Background

The urban sector community at the Asian Development Bank (ADB) has identified city cluster development (CCD) as a key strategy for urban-led development in developing member countries. CCD is a process of economic and social development through which the built-up areas of a number of human settlements become linked together functionally, structurally, and spatially to form an integrated urban region. CCD occurs when the territorial scopes of a number of adjoining cities expand until they create an urban corridor, as in the Tokyo–Nagoya–Yokohama–Osaka–Kyoto–Kobe Shinkansen, or "bullet train," conurbation in Japan. It can arise from the expansion of a megacity that envelops adjoining small and intermediate-sized cities to form a mega-urban region, as in Metro Manila, Jakarta, Delhi, or Karachi (Laquian 2005). It may take the form of a subnational city cluster made up of large and medium-sized cities in which no one city is dominant, as in the Guangzhou–Shenzhen–Hong Kong–Macau Pearl River Delta region in the People's Republic of China (Yeh et al. 2002). Some city clusters have small cities that act as service centers for small towns, as in the Naga–Legaspi–Iriga–Daet city cluster in the Philippines (Mangahas 2006). Finally, some transborder city clusters have adjoining cities located in separate nation-states that pursue common development initiatives, as in the Singapore–Johor–Riau "growth triangle" in Southeast Asia (Macleod and McGee 1996).

Finding the appropriate policy instruments (such as CCD) that deal with worsening urban problems is particularly important in Asia because the region's urban population is expected to reach 2.7 billion, or about 55% of

the world urban population, by 2030. This means that close to 1 billion people (or 48 million per year) will be added to Asia's urban population over the next two decades. More than half of the world's megacities (agglomerations with populations of 10 million or more) are in Asia. The proportion of Asian megacity residents to total urban population worldwide has risen from 5% in 1960 to 10% in 2000. In 1950, Asia had only one large city; by 2015, it is projected to have 23 cities (population size 5 million or above). In 1950, 6 million people lived in large cities; by 2015, that number is projected to increase to 160 million. The fastest urban growth rates in Asia (occurring in small cities with less than 500,000 people) are of far greater concern. In 1975, about 12% of urban populations in the region were living in small cities; this proportion increased to 19% in 2000 and is projected to increase to 22% by 2015 (United Nations 2007).[1]

In many Asian megacities, the built-up area has sprawled into surrounding regions engulfing villages, small towns, and other cities to create what have been called "extended metropolitan regions" (McGee 1995). As the outward thrust of urban agglomerations has spread, they have linked up with the territories of other cities to create city clusters. A planned development of city clusters is important because cities and towns generally function as engines of economic growth and the principal agents for socioeconomic transformation. However, empirical evidence shows that in Asia and other developing regions, the capacity of these "engines" to generate positive change is critically hampered by poor infrastructure and services, weak financial bases, and inefficient governance and urban management mechanisms. Asian urban institutions are unable to cope with the complex problems confronted by urban areas, not the least of which is that 200 million poor people already live in ADB's developing member countries (DMCs). The costs of providing urban infrastructure and services are daunting. ADB estimates its DMCs will need around $60 billion per year between 2006 and 2010 to provide adequate water supplies, sanitation, solid waste management, shelters, urban roads, and transportation systems to make cities function optimally (ADB 2006).

[1] The population figures for Asian cities available from the United Nations and other sources are based on official country definitions that are confined to formal political boundaries. There is demographic evidence, however, that these figures are significantly "undercounted" because the spread of urban development actually extends way beyond formal city boundaries.

Since the end of World War II, the rapid growth of very large cities has been a major policy concern in most Asian countries. Alarmed by the rapid growth of megacities, governments have pursued strategies to control their expansion. In the People's Republic of China (PRC) and Viet Nam, a household registration (*hukou*) system strictly controlled rural–urban migration and limited access to jobs, housing, and other benefits to bona fide urban residents. Metropolitan plans in Bangladesh, India, and Pakistan used greenbelts in an effort to confine urban growth within specified zones. Indonesia and the Philippines issued identity cards to city residents that entitled them to city services denied to migrants. The Government of the Philippines gave free bus passes to urban migrants who agreed to return to their home villages. In the PRC during the Great Proletarian Cultural Revolution (1966–1976), some urban residents were sent to rural areas "to learn from the peasants." In India, Pakistan, the Philippines, and Thailand, poor people living in inner-city slums were evicted and resettled in suburban colonies. Indonesia, Malaysia, Nepal, and Sri Lanka, opened resettlement areas and land development schemes in frontier areas to deflect migration from cities. India and the Republic of Korea created growth centers and growth poles to act as counter-magnets to large cities. In almost all Asian countries, basic urban services have been denied to residents of slum and squatter communities, the argument being that providing these services would be tantamount to rewarding them for their illegal actions. It was also believed that helping the urban poor would only encourage more people to move to urban areas, expanding slums.

Only in recent years have some Asian governments recognized the developmental role of cities, and adopted more proactive, urban-led strategies. This policy shift was based on the observation that a country's urbanization level (the proportion of the population that lives in cities and towns) is directly correlated with its level of economic growth. It is a fact that the Asian countries and regions that are the most urbanized have the highest per capita gross domestic product (GDP). In 2006, Singapore and Hong Kong, China—both 100% urban—had per capita GDPs of $38,714 and $33,471, respectively. Japan, more than 80% urban, had a per capita GDP of $33,100 (purchasing power parity). In contrast, countries with low urbanization levels, such as Bhutan (7.1%) and East Timor (7.5%), had the lowest per capita GDPs. In the light of the positive relationship between urbanization levels and economic growth, some development specialists have advocated using accelerated urbanization as an instrument for stimulating overall economic growth.

Thus, instead of passively reacting to urban development problems—increasing urban population, urban sprawl, traffic congestion, water shortages, and air and water pollution—they advocate the use of urban-led strategies to proactively spark economic and social development. For example, in the PRC, the Government has invested heavily in such urban infrastructure and services as roads and transportation, water, sewerage and sanitation, energy generation and distribution, housing, and solid waste management and concentrated these in selected coastal cities and regions, special economic zones (SEZs), export processing zones, industrial parks, and high-tech parks. In India, the Jawaharlal Nehru National Urban Renewal Mission has earmarked funds to augment urban infrastructure and services in 63 cities. The Government of India has approved the establishment of SEZs, for example, Positra in Gujarat and Nanguneri in Tamil Nadu. In Malaysia, the Government has pursued a clustered cities development strategy around Kuala Lumpur by establishing the new cities of Putrajaya and Cyberjaya. The Government of the Philippines is developing the Manila-centered region by creating a constellation of 22 chartered cities around Metro Manila and setting up two SEZs in the former US military bases of Subic Bay and Clark Air Force Base. These proactive strategies that use city clusters as the leading edge for urban-region growth constitute an important paradigm shift in the field of development.

The conceptual framework of "clusters" was initiated by M. Porter (1990). "Clusters" are groups of companies and institutions co-located in a specific geographic region and linked by interdependencies in providing a related group of products and/or services.[2] Cluster development is increasingly receiving attention globally[3] as one form of economic development strategy involving business clusters. Since it was first proposed in 1990 by M. Porter, governments and academics have come to see the concept as a means to stimulate urban and regional economic growth. Though the types of clusters can vary depending on which environment or context we are interested in for strengthening business competitiveness, this study

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[2] This definition is built-up based on M. Porter's initial work (1990), by C. Ketels, Harvard Business School: The Development of the Cluster Concept: Present Experiences and Further Development. A paper prepared for the Conference on Clusters, Duisburg, Germany, 5 December 2003.

[3] C. Ketels (2003) provides simple statistics, indicating that there are more than 300 entries for the last 3 years, and the cluster profile database at the Institute for Strategy and Competitiveness contains more than 800 entries from 52 countries.

focuses on the geophysical space of urban areas and urbanization for their competitiveness and economic development.

Positive economic impacts of agglomerated city regions and their contributions to expediting growth should be tapped as opportunities in the context of rapidly urbanizing Asian developing member countries. This flagship study is an initial, exploratory step in pursuing city cluster development (CCD) as a strategy for ADB operations. It attempts to define and analyze the CCD process and looks into the developmental potentials of CCD as it relates to Asian urbanization. Based on an analysis of how city clusters form and develop, it explores strategic directions and makes a preliminary market analysis of possible CCD initiatives in developing member countries in Asia. Other objectives of the study are

- to identify and analyze potential challenges, critical issues, and constraints that may confront CCD as a policy intervention instrument;
- to formulate a long-term strategic framework for pursuing CCD; and
- to explore, as a specific case study, the applicability of the CCD strategic framework to India.