Advance copy

United Nations TD/B/COM.3/84

United Nations Conference on Trade and Development

Distr.: General
8 January 2008

Original: English

Trade and Development Board
Commission on Enterprise, Business Facilitation and Development
Twelfth session
Geneva, 4–5 February 2008
Item 3 of the agenda

Trade logistics and global value chains

Note by the UNCTAD secretariat*

Executive summary

This note reviews the role and impact of trade logistics as well as transport and trade infrastructure in global value chains and highlights how a coherent, holistic policy approach to trade logistics and infrastructure development has the potential to link and integrate SMEs into international production systems. A country's infrastructure and the efficiency of its trade and transport-related services play a crucial role in improving its international competitiveness and have become critical elements for attracting foreign direct investment. An enabling environment, targeted policies and incentives to develop public–private partnerships to build the much-needed infrastructure and increase the service levels can help diminish the challenges encountered by small and medium-sized enterprises and global value chains alike. At the policy level, the note considers national, regional and multilateral measures to increase supply capacity and facilitate integration into global value chains. It notes that the Aid for Trade initiative should attach a high priority to the development of productive capacities and of trade infrastructure.

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

I. Introduction

1. This note reviews the role of trade logistics, transport and the corresponding trade infrastructure and investment for the integration of small and medium-sized enterprises (SMEs) into global value chains (GVCs). GVCs cover the full range of interrelated productive activities performed by firms in different geographical locations to bring out a product or a service, from conception to production and delivery to final consumers.[1] GVCs have been facilitated by a reduction in transport costs, organizational changes and rapid diffusion of communication technologies that enable firms to distribute specific activities to, and manage, affiliates and partners abroad. Those changes in production networks have opened up new opportunities for developing countries' firms to integrate into GVCs.

2. However, many developing countries' firms, especially SMEs, are unable to benefit from the opportunities offered by GVCs because of their low connectivity to global transport networks and their weak productive capacity. The lack of access to transport infrastructure in some developing countries affects firms by increasing the costs of doing business and international transport.[2] Similarly, building productive capacity ultimately depends on domestic and foreign investment by firms, and their ability and willingness to invest are, to a large extent, a function of the investment and business climate in which they operate. An insufficiently developed overall business climate with inadequate transport and trade facilitation and a suboptimal service infrastructure can undermine a country's ability to attract investment and participate successfully in international trade.

3. GVCs nowadays fully incorporate the sourcing and inventory stages of global production as well as the distribution processes. In such a context, physical, institutional, technological and regulatory obstacles to cost-effective trade transactions should be addressed in a comprehensive manner. Investments in "hardware" solutions, such as transport infrastructure and equipment, must be supported by corresponding "soft measures", such as streamlined managerial and administrative systems as well as the appropriate institutional, legal and regulatory framework.

4. This note addresses many of the above issues. Section II reviews the critical elements of competitiveness, namely those linked to trade logistics, investment and infrastructure, and provides a short summary of the main trade-related obstacles to integration of SMEs into GVCs. Section III outlines possible policy responses necessary for developing an enabling environment and incentives for trade capacity and infrastructure development to attract private investment and promote public–private partnerships. It also briefly describes ways of cooperating with the private sector to further that process and stresses the importance of increased regional coordination and cooperation to create synergies and find solutions to common problems for the benefit of all. Section IV sets out conclusions and the way forward.

II. Trade logistics, investment and infrastructure: critical elements of competitiveness

Trade logistics in global value chains

5. With the emergence of export-oriented growth strategies and a new global production system within geographically dispersed GVCs, trade logistics has become of paramount importance. For most value chains there must be a physical transport chain that moves the product from one production, processing or distribution facility

[1] UNCTAD. *Global Value Chains for Building Productive Capacities*. TD/B/COM.3/79, 2006.

[2] See UNCTAD, *Review of Maritime Transport*, various issues, for comparisons of international transport costs. See also Ports and international transport costs, in *Transport Newsletter*, No. 31, UNCTAD, 2006.

to the next. GVCs make great demands on the transport and service infrastructure, which has to sustain this complex supply system, and any disruption is automatically equivalent to a weak or impaired link.

6. Several studies have illustrated the problems faced by SMEs eager to participate in GVCs in developing countries. In sub-Saharan Africa, for example, exporters deal with average delays of 50 days for each shipment and need no fewer than 20 signatures on eight or nine Customs forms.[3] These are dire conditions for SMEs, which simply do not have the required capacities and financial means. Also, partners in GVCs need to go through agents or other intermediaries to cope and comply with the red tape involved. Similarly, exporters in Angola and Kazakhstan spend 74 days and 93 days, respectively, in complying with all mandatory documentation and procedures, whereas exporters in Estonia spend only three days dealing with administrative requirements. Also, in many countries Customs authorities still open most of the containers, and this results in, among other things, delays and increased costs. Such obstacles make the integration of SMEs into global supply schemes – where timely production and lead times are prerequisites – an illusion.

7. The lack of connectivity with global transport networks – direct or via trans-shipment ports – remains an important barrier to trade in many developing countries. Many African countries, particularly the landlocked ones, are among those worst connected to international shipping transport networks. Their estimated international freight costs as a percentage of the value of imports is therefore also particularly high.[4] On the other hand, many Asian countries or economies are the best or among the best connected worldwide.[5] China heads the list, followed by Hong Kong (China), Singapore, Malaysia, the Republic of Korea, Sri Lanka and India, among the first 20 of 162 countries.[6] Similarly, in Asia the estimated international freight costs as a percentage of import value have steadily fallen over a period of 15 years (from over 9 per cent to just below 6 per cent).[7] This shows that effective integration into global transport networks provides scope for development and integration into GVCs.

8. Supply-chain management within GVCs offers ways of doing business to both large and small companies, which belong to a whole chain of suppliers, manufacturers, distributors and retailers. GVCs can be horizontally and vertically integrated by large corporations – the lead firms – which apply optimized business models and support investment in new systems and business practices. The lead firm, typically a transnational corporation (TNC), may outsource, and entrust the best-qualified domestic firms with the performance of certain functions.

9. Supply-chain optimization can be achieved by breaking down the boundaries that traditionally segregated the different segments of the chain as well as by mobilizing and facilitating partnerships through strategic application of technology. It can also include the formation of clusters which establish a link between geographical locations and economic performance, creating a network of firms embedded in complex inter-firm relations. Those clusters are thus better equipped to cope with the volumes required by the lead firm. GVCs stress the development of just-in-time delivery, placing great emphasis on inventory and logistics function to minimize inherent costs, and designing new distribution strategies to better link the entire network to the customer. This means that GVCs require a particularly sound and reliable enabling environment that facilitates the internal and cross-border movements of goods and services.

[3] World Bank. *Doing Business Report*. 2006.
[4] UNCTAD. *Review of Maritime Transport, 2007.*
[5] UNCTAD. *Liner Shipping Connectivity Index, 2007.*
[6] UNCTAD. *Transport Newsletter*, No. 3, 2007.
[7] UNCTAD. *Review of Maritime Transport, 2007.*

Infrastructure development and investment

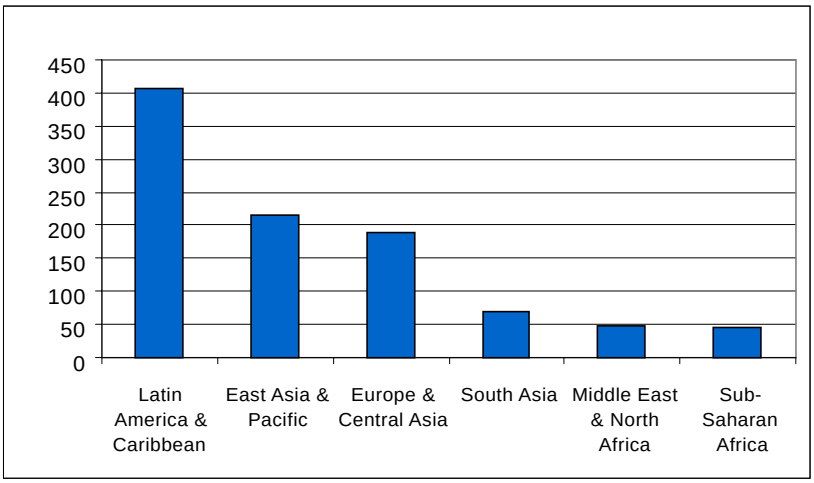
10. The detrimental effects of poor transport infrastructure on investment, exports, poverty alleviation and, more generally, development have been well documented.[8] A recent study estimates that trade among West African countries could expand by up to 400 per cent on average if their roads were paved. Similar investment could increase trade in Southern Africa by 300 per cent.[9]

11. It has been observed that quality infrastructure plays a key role in foreign direct investment (FDI) and export decisions of firms. Investors, especially in export-oriented sectors, choose locations that will offer a project effective and reliable distribution and supply channels. The World Economic Forum developed an index that assesses the infrastructure quality gap.[10] This index measures a given country's road, port and air transport and electricity infrastructure against that of Germany, which was chosen for its world-class infrastructure development. According to the index, for example, Chile exhibits the smallest infrastructure quality gap (i.e. relatively better infrastructure) and the best private sector investment track record in Latin America. This has helped Chile to consistently outperform other countries in the region in attracting investment.[11]

12. One way of closing the infrastructure quality gap is to attract private sector participation or investment in infrastructure through privatization and private–public partnerships. For that to happen, improvements in the regulatory framework may be necessary as first steps. Currently, private sector participation in infrastructure projects remains low and varies widely from region to region (see figure 1). This is confirmed by case studies conducted in India. It is estimated that India's investment in infrastructure should rise from 4 to 9 per cent of GDP in order to meet the increased requirements generated by rapid economic growth. However, domestic public investment (about 70 per cent) will still constitute the backbone of such funding requirements.[12]

[8] World Bank. Private participation in infrastructure in developing countries: trends, impacts, and policy lessons. 2003.
[9] World Bank. *Doing Business Report*. 2007.
[10] World Economic Forum. *Benchmarking National Attractiveness for Private Investment in Latin American Infrastructure.* 2007.
[11] Chile is ranked high by the UNCTAD FDI Performance Index and FDI Potential Index (*World Investment Report, 2007*).
[12] Mr. Arvind Mayaram, Joint Secretary, Ministry of Finance, India, statement at the UNCTAD Expert meeting on comparing best practices for creating an environment conducive to maximizing development benefits, economic growth and investment in developing countries and countries with economies in transition, Geneva, 24–25 September 2007.

Figure 1. Infrastructure projects with private participation, 1990–2005
($ billions)



Source: World Bank. World Development Indicators, 2007; Regional Fact Sheet: Latin America and the Caribbean.

Access to financing and technologies

13. Every stage of an infrastructure project, from planning to maintenance, involves assessing and applying a wide range of services, technologies and management techniques. However, many developing countries lack such diversified services and the necessary regulatory capacity. This is caused inter alia by a weak regulatory environment, lack of skills, insufficiently developed distribution networks, lack of information technology and, more broadly, a lack of public awareness. In addition, soft infrastructure consisting of the relevant institutional and technological infrastructure is also needed to support the development of enterprise competitiveness. Such infrastructure includes business incubators, industrial and science and technology parks, productivity centres, business development services and investment promotion institutions. For example, the Richards Bay industrial zone in South Africa is a cluster where major new investment projects by TNCs in the 1990s received government support for outsourcing to local SMEs. Despite some initial difficulties, it managed to create linkages between large firms and government-accredited SMEs, and to offer support to SMEs in their participation in procurement programmes. It also established a forum where SMEs could meet potential partners.

Transport-related obstacles to integration into GVCs

14. The efficiency of transport services and the availability of reliable infrastructure and technology, as well as transfer and transit times, are crucial elements of a transport chain and can impact on location, partner and investment decisions. The bottlenecks that hamper productivity, drive logistics costs and ultimately make the integration of SMEs into GVCs a challenging issue include the following:

(a) The lack or suboptimal use of available services due to capacity problems;

(b) Overregulated and segmented transport services and service monopolies;

(c) Institutional inefficiencies and procedural problems;

(d) Poor internal management within agencies and the private sector;

(e) Lack of an adequate legal framework based on internationally agreed uniform rules and standards;

(f) Non-harmonized and non-aligned Customs and border procedures;

(g) The poor state or non-availability of physical infrastructure;

(h) Lack of access to global transport networks;

(i) Lack of access to finance in the form of private or public investment; and

(j) Lack of access to the IT infrastructure, and its incompatibility with international requirements.

15. Trade and transport costs, access to global transport networks and an adequate support environment, including a stable legal and regulatory framework, are therefore crucial for the development of supply capacities and determine a country's competitiveness in attracting FDI and participating in global trade.

III. Policy responses

Policy framework

16. It is no longer possible to separate transport and infrastructure issues from general development goals. Many of the shortcomings related to inadequate capacities in shipping, freight handling, transit and border-crossing result from complicated and lengthy administrative procedures, poorly coordinated controls, the high level of fees, the non-enforcement of existing international conventions and standards, and a lack of effective national implementation. Those shortcomings and associated costs should be addressed by policymakers in a comprehensive way with a view to removing physical, technological and procedural obstacles through the introduction of reforms supported by corresponding streamlined managerial and administrative systems. Therefore, policy responses to the challenges described above need to be part of a wider policy framework and require strong political backing in order to drive, implement and enforce changes. For example, transit corridors could be redesigned to become genuine development corridors that combine sustainable elements of commercial, transport and industrial policies. The spatial development approach can have the potential over time to effectively increase a country's competitiveness and facilitate the participation of SMEs in GVCs.

17. Developing countries need to improve the enabling environment (institutional, legal and administrative), build capacities, increase transparency and coordinate services. Traders and investors look for predictability, accountability and reliability. If such basic conditions are not provided, trade and investment flows are easily diverted. Governments are the driving force, steering the process towards the elimination of major bottlenecks. There is ample room for increased policy direction, motivation and resource allocation to improve strategic vision, transparency and accountability.

Trade logistics

18. Trade and transport facilitation, which is crucial for enhancing trade logistics, aims at ensuring that national authorities are able to increase their international trade efficiency. The United Nations Economic Commission for Europe (UNECE) estimates that potential direct savings resulting from trade facilitation measures can range from 2 to 3 per cent of total global trade value.[13] They could contribute to improving the international competitiveness of the private and public sectors in developing countries. Key beneficiaries in that respect would also be the large number of the predominantly small firms in developing countries, whose trade transaction costs are disproportionately high. SMEs need to be able to comply easily and at reasonable cost with administrative and regulatory requirements, eventually eliminating many

[13] UNECE. Trade facilitation in a global environment. ECE/TRADE/2002/21, 2002.

intermediate steps through, for example, one-stop-shops, which can be beneficial in this connection.

19. In order to benefit from potential economies of scale it makes sense to group together SMEs and the services they need, for example through the creation of trade and transport clusters. In such a setting, companies enjoy advantages by being closer to suppliers, agents or logistics providers. However, it might not always be possible to reduce the geographical distance of SMEs potentially capable of entering GVCs. In South Africa, for example, the largest export volumes originate from areas within 100 kilometres of a port, including dry ports.[14] Providing SMEs with easier access to space closer to seaports or airports – or developing seaports, airports or dry ports closer to areas with SMEs that have the potential to participate in GVCs – could be a possible solution, particularly for integration into value chains for perishable and time-sensitive products such as fresh fruit, vegetables or flowers.

20. Cooperation between India, Brazil and South Africa has shown that a continuing dialogue on issues such as shipping and logistics services has now become an essential part of the new geography of trade, and may prove especially relevant in the case of potential common projects involving public–private partnerships. In that respect, and for the purpose of further promoting efficient logistics solutions for SMEs, multimodal transport can play an important role, especially when it occurs under framework agreements.

21. Multimodal transport can help facilitate cross-border transport and transit, and has the potential to increase the participation of landlocked countries and SMEs in global trade patterns. Eventually, however, only an efficient service infrastructure with upgraded IT facilities, together with a viable physical infrastructure, will be able to cope with the sophisticated demands of GVCs and their transport chains. This in turn has the potential to create high-value spillover effects also for SMEs, help upgrade the business environment of a whole country and eventually generate growth. For example, a well-functioning port can attract more business, both regional and international, from coastal and landlocked countries – a win-win situation for users and operators.

22. A prerequisite for efficient trade logistics is a transparent legal framework that is based on uniform international rules and creates certainty and predictability, taking into account modern commercial practices and technological developments. In contrast, a fragmented and complex legal framework creates uncertainty, which in turn increases transaction costs since it results in legal and evidentiary enquiries, costly litigation and rising insurance costs. It may thus be considered a serious obstacle to the development of international trade, hampering particularly the ability of SMEs to integrate and compete effectively in GVCs. Uniform international law serves to facilitate contracting and interacting across national borders. It can also help to address public policy considerations in fields where parties with unequal bargaining power interact with one another, including in the field of transportation.

23. Important topical issues in the field of transport law include the continuing challenge of providing a transparent and user-friendly liability regime for international multimodal transport, simplification of transport documents and the development of electronic alternatives to traditional paper-based documents. Other key emerging issues, such as maritime and supply-chain security, and, more recently, environmental issues and concerns about climate change, are of increasing global importance, and are going to affect developing and developed countries in many ways, including in respect of internationally agreed regulatory frameworks that need to be implemented at national and regional levels. For developing countries, effective participation in

[14] W Naudé and M Matthee. The significance of transport costs in Africa. *Policy Briefs*, 5 , 2007.

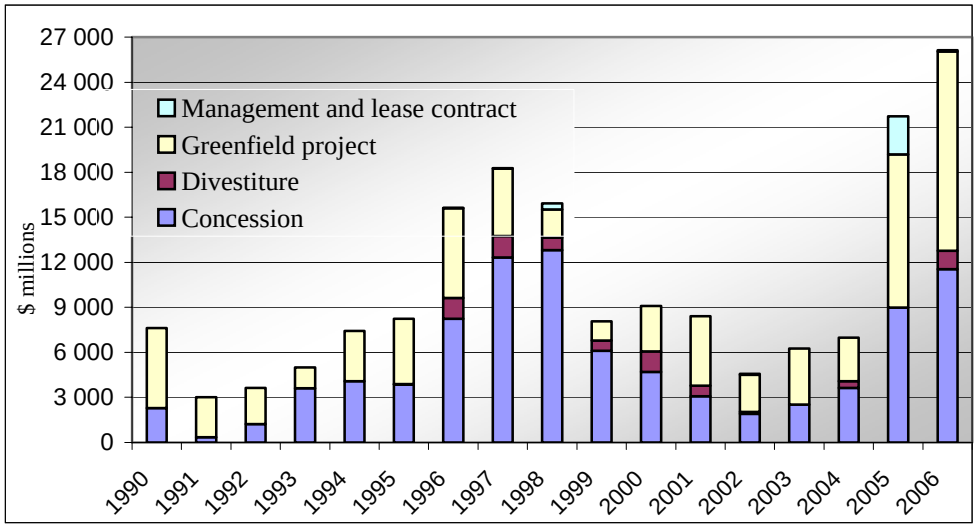
relevant international consensus-building processes is crucial, as is consideration of related capacity-building needs to ensure compliance and implementation at national levels.

Infrastructure development and investment

24. Developing countries generally relied on large public sectors to stimulate economic development, often because of the very severe lack of capacity of indigenous private business during the immediate post-independence era. In recent years, countries have pursued policies to encourage private sector participation in financing and delivery of infrastructure services to improve efficiency and access. Although investment in transport infrastructure with private sector participation declined after 1997, there was a rapid increase in 2005 and 2006 (see figure 2).[15] The increase in concessions on existing assets and greenfield investment projects may suggest that investors are choosing projects with fewer risks of political interference. Also, the remaining public ventures may not be as attractive to private operators as those already privatized.

25. However, private investment in infrastructure projects remains a challenge for both developed and developing countries.[16] Balancing the public interest in improved services at a reasonable fee with private sector interest in a meaningful return on invest may not be easy. In the transport sector, investment in new roads, for example, could reduce traffic on existing roads, and this in turn could reduce revenue collection by private operators. Similarly, measures to operators' improve efficiency, productivity and profitability could result in increased fees and job losses. In many African countries, there have been numerous strikes protesting against proposed privatization of State-owned enterprises, with unions fearing job losses or reduced benefits. According to the United Nations Economic Commission for Africa, if such conflicts are to be avoided, "it is crucial to link privatization programmes with broader development and private-sector promotion strategies, and encourage public debate to secure consensus".[17]

Figure 2. Trends in private investment in transport infrastructure, by type



Source: World Bank Private Sector Participation in Infrastructure Database (2007).

[15] World Bank. Private activity in transport shows strong growth in 2006. PPI data update 5, 2007.

[16] F Sader. Attracting foreign direct investment into infrastructure: why is it so difficult? International Finance Corporation and World Bank FIAS Occasional Paper 12, 2000.

[17] D Makonnen. Broadening local participation in privatization of public assets in Africa. Mimeo prepared for the United Nations Economic Commission for Africa.

26. GVCs need quite complex logistics facilities, especially in the area of perishable goods such as fruit, vegetable and horticulture produce. Not only are the supply systems complex but also the facilities and systems required in order to sustain them need to be more and more sophisticated. Investment in such facilities can be crucial for entry and survival in GVCs. For instance, in Kenya there was substantial FDI in developing the export of horticulture produce (see box 1),[18] and the country is today regarded as one of the early and well-prepared entrants that have helped shape the conditions that others face now in terms of developing the skills, facilities and services needed to succeed in GVCs.

Box 1. Harvesting horticulture for development in Kenya

Efficiency of transport infrastructure is crucial for SMEs in the horticultural sector. Both vegetables and cut flowers require considerable investment in post-harvest facilities and transport infrastructure, as well as immediate access to air-cargo capacity, because they are perishables and delicate to handle. In addition, private operators need access to a support infrastructure with marketing centres in the growing regions, refrigerated trucks for transportation, pre-cooled facilities at airports and land close to airports. SMEs have to rely on distribution and marketing services to seamlessly link production planning with distribution and marketing, whereas large firms are vertically integrated across the entire industry.

Twenty years ago, small exporters in Kenya would buy green beans in local wholesale markets or directly from smallholders, pack them in boxes or sacks, send them to importers in, for example, the United Kingdom and sell them through wholesalers. Since then, the business has been completely transformed and fresh vegetables are now mainly sold through larger supermarkets, with a speedier passage throughout the supply chain. Seed companies, exporters, importers and retailers work together to develop new products and varieties. Suppliers are regularly monitored and audited, and specialized logistics are being put in place to facilitate processing and packaging in Kenya. The Government has put in place the required facilities and marketing centres. This allowed an international investor (from the Netherlands) to build on the country's experience with vegetable exports in order to launch the Oserian Development Company in the 1980s and become the industry leader in cut flowers.

The nature of the horticulture industry has helped Kenyan exporters to develop the necessary technical and managerial skills and has encouraged the development of suitable infrastructure and financing mechanisms. Nonetheless, exporters still face constraints owing to Kenya's weak domestic transport infrastructure and the high costs of air freight. In 2006, the Government developed a five-year strategy to expand trade by further simplifying cross-border trading. The East African Community Customs Union, which came into being in 2005, has been one of the push factors in introducing reforms in Kenya and the other countries of the region.

Source: Institute of Development Studies. Export horticulture and poverty in Kenya. 2002.

27. The telecommunications sector has become a particularly dynamic sector for privatization. Many African phone systems were antiquated and unable to reach more than a small minority of the population. By liberalizing the telecommunications industry and putting in place favourable legal and regulatory frameworks, African countries have gained access to new technologies and investment resources that have helped modernize and expand their systems. Mobile telephony has proved one of the

[18] J Humphrey. Commodities, diversification and poverty reduction. Paper presented at the FAO Symposium on the State of Agricultural Commodity Market Research, Rome, 15–16 December 2003. 2004.

most suitable and development-oriented infrastructures, linking producers and communities in remote areas to markets in urban areas. Many case studies have shown that complementary policies and an appropriate regulatory framework are crucial for ensuring successful private participation in infrastructure (see box 2). For example, in successful privatization in telecommunications and power in Peru industry investors were preferred to financial investors, as a result of which significant additional capital and management skills were brought into the sector.

Box 2. Business linkages and Customs improvements in Uganda

Uganda is a landlocked country, and as a part of the Big Push Strategy outlined in the Investment Policy Review of Uganda (UNCTAD/ITE/IIP/MISC.17), the main stakeholders have subscribed to a nine-prong action plan, including the setting up of dry ports, Customs upgrading, and client charters to improve service delivery in the main administrations. In addition, UNCTAD has identified and developed business linkages' potential in key industries and services. The project is supported by the Swedish International Development Agency, UNCTAD and the United Nations Development Programme, and implemented by Enterprise Uganda and the Ugandan Investment Authority. The outcomes of the Business Linkages Uganda programme include the establishment of 26 sustainable business linkages between TNC affiliates and local SMEs, the mobilization of eight large companies for the establishment of demand-driven business linkages, policy advice and recommendations to the Government and the private sector on linkage development, and provision of business development services supporting the implementation of sustainable business linkages. An example of the business linkages developed is the signing in 2005 of an agreement between Kinyara Sugar Works Ltd (KSWL) and Enterprise Uganda to support Ugandan sugar cane farmers for 24 months.

Under the deal, co-financed by KSWL, farmers are helped with the improvement of quality and consistency of supplies, the honouring of contracts, corporate governance and business ethics, among other things. Enterprise Uganda supported the farmers in producing a three-year business plan to consolidate corporate governance, and upgrade the company's business and management skills. As result of the stakeholders' commitment, the Uganda Investment Authority has also been able to mobilize public investment for the purpose of paving the road connecting farmers to their main customer, with a consequent dramatic reduction in lead time. Recent reports released by the Uganda Revenue Authority showed KSWL to be one of the top Ugandan taxpayers, contributing Ush 13.7 billion in taxes for the 2004/05 financial year.

In 2001 the Government of Uganda funded the implementation of Asycuda ++ within the framework of a comprehensive reform project. The system was configured to cover all Customs operations, including DTI (direct trader input), warehousing and transit monitoring. Asycuda is currently running in 10 Customs offices. The Kampala Customs Office in Nakawa hosts the Customs Business Centre, an Asycuda-based Single Window concept which centralizes all trade operations and concentrates the bulk of the transactions and revenue of the Uganda Revenue Authority. The recent establishment of the joint border post in Malaba on the Kenyan border, together with the introduction of the automatic exchange of transit data between the Kenyan Customs system (Simba) and Asycuda in Uganda, has considerably improved the clearance and management of transiting goods in Uganda.

Source: UNCTAD. Business linkages: lesson learned (forthcoming); Asycuda.org.

Partnering with the private sector

28. Public investment has always played a major role in infrastructure development. However, budget cuts, fiscal deficits and high energy costs have hampered the allocation of sufficient public resources to physical and service infrastructure projects. It has been even more difficult to secure public service efficiency in areas hampered by conflict and prone to natural disasters. In addition to public investment, developing countries therefore need to attract FDI and other forms of financing to fulfil their infrastructure development objectives.

29. In many developing countries, private participation via public–private partnerships (PPPs) has provided a good solution with regard to relieving Governments of financial and institutional constraints in building transport infrastructure capacity. PPPs have also helped improve access to modern infrastructure services, accompanied by substantial improvements in coverage. However, some analysts have expressed their disappointment because expected improvements do not always materialize for various reasons, such as differences in perception between the public and the private sector, maintenance issues or difficulties in meeting provisions set out in contracts. In addition, the experience of over two decades with PPPs suggests that some infrastructure projects are not viable or profitable unless they charge fees, which reduce universal access.

30. In transport infrastructure development, foreign investors can be given several options, for example management and lease contracts, and concessions. Concessions suit the need of developing countries to build and maintain infrastructure such as roads, ports or airports. An example is the Spanish concessionaire Abertis Infrastructures, which operates 15 airports in Mexico, Jamaica, Chile and Colombia and handles more than 20 million passengers a year. In addition, the company has a 17 per cent stake in the Mexican airport operator Grupo Aeroportuario del Pacífico. It recently acquired the Mexican company Desarrollo de Concesiones Aeroportuarias, the airport concession unit of Actividades de Construcción y Servicios.

31. Some countries have joined forces with large international service providers to operate their ports. They have thus managed to attain high levels of performance and sophistication, especially in port and container terminal development and management. At the global level, a large proportion of the growth in port container terminals is the result of private investment. Today, 75 per cent of container port handling is done by private operators.[19] In Africa, however, investment in port operations is still relatively low, and the share of private investment in container port operations is far below the world average. Private participation in Africa's container port handling is estimated at only 20 per cent. When private sector investment and management are the driving force behind port modernization, as in Djibouti, Cameroon, Nigeria and Côte d'Ivoire, ports have generally managed to achieve significant improvements in their productivity. Thus, the average berth productivity in those ports more than doubled (in Djibouti and Douala-Cameroon from 15 moves per hours (mph) to 35 mph) or more or less tripled (in Abidjan-Côte d'Ivoire from 15 to 40 mph and in Apapa-Nigeria from 6 to 18 mph) between 2002 and 2006.

32. Overall, experience has demonstrated that while private participation can relieve Governments of major capital expenditures, it places increasing demands on their institutional capacity to regulate the sector, monitor the performance of private partners concerning their contractual commitments, and establish an effective competition authority to combat monopolistic behaviour and to ensure better coherence in legal and regulatory matters (including concessions, build-operate-transfer (BOT) or other agreements).

[19] Drewry. *Annual Review of Global Container Terminal Operators, 2006.*

33. An effective regulatory scheme to supervise and implement the privatization process was also regarded as a success by the Investment Policy Review of Peru (UNCTAD/ITE/IIP/MISC.19). The country has built on this experience for the development of road concession or BOT-type contracts. Examples such as this one show that it is important to combine privatization with an effective competition policy in order to ensure competitive practices by operators and improvements according to required standards, and that adoption of competition laws needs to be followed by effective implementation.

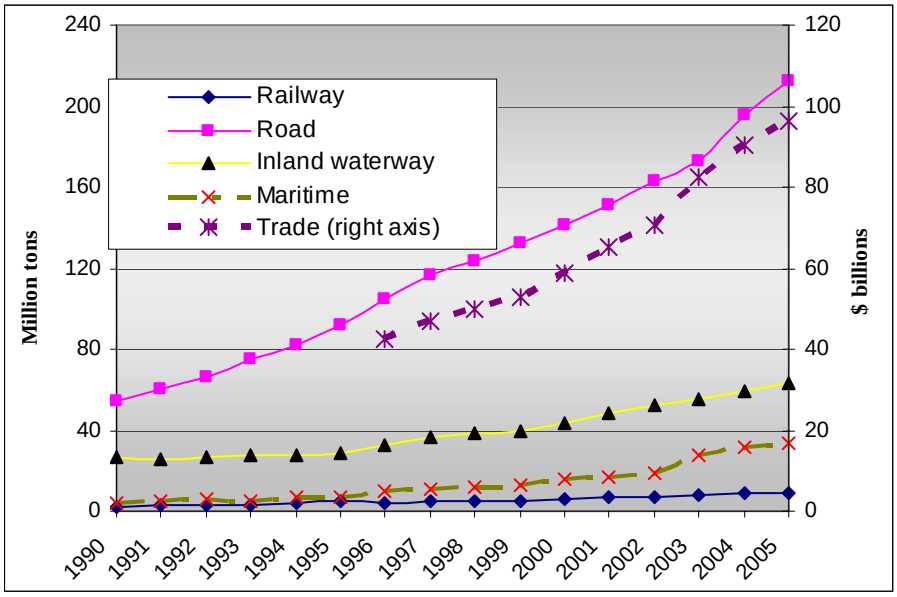
34. Other complementary policies need to deal with job losses associated with rationalization or the closure of non-viable enterprises. Because of such drawbacks, some countries approached privatization more cautiously. Other countries – often the least developed and landlocked – are faced with a lack of interest on the part of investors as regards private sector financing of infrastructure projects. In such cases, public investment and development assistance play an important role, as has been the case for example in Haiti, Lesotho and Nepal.

35. An appropriate and well-functioning regulatory environment in transport infrastructure can mobilize local and foreign investment. The experience of Viet Nam in that respect is interesting. As shown in box 3, the country met the challenge to develop rapidly the required transport infrastructure, mainly owing to increased institutional ability and progressive liberalization.

Box 3. Developing trade logistics in Viet Nam

Viet Nam has been one of the world's fastest-growing countries in the last 15 years (with a real GDP growth average of 7.4 per cent a year from 1990 to 2005). Demands on transport infrastructure and services have been huge (see chart). Part of Viet Nam's success has been due to the ability of the public sector to develop the required infrastructure. The Government is now seeking to complement public investment with private investment in order to meet continuing demand and to provide more competitive outcomes in terms of cost and quality. The construction and the operation of ports and airports is now partially open to foreign investors. When joining the World Trade Organization in 2007, Viet Nam undertook to liberalize logistics chain services such as courier services and distribution. UNCTAD's forthcoming Investment Policy Review is examining detailed policies needed to attract FDI in infrastructure.

Viet Nam: total freight volumes by mode and value of trade



In addition, UNCTAD's Business Linkage pilot project in Viet Nam has resulted in eight suppliers upgrading in the Unilever third party network. Thanks to high-end training, the main Unilever suppliers manufactured in 2006 80 per cent of total Unilever production, sold mainly in the domestic market. In addition, they developed export capacity, selling in 2006 15 per cent of their total production volume to 20 countries in the region, mainly China, Indonesia and Thailand. At the policy level, streamlined Customs and efficient transport have been key elements of this successful export growth.

Source: UNCTAD. *Investment Policy Review of Viet Nam,* forthcoming.

36. Building or rebuilding transport infrastructure is a long-term development goal, to be achieved by a combination of public funds, private investors and the donor community. To bridge the infrastructure divide between developed and many developing countries, in 2005 the United Nations Economic and Social Council (ECOSOC) called for greater coordination of efforts among the various actors to address bottlenecks and gaps and to develop innovative financing mechanisms.[20]

[20] UNCTAD issues note on science, technology and innovation, including ICTs, to meet the MDGs. Ministerial Roundtable

37. Privatization and various forms of PPPs have been developed to support Governments' efforts to improve, inter alia, transport infrastructure. For example, the experience of the United Republic of Tanzania showed that private sector involvement and investment in port facilities improved efficiency and increased business opportunities for hotels, banks, and insurance and consulting firms. Thus, FDI can be a win-win solution; it can finance infrastructure projects and trigger sequential investment in other areas. However, as benefits from FDI do not materialize automatically, an enabling framework needs to put in place to secure those benefits.

Regional cooperation and coordination

38. Developing countries may benefit from expanding exports globally as well as regionally. A parallel approach encourages a viable regional orientation towards partners at a similar level of development as well as integration into GVCs and trade on world markets. Thus, building a regional infrastructure can be an important factor for enhancing the competitiveness of domestic producers. In addition, regional exports can be an effective initial step towards integrating into the wider international market. The quality of trade logistics and information technology in a region directly impacts on its trade dynamics and ultimately on its economic development and the growth of productive capacities. Coordinated regional cooperation in the area of trade logistics and trade facilitation can increase the efficiency, speed and quality of services and infrastructure, thus allowing goods to flow smoothly to, through and from a particular region.

39. Regional or subregional responses to trade logistics could bring about practical solutions to such issues as transport and transit conditions, Customs cooperation, administrative requirements, time-consuming border controls or duplication. Formal regional frameworks, if they are effectively implemented, have the added advantage of increasing trust and supporting good neighbourly relations. Encouraging dialogue on such a basis between trading nations and all stakeholders can make a whole region more attractive to GVCs. For example, two initiatives – the Andean Community and MERCOSUR – coordinate the facilitation of multimodal transport, and the Business Alliance for Secure Commerce in South Americas brings together the private sector, Customs authorities, government and international organizations to work on the promotion of security in trade. Cooperation can take various forms and deal with aspects including border agency coordination, transit agreements, trade or development corridor solutions. They all address, within or outside formal frameworks, technical issues – mainly linked to transit – that allow in the medium and long term closer economic and trade integration (e.g. Customs integration in the ASEAN region, and in Central Asia, within the Economic Cooperation Organization, six of whose member countries have now ratified the Transit Transport Framework Agreement).

40. Regional integration and regional networks linking different modes of transport (as in the case of corridor initiatives) can also increase competitive capacities and help organize the transport sector. Eventually, this would lead to lower transport costs and improved service quality levels. Reduced costs and transit times, streamlined border clearance techniques and logistical information made available by new UNCTAD-developed information systems have also been important. In addition, trade and transport facilitate the emergence of networked clusters.

41. Regional infrastructure development has also helped increase the competition among port authorities in the Southern African Development Community region for business from landlocked countries. Emerging corridor management institutions, such

on Science, Technology and Innovation, including ICTs, to meet the Millennium Development Goals, ECOSOC, High-level Segment, 2005.

as the Walvis Bay Corridor Group, have established marketing offices abroad (e.g. in Zambia) and offered landlocked countries attractive packages that include space for dry ports at their ports (for example, Zambia is seeking to take up the offer to develop a dry port in Walvis Bay). In addition, Angola, Mozambique and the United Republic of Tanzania are modernizing their facilities with the aim of attracting business from the Democratic Republic of the Congo, Malawi, Zambia and Mozambique.

42. The signing of the East African Community Customs Union protocols in January 2005 highlighted the critical areas for reform: document standardization, information technology use, port services facilitation, border post cooperation, third party insurance, tariff reform and standards harmonization. The reforms introduced include risk management procedures to build an expanded domestic market in East Africa. Regional integration has become a major driver for the improvement of transport infrastructure and related services such Customs and visas. The private sector has been vocal for years regarding those reforms. The Investment Guide to the East African Community (UNCTAD/ITE/IIA/2005/4) highlighted the need for streamlined regional procedures for visas and Customs to improve the investment climate. In UNCTAD's opinion, regional cooperation has to include coordinated action in policy areas that strengthen the potential for growth and structural change in developing countries, including macroeconomic, financial, infrastructure and industrial policies.

IV. Conclusions and the way forward

43. GVCs are interdependent economic systems with complex coordination mechanisms which, if they are to run smoothly, require efficient logistics and infrastructure solutions. This means that policies should ensure that the trade-supporting institutional and physical infrastructure within the circuit of GVCs is effectively improved, especially for SMEs. This is an important prerequisite for enterprise development and consequently the development of productive and trade capacities. Developing transport infrastructure in particular provides SMEs with immediate business opportunities and facilitates their growth. They participate directly and straight away in the development of an infrastructure project as, for example, suppliers, service providers and subcontractors.

44. Similarly, trade, which to a large extent requires and depends on transportation, can play the role of an authentic generator of sustained economic growth, diversification, employment and poverty reduction in developing countries. Certain growth strategies based on labour-intensive and assembly-type operations as performed by GVCs are highly sensitive to transport costs and therefore cannot be replicated unless excellent logistics and connectivity are in place.

45. While a good physical infrastructure is important, SMEs find it often just as problematic to deal with dysfunctional institutional settings and related inefficiencies. Adequate and targeted policies therefore require prior analysis and understanding of the needs of GVCs, including those in the area of logistics, and a subsequent focus on how SMEs' entry into those GVCs can be facilitated. Such policies, which require strong government support for their implementation, usually include the following:

(a) Comprehensive approaches combining elements of commercial, transport and industrial policies (e.g. development corridors, clusters), and the creation of a sound enabling environment (institutional, legal and administrative) as a precondition for attracting investment in infrastructure development or other forms of private sector participation in infrastructure projects;

(b) Development of coherent transport policies aimed at increasing transport capacities and public and private service levels, connectivity to global and

regional transport networks, and a better link-up of landlocked countries through, for example, effective transit arrangements;

(c) Introduction of necessary reforms, for example in the area of Customs, and of trade and transport facilitation measures, including regional coordination and cooperation on transit, infrastructure development and joint projects such as joint border facilities, and coordination of services or formal requirements to ensure economies of scale and reliable transit transport routes;

(d) Assistance to SMEs to foster their participation in GVCs with policies aimed at increasing productive capacities as well as improving storage, supply, marketing and distribution capacities and facilities; and

(e) Introduction of complementary policies, including incentives for more private sector participation, business linkages and public–private partnerships in the development, implementation and management phases of reforms and infrastructure projects.

46. Furthermore, developing countries can benefit from trade only if they put the development of productive capacities at the centre of their national policies. Building productive capacity will involve efforts to improve their attractiveness as regards investment and their trade infrastructure for development. To address those challenges at the multilateral level, there is a need to enlarge the scope of the Aid for Trade initiative and increase the support for productive capacities development, as well as to build appropriate support for trade policy formulation for WTO accession and the negotiation of bilateral and regional agreements.

47. Promoting partnerships between large firms and SMEs in the implementation of projects could further facilitate the latter's growth and upgrading. In addition, infrastructure projects often create an opportunity for the emergence of SMEs. For instance, the development or expansion of a port may require additional services that are generally offered by SMEs. These could include Customs clearance and forwarding, insurance, storage, security and maintenance. Finally, as highlighted in this note, infrastructure projects stimulate the growth of the entire economy. Transport infrastructure, such as roads, bridges, airports and seaports, accelerates the growth of many support services that create jobs and generate wealth. Such projects also trigger progress in other sectors that depend on efficient and affordable transport infrastructure (e.g. tourism) and access to external markets.

48. In order to assess investment regulatory frameworks and make policy recommendations, UNCTAD regularly conducts Investment Policy Reviews of developing countries. Furthermore, it advises Governments on business linkages and ways in which foreign direct investment can contribute to enhancing development.

49. UNCTAD contributes to ensuring efficient trade logistics through its analytical work, technical assistance and capacity-building initiatives in the area of trade and transport facilitation. In various national projects that address the key constraints faced by the logistics sector it assists in the modernization of practices and procedures, the establishment of a dialogue between the public and the private sector, or the review and simplification of documents, documentary requirements and related legislation. Within that framework UNCTAD also focuses on management issues in the transport sector, security-related requirements and electronic trading tools. Furthermore, it provides assistance in defining national trade facilitation strategies, capacity-building in trade procedures and trade operations, and assistance within the framework of WTO trade facilitation negotiations.

50. With regard to legal issues affecting developing countries' trade and transport, UNCTAD, with its experience and technical expertise, and its focus on research and analysis, can assist policymakers and traders in developing countries in their

understanding of often complex regulatory issues and relevant international developments. UNCTAD's work on transport law, as well on key emerging issues such as supply-chain security and the effects of climate change, is aimed at helping inform the debate on appropriate policy responses in the context of international negotiations and assisting in the effective national implementation and application of relevant international conventions.