

**Global and Regional Production Networks and their Implications: Regional
Infrastructure and Logistics Services with Special Reference to the Clark-Subic
Logistics Hub**
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I. LOCAL AND REGIONAL PRODUCTION NETWORKS

A. Evolution of production and supply chains and networks

Many industries have firms that tend to agglomerate¹, that is, locate very close to one another, leading to geographic concentration. Agglomeration can be caused by accessibility to a concentrated natural resource (such as energy/power, water supply, raw materials or weather) or man-made resources (air- and seaports, markets, or infrastructure), but it often feeds upon itself through agglomeration economies. However, agglomeration of several firms engaged in similar or related activities at the same location are defined as clusters². While industry clustering³ and the agglomeration of firms are manifestations of economic activity, these may not necessarily be a supply chain⁴ nor a production network⁵.

The supply chain encompasses all activities of a firm associated with the flow and transformation of goods from the raw materials stage, through to end-users, as well as the association information flows” for a specific product line (Monczka, Trent, & Hanfield 2002). A manufacturing firm may strategically opt to undertake the fragmentation of its production process and outsource these activities or the performance of these fragmented parts to specialty firms external to its organization thus, forming a group of support firms linked to the production chain of the lead manufacturing firm evolving into what is generally described as a production chain network.

A supply chain network is a web of several distinct companies with specific specialization of activities that collaborate to supply a major portion of whole product to a

¹ Agglomeration – geographic concentration or groupings of firms. Agglomeration is the gathering of various firms in a geographic area not necessarily of the same product-commodity but may be of activities related or to service the non-core activities of product-commodity firms.

² Clusters are a geographically proximate group of interconnected companies and associated institutions in a particular field linked by commonalities and complementarities. Clusters encompass an array of linked industries and other entities important to competition, including government and other institutions – such as universities, standard setting agencies, think tanks, vocational training providers and trade associations (Porter, 1998); Clustering – a number of things of the same kind growing or collected together

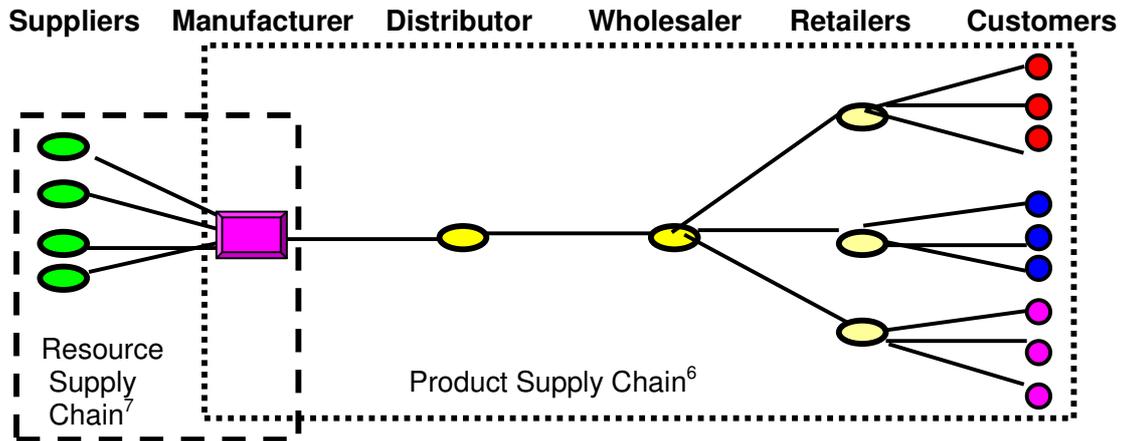
³ Industry clustering is the grouping of firms, allied businesses and buyers – all operating under an environment shaped by the government, the physical and cultural heritage and available infrastructure. It is also the grouping of interrelated or interlinked activities composed of industries, suppliers, required support services, infrastructure and institutions. Geographic focus can range from single city, region to a network of neighboring countries. Industry clustering is expected to result in a single integrated plan for the organization such as, marketing, distribution, manufacturing and purchasing along the supply chain.

⁴ Supply Chain - are all activities directly connected in series of links fitted into one another to provide, furnish, and service the inputs of resources (materials and supplies) to a process or system; system of management, production, operations and assembly, purchasing, order processing, inventory management, transportation, warehousing, and customer service.

⁵ Production Chain Network – pertains to the various activities provided by support firms externally sourced and linked to specific fragmented parts of the manufacturing process of a firm’s transformation or conversion process of inputs into a unique output of finished products.

large manufacturer, retailer and wholesaler. Supply Chain Management (SCM) is the integration as well as outsourcing of business processes from end user through original suppliers to provide products, services, and information that add value to internal and external stakeholders.

Figure 1: Supply Chain Network



Source: Enhancement of SGV framework.

B. The Transformation of the Value Chain Concept

A value chain, as indicated by Porter (1985), is a collection of activities in every business firm to design, produce, and market, deliver, and support its product. Value activities are the means by which a firm creates a product of value to its customers. Momentarily, the value chain includes the total cost of all value activities which, when subtracted from total value to customers, results in margin to the firm.

Any firm that exists needs supply chains in some form to operate. The degree to which a firm's supply chain has been transformed into a value chain determines the degree of success of the firm in terms of profitability. Firms whose supply chains are just supply chains are not achieving their potentials to add value for their customers and will financially underperform other firms who have made the transformation from supply chain to value chain.

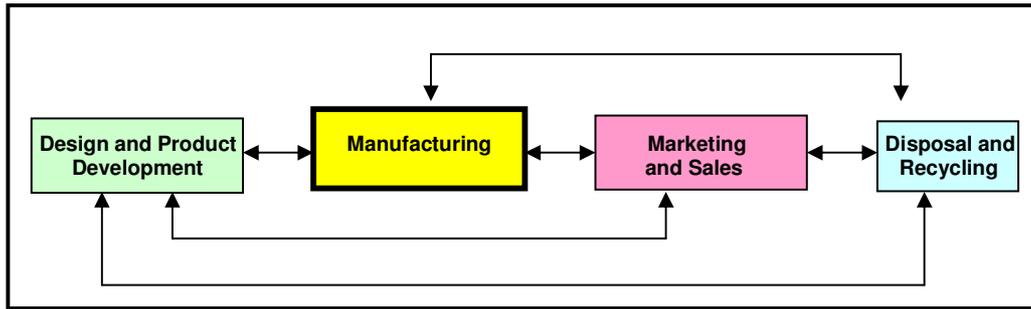
1. Value Chains

Value chains capture a sequence of related and dependent activities that are needed to bring a product or service from conception, through the different phases of production, to delivery to final consumers and after sales services, and finally to disposal or recycling.

Figure 2: A Simple Value Chain

⁶ Product Supply chain – pertains to the series of economic activities (marketing and distribution) to move the product to the final customer/buyer.

⁷ Resource Supply chain – pertains to resource materials/supplies as inputs to production process of a specific finished product.



Source: Kaplinsky & Morris, 2000

They are complex entities where production is only one of several value-added links in the chain. They may include a range of related and dependent activities within each link of a chain, and between different chains. Intermediary producers in one value chain may feed into several other value chains.

Value chains can span enterprises of local economy, a sub-national regional economy, the entire domestic economy, a supra-national regional economy, and the global economy. The structure and the dynamism of the market a value chain serves are important factors, as they influence innovation possibilities of firms in value chains. Usually low-income, price-elastic markets tend to stimulate innovation on processes, which high-income markets tend to stimulate product and functional innovation.

The global value chain (GVC) concept is increasingly complemented by that of global production networks (GPNs) of specialized independent firms, capturing complex relationships and interrelations between firms that are systemic in nature⁸. The production network concept reflects the processes of accelerated fragmentation in knowledge-intensive activities in some value chains. Indeed, product technology is becoming increasingly modularized in product design and development and modularization of technology knowledge enables that knowledge to adopt the characteristics of a standard commodity. This in turn, allows design and other knowledge-intensive activities to be separated from the whole value chain system and to be performed in different geographical locations (Ernst and Luthje, 2003). Besides high technological intensity and fragmentation possibilities in some sectors, higher value to weight of products is also used as an explanatory factor as to why production networks are more prevalent in some sectors or countries than in others.

2. Global Value Chains (GVCs)⁹ and Global Production Networks (GPNs)¹⁰

Global production networks consist of the flagship firm and local suppliers. The flagship firm defines the strategy and organizational policy of the network. There are two types of flagships. The first type form part of brand leaders, such as Toyota, IBM, and

⁸ Changes in price, products, and types of services, efficiency and technology have an effect on a market and on competition.

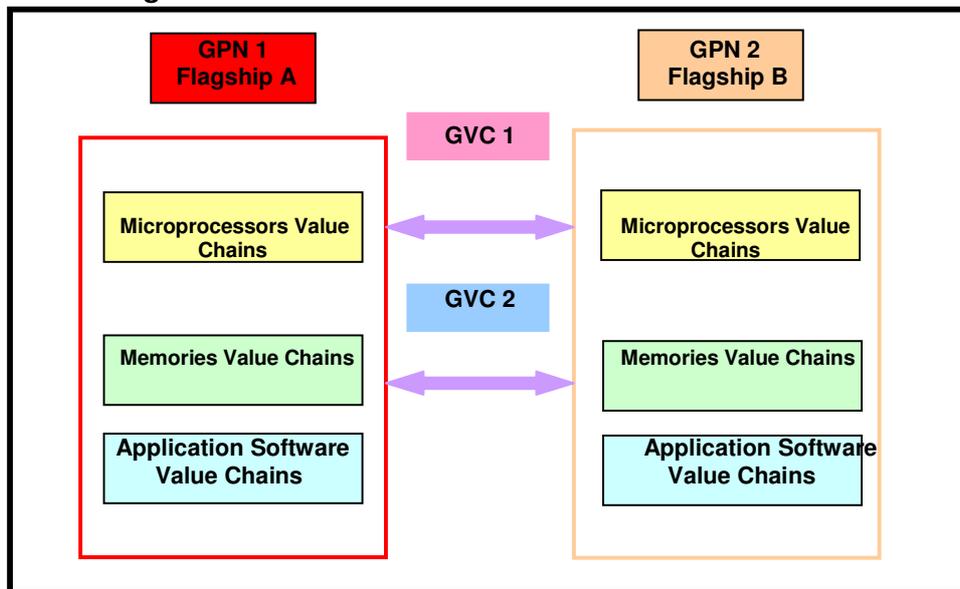
⁹ GVCs, when a firm breaks down the value chain into a variety of discrete functions & locates them wherever they can be carried out most effectively, where they can improve the firm's access to resources and capabilities, and where they are needed to facilitate the penetration of important growth markets.

¹⁰ GPNs combine large, multi-divisional multinational corporations, its subsidiaries, affiliates and joint ventures, its suppliers and subcontractors, its distribution channels and value-added resellers, as well as its R&D alliances and a variety of cooperative agreements, such as standards consortia (Ernst, 1997 and Sloan, 2000)

Westinghouse that allow suppliers to be independent but demand high performance from them. Brand leaders pursue cost reduction, product differentiation and time-to-market strategies through outsourcing volume at low margin manufacturing and related support services. The second form part of contract manufacturers, such as Solectron or Flextronics, which set up their own production networks and create an integrated supply chain, available to the brand leaders.

A firm-led GPN can participate in different value chains and a GVC can comprise two or more production networks. GPNs are usually related to a specific flagship firm (e.g. Toyota GPN) while a GVC is related to a specific product (e.g. hard disk drive GVC). A product-specific GVC can consist of a variety of GPNs, i.e., GPN participants at different hierarchical layers are under the leadership of one flagship firm. Growth, strategic direction and network position of participants in GPN depends markedly on the flagship company strategy. A company specific GPN can participate in a variety of GVCs as shown in Figure 3.

Figure 3: Global value chains & Production Networks



Source: Memedovic, 2003, UNIDO

The world's largest electronics service company, Solectron, is an example of a global production network. Customers of Solectron span five continents in more than 20 countries and its supply facilities are located where the customers' requirements can be competitively served. Solectron's GPN consists of 53 branches dispersed in the Americas, Asia-Pacific and Europe and participates in various value chains of electronic products like those in the automotive, communications, computing and storage, consumer, industrial and medical industries.

A flagship firm can be dominant in a product-specific value chain, such as the value chain personal digital assistants, while having little influence on the value chain governance. This is the case when the firm itself is a part of a larger value chain, supplying components for production of final goods. For instance, Solectron provides

car radios and navigational systems, anti-lock brakes and airbag control modules with little influence on the larger automotive value chain. (Ernst, Dieter & Linsu Kim 2002)

3. Types of Value Chains

The distinction between the two types of value chains is important because the dynamics of the relationship and inert-reactions they generate are different in each case, especially when the opportunities to leverage new knowledge and capabilities from these arrangements differ as well. Usually “easy” technologies can give rise to buyer-driven chains, while “difficult” technologies with close coordination needs, proprietary technologies and the like, to producer-driven chains.

Buyer-driven value chains consist of large buyers with core competencies in branding and marketing. They increasingly organize, coordinate and control the production, designing and marketing activities to target consumer markets in developed and developing countries, and in transition economies. These chains are typical for labor intensive industries and are highly relevant to developing countries (agro-food, textiles, garments, footwear, toys, furniture, etc.). For the producers of branded products (e.g., Nestle and Del Monte in the food value chain and Levis and Bench in garments), it is of the highest importance to capture much value added from research and development and marketing. So they are keen to maintain the value of the brand and to avoid copying, through intellectual property rights. Their strong market position is the result of the global brands and brands for a specific market or region.

Producer-driven value chains, meanwhile are composed of key producers in the chain that control vital technologies, which are of crucial importance for positioning in the final product market. They coordinate these value chains and take responsibility for helping the efficiency efforts of their suppliers and their customers. These chains are typical for medium- and high-tech industries, like automobiles, electronics, telecommunications, etc. Developing country producers tend to be part of labor intensive, buyer driven chains with the exception of the East Asian Newly Industrializing Economies (NIEs) that have move from buyer- to producer-driven chains.

C. Global Buyers and Access to Chains’ Lead Firms

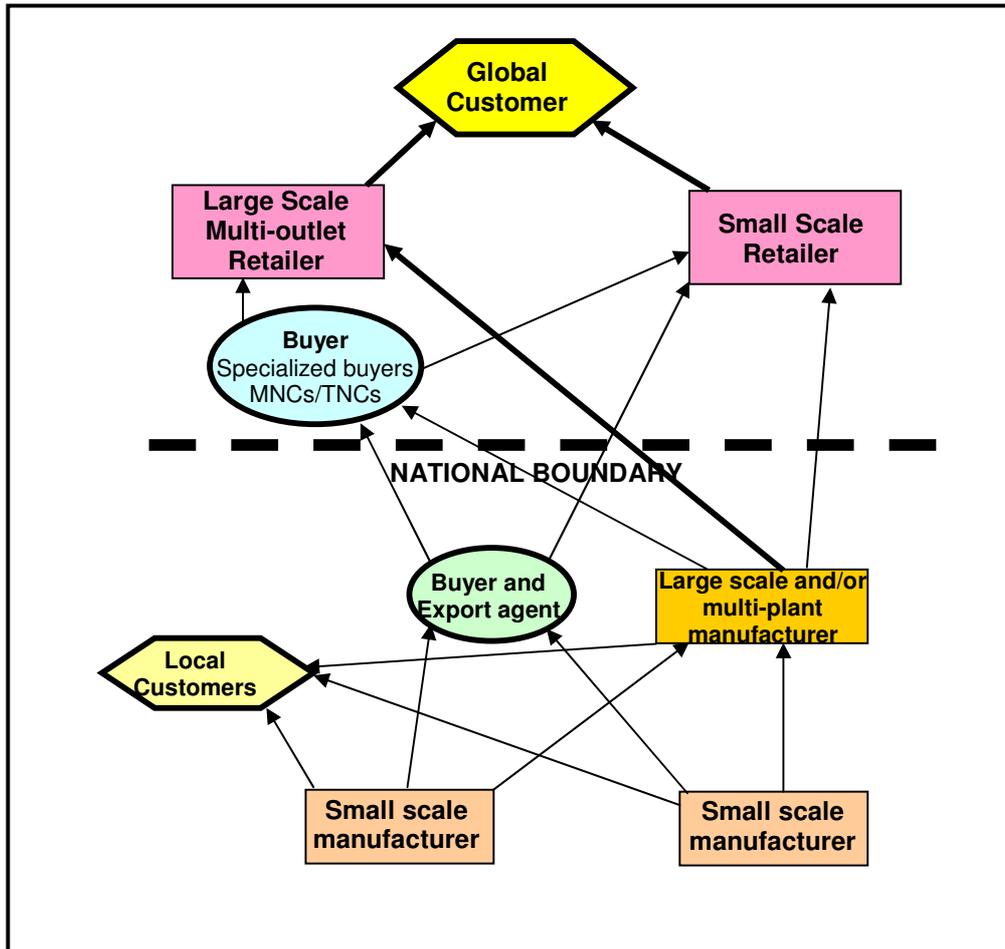
The challenges for developing country producers – local production networks (LPNs)¹¹ – is to access the chains’ lead firms, either directly as a first-level; supplier (or subaltern), or indirectly as a second-level supplier (i.e. retailers, branded marketers¹² and branded manufacturers¹³) The global buyers are the intermediaries between global consumers and the local manufacturers, thereby inserting local industries into global value chains. (Refer to Figure 4.)

¹¹ LPNs are firms participating in a series of production functions, activities and process networked to a final product in a local area primarily to deliver to a domestic market or linked to supply as inputs to other product specific LPNs

¹² Branded marketers are well known as manufacturers without factories as they are not engaged in production. Instead they design and market their goods (e.g., Nike, Adidas, and Puma or Bench).

¹³ Branded manufacturers are offshore suppliers, usually in neighboring countries with trade agreements that allow goods assembled offshore to be re-imported with a tariff charged only on the value added by foreign labor. The trend for the brand manufacturers is less engagement in production and more in marketing through capitalizing on brand names and retail outlets.

Figure 4: Linking local producers to global buyers



Source: Kaplinsky & Readman (2000)

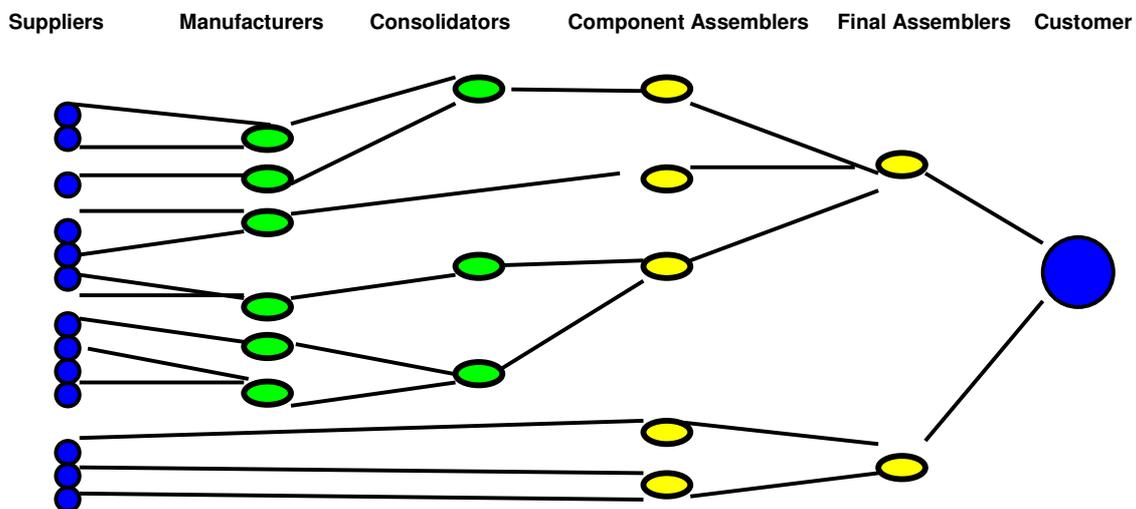
Organizers of production on behalf of retailers are increasingly powerful trade intermediaries or first level suppliers in East Asia. They carry out low-profit activities transferred from lead firms. Trade intermediaries are independent companies matching domestic manufacturers and foreign buyers. They export, import, and engage in third country trading (supplier, buyer and broker all being from different countries) of goods and services. Logistic capabilities are important for these firms but also the ability to play the management-coordinating role.

D. Production Network Analysis – Conceptual Framework

The Production Network analysis focuses on how a lead firm's production network is organized; how it is dispersed across firms and borders and how technology is transferred among network participants. Local enterprises need to possess high technological capabilities to be included by a lead firm in its local, regional or global production network. Once selected, participants can benefit from the network capability formation and development, which is the core of the strategy adopted by a lead firm to raise the competitiveness of its network.

The classical view of LPNs is that these are basic units of the region or local area. This view is a static framework, portraying the LPN as a given source where the technological development is secured through external factors. This view emphasizes that LPNs are developed through the quantitative growth of their available sources, especially from the “reservoir” of human sources. The local area/territory does not represent a special source as such, it may only represent a market area of doubtful attraction for investments. The local production units are linked to the market through traditional supply chain as shown earlier in Figure 1. However, the dynamic view of LPNs and their development can be assigned not only on the basis of the quantitative growth, but also on the basis of qualitative development of existing regional scope, which provides additional production facilities. The local production units interact and support each other to the supply chain as a network as shown now in Figure 5.

Figure 5: LPNs and Regional-Global Production Network

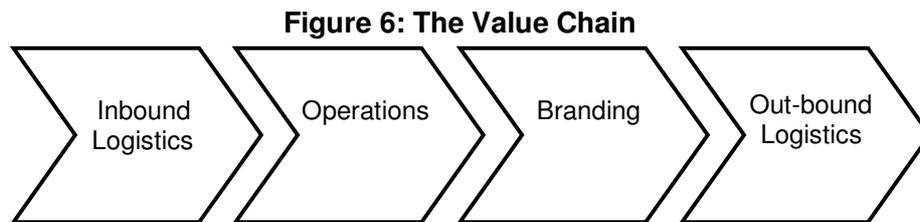


Source: Enhancement of SGV framework

This point of view of an industrial LPN area is not only assigned with products, which are produced there, but also involves a “local network economy” i.e., a wider region with existing services and other products (machinery, repair shops, marketing companies, financial services, consultancy and so on) which contribute to lower transaction costs. These LPNs are based on a new form of the socio-regional organization; they are geographical areas, where not only geographic but also economic and social conditions contribute to their development. It is enabled by sound inter-enterprise alliances and partnerships.

New models of production, consisting of networks of specialized small and medium enterprises (SMEs) that are connected with large companies as main or secondary contractors, are then created on this basis. The concept of big brother-small brother can evolve as a co-operational membership to a specific supply chain. As transactions globalize, other companies in the country have to follow suit. They can start by making sure that their traditional model is as efficient as possible, and then begin seeking out partnerships and alliances, which means sharing gains and pains.

The value chain represents all the activities that take place within the firm to create value for customers. In the classical view of the organization, it can be described as purchasing (inbound logistics), production (operations), marketing (branding) and distribution (outbound logistics) as the basic steps in the value creation process as shown in Figure 6. All stages of the value chain are potentially strategically important in the sense that if a competitor consistently out-performs the other industry players in any one of the value creating activities in the chain then they are vulnerable.



The concept of integrating the upstream and downstream processes leads to a more responsive supply chain, underpinned by the need for mutual benefit through the free flow of information up and down the chain. Participating in an LPN actualizes the rationalization of the supplier base, that which is based on economies of scale and the search for continuous quality improvement and innovation. Thus, there emerges a growing inter-dependency amongst the parties in the chain-network wherein co-operation and partnership are pre-requisites for achieving a long-term mutual benefit. Allowing supply chains to operate as seamless processes requires openness, trust and willingness to share information on the cost structures. The philosophy of price reduction comes not at the expense of the supplier's margin but instead is achieved through reductions in the supplier's cost.

The foundation for suitable business relations in the LPN is trust. Trust reflects the degree of the personal reliability and reputation that each member in the supply chain acclaims. In general, it is extremely difficult if not impossible for a network member to function effectively and benefit in the long run within the network if it presents false information or gains personal favor.

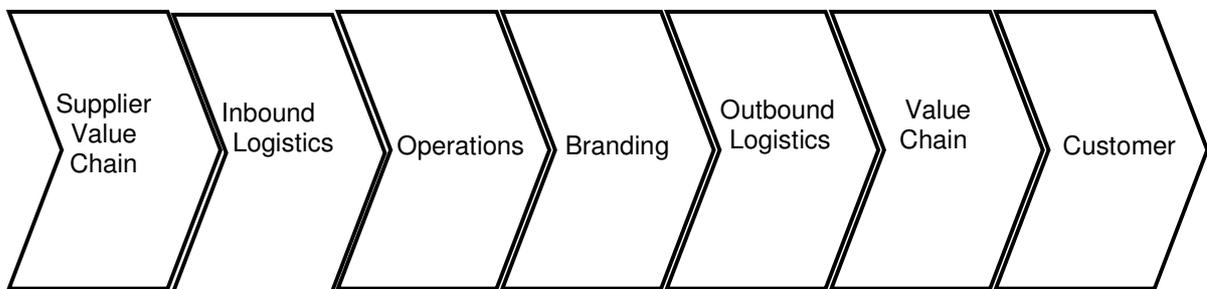
Significant cost savings may also be realized if the supplier is able to achieve better utilization of capacity through advance notification of customer requirements. The costs of the supplier (i.e., of "schedule instability") are hidden in the loss of economies of scale, quality costs and higher labor costs due to overtime and re-runs. Conventional supply chains comprising of separate corporate entities with only minimal up- and down-stream transparency of market related information, inevitably build buffers against the uncertainty of demand which are oftentimes in excess of current requirements. These changes in mindset and operational strategy had led to the realization of the concept of quick response. Also, an emerging concept of vendor managed inventory, involves a planning process through which the supplier manages the flow of the product into the customer's manufacturing or logistics system. This flow is triggered by frequent exchanges of information about the take off (point of sales) or usage of the product at the level of the customer to determine the economic re-order point and quantity to replenish stocks.

Some technical characteristics of local manufacturing networks could be common for groups of companies (bounded on the base by specific technology, design

standards of products, quality of products). Even within the range of one industrial network, a company has the tendency to be partly homogeneous and partly heterogeneous, meaning it can create new activity, new forms of leading people, new connections and so on. In order to make the LPN and local surroundings dynamic and attractive to other businesses, it is important that the balance and compensation between the local and global environments and between local and global interests be observed; otherwise the global environment has a tendency to overshadow the advantages of the local environment as a production unit.

In improving the value chain, the firm that identifies an activity where it does not have a competitive advantage in terms of cost-effectiveness, must seek a partner who could perform that activity more cheaply and/or more effectively. The organization to which these critical tasks are outsourced must not be seen as subcontractors but rather as true partners in an extended supply chain as shown in Figure 7.

Figure 7: Extended Value Chain



E. The Participation of Asian Countries in GVCs and GPNs

For many Asian firms, foreign and local buyers were a key entry point into GVCs; an essential source of skills, knowledge and new technology and an important means for marketing. Many Asian firms at first sold their goods to the large buying houses in Japan (e.g. Mitsubishi and Mitsui) and the United States (e.g. JCPenney and Macy's). The global buyers enabled local firms to get credit needed to expand their production. They also supplied technology in various forms (blueprints, specifications); information on competing goods; production techniques, and guidance on design and quality.

East Asia, without China, is now the most industrialized region in the developing world and the engine of recent industrial growth.¹⁴ The region's export structure has become more technology intensive, with the shares of medium- and high-technology intensive sectors rising.¹⁵ In 2000, China's manufactured exports expanded 26 times the value recorded in 1981. Respective export expansions of Thailand, Malaysia and Indonesia were 19, 13, and 12 times. In Indonesia and the Philippines the share of resource-based exports decreased significantly from 88 to 32 percent and from 65 to 7 percent, respectively, in 1981 and 2000.

¹⁴ China included still lags behind Latin American countries.

¹⁵ East Asia (excluding China), leads in medium and high-technology-sectors, followed by low technology and resource-intensive sectors.

China's share of medium-tech exports in manufactured exports rose from 14 to 21 percent (in 1981 and 2000). The respective rises for Indonesia, Malaysia, the Philippines, the Republic of Korea and Thailand were from 2 to 18, 6 to 12, 29 to 34, 19 to 24, and 4 to 10 percent. For comparison, this share decreased for Japan and the first group of Asian Tigers (i.e. Hong Kong and Singapore) for the same period. The rises in the share of high-tech exports in manufactured exports were the most striking in the Philippines, from 4 to 70 percent, and in China, from 3 to 24 percent.

Increasingly, Asian countries and producers have been drawn into the merging GVCs and GPNs, serving wider markets, often on a global scale. Their participation in these new global business formations is continuously rising and deepening. This is especially true for East Asia and China. Capsule analysis of three sectors: Textile and Clothing (T&C); electronics; and automotive are presented:

1. Textile & Clothing

The relocation of segments of entire production processes started in the 1950s, with the move from North America and Western Europe to Japan. During the 1970s and 1980s, the center of clothing production switched to Hong Kong, Taiwan, and the Republic of Korea. In the late 1980s and early 1990s, the bulk of world T&C production was transferred to mainland China and several South East Asian countries like Indonesia, Malaysia and the Philippines. In the late 1990s, other Asian countries joined the list. Recently, the participation in GVCs of the established Asian players has decreased while that of China and other Southeast Asian countries has risen.

In 2000, the Philippines, Vietnam, Bangladesh, and Sri Lanka each reached US\$1 billion in exports of T&C. Over the decades, Asian producers have been increasingly able to take part in relational value chain interactions that call for full package production and more autonomy (i.e., capabilities to interpret designs, make samples, source the needed inputs, sustain product quality, meet price and on-time delivery requirements). This has allowed the generation of backward linkages with the domestic economy and to develop a more integrated domestic industry. This has also allowed knowledge exchange (especially of tacit knowledge) for building personal relationships and for learning how to make competitive consumer goods for the international market (Gereffi, et al 2002).

2. Electronics

Participation of Asian countries in the electronics global production system started in the 1960s, when Japanese firms began licensing to local firms in Taiwan, Hong Kong and the Republic of Korea. In the late-1960s, American and European firms began to relocate labor-intensive processes of semi-conductor assembling to East Asia, particularly in Singapore, Hong Kong, Malaysia, and Thailand. Involvement of the Asian countries in this value chain has continuously deepened. For instance, until the early 1980s, practically the entire production of hard disk drives was done in the United States. Today, Southeast Asia produces 70 percent of all production of hard disk drives. Indeed, the output of the Asian plants of Seagate (the industry leader in hard disk drives) accounted for 64 percent its worldwide production in 2000. Seagate has also begun relocating its higher value added activities like engineering, R&D, and business services to the region (Ernst and Luthje, 2003).

3. Automotive

Since 1950 until the late 1980s, the automotive industry in many developing countries used import-substitution industrialization policies to promote the growth of the domestic activities in the sector. But, since 1990s, trade liberalization policies pursued by developing countries have changed and shaped the geographical organization of the industry. Today, the automotive industry is considered as one of the most global of all industries with manufacturing process and products being performed and produced by many producers in various regions and countries around the world. Although the participation of the Asian countries in the process of globalization in this industry is still rather small in absolute terms it shows a rising trend.

II. FORCES AFFECTING THE INTEGRATION TO GLOBAL VALUE CHAINS ON INFRASTRUCTURE AND LOGISTICS SERVICES

A. Globalization

Economic “globalization” is a historical process, the result of human innovation and technological progress. It refers to the increasing integration of economies around the world, particularly through trade and financial flows. The term sometimes also refers to the movement of people (labor) and knowledge (technology) across international borders. There are also broader cultural, political and environmental dimensions of globalization that are not covered here. The term has come into common usage since the 1980s, reflecting technological advances that have made it easier and quicker to complete international transactions—both trade and financial flows. It refers to an extension beyond national borders of the same market forces that have operated for centuries at all levels of human economic activity—village markets, urban industries, or financial centers.

Markets promote efficiency through competition and the division of labor—the specialization that allows people and economies to focus on what they do best. Global markets offer greater opportunity for people to tap into more and larger markets around the world. It means that they can have access to more capital flows, technology, cheaper imports, and larger export markets. But markets do not necessarily ensure that the benefits of increased efficiency are shared by all. Countries must be prepared to embrace the policies needed, and in the case of the poorest countries may need the support of the international community as they do so (IMF, 2000).

B. Global Structural Adjustments

The World Trade Organization and free trade agreements (both bilateral and multilateral agreements) and other global forces are impacting production networks, infrastructure and logistics service providers, the customers that use these services and the government that promotes policies for investment attraction and the efficient operation of the business sectors.

As adjustments to globalization of production and trade intensify, producers or firms across the globe have been subjected to continuously growing competitive pressures thereby undertaking industrial adjustments and upgrading to achieve a comfortable level of competitiveness. Firms have learned to take advantage of

manufacturing cooperation, extension of production, common research, obtaining possibilities of entering the market, as well as from the division of financial risk among partners. This structural adjustment took off from the earlier drivers for competitiveness i.e., specialization, mass production, creating market niches and product-technology breakthroughs that made way to synergy. Likewise, as a result of this synergy, fragmenting the activities in all stages of the production value chain became possible as technological advancements accelerated with increasing trade and investment liberalization. Several of the activities that can be segmented are now being performed in various LPNs, located across the globe and reintegrated again through production systems of GVCs and GPNs.

To broaden the scope of getting gains from an open trade and investment regime, participating in GVCs and GPNs obviously becomes the best option, and thus, diminishes pressures from protectionism. Producers in developing countries, for instance, can now enter foreign markets, earn foreign currency, diversify their exports, and most importantly, get new skills, knowledge and technology. All of the aforementioned are key factors for productivity growth. Latecomers from developing countries can also exploit the advantage of their late arrival by tapping into new technologies, rather than having to retrace the entire previous technological route. Firms in developing countries participating in LPNs can accelerate the upgrading of their productive and innovative skills by using the relationships with foreign partners in GVCs and GPNs. These local firms can bypass some of the frozen organizational inertia that restricts their more established competitors by using various forms of collaborative processes to help with the developmental process.

After the growth strategies of clustering and agglomeration has attracted firms to locate in one-stop processing zones, i.e., industrial parks. Few firms might realize the need to join network structures of specific supply chains. This form of organizational structure attracts not only foreign multinational companies operating in different countries (including the Philippines), but also island-based firms, which take advantage of the regions' resources and investment climate. For large companies, which are organized according to the classical principles, the tendency towards the common network connections is evident. They have relatively great degree of autonomy and because of that; they can adapt flexibility to regional or global markets. These network structures, in general, are characterized as long term agreements among firms, enabling them to access, obtain and maintain competitive advantages in relation to other companies not belonging to the network, thereby enhancing synergistic results. Network agreements are characterized by a specific system of values which is based on mutual trust, i.e., a compulsory condition for existence and stability of the network and common responsibilities.

This agreement or contract may be formal or informal, based upon norms typical for every network. A basic indication of the specific system of values is the common support and willingness of individual participants in the network to abnegate short-term advantages on behalf of the common development. The network form of arrangement of the company enables the firms involved to gain a lot of synergistic advantages.

As to the organizational-managerial aspect of network structures, managerial parts are different than in the classical organization, which has hierarchical structure. In network structures a management center is created for the purpose of coordination, linking all cooperating firms on the basis of the contract. Management responsibility is

divided among all parts of the network. In the network structure, centralized control of operations does not exist (in contrast to the hierarchical structure) and the main company only coordinates the plans and activities. The network represents a flexible structure allowing companies to gain competitive advantages; it creates relationships of cooperation among the new partners. Within the network structure the borders between structural parts are not as direct as in other forms of organization structures. Moreover, the process receives additional impulses through shared use of the information infrastructure and information networks, which are the common property of the network.

Lastly, this route of integrating into the global economy also exposes a host country's macroeconomic and business conditions to the stronger international competitive pressures, stimulating a country to make better physical infrastructure, utilities, logistical facilitation, attractive investment climate, and to create a more business friendly environment. Once a participating country starts reaping the benefits from these opportunities, trade and investment distortion policy measures become a less attractive option.

C. Globalization Drives Logistics Outsourcing

Competition, globalization, technology, pacing and the emergence of capital markets have all had a major impact on business today. As organizations look for an alternative route through today's competitive white water, many companies are turning to specialty providers to outsource their non-core functions. All businesses consist of three types of functions: Core Functions, Tactical Non-Core Functions and Strategic Non-Core Functions. Core Functions are an organization's core competency—the unique business functions that makes the organization successful, the critical activities that allow it to thrive. For example, a research organization may also do some manufacturing and distribution but their core function is research because that is the primary service the company provides (Thomskin, 2003).

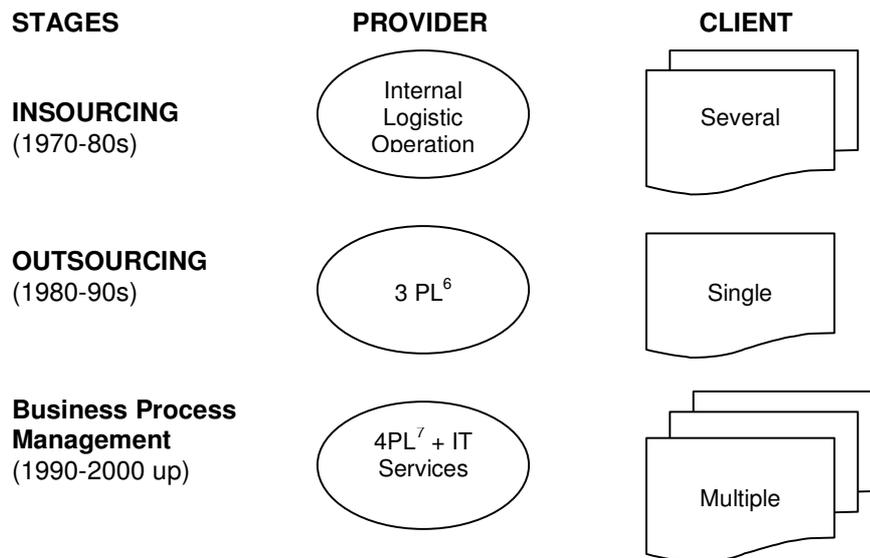
But companies cannot exist by only performing core functions. Other functions are necessary too—payroll, audit, janitorial and food service are tactical non-core functions that are absolutely necessary, but should not, by definition, have an impact on the bottom line. Certainly you can argue that if your food service providers poison your staff, your landscape providers destroy vital electrical cables/connections, your payroll providers embezzle your funds, your auditors allow others to misreport your income or the janitorial staff throws away important papers, these things will certainly impact your bottom line. Yes, these functions are important, but for them to impact your bottom line they really, really need to be done poorly.

On the contrary, logistics or manufacturing operations, information technology and marketing are excellent examples of strategic non-core functions that, if done well, can have a major impact on your bottom line. The reason for these impacts on your bottom line is both the much greater costs of these functions versus tactical non-core functions as well as the implications to the success of the business if these functions are not done well as compared to the tactical non-core.

All stages of the value chain are of potential strategic importance in the sense that if a competitor consistently outperforms us in any one of the value-creating activities in the chain then he is vulnerable. In logistics outsourcing, the strategic key is for

business consolidators (an evolving breed of logistics service providers in the 3PL¹⁶ and 4PL¹⁷ category) to create the enabling business environment that will draw-in business opportunities to attract globally dispersed customers to exploit and translate these opportunities into profitable activities. A simple evolution in supply chain outsourcing is depicted in Figure 8.

Figure 8: Evolution of Supply Chain Outsourcing



D. Regionalization

Regionalization can be thought of as the growth of societal integration within a given region, including the undirected processes of social and economic interaction among the units (such as nation-states; see Hurrell 1995a, 39). As a dynamic process, it can be best understood as a continuing process of forming regions as geopolitical units, as organized political cooperation within a particular group of states, and/or as regional communities such as pluralistic security communities (see Whiting 1993, 19).

Similarly, the term regionalism refers to the proneness of governments and peoples of two or more states to establish voluntary associations and to pool resources together (material and non-material) in order to create common functional and institutional arrangements. Furthermore, regionalism can be best described as a process occurring in a given geographical region by which different types of actors (states, regional institutions, societal organizations and other non-state actors) come to share certain fundamental values and norms. These actors also participate in a growing network of economic, cultural, scientific, diplomatic, political, and military interactions (Mace & Therien 1996, 2).

Regionalization (the tendency or process to form regions) and regionalism (the purposive proneness to create regional institutions and arrangements) find expression in

¹⁶ 3PLs are Third Party Logistics Service Providers specific to a client.

¹⁷ 4PLs, on the other hand, are Fourth Party Logistics Providers which are consortia of 3PLs handling multiple clients.

economic and security domains, including convergent motivations toward both political/security and economic forms of integration. Some of the common factors that might explain the trend toward economic regionalism ('the new regionalism' of the 1980s and 1990s) are the effects of the end of the Cold War, the shifting balance of world economic power, the uneven effects of globalization, and the shift toward outward-oriented economic policies in many parts of the developing world (Fawcett 1995, 25).

E. ASEAN Integration

American businessmen are long-term investors in ASEAN because the region is a key market for American companies as it offers opportunities for strong growth. ASEAN is the third largest overseas market and the US is the top foreign investor in its members, which has reached more than US\$88 billion. This is larger than the US investments in China, Mexico or Brazil. Thus, American access to and participation in ASEAN markets is mutually important to the economic futures of both US and Southeast Asia regional countries.

A number of US transnational and multinational corporations have production networks in the ASEAN region because of the economic advantages such networks offer. The Philippine government has recognized this as a major consideration in developing a strategy to attract FDIs as an inward investment location, by focusing on the infrastructure that are already in place in the country when the United States Armed Forces turned over its military installations to the government and thus brought about the creation of a growth corridor bridging the Clark Air Base, the Cubi Point Naval Air Station, and the Subic Bay Naval Station.

Most MNCs appears to build clusters of subsidiaries within the Asia Pacific Region, allowing them to switch production of a certain product to another subsidiary when there is a problem such as shutting down factories, strikes, capacity shortages, political-economic upheavals, etc. in one of their subsidiary. The regional or global supply chain is constantly monitored and attempts to manage/consolidate demand and ensure balanced capacity load across subsidiaries in the respective regions is pursued. MNC locators, have to rely on the 4PL logistic providers and the degree of infrastructures in a country location to ensure that capacity loading dovetails to abrupt fluctuations in demand.

The US firms view ASEAN as one region, rather than a collection of individual sovereign countries. The political structures of these countries are not likely to change for some time although moves toward monetary integration similar to the European Union may be considered in the near future as ASEAN countries are bound together in economic terms. There is an overwhelming economic self-interest for all ASEAN countries to work together to bring down trade barriers and promote economic growth and cooperation. Indeed, RPNs depends upon free movement of goods and services throughout ASEAN, and they bring great efficiency savings and enhanced productivity and competitiveness.

The US-ASEAN Business Council has long supported the ASEAN Free Trade Area and other initiatives to promote regional economic integration. The Council and its member companies have pointed out that with ten integrated markets with a population exceeding half a billion people, ASEAN will be much more attractive to large-scale direct investment than it would as a collection of relatively small, segmented markets.

F. Drivers for Integration in the ASEAN

Drivers for economic integration in ASEAN can be surmised into three processes namely:

First, market-led process through the international production sharing of MNCs, reduction of barriers to trade and investment were made possible by the unilateral, bilateral-FTAs and multilateral agreements-MTAs, and the rapid development of multi-modal transport and logistic providers, and information and communication technology.

Technological advancements in logistics make fragmenting the operational activities in all stages of a production value chain practical and possible. Some activities can be performed in different locations and integrated again into global value chains-GVCs and global production networks GPNs.

These fragmented production systems can create opportunities for developing country producers to upgrade their technological infrastructure and industrial capabilities and to integrate into the global economy as an active participant. Linking to global value chains can provide better access to markets and to knowledge of leading players.

Under these offshore production schemes, different stages of production are spread to locations that offer significant advantages in production costs and access to export markets.

The labor-intensive segment of the production chain usually locates in developing countries where wages are low vis-à-vis productivity. International production sharing is commonly applied more in labor-intensive products such as electronics, semiconductors, automotive, and garments.

The integration of ASEAN into the global/regional production network was the result of the industrial restructuring of the newly industrialized economies (NIEs), who were initial hosts of the offshore production of Japanese and American firms. When wage rates vis-à-vis productivity in the NIEs began to rise, these economies lost their comparative advantage in the labor-intensive segment of the production chain, causing MNCs to relocate their production offshore to ASEAN, China and other developing countries in South Asia.

The significant improvement of economic performance in East Asia and the intensification of economic linkages among economies in the region was a result of this integration. The domestic policies of the ASEAN performed a crucial role in shaping the member economies' capacity to take part in the global production chain.

Generally, the unilateral trade and investment liberalization policies of the member economies fostered domestic efficiency and produced competitive industries. However, it is important to note that the integration of the priority sectors is strongly determined by the members' sectoral policies. Greater openness and liberalization in sectoral policies is noted in the electronics and ICT sectors while protectionism policies are observed in the textiles and garments industry.

The second driver is institution-led process through free trade and investment agreements and functional cooperation arrangements. Barriers to intra-regional trade were gradually reduced as the ASEAN Free Trade Area (AFTA) policies attracted the FDI-driven production networks. In reducing the trade barriers across the region, AFTA created an environment where MNCs are freer to locate their cross-border bases and Lens. The integration of the priority sectors is strongly determined by the members' sectoral policies and economic activities, allowing them to exploit factor price differences within the region. Barriers to investment were gradually eliminated and rules and policies on investment were liberalized through the ASEAN Investment Area (AIA). The intra-regional restrictions on trade in services are also gradually liberalized under the ASEAN Framework Agreement on Services (AFAS). The ASEAN also implements a number of regional cooperation programs, particularly in industrial cooperation and harmonization of policies and institutions, to make the region more attractive to foreign direct investment.

The third driver is a private-led process in the form of sub-regional economic zones (SREZs). SREZs enhance the attractiveness of investment combining comparative advantages, and exploiting economic complementarities and economies of scale. Unlike institutionalized arrangements, sub-regional economic zones are private sector-led, with the role of national and local governments being limited to facilitating business through appropriate policy frameworks and investment promotion. The focus of cooperation is mainly on investment and infrastructure provision rather than specifically on trade liberalization.

Foremost among the SREZs are (i) Indonesia-Malaysia-Singapore Growth Triangle; (ii) Indonesia-Malaysia-Thailand Growth Triangle; (iii) Brunei-Indonesia-Malaysia-Philippines East Asia Growth Area; and (iv) Greater Mekong Sub-region

G. Privatization

Privatization is the economic process of transferring property, from public ownership to private ownership while the opposite process is nationalization. In theory, privatization helps establish a "free market", as well as fostering capitalist¹⁸ competition. Conversely, socialists¹⁹ view privatization negatively, arguing that it reduces state control of essential services.

In general, nationalization was common during the immediate post-WW2 period, but privatization became a more dominant economic trend (especially within the United States and the United Kingdom) during the 1980s and '90s. This trend of privatization has often been characterized as part of a "global wave" of neoliberal²⁰ policies, and some observers argue that this was greatly influenced by the policies of Reagan²¹ and

¹⁸ Capitalist competition, in its economic sense, refers to free market competition. A broader definition of capitalism is that social system based on the principle of individual rights (Capitalism.org, 2004)

¹⁹ Socialists, people who view the means of production are owned by the workers rather than by a rich minority of capitalists or functionaries. Such system of ownership is both collective and individual in nature (Mcmullan, 2005).

²⁰ Neo-liberalism, in theory, is essentially about making trade between nations easier. It is about freer movement of goods, resources and enterprises in a bid to always find cheaper resources, to maximize profits and efficiency

²¹ Ronald Wilson Reagan, 40th President of the United States.

Thatcher²². The term “privatization” was coined in 1948 and is thought to have been popularized by *The Economist* during the ‘80s.

Privatization is frequently associated with industrial or service-oriented enterprises, such as mining, manufacturing or power generation, but it can also apply to any asset, such as land, roads, or even rights to water. In recent years, government services such as health, sanitation, and education have been particularly targeted for privatization in many countries.

The basic argument given for privatization is that governments have few incentives to ensure that the enterprises they own are well run. On the other hand, private owners, it is said, do have such an incentive: they will lose money if businesses are poorly run. The theory holds that not only will the enterprise’s clients see benefits, but as the privatized enterprise becomes more efficient, the whole economy will benefit. Ideally, privatization propels the establishment of social, organizational and legal infrastructures and institutions that are essential for an effective market economy²³.

Advocates of privatization argue that governments run businesses poorly for the following reasons:

- i) They may only be interested in improving a company in cases when the performance of the company becomes politically sensitive.
- ii) Conversely, the government may put off improvements due to political sensitivity, even in cases of companies that are run well.
- iii) The company may become prone to corruption; company employees may be selected for political reasons rather than business ones.
- iv) The government may seek to run a company for social goals rather than business ones.
- v) It is claimed by supporters of privatization that privately-held companies can more easily raise capital in the financial markets than publicly-owned ones.
- vi) Governments may “bail out” poorly run businesses with money when, economically, it may be better to let the business fold.
- vii) Parts of a business which persistently lose money are more likely to be shut down in a private business (this is conversely seen as a negative by critics of privatization).
- viii) Nationalized industries can be prone to interference from politicians for political or populist reasons. Such as, for example, making an industry buy supplies from local producers, when that may be more expensive than buying from abroad, forcing an industry to freeze its prices/fares to satisfy the electorate or control inflation²⁴, increasing its staffing to reduce unemployment, or moving its operations to marginal constituencies, these can cause nationalized industries to become uneconomic and uncompetitive.

²² Margaret Thatcher, Prime Minister of the United Kingdom from 1979 to 1990.

²³ Market Economy, the term describes an economy where goods and services are traded. As things are being traded, rather than freely given, these things have *exchange value*. That is, what is being purchased has a value in terms of being able induce one to part with something of value in exchange (Wikipedia).

²⁴ In economics, inflation is an increase in the general level of prices of a given kind.

In particular, the first and last reasons become important because money is a scarce resource: if government-run companies are losing money or if they are not as profitable as possible, this money is unavailable to other, more efficient firms. Thus, the efficient firms will have a harder time finding capital, which makes it difficult for them to raise production and create more employment.

Ideally, privatizations are organized as auctions where bidders compete to offer the state the highest price, creating real value that can be used by the state as investment capital. The state can also allow foreigners to buy privatized enterprises, whereby an outside investor invests the capital needed to upgrade and modernize the firm, making it internationally competitive.

H. Privatization and Global Integration

Participating in an international supply chain frequently limits performance in many attributes associated with agility, which is the ability to respond aggressively and rapidly to business aberrations. Some firms in an international value chain may find difficulty adjusting its structure or geographical set-up in reacting to changes in the manufacturing or political environment if the firm has local production units in more than one continent.

The organization and management of a supply chain consisting of LPNs scattered in different countries would not be the same as managing a domestic supply chain. A complex form of infrastructure support is needed to respond to the logistic decisions to achieve the competitive advantage of proximity and resource utilization where the key considerations are in the following:

- i) Efficiency considerations;
- ii) Cost-Productivity considerations;
- iii) Investment considerations;
- iv) Labor-Skill considerations; and
- v) Systems and operating know-how (Management and organizational systems)

Realizing the challenges faced by globalization and regionalization forces, most governments are increasingly privatizing key services (growth areas, ports, infrastructure, and utilities) both to improve efficiency levels and to make their countries attractive for investment for global corporations; LPNs must link and participate in the global supply chain to sustain its competitiveness.

There at least two important issues inherent in managing an international supply network, these are:

- i) Configure the value chain activities across the international network of production units.
- ii) Determine the most appropriate way to manage the value chain activities in order to meet demand and achieved advantages from the global network.

Several authors have highlighted that understanding the configuration, which describe the key members of the chain, main processes and contributions among the members, relationship types and integration elements acting on these processes, is necessary to understand and analyze a supply chain or network

As a good supply chain structures can provide the overall chain with competitive advantage, it can also become a limiting factor. Developing international supply chains may increase firms' business complexity and expose them to greater risk and vulnerability. (Houlihan, 1987)

I. Enhancing ASEAN Competitiveness

Productivity and competitiveness should be equated in relative terms. Competitiveness relates to measures that firms, industries, regions and the government should cautiously adopt to foster, maintain and increase productivity on a sustainable basis. It is dependent on the continuous upgrading and development of human resources, capital and natural resources and relates to induced and evolving technological change and innovation. Competitiveness applies further to the changing organizational structure and behavior of firms, industry and government – both locally and nationally and refers to creating and strengthening inter and intra-industry and international linkages.

Countries that have low labor costs may have a comparative advantage. But many of these countries are caught in a cycle of poverty and slow development and that does not necessarily mean they are competitive. Comparative advantage is not competitive advantage and the literature expounds and features countries competing with one another, but it is firms and industries, and not nations that compete in the global market. The government can induce and condition the domestic market and the business environment to facilitate international competitiveness and thus, emphasis for competitiveness should be on facilitation.

Experience has shown that competitive advantage is created in industries, not in economies as a whole. Whereas comparative advantage does not necessarily lead to competitive advantage, it can be the basis on which to build a competitive advantage. Thus, competitiveness is achieved through a continual process of innovating, upgrading and increasing value-added activities. Competitive pressures play a critical role both in the domestic and international markets, but it is the local actors that are important determinants of competitiveness.

Strategically, the ASEAN region is positioned between two global giants i.e., India and China. To achieve an effective level of competitiveness, the economic challenges that the ASEAN region faces are enormous in terms of infrastructure and technology adjustments. With the formal admission of China in the WTO, China has now become a very attractive target for foreign investors. Even though China has only attracted \$11 billion of American investments, China is quickly catching up to ASEAN. It is imperative for ASEAN to compete for FDI by making the region a more competitive, open and bilateral investment area.

At the firm level, concerns in the ASEAN region are emerging with regard to the need for industry-specific training, and the lack of marketing skills. It now seems important to develop a framework for doing precisely this. A useful analytical framework needs to provide for a three-tiered analysis.

- i) The first level is the individual value chain. This analysis will identify the key actors in the chain, estimate the value added at each stage, establish the chain's spatial dimensions, and determine its mode of governance.
- ii) The second level of analysis is the production network. Here the focus is on connections between value chains. The analysis will identify the linkages between firms and subsidiaries operating in and among different locations and will seek to determine the impact of the linkages on the chains making up the network.
- iii) The third level of analysis deals with the institutional framework. It will focus on the three main groups of institutions: firms, markets, and the socio-political-economic context. The aim at this level is to see how the institutional arrangements facilitate or impede the functioning of the production network and its constituent value chains.

When combined, these three levels of analysis should enable researchers to see not only what is happening to industry in ASEAN countries, but why it is happening and what needs to be done to improve the situation.

III. THE CHALLENGE OF PRIVATIZATION

The Philippines has taken pains to re-structure the financial institutions and undertake divestment reforms of government corporations (GOCC) by applying aggressive privatization policies through the Asset Privatization Trust (APT). Although, its conversion performance was dismally enmeshed in scandals and legal impediments, the financial burden of non-performing assets and resources reduced the debt service component of the national budget. In a number of cases, the privatization of service utility assets was captured by booty capitalists and oligarchies to the disadvantage of public service.

In contrast, policy changes across political regimes has apparently telegraphed confused signals as to the government's growth strategies and privatization priorities as in the case of Ninoy Aquino International Airport Terminal 3 takeover affecting the investment climate of the country.

A. Competition Policy

The passage of a comprehensive competition policy would provide an appropriate legislative framework for the implementation in the Philippines. The creation of Philippine Competition Commission (PCC) and Special courts would provide the enforcement mechanisms. However, this framework and mechanisms alone are not sufficient.

The critical issue is the current lack of experience and knowledge in competition policy matters in the Philippines, particularly in the judiciary. It is one thing to know that a firm in a position to control the relevant market for a particular good or service is not permitted to limit production for the purpose of raising prices, but quite another to prove that the firm in question, firstly, has control of a market and secondly, reduces production to raise prices, and another still to adjudicate in a case where such accusations are made. While a background in law may be required, and even necessary for investigation and prosecution functions, a background on economics, industrial organization and management may be essential for the difficult tasks of analyzing complex industrial and

market structures and ascertaining whether trade practices and/or anti-competitive practices have been committed.

Continuing efforts and resources should be made in advocating the cause of competition and in creating a competitive environment. Consumers and producers alike need assurance that the law would be applied without discrimination. Advocacy should initially be directed towards consumer groups and business associates for consumers must be made aware that competition is the best protection for consumer's rights. The latter, meanwhile; will need assurance that a competent authority can inform society not only about the benefits of competition law but also be seen as applying the law correctly.

The government is aware that any effort to increase the level of competition in the domestic economy is bound to meet with considerable resistance from the handful of rent-seeking families/business groups that have always had privileged access or control over the Philippine economy. They will continue to resist sort of change that will threaten their privileged positions and indeed, several interest groups hold controlling interests in numerous sectors (agriculture, manufacturing, energy, power generation and distribution, banking, etc.) and powerful political and media connections, thereby compounding the difficulty of pushing for reforms.

There is a growing movement toward free trade, which is a move towards General Agreement on Tariffs and Trade (GATT) principles. In contrast, the path towards bilateral and regional arrangements diverges from GATT. Economies like the Philippines may find it more advantageous to transform their rigid market structures and heavily regulated industries into more open and non-discriminatory frameworks. As each country pays attention to liberalization and deregulation of its domestic economies, the formation and functioning of international market mechanisms will follow.

It is generally acceptable that harmonization/internationalization of competition policies should not be done at this stage when most developing countries are still establishing a competition culture within their territories and are just embarking on educational and information programs.

B. National Strategy for building production capacity and capability

The Philippine Medium Term Development Plan (MTDP) identifies the priority transport infrastructure projects with particular emphasis on developing infrasturcutre. Furthermore, supports the development of new centers of government, facilitate access to tourist areas, and support the affirmative action for peace and development in Mindanao and other highly impoverished areas. The Nautical Highway with Roll On-Roll Off (RORO) vessels and ports has shown remarkable success in stimulating trade and tourism activities in coastal communities by significantly reducing the costs of transport and cargo handling. The RORO inter-island transport services, farm-to-market road infrastructure, and grains handling infrastructure, among others have complemented regionalization of LPNs within the Philippine archipelago in terms of transport infrastructure services. The Plan also identifies measures to make digital infrastructure cheaper and more accessible the across the country through lower connectivity costs, regulatory reforms, and development of the human resource skills to support the development of the ICT-related industries.

The Philippine Government has long since identified small and medium enterprises (SMEs) as the engine of growth and development for the Philippine economy. It has since given high priority to this sector for their vital role in generating much needed employment opportunities especially in the countryside. The promotion of SMEs is also seen as a strategy for the dispersal of economic activities in the countryside thereby unclogging the already crowded main growth areas. However, the government has, for many years concentrated a great deal in improving productivity and efficiency. Focus was continuously poured to these areas under the premise that this will help the SMEs become more competitive and profitable. Several programs were initiated and implemented towards achieving these objectives through productivity improvement.

In spite of these, the performance of the Philippine economy remained lackluster and the competitiveness of the SMEs particularly at the global level declined. The private sector as well as the government realized that focusing on simple productivity approaches or strategies was not enough. Observing that so many resources were still being wasted in manufacturing, agriculture, industry and services sectors, there was an urgent need to refocus and redirect strategies. The areas of focus identified were the adoption of industry clustering, development of the retailers sector through a Retailers Act, and the provision of an Information Technology (IT) environment through the passing of the first Philippine E-Commerce Act.

The industry clustering approach has had dramatic impact on a large portion of SMEs particularly in the furniture, gifts, toys, houseware and the food processing sectors. Industry Clustering serves as the overall mechanism through which these different functions can be integrated. The Industry clustering concept establishing LPNs evolved into the concept of SCM, eventually connecting to GVCs and GPNs. It can also be perceived as a prelude to the application of a systematic and comprehensive supply chain and it is believed that once industry clustering is fully developed and made operational, SCM would follow easily as all other businesses come together in support of one other.

C. Fast-track strategy to participate in GVCs and GPNs

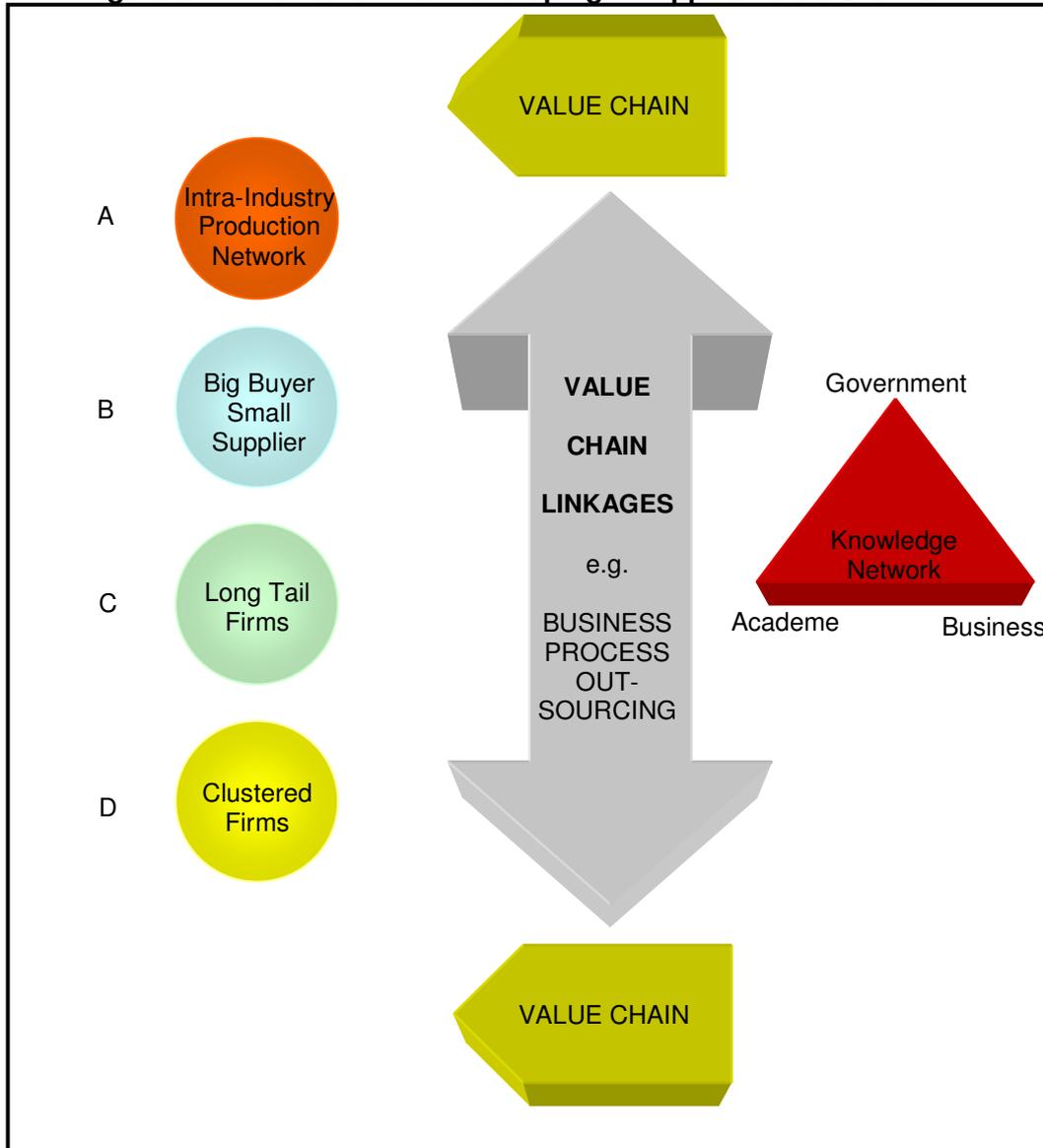
To be in line with global integration, both the Philippine government and private businesses, increasingly need to support sound business practices with strategic alliances and partnering, real-time connectivity and effective management and the sharing of information. Thus, there is a need for a national industrialization strategy that does not have to reproduce the entire previous technological trajectory but exploits the advantage of late arrival to tap into new technologies.

The Philippines while relying on FDI to gain access to technologies, knowledge and skills of the leading economies, failed to attract a critical mass of investment-locators-partners to leverage productivity gains by pursuing passive industrial policies, combined sending confused signals of sound economic management, pro-business environment and infrastructure building. Such that the country has been eased out and bypassed the big players of GVCs and GPNs.

The Philippine government and private enterprises need to address a variety of issues on mechanisms of technological learning and mastery, which are at the core of the catch-up process (Nelson, 2003). These would include national strategies and policies that influence framework conditions (political, social and macroeconomic

stability) and the system of innovation and training for technological learning and mastery. This system comprises of investment in education and training, national research effort, upgrading of physical infra-structure, utilities and logistics capabilities, lowering of business transaction costs, sound rules and regulations and their enforcement, and the quality of governance at the firm and government levels.

Figure 9: A Framework for Developing Philippine Value Chains²⁵



As a latecomer, the Philippines should enter into activities with GVCs for which their capabilities are suited rather than trying to enter into all activities in the value chain

²⁵ Source: Neri, 2005 adaptation of discussions with Director-General R. Neri of the National Economic and Development Authority.

(refer to Figure 9). The Philippine LPNs and RPNs can also enter dynamic activities in a value chain with great opportunities for technological learning and spillovers.

The clearest and least controversial pattern is insertion in global chains characterized by captive relationships²⁶. Local firms “adopted” by global buyers can expect to progress fast but integration into such chains is a double-edged sword. Although it facilitates inclusion and rapid enhancement of product and process capabilities, it inhibits functional upgrading; progressing into design, branding and marketing often conflict with the core competence of global buyers.

In some cases, clusters of developing country producers i.e. “A” (Figure 9) are able to offer comprehensive combinations of products and related services at great speed, enabling them to have a more balanced relationship with their buyers.

Identifying the key buyers, i.e. big buyers- “B” (big buyers and small supplier) in a particular GVC would reveal the proximity of these buyers to the final markets in terms of their drivers. Buying and/or order taking are performed by representatives of the key buyers of the final market such as clothing, food, toys, wearables and footwear. The major decisions in other sectors may be made by systems assemblers, consolidators, and integrators but in many cases, markets may be fragmented.

Other types of key buying institutions are in the traditional form of:

- i) Retail chains(bulk purchases) – Uniwide Sales(durable goods), SM malls, . Robinsons malls, McDonalds & Jollibee (chicken fryers, potatoes, etc.)
- ii) Wholesale firms (category agents in the food industry) buying in large volumes.(powdered milk, sugar, flour, etc.)
- iii) Independent buyers (distributors, dealers), generally selling to small scale retailers
- iv) Large firms in key links of the chains which buy in large volumes and/or who set the rules (legislative governance) which govern incorporation in final markets (firms engage in cement, fertilizer, explosives, crude oil, etc.).

In many global chains, the buying function of supply chain organizations of small-scale producers is increasingly becoming concentrated and dominated by supply chain configuration into Transorganizational Network²⁷. In most cases key buyers have an eye for the dynamism of the buying function, which makes it imperative to monitor the activities of these buyers. This is prevalent in their emphasis on environmental practices of their suppliers, gender and child safety, anti-terrorism, international standards on quality etc. Identifying the preferences of buyers in terms of specific sources of supply, will be important in upgrading systemic competitiveness that is linked to durability of relationships and trusts.

Industrial policy-making is country specific, and the Philippines must give emphasis and much attention to the role of a national innovation system in the country strategy and policy framework in order to leapfrog trending growth in line with the “catch-

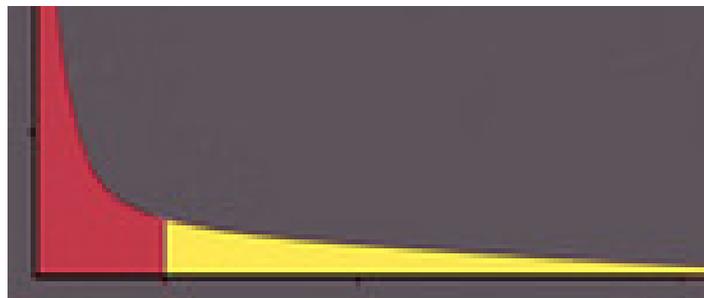
²⁶ Captive relationship—developing country suppliers are captive trade relationship with foreign buyers.

²⁷ Transorganizational Network – is three or more organizations and stakeholder groups (with a stake in the Supply Chain) doing together what they can't do alone, develop more lean and green practices, standards and quality upgrade. These organizations may be industry sector associations, professional management associations, non-government organizations – NGOs, etc.

up” process. The key is to participate in high-tech global value chains while developing local skills, physical infrastructure, and improving the domestic research effort. This should also be coupled with the establishment of intermediary institutions for supporting innovation and learning efforts of firms. Through active government involvement in and support of the catch-up process, it is ensured that domestic firms will be producing quality products and will be meeting national and international standards, which is then expected to lead to improved export performance.

The development of Long Tail Firms is based on the revolutionary theory of Chris Anderson²⁸ coined “The Long Tail,” following the power law distribution in statistics when applied to website on-line marketing as symbolically illustrated in Figure 10.

Figure 10: The Long Tail

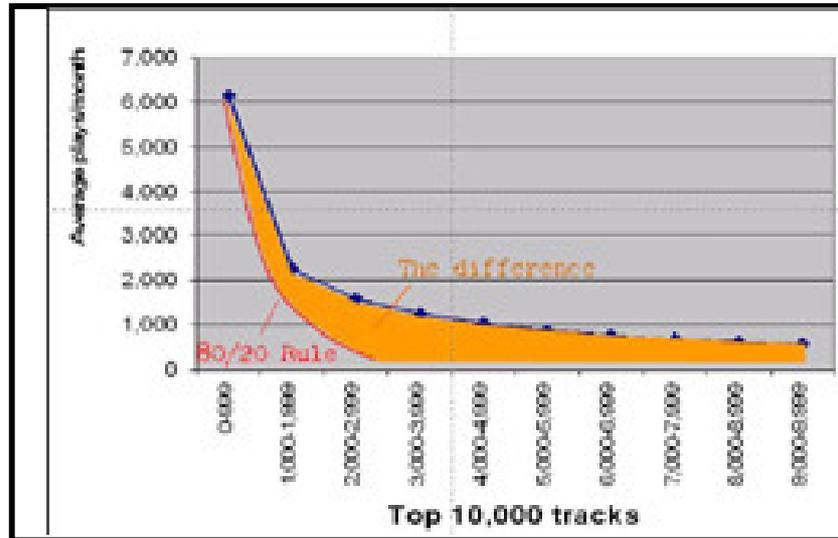


Through his interpretation of interesting new data from Internet sales of music and books, Mr. Anderson argues that the world is not 80/20²⁹ after all and that businesses are realizing that there are large underserved markets of consumers who demand the obscure products that populate the far right-hand side of the product distribution, the long tail- LT.

Figure 11: The Long Tail and the 80/20 Rule

²⁸ Chris Anderson, the Editor-in-Chief of Wired magazine , developed The Long Tail Theory.

²⁹ 80/20 Rule or Pareto's Principle



Anderson noted that most businesses are entrenched in the old way of thinking which revolves around the 80/20 rule. This drives them to focus on generating “hits” that fall into the top 20% of the popularity distribution. As a result, there are significant markets which are not being served because they are not singly large enough, or are large but not concentrated enough geographically. Additionally, there is often a supply of products for these markets, but their sale and distribution are not economical because of the lack of geographical density. This is a standard case where supply & demand don't meet. Enter the Internet and the new economy. The cost of warehousing and shelf space has been so reduced that it has become economical to serve these markets. Whereas in the past, businesses would have to pander to the lowest common denominator with hits, they can now attack the niches more profitably. Anderson predicts that the future will be all about niche products-projecting that in aggregate, they will become half or more of the volume in many product categories.

Anderson acknowledged that as you increase the variety of products and move further down the tail, there is more noise. That is, more choices means there is more information to process in order to filter for what you want. All this noise can depress demand with some people being overwhelmed by the choices. Anderson said that recommendations, reviews, detailed product specifications, and product associations are increasingly necessary to cut through the noise and guide customers to what they will want.

In the Long Tail world, product branding will become less important. Instead of relying on brands, people will come to rely more on objective product specs, user driven recommendations, and reviews. In fact, in this world, the reviews themselves may develop large brands which carry even more weight than the product's brand. “The longtail captures a key phenomenon enabled by the Internet that is the equivalent to the impact of the transportation system in the mid-20th century. The ability to expose and access all forms of data in a friction-free, low-cost manner via the Internet permanently alters hierarchies that ruled over the last millennium” (Farber, 2005).

E-commerce is transforming a significant portion of the retail Supply Chain into demand-led, trans-organizational networking. In traditional “marketplace” supply chain

theory, resources and their transport vehicles travel and move in physical-space and time networks, but with e-commerce, there is “virtual network movement” or “virtual mobility” in the market space of “cyberspace” networking. The result: dramatic improvements in customer service because inventory is always fully stocked.

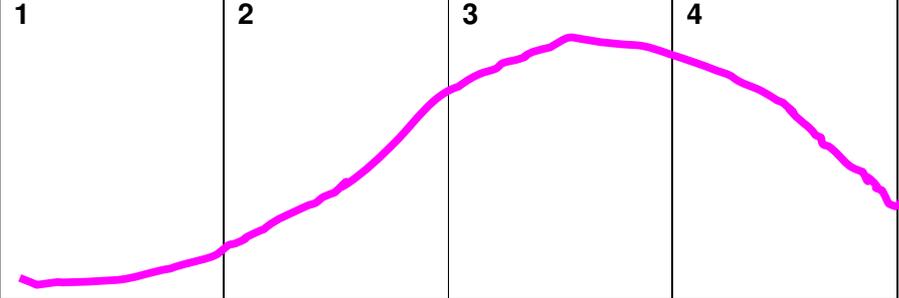
D. Transformation of the global value chain

The overall objective is to have Global Supply Chain configuration in place that will result in meeting or exceeding the expectations customers. The specific objective and expectation of GVC, meanwhile, is transforming the supply chain into a value chain and will usually include some combination of the following objective and expectations.

- i) Leverage speed (accommodate business unit and geographic boundaries)
- ii) Align incentives for integration of activities (buyers, suppliers, end-users to support organizational goals and strategy).
- iii) Optimize supply chain operation (number of members, capabilities)
- iv) Reduce inventories across the chain
- v) Reduce all cost (item cost and supply chain operational cost).
- vi) Assurance of supply of right quality items to support operations.

Figure 12 is a summary of activities which must be undertaken in the matrix of the groups of supply chains described in Figure 9, matrixed against their relative stage in the life cycle of the value chain.

Figure 12: Value Chain Life Cycle

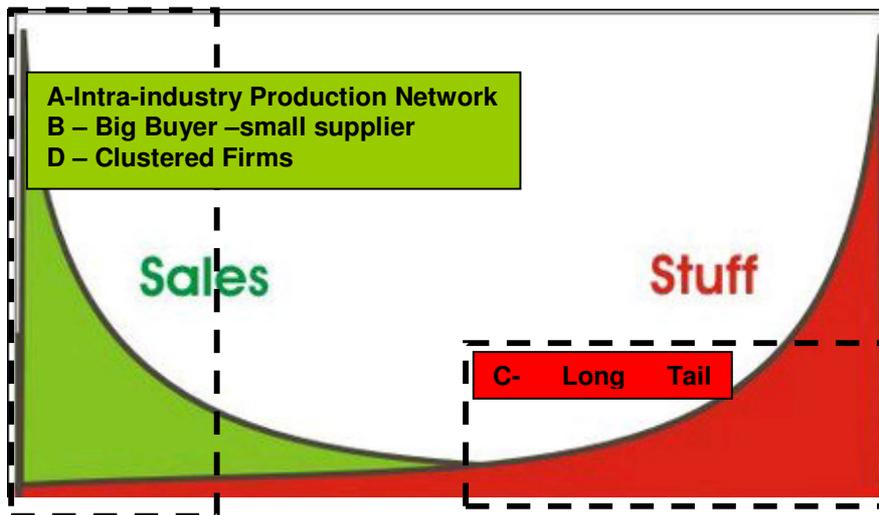


	1	2	3	4
	Introduction	Growth	Maturity	Decline
A Intra Industry Production Network	Build capability	Build capacity, integrate activities	Optimize operations, reduce inventories	Reduce all cost Upgrade and Acquire New Technology
B Big Buyer Small Supplier	Align incentives for integration of activities	Optimize supply chain operation (number of members, capabilities) Reduce inventories across the chain	Reduce all cost (item cost and supply chain operational cost). Assurance of supply of right quality items to support operations	Upgrade and/or Acquire New Technology
C	Design &	Increase variety	Aggregating hits	Diversify

Long tail Firms	architecture of e-Commerce model	& inventory of product offerings, need both a head of relatively few hits and a tail of many niches, so that recommendations and other filters can lead consumers from one to the other	and niches into a one big curve, from head to tail	application of e-commerce to other industry sectors
D Clustered Firms	Leverage speed –SBU's & geographic boundaries	Align incentives for integration of activities Optimize supply chain operation (number of members, capabilities)	Reduce inventories across the chain Assurance of supply of right quality items to support operations	Upgrade and/or Acquire New Technology

The Intra-industry production network (A), big buyer-small supplier (B), and the clustered firms (C) are to supply the requirements of the market driven forces in the 20% portion of the “head” of the hit sales which contributes to 80 % of the market share. While The Long Tail Firms (C), will position themselves to supply the product requirements in 50% of the remaining 80% Long Tail world (See Figure 13.)

Figure 13: Target Markets of Philippine Transfigured Value Chains



Product branding will become less important in the Long Tail World and instead of relying on brands, the promotional drivers will be more on objective product specs, user driven recommendations, and reviews. In this world, the reviews themselves may develop large brands which carry even more weight than the product’s brand. Thus, the Long Tail Firms must strive hard to develop and design architectural platforms for e-commerce transaction linked to real time logistic support systems.

The key is to service significant markets which are not being served because they are not singly large enough, or are large but not concentrated enough geographically. Additionally, there is often a supply of products for these markets, but their sale and distribution are not economical because of the lack of geographical density. Thus, the flexibility of Philippine SMEs participating in supply chains can easily match aberrations of the LT search engines where supply and demand don't meet, by aggregating the untapped tail.

E. Improved Logistics as Strategy: Challenges for the Philippines

As for developing a competitive Logistics cutting-edge strategy: The convenient location of Luzon in Asia has been recognized by two American air courier firms which have invested at the former US military bases on Luzon and there is therefore potential for these to expand and be joined by other air cargo operators.

1. Transportation Infrastructure

Congested roads and dilapidated air and seaports raise the cost of moving goods and people, especially in densely crowded urban centers but also between major islands. Inadequate public regulatory bodies, protectionist policies, oligopolistic air and maritime sectors and corruption in many guises make the transportation sector a prime and critical target for reform.

Unlike wealthier Asian economies, the Philippine government cannot source the billions of dollars needed to modernize infrastructure from the limited revenues and concessional overseas development assistance (ODA) loans available to it. The private sector then, becomes a resource that can design, develop, fund, build and operate many of the needed airports terminals, bridges, ferries, rail lines, roads, seaports and water systems. The private sector has funded the majority of investment in power and telecommunications for over a decade and this must continue. Although there no restrictions on foreign ownership of power plants, other private infrastructure projects are considered to fall under the 60-40 public utility restriction. These restrictions should be lifted. The build-operate-transfer (BOT) program urgently needs reinvigoration.

There are six major transportation infrastructure projects that must be pursued to completion:

- i) The private sector Northern Luzon Expressway renovation will reduce travel time north of Manila and be completed by early 2005
- ii) Subic-Clark-Tarlac Expressway. A new toll road connecting Subic and Clark financed by JBIC should be operating by 2006.
- iii) Northrail Project. After a decade of effort, it appears rails service north of Manila to the vicinity of Clark will return in several years with Chinese Government financing.
- iv) LRT-2. This \$1 billion project financed by the Japanese government started a decade ago has begun partial operations as "Megatren", a vital addition to the light rail system of the National Capital Region (NCR)
- v) Manila-Cavite Coastal Road Extension. An 11 kilometer extension along the southwest littoral of Manila Bay should be completed in 2006.

- vi) Nautical Highway. The government has launched a Nautical Highway network of roll-on-roll-off ferry-linked ports to move goods and people between islands, from Batangas to Mindanao.

2. Growth Corridor

The level of competitiveness that a country attains in a global world economy defines, to a large extent, the country's development patterns and pace of growth. Whether in the context of WTO, AFTA, APEC, bilateral free trade agreements or even in a strictly domestic market-oriented regime, competitiveness and efficiency are the primordial importance. The interplay of the determinants of competitiveness and efficiency like infrastructure, logistics, stability of policies, investment policies, the regulatory environment, education and training, labor skills and a host of other factors impact on both local and global production chains.

The development Issue is a new area development strategy along the Clark-Subic Growth Corridor aiming to promote decentralization of urban functions from Metro Manila and facilitate sustainable economic growth in the NCR based on a new spatial structure. Otherwise, the economy of Metro Manila would decline in terms of per capita gross regional domestic product, the quality of metropolitan environment and peoples' quality of life due to over concentration, congestion and pollution.

3. Clark-Subic Tandem as a Global Logistics Hub

The key challenge in the development of a logistics hub is how to manage these factors so as to reduce cost of production and doing business and trade. This way, the logistics hub will be complemented by the infrastructure, logistics services and other production factors to catalyze specific development patterns.

The Clark Aerotropolis possesses a location so strategic and unique that American military forces maintained it as its largest air base outside the United States mainland. For almost 100 years, it was the United States' beacon in the region, until 1991 when the benefits of Clark's extraordinary place in the map were extended to the rest of the world as a special economic zone. The Clark Aerotropolis is 33,000 hectares of prime land located in Central Luzon, the Philippines' new productivity center. It lies 80 kilometers north of the capital city of Manila and 60 kilometers east of Subic Bay, a former US naval facility that has been redeveloped into a major freeport. A natural entry point to the Asia Pacific region, Clark is only 2 to 3 ½ hours away from Hong Kong, Taiwan, Singapore, Japan, Korea and other key points in Asia.

The Clark-Subic Growth Corridor is located in the Central Luzon basin, which has 18 square km of land area, one of the largest flat areas in the Philippines. The land-locked plains of Tarlac, Porac, Hermosa, San Fernando and Floridablanca shall be clustered into a special economic zone to access seaports of Subic, Mariveles and Metro Manila. This vast and unique land resource economic zone in the Clark-Subic Growth Corridor will be transformed into a logistics-driven powerhouse, i.e. the gateway of Philippine products to the world. This gateway will be the new connection to the Bagiuo Export Processing Zone.

4. Challenges in the development of Clark-Subic logistics hub

The worldwide logistics industry is valued at \$320 billion per year and expected to grow at 3-10% per annum. Three major modalities – land, sea and air – make up the logistics industry. Two-thirds of the value of world merchandise trade are moved and stored through air cargo. Around 45% of these are intra-company freight cargo, i.e., almost half of world air shipments are raw materials, intermediate goods and goods for distribution shipped by companies to their regional offices, branches, trans-shipment hubs, subsidiaries or affiliates.

In terms of sea transport, current world container fleet number around 2,755 ships with a carrying capacity of 5,356,650 TEUs. Around 50% of these pass thru the front door of Subic. A capacity shortage of 14 million TEUs is projected for the Asia Pacific region; Singapore has already reached its capacity limit and the Port of Hong Kong is severely silted. Moreover, cargo is becoming increasingly containerized – about 70% of general cargo today is containerized – and is expected to be 90% containerized by 2010. Consequently, the container fleet is the fastest growing ship type today. These ships are getting larger, led by the S-class vessels of Maersk which can carry more than 7,000 TEUs. Vessels of more than 3,000 TEUs make up 71% of all new ship-buildings. To respond to these large-scale ships, major ports need to develop massive infrastructure and systems to increase their carrying capacities. Below are the carrying capacities of Asia-Pacific's major and upcoming ports:

Table 1: Carrying Capacities of Asia-Pacific Ports

Port	Carrying Capacity (TEUs)
Singapore	17,000,000
Hong Kong	17,000,000
Manila	2,000,000
Kaohsiung	7,000,000
Pusan	7,000,000
Bangkok	2,000,000
Laem Chabang	2,500,000
Qingdao	3,400,000
Subic	53,000

Source: United Nations Conference on Trade and Development (UNCTAD)

In terms of land transport, the Philippines lag behind in terms of number of kilometers of expressways, railways and paved roads compared to its Asian neighbors. There was no major expressway built in the Philippines since 1997 after the North and South Luzon Expressway. Below is a comparison of the number of kilometers of expressway in Asian countries:

Table 2: Expressways in Asian Countries

Country	No. of expressway kilometers built
Indonesia	690
Malaysia	963
Thailand	820
Taiwan	538
China	>30,000
Philippines	168

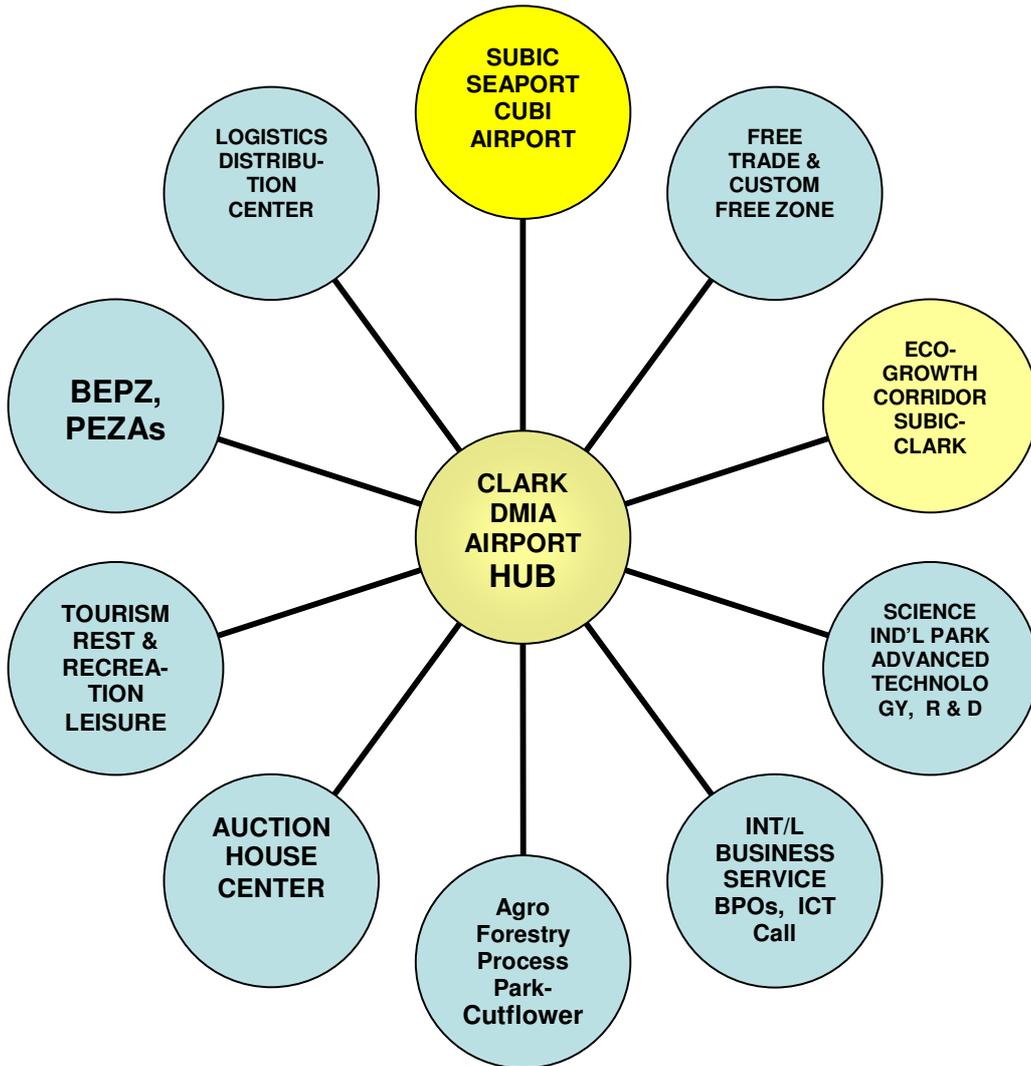
Source: UNCTAD

5. Clark-Subic Logistics Hub - Conceptual Framework

The Clark-Subic growth corridor as a logistics hub must respond to the demands of globalization, regionalization and privatization with the transformation of a vast and unique land resource into a logistic driven powerhouse.

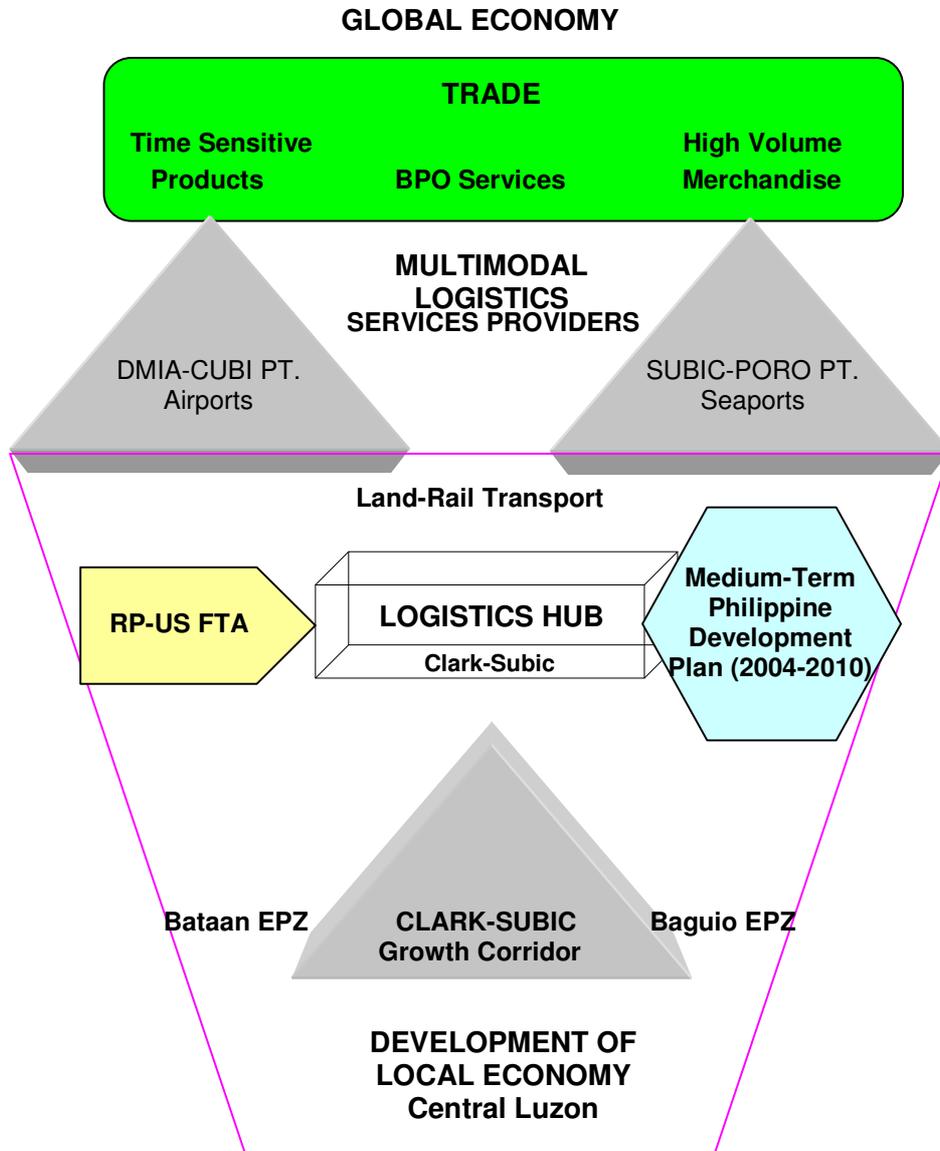
A conceptual framework of the Clark-Subic Logistic Hub is presented in Figure 14.

Figure 14: Conceptual Framework of the Clark-Subic Logistics Hub



The guiding development framework for the Clark-Subic Logistics Hub is presented in Figure 15, indicating the essential factors which will create a competitive Logistics Hub as a global stimuli for rapid growth and development of the Local Economy.

Figure 15: Research Framework: Logistics Hub – A Global Stimulus for Rapid Growth and Development of the Local Economy



6. Key Success Factors for a Clark-Subic Logistics Hub

The Clark Aerotropolis and Subic Bay Freeport will be interconnected by a 55.8 kilometer toll way to maximize potentials for global trade. The facilities within these zones, such as the deep harbor in Subic Bay and the logistics center in Clark, will be synergized to facilitate the distribution of time-sensitive goods and services. Moreover, a convergence point that links land, air, and sea transport schemes between Clark and Subic will be installed. This pursuit will hasten the emergence of a new independent industrial region in Central Luzon which if the Clark-Subic Growth Corridor.

A Rapid Railway System from Manila to Clark will also be developed to enhance access to the Clark Aerotropolis. A heavy load railway system to transport 40 foot

containers on piggyback will bridge the Clark Aerotropolis to Subic Bay for the movement of heavy-volume merchandise and materials aside from the activation and upgrade of the existing fuel pipeline.

The following are the key success factors for a competitive Clark-Subic logistics hub:

- i) Ideal geographic location;
- ii) “Hub” advantages;
- iii) Presence of developable transport infrastructure;
- iv) Effectiveness of centralized planning;
- v) Developable resource base;
- vi) Optimal financing mix (concessional/ODA loans, private/non-government financing, government capital expenditures, LGU resources) for the various infrastructure, utilities and development projects;
- vii) Responsive Institutional Arrangements; and
- viii) Political Will

a. Hub Business Services as Opportunities

Business services consist of a broad range of services, including computing and data processing, professional services, marketing services, technical services, leasing and renting, labor recruitment and operational services. For almost every function performed in a modern business, there exist specialized companies providing the function in the form of a business service. As a result, an increasing number of manufacturing and service firms choose to purchase or outsource business services from external suppliers rather than producing the services themselves and stick to their core functions and competencies. The growing outsourcing business, in turn, contributes to diversification in the business service sector, with new types of services emerging all the time.

Business services mainly provide knowledge-intensive inputs to other industries, and are important channels for technology diffusion and a source of productivity growth in other industries. It is particularly important for the diffusion of process and management innovations.

b. Hub Opportunities in Business Process Outsourcing

The Philippines has been known for outsourcing backroom operations for offshore international companies operating in the Pacific Rim and Far East Asia. The country has rapidly become a regional and global hub for shared corporate backroom operations in the past decade after the financial crisis that hit the Asian countries. Such outsourcing activities included the traditional financial services such as accounting and bookkeeping, account maintenance, accounts receivable collection, accounts payable administration, payroll processing, asset management, financial analysis and auditing, management consulting, inventory control and purchasing, expense and revenue reporting, financial reporting, tax reporting.

A fast growth area is in the other finance-related services such as financial leasing, credit card administration, factoring and stock brokering; as well as for logistics

management, cargo shipment management, engineering design and architectural drawings.

Again, these companies' choice of the Philippines as the location for their shared backroom operations is the country's rich pool of low-cost yet English- and IT-proficient business, accounting, HRM and engineering graduates. Moreover, the World Competitiveness Report 2001 ranked the Philippines 16th of 49 countries for "International Business Experience."

Filipino professionals are also particularly noteworthy for their marked customer service orientation, superior work ethic, high degree of trainability, flexibility, multicultural adaptability, and loyalty. Summarizing the Philippines' advantages as a BPO destination are its strategic location, the availability of prime yet low-cost real estate in the country, its good and increasingly cost-competitive telecommunications and other business infrastructure, its expatriate-agreeable lifestyle, and its progressively IT-supportive policies and incentives.

For small and medium-sized companies in manufacturing and service industries to utilize specialist services in non-core, but strategically important functions, locating in the Clark-Subic Growth Corridor will surely be advantageous as service providers agglomerate in this fast developing economy.

c. Clark-Subic Hub as Enabler for Development

The Clark-Subic hub serves as the enabler to spur the rapid development of the Clark-Subic Growth Corridor which links up the Bataan and Baguio Export Processing Zones and other PEZA economic zones. As the tremendous influx of investments and commercial activity fulfill the needs of the supply chain, the underlying economic activities will draw and pull together the development of social support for human settlements such as the human capital formation becomes sustainable.

The Clark-Subic Hub is envisioned to have the following private providers' offerings of services:

- i) Hub Services: Solutions in transportation; guaranteed on-time availability of parts warehouse management distribution solutions; track and trace via the internet; customs consultancy; dangerous goods handling; one-stop-shopping; supply chain management; specialized packaging
- ii) All products, i.e. services are speed-defined, allowing you to choose with what priority the goods are to move. All are aimed at the same result: guaranteed on-time availability of your parts.
- iii) For Routine shipments: pick up by regular transport; standard airport acceptance and availability times; documentation and customs clearance at standard speed; airport to airport. Capacity on request/reply basis; delivery via regular transport; competitive rates.
- iv) For Urgent shipments: fastest pick up by means of high speed transport; last in-First out documentation and customs clearance; preferred access to capacity; airport acceptance until three hours prior to departure and availability within three hours after arrival; high speed airport-to-airport transportation; quick transfer at hubs; delivery by high speed transport

- v) Dedicated courier service for pick up; guaranteed capacity; immediate documentation and clearance; airport acceptance until one hour prior to departure and availability within one hour after arrival ; airport-to-airport at high speed service, including operational priority; quick transfer at hubs; dedicated courier service for delivery; optional services such as charter rental, onboard couriers, opening of non cargo flights.

IV. CONCLUSION: HURDLE CHALLENGES FOR THE PHILIPPINES

The massive investments and infrastructure requirements for a competitive Clark-Subic logistics hub may divert resources – financial, manpower and physical resources – from other parts of the country like Mindanao to Central Luzon. This poses a great challenge to national development policy. It is important that the Clark-Subic logistics hub be the “enabler” not just for regional development but will serve as a springboard for industrialization of the whole nation.

It is thus important that policies and programs shall spur, complement, support and be supported for the Clark-Subic logistics hub to be an effective enabler of national development.

These supporting and complementary programs should include:

- i) Philippine Export Development Plan. The Clark-Subic logistics hub should not just be a hub serving the production, distribution and storage needs of other countries but equally to serve the needs of the Philippine export industry as well.
- ii) Establishment of Adequate Utilities. The establishment of adequate and reliable utilities – power, water, sewage, telecommunications, waste disposal – both in the logistics corridor and nationwide is a necessary condition for competitiveness. The regulatory and investment policies on utilities should therefore be improved not just to make the Clark-Subic logistics hub competitive but also to make Philippine agriculture, industry and exports as competitive.
- iii) Developing/Improving LPNs. For the Clark-Subic logistics hub to spur and serve Philippine industry, agriculture, exports, services, manpower and economic development, in general, LPNs should first be developed and improved and then efficiently connect to the logistics hub. The effort to develop and improve LPNs to make them globally-competitive requires much work as this will entail looking at all economic activities that will gain from the logistics hub. This will range from the current export winners like gifts, toys, accessories, garments, electronics, to emerging industries like mining, tourism, jewelry-making, ship repair and ship building, aviation, and ICT services.
- iv) Assistance to Local Government Units (LGUs). Two levels of assistance to LGUs are crucial in taking advantage of the Clark-Subic logistics hub. First is the complementary planning and development needed to be undertaken by the LGUs in Central and Northern Luzon where the impact of the logistics hub is direct and huge. The manpower, services, housing, education and economic activities of these adjacent and nearby areas need to adjust and to complement the hub. In short, the capability of these LGUs to respond to the demands of the logistics hub will have to be honed and developed. The

second level of assistance is in ensuring that the LGUs institute the appropriate policy and action programs to gear and improve LPNs to be globally-competitive so as to maximize the benefits of the Clark-Subic logistics hub.

- v) Improving Domestic Transport (Overland and Inter-island). To connect the LPNs to the Clark-Subic logistics hub and maximize the benefits, the local roads and highways network, the local ports and airports network and railway system and inter-island shipping should also connect and complement the logistics hub. Again, reforms in the regulatory framework and the pricing and investment policies are vital to gear domestic transport to support globally-competitive production.
- vi) Trade Facilitation and Negotiations. In line with export promotion for local products, trade facilitation systems are key to maximize the benefits of Clark-Subic logistics hub. Systems for customs processing, air control, immigration and tourist processing, port documentation, tariff and non-tariff assessments, quarantine, health and sanitary inspection need to be streamlined and rationalized. Moreover, improving trade negotiation skills and strategies will ensure that export programs will work to serve the interest of the country.

The catalytic explosion of competitive forces will drive the engines to accelerate the development of Local Economy in central Luzon. This will serve as the stimulus for further growth that will cause the other economic zones to be satellite feeders to the Clark-Subic hub.

References

- DuBois, F.L., Toyne, B. and Oliff, M.D. (1993). "International Manufacturing Strategies of U.S. Multinationals: A Conceptual Framework Based on A Four-Industry Study", *Journal of International Business Studies*, Second quarter, pp. 307-333.
- Ernst, Dieter & Kim, Linsu (2002). "Global Production Networks, Knowledge Diffusion, and Local Capability Formation", *Research Policy, Elsevier*, vol. 31(8-9), pp. 1417-1429
- Ernst, Dieter & Boy Luethje (2003). "Global Production Networks, Innovation, and Work: Why Chip and System Design in the IT Industry are Moving to Asia", *Economics Study Area Working Papers 63, East-West Center, Economics Study Area*.
- Ernst, Dieter (2000). "The Economics of Electronics Industry: Competitive Dynamics and Industrial Organization", *Economics Study Area Working Papers 07, East-West Center, Economics Study Area*.
- Ernst, Dieter (2000). "Catching-Up and Post-Crisis Industrial Upgrading: Searching for New Sources of Growth in Korea's Electronics Industry", *Economics Study Area Working Papers 02, East-West Center, Economics Study Area*.
- Ernst, Dieter (2000). "Global Production Networks and the Changing Geography of Innovation Systems: Implications for Developing Countries", *Economics Study Area Working Papers 09, East-West Center, Economics Study Area*.
- Fawcett, Louise (1995). "Regionalism in Historical Perspective" in *Louise Fawcett and Andrew Hurrell, eds., Regionalism in World Politics*, Oxford: Oxford University Press, pp. 9-36
- Fukayama, F. (1995). "Trust: The Social Virtues and the Creation of Prosperity", London: Hamish Hamilton.
- Houlihan, J.B. (1987). "International Supply Chain Management", *International Journal of Physical Distribution and Materials Management*, vol. 17 (2), pp. 51-665
- Hurrell, Andrew (1994). "An Emerging Security Community in South America?", Paper presented at the APSA annual meeting, New York, September 1-4.
- International Monetary Fund (2002). "*Globalization: Threat or Opportunity*", IMF Publications
- Kaplinsky, R. and M. Morris (2000), "*A Handbook for Value Chain Research*", IDRC.
- Kaplinsky, R. and J. Readman (2000). "*Globalization and Upgrading: What can (and cannot) be Learnt from International Trade Statistics in the Wood Furniture Sector*", Brighton Centre for Research in Innovation Management, University of Brighton and Institute of Development Studies, University of Sussex.
- Mace, Gordon and Jean-Philippe Therien (1996). "Introduction: Foreign Policy and Regionalism in the Americas", *Gordon Mace and Jean-Philippe, eds., Foreign Policy Regionalism in the Americas*, Boulder, Colorado:Lynne Rienner, pp. 1-17
- Monczka, Robert, Robert Trent and Robert Hanfield (2002). "Purchasing and Supply Chain Management", Second edition, South-Western, Cincinnati, Ohio.
- Privatization retrieved from: www.fact-library.com
- Porter, M.E. (1985), "Competitive Advantage: Creating and Sustaining Superior Performance", New York: The Free Press.
- United Nations Conference on Trade and Development (UNCTAD) Statistics. Retrieved from <http://www.unctad.org/Templates/Page.asp?intlItemID=1584>.
- Whiting Van R. (1993). "The Dynamics of Regionalization: Road Map to an Open Future?", *Peter H. Smith, ed., The Challenge of Integration: Europe and the Americas*, Miami, Florida:North-South Center, pp. 17-49.
- Whitley, R. (1992). "*European Business Systems: Firms and Markets in their National Context*", London:Sage.