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Accessing Markets, Technology, Experience

Role of Global Value Chains

Global value chains are reshaping international business and offer significant opportunities for CAREC economies to expand trade and support sustainable growth by developing non-traditional exports.[1] Involvement in global value chains could provide access to new markets as well as the technological, managerial, and market-related know how of leading international businesses. However to enter these value chains and benefit from these opportunities CAREC enterprises must meet a range of demanding requirements. This poses new challenges to governments and firms, both large and small; and would redefine the framework for business-government relations. This *CAREC Notes* introduces the global value chain concept and outlines some of the opportunities and implications for CAREC enterprises.

Reaching International Markets

A key challenge facing CAREC economies is how to link domestic enterprises more effectively to international markets in order to achieve sustainable growth and development. This is particularly important given the continuing dominance of a small number of primary commodities in CAREC exports; limited trade in manufactures; the concentration of trade in a small number of mostly larger CAREC economies; limited success in attracting foreign direct investment outside of energy and natural resource sectors; and the unrealized potential for trade, particularly with neighboring Europe and a rapidly growing East Asia.[2]

Improvements in transport systems and in the trade environment in CAREC economies are necessary, but will not be sufficient to expand and diversify linkages of CAREC enterprises to international markets. Such linkages are also conditioned by the competitive structure of global industries. The ability of CAREC enterprises to expand exports of fresh fruit and vegetables to key markets in Europe, North America, or Asia, for example, will depend not only on overcoming physical and non-physical barriers to trade within and beyond the CAREC economies. It also will depend on the ability of CAREC enterprises to be competitive suppliers to global retailers, such as grocery store chains Carrefour and Tesco that increasingly control access to

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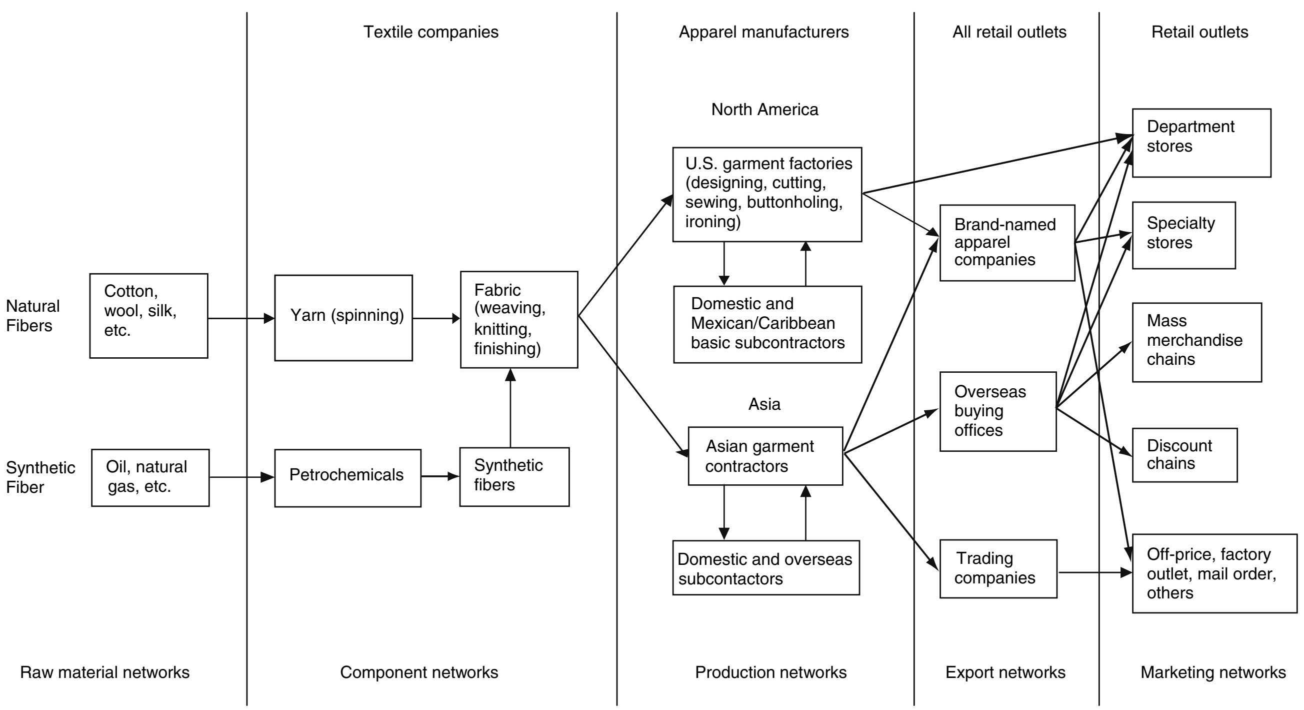
international markets within the framework of global value chains.

Integrating into the international trading system increasingly means participation in global value chains.[3] This poses important opportunities and challenges to the CAREC economies, and to regional cooperation. Global value chains provide opportunities for enterprises, including small- and medium-scale enterprises, to build new competitive capabilities and enter into large-scale exports by focusing on a few selected activities and outputs. But to do so, enterprises that supply global value chains must meet a multiplicity of demanding requirements related to quality, quantity, price, timely delivery, and flexibility.

The Transformation of International Business

The reorganization and relocation of international business is transforming the global economy with important implications for the competitiveness of firms and the prosperity of nations. The proportion of goods and services conceived, produced, and consumed entirely within one country—or within one firm—is rapidly shrinking. Technological and managerial innovations and the removal of constraints on the cross-border flow of resources, goods, services, and capital have led to the emergence of global value chains (Figure 1). Global value chains and associated production networks (Box 1) involve the fragmentation, dispersal, coordination, and re-integration of production-related activities among firms in geographically dispersed locations (Box 2). They are emerging as the organizing framework for production, investment, and trade in an expanding range of product groups such as garments, agro-industry, furniture, automobiles/auto-parts,

Figure 1. The Apparel Global Value Chain



Source: Figure 1, Gereffi, G. and O. Memedovic, *The Global Apparel Value Chain*, UNIDO, Vienna 2003.

consumer electronics, telecommunications, IT, as well as business and health services.[4]

Although many large multinational enterprises continue to provide a variety of products and services on global markets, they increasingly purchase inputs and components from smaller firms in widely dispersed locations that serve particular industry niches. Global trade increasingly involves exports of parts, components, subassemblies, and services within the framework of global value chains and associated production networks. This has resulted in growing task-related specialization by firms in the production of goods and services, and the corresponding acceleration of growth in intra-industry and intra-product trade, as compared with traditional trade in final products.[5]

The transformation of international business through the emergence of global value chains

Box 1: Key characteristics of Value Chains, Production Networks

A *value chain* describes the organization of production of particular products or services such as garments, automobiles, or computers. It refers to the full range of value-added activities required to bring a product from its conception, through design, sourcing raw materials and intermediate inputs, production, marketing, distribution and service support to final consumers. Value chains become 'global' when their component activities are geographically dispersed across borders to different countries.

A *production network* represents the set of linkages within an enterprise or among a group of firms in particular value chains for producing specific products such as a particular type of computer, mobile phone, jeans, or car. This can take the form of production relationships among subsidiaries or affiliates of a multinational enterprise. Alternatively and increasingly they involve outsourcing and subcontracting to independent firms. As a result, competition within the framework of global value chains is increasingly between networks of enterprises, rather than only individual firms.

Key characteristics of global value chains and associated production networks:

- **Governance:** Global value chains generally involve a key role for lead firms, often global brands such as Levi in garments, Carrefour in food retailing, Ford in automobiles, or Ericsson in telecommunications. These lead firms provide product, market, and technical information with the expectation that lower-tier suppliers will maintain and improve performance to meet global competitive standards. Lower-tier suppliers, in turn, invest in equipment, skills, and specialization necessary for producing within the framework of a production network, with the expectation that lead firms will continue to use their outputs—and over time, provide opportunity for upgrading.
- **Standards:** Global markets are governed by an increasing variety of stringent product and process standards that suppliers must meet. Examples of the diversity of standards include general international standards such as ISO 9000 (quality) and ISO 14000 (environment); industry-specific standards, such as Hazard Analysis and Critical Control Point (HACCP) in the food industry; region-specific standards, such as QS 9000 (quality in autos originating in the United States); and firm-specific standards to ensure consistency, reliability, and differentiation of products.
- **Global suppliers:** Global brands and retailers are increasingly reliant on a small number of "first-tier" suppliers with global reach such as Li & Fung for Levi in garments, Flextronics for Ericsson in electronics and telecommunications, and Visteon for Ford in auto parts. These first-tier suppliers play a critical role in determining and organizing participation by lower tier suppliers in value chains. They are increasingly driving global investment, production, and trade patterns with significant influence on the export competitiveness of nations and the performance of local enterprises.
- **Upgrading:** Growing intensity of global competition, shortening of product life cycles, demanding buyers, and falling barriers to entry in many industries are requiring continuous innovation and increased efficiency throughout the value chain. Such upgrading by enterprises within value chains can take the form of increasing efficiencies in the manufacturing process; improving existing products or developing new products; "adding value" by moving upstream from manufacturing to product design; or using existing capabilities to move to a more attractive value chain.

Global value chains offer significant opportunities for CAREC economies to expand non-traditional exports

creates opportunities for new entrants in the international economy. As production systems become decentralized, fragmented, and more specialized, new market opportunities emerge for all types of firms, including small- and medium-scale enterprises, to enter global markets, and upgrade into higher value export activities through specialization. Many firms, particularly smaller enterprises, are finding that success and "creating value" may be achieved through specialization in a limited set of activities, outputs, and market niches. For example, even simple components, such as hubcaps, can be produced for regional and global markets by a supplier in Toyota's or Ford's production network. Specialized niche markets, such as organic fruits and vegetables, can be regional and even global in nature if the buyers are global retailers such as Carrefour or Tesco. However, taking advantage of such opportunities requires that enterprises be capable of delivering specified products, in the right quantity, with the required quality, at the right time, and meet an expanding range of increasingly stringent global standards on, for example, labor conditions and the environment. The payoffs from participating in global value chains can be high, but so are the requirements for entry (Box 3).

Implications for CAREC Economies

Global value chains offer significant opportunities for CAREC economies to expand non-traditional exports. They allow qualified CAREC enterprises to concentrate on specific components or activities in particular value chains in which they enjoy competitive advantages, due for example to low-cost, relatively skilled labor. They can also provide the foundations for an effective strategy for the processing of raw materials where CAREC economies are already competitive. This could include processing local cotton into textile yarn, fabrics, or clothing, within the framework of the global

Box 2. Producing Levi Jeans in the Apparel Global Value Chain

To produce a line of garments such as jeans, a global brand such as Levi might purchase South Korean yarn; have it woven and dyed in Taiwan by a subsidiary; send the fabric to be cut in Bangladesh by a subcontractor; ship the pieces for final assembly to affiliates in Cambodia and Thailand, where the garments would be matched with Japanese zippers, and deliver the finished product to geographically dispersed affiliated retailers in North America and Europe. In practice, global brands such as Levi increasingly do not manage the production process of jeans themselves. These activities are likely to be coordinated for Levi by a first-tier global supplier, such as Hong Kong-based Li & Fung. This particular set of firm-specific linkages, within the broader framework of the global apparel value chain constitutes a particular—in this case Levi's—international production network for jeans.

Source: Based on Magretta, J., "Fast, Global, and Entrepreneurial: Supply Chain Management, Hong Kong Style". *Harvard Business Review,* September-October 1998.

apparel value chain; or linking local agricultural producers to agribusiness value chains. Within the framework of global value chains higher-tier buyers can provide access to technological, managerial, and market-related know how, and to intermediate inputs. But to compete in the new world of international business, CAREC enterprises must meet demanding requirements. This poses new challenges to governments and firms, and redefines the framework for business-government relations. General policy-related implications of global value chains include the following.

Establishing a Global Value Chain mindset: A fundamental challenge for effective participation in global value chains is for CAREC governments and enterprises to develop a *'GVC mindset'* as the basis for achieving systemic efficiencies in value chains, rather than focusing only on improving individual firm-level performance. In the traditional concept of exporting, an enterprise makes a product for the domestic market then finds foreign buyers. Consistent with this, the firm has been the basic unit of analysis in looking for ways to improve export performance. But supplying international markets increasingly involves making parts of products or services to specifications given by or defined jointly with global buyers. This provides opportunities for enterprises to specialize, but requires value chain-related coordination among firms. The basic shift in perspective for both governments and enterprises is to see firm performance in the context of particular value chains.

Value chain analysis: Performance is determined not only by what happens within a firm, but also by activities and relationships outside the firm related to value chain linkages. For example, automaker Ford is dependent on first-tier suppliers, which in turn depend on lower-tier component suppliers to perform to required standards of quality and efficiency, as inter-firm logistics and import/export procedures shape critical delivery times. Competitive performance is a function of linkages among enterprises within the framework of an industry value chain, rather than only of individual firms. Value chain analysis means examining enterprises in a given

Box 3. Fresh Fruit and Vegetable Industry Global Value Chain

The fresh fruit and vegetable industry is one of the most vibrant in international trade. It is characterized by increasing concentration through global retailers/supermarkets such as Carrefour and Tesco in leading markets such as North America, Europe, and increasingly Asia. As they have expanded in size, global retailers are exercising growing influence on the industry value chain, often at the expense of traditional global food producers such as Nestle, Unilever, and Kellogg. These global retailers, although usually not directly involved in production, are exerting increasing control over product, production process, and suppliers through strictly enforced market and firm-specific standards. Along the way, they are increasingly using a smaller number of large-volume first-tier suppliers, which in turn are consolidating and rearranging lower-tier suppliers within their production network.

Firms wishing to enter the fresh fruit and vegetable global value chain must be able to provide the necessary scale, control (traceability), quality, price, reliability of delivery, and innovation capability before being considered a potential supplier. This requires efficient logistics systems and import/export procedures to be in place in given countries; along with business development services that support the acquisition of key information and skills by local producers.

As a consequence, both potential payoffs and barriers to entry have increased significantly in the fresh fruit and vegetable industry value chain. Those producers able to upgrade production and management systems and meet requirements can access expanding international markets, realizing growth in scale and revenues, and opportunities for upgrading. For example, the trend to product differentiation such as organic produce is creating significant opportunities for qualified producers to serve niche markets that are regional or even global in nature. However, suppliers unable to meet the necessary requirements increasingly find themselves in stagnant, uncertain, unprofitable segments of the business.

Vertical and horizontal cooperation through enterprise clusters can support the participation of CAREC enterprises in global value chains

chain and linkages among them to see how and where they can be strengthened to gain production and marketing efficiencies; or to enable a more effective vertical and horizontal flow of information, innovation, inputs, and resources. Focus is also on more general factors influencing performance in particular value chains, including the related legal, regulatory, and policy environment; and the availability and quality of support services such as financing, equipment, training, and information technology. This analysis can reveal constraints on value chain-related performance that may require attention such as inter-firm logistics, particular import-export procedures, or more effective firm-level cooperation through enterprise clusters.

Opportunities for new entrants: In an increasingly wide range of industries it is now possible for enterprises, however small, to become internationally competitive based on a single function or a small number of functions/activities as suppliers in global value chains. Similarly, it is possible through participation in global value chains to achieve large-scale exports of specialized outputs, such as organic fruits and vegetables, in niche markets that are regional or even global in scale.

Opportunities for value creation: In a world of global value chains it is not the industry or sector that is most important, but a firm's core capabilities in a particular industry value chain. For example, a competitive supplier of hubcaps or fan belts or zippers can achieve significant success in regional or even global markets. Value creation is not linked only to final products and brands: opportunities for value creation exist anywhere along the industry value chain—in any industry—through specialization and upgrading. Enterprise-level upgrading requires access to information, technology, and finance; and is closely tied to incentives that encourage or discourage learning by lower-tier suppliers within value chains.

"Match the best, or outsource to the best": To be competitive, enterprises—both small and large—have to continuously match their performance to the "best-in-class" for each activity, function or output such as manufacturing, design, logistics, or marketing. Unless they are able to "match the best" they are unlikely to compete effectively on international markets as suppliers in global value chains given sourcing options available to global buyers in most industries.

Cooperate to compete: Individual small- and medium-scale enterprises may face significant constraints in responding to sourcing opportunities provided by global value chains. However, vertical and horizontal cooperation through enterprise clusters can provide a potentially effective mechanism to achieve collective efficiencies through joint action, and support the participation of CAREC enterprises in global value chains. Vertical linkages are relationships among firms at different levels in the value chain, for example between suppliers of inputs and components, assemblers, and distributors to final markets. Linkages among vertically related firms can improve enterprise access to new markets, skills, technology, information, and knowledge. Horizontal linkages among firms at the same level within a value chain can allow for volume purchasing of key inputs including equipment, raw materials, finance, and business services. It can also expand joint production capacity for meeting large orders on a regular basis through joint economies of scale; facilitate specialization in production; and strengthen bargaining power. Enterprise clusters, or cooperative groups of firms in the same or related industry value chains, can therefore play a key role in linking small- and medium-scale enterprises to international markets through global value chains.

New challenges for development strategy: Previously, development strategy targeted foreign direct investment by multinational enterprises—particularly global brands such as Toyota, Ericsson, or Motorola—as a key means for developing export capabilities. By investing in local subsidiaries and joint ventures, multinationals served as an important means for technology and skill transfer, and for accessing international markets. The challenge to firms and governments within the framework of global value chains, however, is that local producers must increasingly already have required capabilities to be even considered by first-tier global suppliers, or lead firms such as Carrefour or Nissan. This includes both firm-level capabilities, and competitive support systems such as inter-firm logistics services.

Regional Cooperation: Addressing the opportunities and challenges presented by global value chains can provide new directions for CAREC, building on the existing focus on infrastructure and trade. As trade within the framework of global value chains increasingly involves components and semi-finished goods, logistics systems are an increasingly critical element of global value chains, delivering products in the right quality and quantity, and on time. Basic transport infrastructure is no longer sufficient for competitive success. Firms in global value chains require not only low transport costs, but also a host of increasingly sophisticated logistics needs: short transit times, reliable delivery schedules, careful handling of goods, certification of product quality, and security from theft and damage. Similarly, trade regimes and procedures must facilitate intra-product flows in particular value chains. If there are cumbersome import/export procedures—rules, regulations, delays; and high import clearance charges on key inputs or high export clearance charges on outputs, it will be difficult for local firms to become suppliers in global value chains. The challenge to cooperation among CAREC economies is to move toward a more integrated approach to transport, trade, and transit—within the framework of market-oriented and relatively open trade policy regimes—focused on specific industry value chains of shared regional interest. ■

Endnotes

[1] This paper draws from, Abonyi, George, Linking Greater Mekong Subregion Enterprises to International Markets: The Role of Global Value Chains, International Production Networks, and Enterprise Clusters. *Studies in Trade and Investment 59*, United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Bangkok, 2007.

[2] See *Central Asia: Increasing Gains from Trade Through Regional Cooperation in Trade Policy, Transport, and Customs Transit*. Asian Development Bank, Manila, 2006.

[3] See for example USAID, "Trade, Micro, and Small Enterprises, and Global Value Chains", United States Agency for International Development, *micro-Report*, No. 25, February 2005; United Nations Industrial Development Organization, *Inserting Local Industries Into Global Value Chains and Global Production Networks* (Vienna, UNIDO, 2004).

[4] See for example United Nations Conference for Trade and Development, *World Investment Report 2002*. (Geneva, UNCTAD, 2002)

[5] The fragmentation of production and corresponding firm specialization in tasks is leading toward the development of a new paradigm for international trade. See for example A.S. Blinder, "Offshoring: The next industrial revolution?", *Foreign Affairs*, Volume 85, No. 2, March/April 2006.

About CAREC

The Central Asia Regional Economic Cooperation (CAREC) Program is a robust development partnership; a concrete example of countries and institutions cooperating to achieve a common purpose. The Program's overarching goal is development through cooperation, leading to accelerated economic growth and poverty reduction. By promoting and facilitating regional cooperation in transport, trade, energy, and other key areas of mutual interest, the CAREC Program helps the countries of greater Central Asia realize their immense potential in an increasingly integrated Eurasia.

The CAREC Program includes Afghanistan, Azerbaijan, People's Republic of China (focusing on Xinjiang Uygur Autonomous Region), Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, and Uzbekistan. CAREC is also and alliance of multilateral and other international agencies active in promoting economic cooperation in Central Asia, namely the Asian Development Bank (ADB), European Bank for Reconstruction and Development, International Monetary Fund, Islamic Development Bank, United Nations Development Programme, and World Bank. ADB serves as the CAREC Secretariat.

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