ADB

Competitive Cities

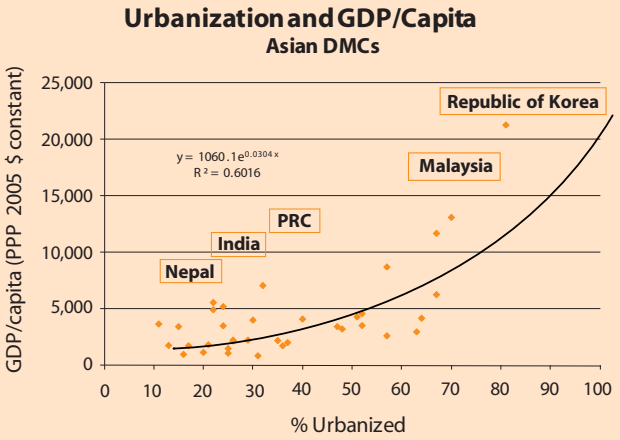
Asian Development Bank

Needed: Inclusive Urban Economic Growth

The Asian Development Bank (ADB) is committed to reducing poverty in Asia and the Pacific. Inclusive development and support to growth-promoting economic activities are the underpinnings of its Strategy 2020. As Asia is urbanizing rapidly, it is projected that, by 2030, more than 55% of the Asian population will reside in urban areas.

Empirical data demonstrate that the productivity of urban economies is at least two or three times higher than that of the non-urban sector in many Asian countries. Further, there is a positive correlation between gross domestic product (GDP) and urbanization (Figure 1). This is why urban areas are known as "engines of economic growth."

Figure 1 Correlation Between Urbanization and GDP Growth



GDP=gross domestic product, DMC=developing member countries, PRC=People's Republic of China.

Source: ADB.

But some cities perform much better economically than others, as indicated in a study by the Organisation for Economic Co-operation and Development (2006) that ranked the competitiveness of cities across many countries. Large cities do not necessarily perform better than others, the question is how those cities lagging behind can improve their performance to catch up with competitors.

How can Asian cities seize the opportunities of local economic growth? What factors make their urban industries more competitive? Or, how could governments or development agencies strategically invest to simultaneously boost the competitiveness and sustainability of local economic development?

Urban areas are the engines of economic growth and poverty alleviation.

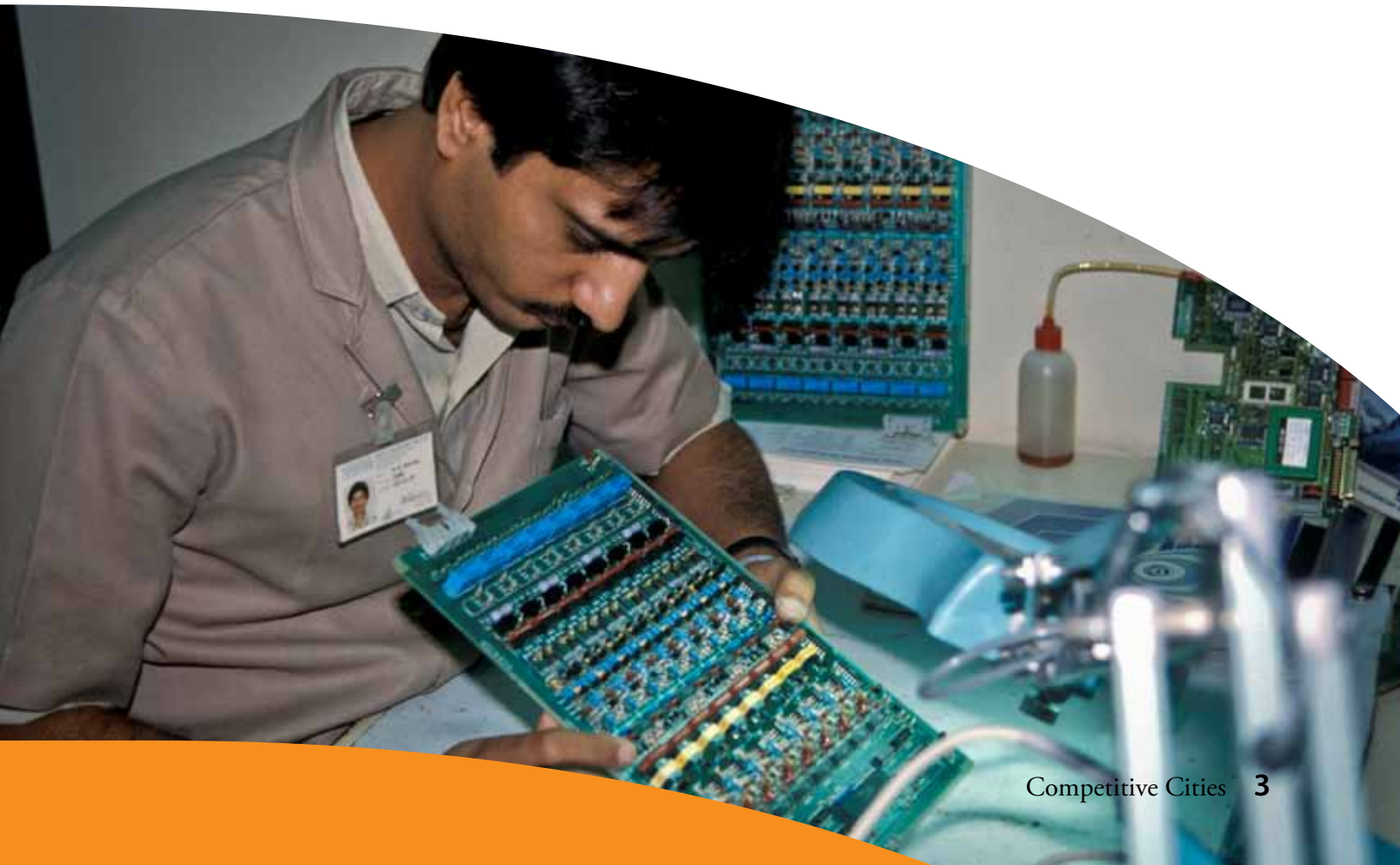
What Makes a City Economically Competitive?

Governments around the world have a growing interest in how to make cities more competitive—attracting investment and creating jobs that help reduce poverty and unemployment. However, in striving to become more competitive (see Box 1 for definition), there is a growing realization that the quality of the urban environment, social systems, and employment can no longer be neglected. These factors are part of the competitiveness equation. Balancing the quest for development, sustainability, and improved competitiveness is a difficult challenge for most cities—especially in the rapidly urbanizing Asian context.

Box 1 What is the Competitiveness of Cities?

The competitiveness of cities refers to the ability of an urban region or cities to produce and market a set of products (goods and services) that represent good value (not necessarily lowest price) in relation to comparable products of other urban regions.

(Modified based on Webster, D., and L. Muller. 2000. *Urban Competitiveness Assessment in Developing Country Urban Regions: The Road Forward.* Washington, DC: World Bank.)



Many common factors contribute to making cities competitive: quality of urban infrastructure, communications and public services, business rivalry and cooperation, access to natural resources and skills, location in relation to markets, risk management, social capital, and quality of life. Not all cities are well endowed with these factors—especially cities in the developing world.

Much of the thinking around competitiveness has been developed from the ideas of endogenous growth theory, which focuses on nurturing city competitiveness and innovation of industry clusters. Export-driven development remains important, but it is subject to powerful global economic factors and influences. In Singapore, Hong Kong, China, and Bangalore, India, the focus of economic development has moved away from an emphasis on low-cost infrastructure, low labor costs, and low taxes, toward highly competitive cities and industry clusters with skilled workers, advanced infrastructure, and innovation.

Successful cities increasingly foster growth in high value added industry clusters using skilled workers, advanced infrastructure and innovation.

How to Build Competitive Cities?

Shifting the Growth Paradigm: City Cluster Economic Development

Cities gain competitiveness from a continuous process of, and commitment to, learning and adjusting in response to the actions of competitors and change. Enhancing a city's competitive position to gain national and/or global prominence takes time. It requires stakeholders to be actively engaged in a city's development and management, carefully analyzing what makes it competitive. It also involves good planning, innovation, and strategic interventions to attract investment, encourage economic development and knowledge, and create a pleasant place to live. This section sets out the City Cluster Economic Development (CCED) approach that allows national and local governments to analyze what makes cities competitive.

Michael Porter's seminal work on *The Competitive Advantage of Nations* (1990)[1] drew attention to the need for nations to enhance their competitiveness to foster

[1] Porter, M.E. 1990. *The Competitive Advantage of Nations.* New York: Macmillan.

growth and economic development. However, Krugman (1997)[2] argued that nations do not compete against each other in any real sense, rather firms and cities are the competitors. Thus, urban managers and business enterprises need to understand what factors enable cities to compete successfully for trade and investment.

Ultimately, the intended impact of the CCED approach is the creation of more job and income opportunities, in both the urban and rural areas and its rural hinterland. By better understanding a city's attributes of competitiveness, policy makers and investors can better foster key investments by government and business that will lead to enhanced competitiveness.

The CCED approach (Figure 2) provides a new paradigm for urban economic development, i.e., proactively supporting private sector development, promoting productivity of industry, and small and/or medium-sized enterprise (SME) clusters and fostering competitiveness of cities. The approach can help ADB's developing member countries target their investments based on their visions for economic growth and poverty reduction.

The impact of the CCED approach is to provide more job and income opportunities.

[2] Krugman, P. 1997. *Development Geography and Economic Theory.* Boston: Massachusetts Institute of Technology Press.

Assessing the Competitiveness of Cities

The CCED approach provides an understanding of the strengths and weaknesses of the key elements of city competitiveness. The approach includes an analytical methodology—a step-by-step guide to assess the competitiveness of cities and industry clusters. Based on this assessment, action plans can be prepared and implemented.

Step 1. Compiling profiles of National Economic Strategy. The first step of analysis involves a macro-level overview of the national policy environment, institutional relationships, strategies supporting economic development, the national urban system, and governance at the national and local levels. Much of the necessary information can be collected from existing public reports and studies.

Figure 2 The CCED Approach

The CCED Approach is a New Way of Pursuing Local Economic Development in Partnership: Conceptual Framework

Enhancing **Competitiveness of Cities**
government as facilitator

↓

Enhancing **Competitiveness of Industry Clusters**
driven by the private sector

↓

Triggering Local Economic Development: **Private and public sectors collaboration**

↓

Increasing Income and/or Job Opportunities, thus Reducing Poverty

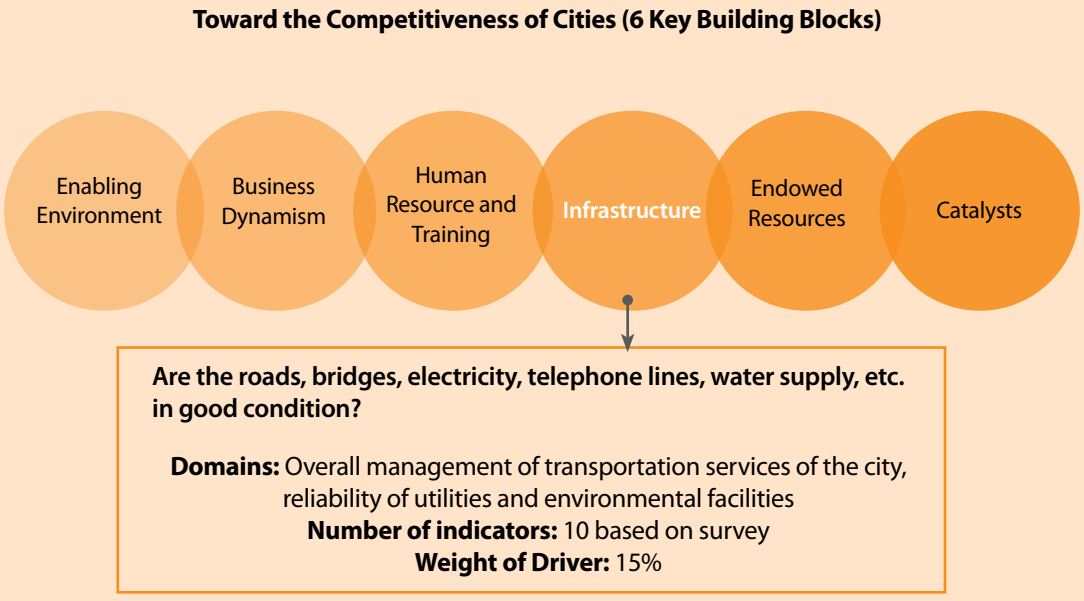
Source: ADB

Step 2. Understanding Six Key Building Blocks of City Competitiveness. Based on the framework of the World Economic Forum's competitiveness index reports, the Philippines' competitiveness of cities index[3] provides a useful and relatively simple method for evaluating the competitiveness of cities. It measures six key building blocks (elements) of competitiveness (Figure 3) using a mix of qualitative and quantitative data collected from statistical and survey assessments on 49 attributes affecting city competitiveness. Many Asian countries, including the People's Republic of China, India, the Philippines, and Viet Nam, have begun to measure the competitiveness of their cities.

The Building Blocks are the following:

- **Enabling Business Environments.** The governance structures and organizational arrangements define the rules for business. Strong enabling environments provide a set of clear and transparent rules (i.e., a good governance system) for business in local economies.
- **Business Dynamics.** Attributes that affect the dynamics of doing business in a local economy include the flow of information, the openness to business and new ideas, the aversion to risk, the taxation regime, the costs of doing business, and the awareness of new technology and its use.

Figure 3 Six Building Blocks of City Competitiveness and Sample Attributes Under the "Infrastructure" Building Block



Source: AIM. 2007. *Philippine Cities Competitiveness Ranking Project*; and Macaranas, F. 2008. *Philippine Cities Competitiveness Project 2007.*

[3] Asian Institute of Management (AIM). 2007. *Philippine Cities Competitiveness Ranking Project*. Manila.

A highly regulated or controlled market significantly reduces business dynamics.

- **Endowed Resources.** Assets or qualities derived from natural capital or are inherited come in many forms or types. Two important types of endowed resources are natural resources and built environment.
- **Human capital.** Access to diverse and highly developed pools of human capital is probably one of the most important attributes for maintaining a competitive position in open market economies. In particular, this refers to (i) alignment of the skills base with the production base; (ii) strong and effective local leadership; (iii) research and development capacity; and (iv) social capital—social interaction and exchange of information among colleagues, and others.
- **Infrastructure.** Strategic infrastructure comprises the hard and soft infrastructure needed to support key industry sectors that will drive the development of the economy. It can include cluster-specific assets, such as supercomputers and scientific or testing facilities, multimodal transport and logistics, and information and research facilities.
- **Catalysts.** Catalysts play a key role in facilitating the development of industry clusters. Civic entrepreneurs championing innovative ways for local governments to develop important projects play a critical role in creating new investments and infrastructure, management services, community development organizations, and more.

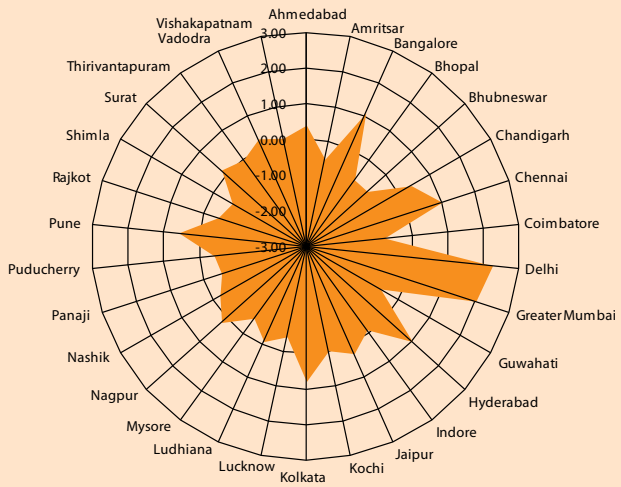
Box 2 provides example of city competitive analysis.

Box 2 Which City is More Competitive?

A city competitiveness study was undertaken in June 2008 to score 49 attributes of competitiveness in a total of 54 cities in Bangladesh, India and Sri Lanka. The median score for the 54 cities was 5.96 out of a maximum of 10.00. Cities with overall competitiveness scores of 7.00 or more are considered internationally competitive. Cities with scores of less than 4.00 are mainly local service economies (they are heavily dependent on imports and produce few regional exports). Overall, the level of city competitiveness in the three countries is weak—with most being competitive at the national and regional levels and only seven being internationally competitive.

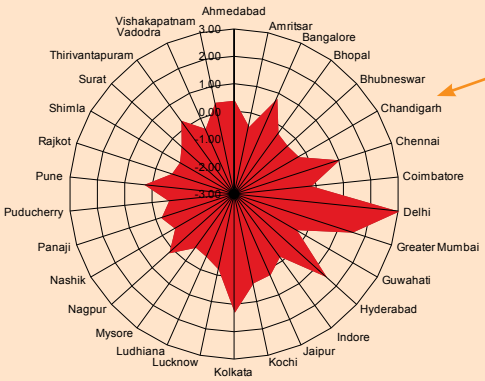
Ranking competitiveness for Indian Cities

Cities' Ranking—Overall



Setting the median score 5.96 as a bench marking "zero point," the study found only seven cities internationally competitive: Bangalore, Chennai, Delhi, Mumbai, Hyderabad, Kolcata, and Pune.

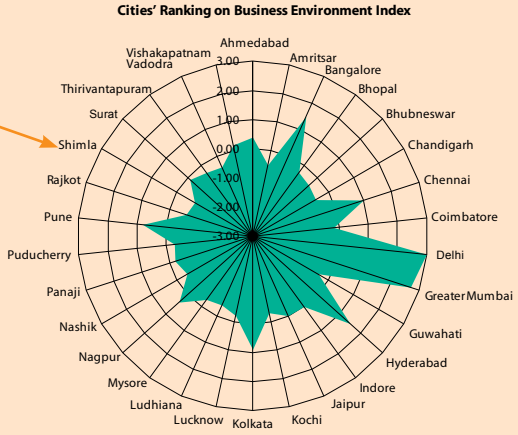
Cities' Ranking on Infrastructure Index



Analysis by Building Blocks

- Business Dynamics
- Endowed Resources
- Business Environment
- Infrastructure
- Catalysts
- Human Capital

Cities' Ranking on Business Environment Index



Source: ADB

Step 3. Identifying the Competitiveness of Industry Clusters at the Local Level. Within the city context described above, it is important to identify the industry clusters (Box 3 for definition) in a selected city (or city region) which can best contribute to increase local GDP. This involves a multisector industry analysis at the local level, comparing local performance with the national level to understand the changing patterns and structure of local industry and local economic potentials.

Box 3 Industry Clusters and Cluster Development

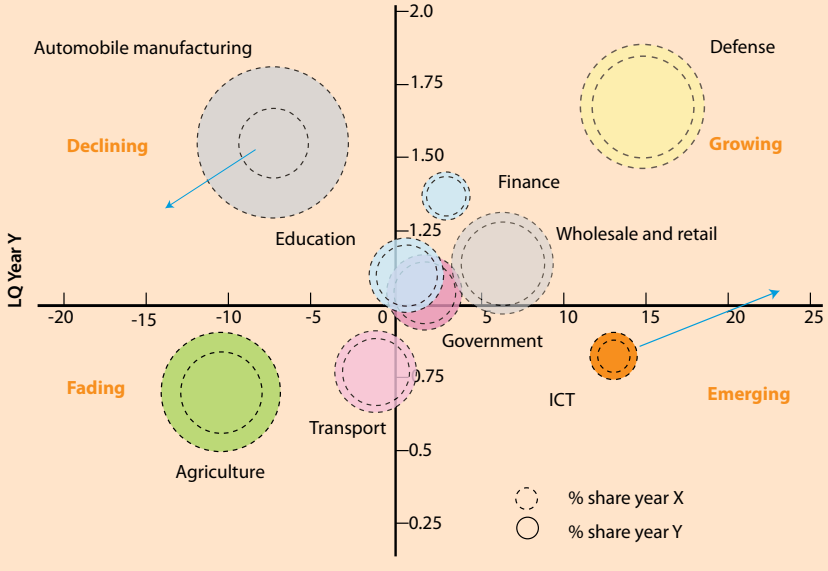
Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field. Clusters arise because they increase productivity due to economies of scale, within which agglomerated companies compete. Cluster development focuses on reducing the costs of doing business for a cluster by making its supply chain more efficient or by supplying needed social and economic infrastructure or by providing opportunities for expanding production or moving output to higher value-added products.

(Modified from www.isc.hbs.edu/econ-clusters.htm: Institute for Strategy and Development, Harvard University)

Figure 4 shows an example of the analysis of evolving industry sectors and clusters. Generally, industry sectors (local clusters) in the upper right quadrant are emerging and growing; those in the lower left quadrant are fading, aging.

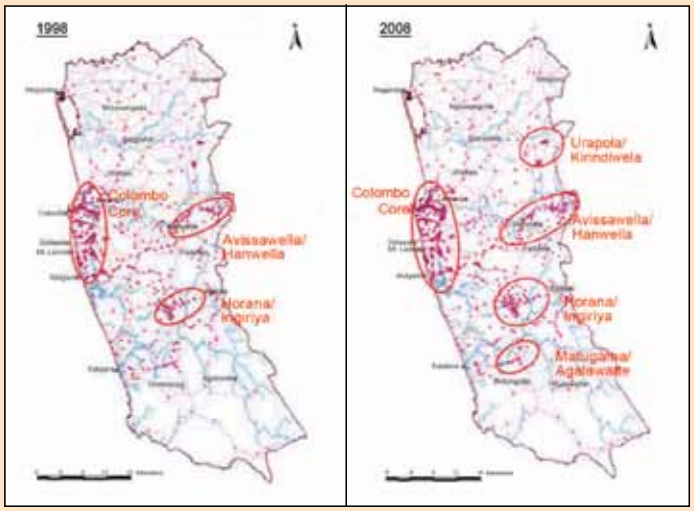
STEP 4. Spatial Mapping of Industry Sector Cluster in a Selected Local Area. This analysis identifies significant spatial concentrations of employment and business activities and financial related transactions that occur between businesses in the same locality. The spatial mapping of industry clusters in a city will be useful for planning and locating key strategic infrastructure and development projects. Cluster maps provide useful information about the scale and magnitude of a cluster for spatial planning. Spatial plans can be used to encourage the co-location of supporting industries and logistics facilities that the cluster needs. They can also provide important information on how the cluster functions and the factors that support its operation and development. Figure 5 illustrates where rubber industry clusters are located in the Colombo Metropolitan Region, and location changes over time.

Figure 4 Rise and Fall of Industry Clusters in a Hypothetical Urban Area: Using Location Quotient and Shift Share Analysis



ICT = information and communication technology, LQ = location quotient.
Source: ADB

Figure 5 Spatial Mapping: Change in Rubber and Plastic Industry—Cluster Colombo Metropolitan Region, Sri Lanka



Source: Sevanatha Urban Resource Center

Step 5: Conducting Gap Analysis for Industry Clusters. This step aims to assess the relative competitiveness of the selected industry. Analysts apply a scoring or ranking using a nominal scale or symbols (+) to evaluate the strength of five factors[4] (Porter 1990) using 47 indicators. Indicators may differ depending on country context. The five competitiveness factors are:

(i) **Input factor condition** includes access to capital, land and facilities, spatial concentration, availability of skilled labor, education and training facilities, quality of logistics and utilities, or cost of services, and quality of living environment for workforce, proximity to raw material, and cost and quality of raw materials for the cluster.

(ii) **Demand conditions** include whether opportunities exist to expand the demand side, such as through export or new domestic markets, new products, and receptiveness to change.

(iii) **Firm strategy, structure and rivalry condition.** Competitiveness is enhanced if firms have flexibility of production systems, responsiveness to management change, and capacity to diversify the scale of joint ventures, to engage in collaboration on technology applications, to build business networks and social capital, and to share industry knowledge.

(iv) **Related supporting industries.** This factor focuses on analyzing strengths of

[4] Porter's diamond model is one of the most widely used techniques for industrial cluster analysis. It involves analysts working with industry focus groups to score the relative strengths of the competitiveness of the selected industry cluster(s) within a city or city region. (Porter 1990)

related services for the local business, the extent of value-adding supply chains, and business capacity to seek and engage with higher value-adding chains.

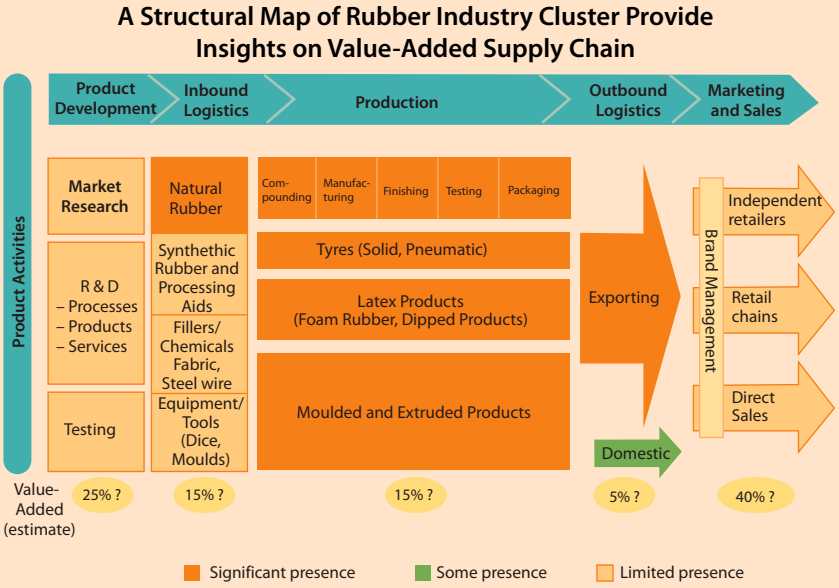
(v) **Government's role.** Government can enhance the competitiveness of industry clusters by providing support for cluster development, streamlining of business approval systems, promoting sustainable industry development and research and development.

The next step is to assess gaps in the industry's current and future competitiveness attributes. Actions to strengthen weak attributes can then be planned. Box 4 shows the results from a gap analysis on the rubber industry cluster in Sri Lanka.

Box 4 What Insights are Gained from Competitiveness Analysis for the Rubber Industry Cluster in Colombo?

The production of rubber and manufacture of rubber products have been a solid part of Sri Lanka's economy since the 1870s. Sri Lanka is now the sixth largest exporter and the eighth largest natural rubber–producing country. Presently, the rubber industry's contribution to export earnings of the country is about 8%. The demand for rubber-based products is increasing, and there is need to enhance the competitiveness of the industry cluster in the Colombo Metropolitan Region. The cluster is an important contributor to the economic growth of the said metropolitan region.

Figure 6a Can Percentage of Value Be Added along the Supply Chain? Example of Rubber Industry Cluster in Colombo, Sri Lanka

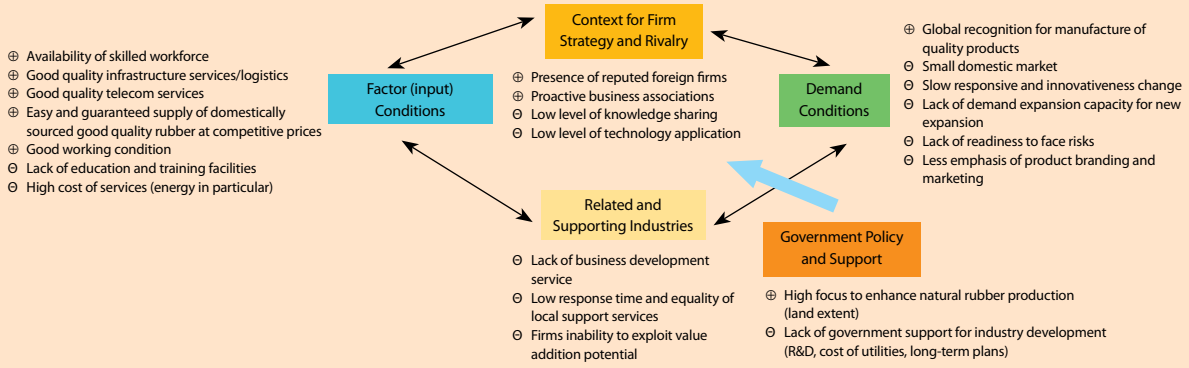


Source: ADB.

Figure 6a shows the industry's value-added structural chain, identifying that support in product development and in activating synthetic rubber processing, fillers/chemicals, fabric and dice moulds, will greatly increase the industry's value addition.

Figure 6b sets out the analysis of the 22 attributes under the five competitiveness factors in the rubber industry cluster.

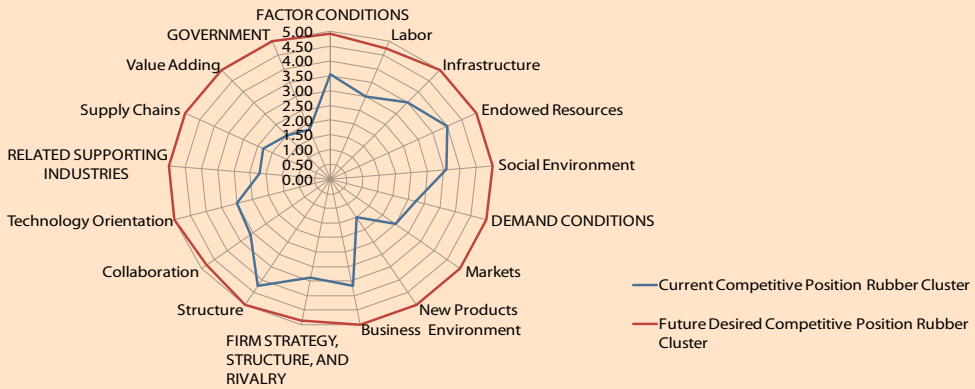
Figure 6b Analysis of 5 Factors and 22 Attributes Contributing to the Rubber Industry's Competitiveness



The factor condition in the cluster is relatively strong (3.54) and internationally competitive (above the score 3.0). It has a well-trained workforce and good—but aging—infrastructure supporting the industry. But the demand condition (2.7) is below international competitiveness requirements.

The diamond model and competitiveness deficiency analysis led to the identification of key areas of intervention that will be necessary to support the development of the cluster. These key initiatives include develop basic infrastructure, enhance research and development and the education and training system, improve the business environment, and support technology development.

Figure 6c Graphic Summary of Gap Analysis Results for Rubber Industry Clusters in the Colombo Metropolitan Region



Source: ADB

Step 6 Preparing a Strategic Business Plan Based on the Results of the Gap Analysis. Industry leaders, government, or parties who have a stake in industry clusters can utilize the results of the CCED analyses to address competitive weaknesses by developing action plans and priority investments. After obtaining a strong commitment from stakeholders, a consensus on how to develop a cluster should define:

(i) **A Business Plan.** What should each industry cluster's stakeholders intend to achieve collectively?

(ii) **Time-Bound Action Plans.** What needs to be done to foster the development of the cluster, i.e., aligning with the analysis results of the six building blocks for city competitiveness and five factors of competitiveness for industry clusters.

(iii) **Benefits of Participating.** What do stakeholders potentially gain from participating in the development of a cluster?

Implementing Cluster Development Projects—the Key Intervention Areas

The range of activities needed to support the development of industry clusters is well within the scope of activities funded by ADB. The significant departure from past practice is integrating the demands of industry for infrastructure and finance in the context of a sustainable development strategy for a city. The core interventions[5] are:

(i) logistics and infrastructure catering to the local industry cluster, e.g., specialized wastewater treatment for tanneries;

(ii) human resource development, e.g., vocational education and supply chain capacity development;

(iii) institutions and regulatory systems, e.g., investment in SME promotion through industry associations and e-governance to reduce transaction costs;

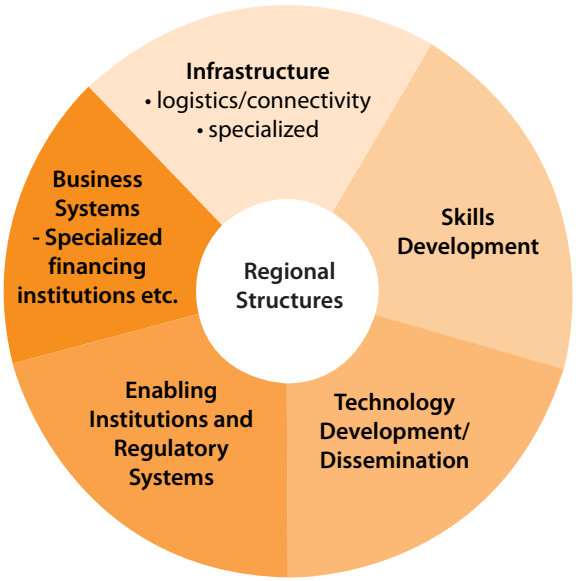
(iv) technology development and dissemination, e.g., support to development activities of industry associations, research and development at local educational and research institutions, pilot projects, and outreach and awareness programs and campaigns, among others; and

(v) business systems, e.g., specialized financial institutions (adapted to the local industries' need for credit, hedging, export credit, and other financial needs) and other specialized facilities.

Support to a regional institution is also needed to foster coordination of government investment and collaboration for "regional marketing," cooperative purchasing of inputs, and other collective activities. The relationship is represented in Figure 6.

[5] ADB. 2010. *City Cluster Economic Development: Towards More Competitive, Sustainable and Inclusive Asian Cities*. Manila.

Figure 6 Critical components of City Cluster Economic Development



Examples of Best Practices

Many projects related to the competitiveness of cities and industry cluster development have been implemented since the early 1990s. One of the famous cluster development projects is the information technology (IT) industry cluster in Bangalore, India. Bangalore is referred to as the *Silicon Valley of India* because of the large number of IT companies located in the city. Its IT industry cluster contributed 33% of India's IT exports in 2006–2007 (amounting to $32 billion). Recently, however, the industry of Bangalore has been under stress, mainly due to the lack of urban infrastructure to accommodate flows of people, goods, and services. There are many global examples of successful industry clusters supported by various types of projects, such as:

- Textile and/or garment industry cluster: Tirupur, India

- Stainless steel cutlery industry cluster: Wazirabad, Pakistan
- Local Cluster Competitiveness in the State of Pernambuco, Brazil, supported by the Inter-American Development Bank (IADB)
- North Grande Competitiveness Program: Argentina, also supported by IADB
- 71 cluster development projects in 16 countries supported by the Multilateral Investment Fund (MIF)
- Numerous Industry-cluster projects in Africa, Asia, and Latin America by the United Nations Industrial Development Organization (UNIDO).

The experience, and later the evaluation, of both the MIF and UNIDO projects have demonstrated the successful application of the industrial cluster approach. This approach has stimulated innovation in products, processes, and productive functions; facilitated access to new markets; and contributed to building or strengthening local institutions (by creating collective norms and organizations). Moreover, there has been a growth in sales, employment, production, productivity, and exports. Box 5 sets out an example of a cluster development project in Argentina.

Box 5 Project Design for Competitive Industry Cluster Development Project

IADB-financed Loan (Document AR-L1003). Program for Industry Cluster Development and Competitiveness in the Province of Mendoza, Argentina (2005)

Background: Mendoza is Argentina's fifth largest province in terms of its contribution to national gross domestic product (GDP) (3.89% in 2003). The province's main economic activities with the greatest potential are wine industry, manufacturing, and tourism. Mendoza's economy shrank considerably between 1993 and 2002. In that period, close to 40% of its industries disappeared. According to the provincial industrial census for 2003, close to 60% of industries were lagging significantly behind in technology. A feasibility study identified 19 clusters for priority support: 10 in agri-food clusters, 5 in tourism clusters, 3 in manufacturing clusters, and 1 oil extraction and/or refinery cluster.

The 19 clusters identified include almost 3,000 businesses that employ more than 18,000 people, and have sales in excess of $2.6 billion and exports of almost $770 million (about 53% of the province's GDP and 85% of its exports). To be more competitive, these clusters would benefit from better horizontal linkage (among companies in the same link of the value chain) and vertical linkage (with companies above or below in the chain).

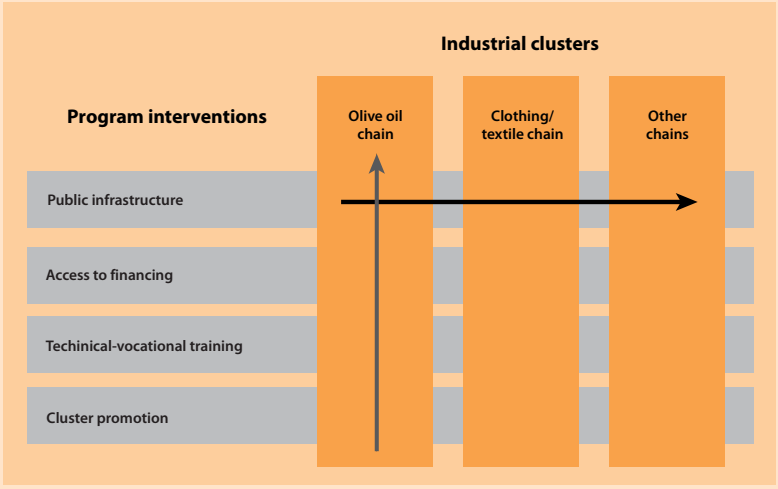
To build these links it is crucial to (i) improve the condition of infrastructure, thereby increasing access and reducing transportation costs, making the value chains more efficient and sustainable; (ii) provide small and medium-sized enterprises with more lending options for technological modernization, and greater access to financial information and advisory services; (iii) tailor technical and vocational training to develop the skills and capabilities needed to join or rejoin the workforce; and (iv) build cooperation networks to strengthen relations among the public, academic, and productive sectors, and to promote the integration of cluster enterprises.

Project objective: The program aims to develop a competitive provincial economic structure, in the context of public–private sector collaboration. The immediate objective is to enhance the competitiveness of the value chains in seven industry clusters in the province.

Components: The program has two phases. Phase I includes (i) public infrastructure to support productive activities ($75.56 million); (ii) improved access to financial services ($19.21 million); (iii) technical–vocational training ($7.28 million); and (iv) a cluster promotion program pursuing cooperation among companies, associations, and institutions in the development and implementation of competitiveness improvement initiatives ($4.02 million). Phase II continues these subprograms, drawing on the lessons learned in Phase I.

Cost and financing: The estimated cost of program Phase I is $116.66 million, of which $70 million will be financed by IADB and $46.66 million by the local counterpart. The execution and disbursement period for this phase is 5 years. IADB financing for Phase II will be $50 million and the local counterpart the province of Mendoza, $33 million.

Program Strategy for Industry Cluster Development and Competitiveness in the Province of Mendoza, Argentina, 2005



Benefits: The impact of the program will increase competitiveness and productivity of the value chains located in seven geographical clusters, thereby obtaining a greater impact than if the interventions were carried out in isolation. The province's small and medium-sized enterprises will be the direct beneficiaries of all the subprograms. In addition, the improvements in the road infrastructure will benefit the clusters, tourism in general and all other users of the improved sections, by reducing vehicle operating costs and travel times, and by improving road safety. The activities of the training subprogram will benefit thousands of youths and adults, some of them unemployed, who will have better employment and earning opportunities.

Source: IADB.

Moving Forward

Overview

To promote the economic development of Asian cities, CCED projects can do the following

- Build understanding of, and analyze, the attributes of competitiveness;
- Identify, map, and analyze sectoral and spatial changes in industry and economic activities at the city, provincial, or national level;
- Identify, measure, and analyze strengths and gaps in key factors that will drive the future development of city economies;
- Describe industry structure, cluster strengths and weaknesses, and supply chains to determine critical elements of strategic infrastructure that would enhance competitiveness;
- Develop a more collaborative approach for local economic development through public and private sector partnership;
- Identify a prioritized set of actions and investments needed to support efficient and inclusive growth.

Knowledge Development Supporting Clusters

ADB's CCED study[6] has advanced theoretical thinking on, and developed practical applications to facilitate, the development of industry clusters. Many Asian countries are just beginning to recognize the importance of industry cluster development as the drivers of economic growth. Creating more open and knowledgeable economies and communities has become critical to the building of local capital. A program for further dissemination of knowledge on the experience of CCED will be developed to sustain support to city economies.

Improving Pathways to Sustainable Development

The CCED process provides detailed insights on strategic investments that will support more sustainable forms of local economic development. CCED gives an understanding of multisector and multi-tiered linkages required to design such supports. Governments and businesses need to learn how to engage collaboratively, to respond to shocks and to create economic opportunities. This will require businesses and governments to understand that local systems must be more attuned to international systems, to accept open knowledge platforms and information sharing, and to engage in competitive collaboration. ADB will support such initiatives under its new Urban Operational Plan.

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[6] K. Choe and B. Roberts. Forthcoming. *Competitive Cities in the 21st Century: Cluster-based Local Economic Development*. Manila: ADB

Competitve Cities: City Cluster Economic Development

Economic challenges in developing Asian countries have become more complex: urban populations are growing at great cost to the environment, climate change has increased risks of natural disasters, and income gaps within and between developing countries are widening. These factors threaten the sustainable growth and development of urban areas, the drivers of Asia's economy. A strategic approach for inclusive growth is needed. The City Cluster Economic Development approach provides a strategic framework and a set of analytical tools, which governments, businesses, and communities can use to support the inclusive and sustainable development of competitive urban economies in Asia. Said approach was developed and tested by the Asian Development Bank to improve the basis for integrated planning and development of urban regions in Asia and the Pacific. It also helps urban managers and other city stakeholders identify action plans and determine priority investment areas.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.8 billion people who live on less than $2 a day, with 903 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

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