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# CITY INNOVATION SYSTEMS: THE METRO MANILA EXPERIENCE

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## INTRODUCTION

**City innovations, as defined by leading Southeast Asian researchers in urban and innovation studies, refer to new or improved solutions that contribute to enhanced liveability, prosperity, and equity of the city. These may be technological products, service or processes; institutional or organizational developments; administrative or legislative policies; or socio-cultural practices that create a more liveable environment, promote better economic conditions, and produce a more equitable social structure. City innovations cover both social and commercial innovation.**

Innovations encompass informal and formal institutional arrangements and their dynamic interactions with different actors in the innovation system. These interactions lead to the development, adoption, and diffusion of the innovation. Actors in the city innovation include not only the traditional participants in the triple helix innovation framework (academe, government, and industry) but also non-government organizations, grassroots and marginalized groups, and mass media that help in the delivery of innovative solutions to the city residents. Innovations that address urban issues in Asian mega cities are the highlight of this study.

The focus of this study is the National Capital Region (Metro Manila), the Philippines' most urbanized region. This study documented and analyzed the following city innovations at the firm, sector, and regional levels: Gawad Kalinga, medical tourism, and UP-Ayala Technology Park. These innovations address three urban problems: housing and community development; employment; and business and human development. Seven criteria are used in the analysis : novelty, impact, equity, economic and financial stability, environmental sustainability, transferability, and political acceptability. Aspects of innovation (product, process, paradigm, service and institution) and the three spatial dimensions (cognitive, information, and physical) are matched to further understand the origin, growth, and development of these innovation.

## METRO MANILA

Metro Manila or National Capital Region—the 18th largest urban center in the world— is composed of 17 local government units (16 cities and 1 municipality) with a total population of 11.6 million (NCSO, 2007 as cited in MMDA, 2010). The 16 cities are Caloocan, Las Pinas, Makati, Malabon, Mandaluyong, Manila, Marikina, Muntinlupa, Navotas, Paranaque, Pasay, Pasig, Quezon, San Juan, Taguig, and Valenzuela. Pateros is the only municipality. It has a total land area of 636 square km. In 2007, NCR registered an annual population growth of 2.11 percent. Population grew at an average rate of 1.7 percent from 1995 to 2007.

Among all regions in the Philippines, Metro Manila contributes the most to the domestic economy. Ninety percent of the country's private businesses, cultural, educational, and medical establishments are located in Metro Manila. The region accounted for 33 percent of Philippine GDP in 2008. In 2007, tax revenue collections by the Bureau of Internal Revenue (BIR) from Metro Manila comprise 41 percent of the Philippine total (NSCB, 2009).

Although Metro Manila is considered the most industrialized region in the country, majority of its land (44.83 percent) is dedicated to residential use. Commercial, industrial, and institutional uses account for 12.22, 7.62, and 6.9 percent of land use, respectively. Roads and open spaces make up 28 percent of NCR total land area.

## CITY INNOVATIONS IN METRO MANILA

Metro Manila, like other ASEAN megacities, is confronted with problems brought about by economic growth and development. Three innovative Philippine solutions to some of Metro Manila's pressing urban issues were identified and analyzed namely: Gawad Kalinga; Medical Tourism, and UP-Ayala Technology Park. Summary of the analysis of the three city innovations is presented in Tables 1 and 2.

*A Social Innovation: Gawad Kalinga*

Gawad Kalinga (GK) is a program aimed at addressing social problems attendant to the lack of proper urban housing in Metro Manila. As of 2006, the National Housing Authority (NHA) has estimated 726,908 households living as illegal settlers or "squatters" or 51.6 % of the total in the country.

GK was initiated by a cause-oriented group in cooperation with Catholic Church-based group Couples for Christ. The project constructs houses for the marginalized, or those who were relocated or living in depressed areas in Metro Manila. Aside from house construction, GK also provides training programs and means of livelihood to beneficiaries to create and develop within GK communities the capability to address social issues on poverty, peace and order, livelihood, and environment.

Today, there are 1,400 Gawad Kalinga Villages and 33,439 houses all over the Philippines. The Gawad Kalinga Model is being replicated in different parts of the world and is now recognized as a benchmark in developing and empowering communities.

*Industry Clustering Innovation: Medical Tourism*

Medical Tourism is a government-initiated program being participated in by private hospitals in the Philippines. These hospitals are concentrated in Metro Manila. Medical tourism emerged in the Philippines in the 1960s. The chief objective of medical tourism is the creation of more employment opportunities for the people in Metro Manila and other places where this type of tourism can be promoted.

The medical tourism is able to provide a number of procedures and treatments under the medical care, surgical care, women's health, dental care, and optometric sub-sectors. The Philippine government estimates the country's health and wellness tourism to have contributed US$1.65 billion to the country's 2005 GDP (1.26 percent of the total). The sector is also said to have grown by 2.4 percent in 2006 and 8 percent in 2007.

Hospitals engaged in medical tourism are concentrated in Metro Manila due to its accessibility to amenities like hotels, transportation, and medical facilities and personnel. There are five government tertiary hospitals that participate in the medical tourism program, all clustered in Quezon City. These are East Avenue Medical Center, Lung Center, National Kidney Institute, Philippine Childen's Medical Center, and Philippine Heart Center. Private hospitals participating in the medical tourism program include Asian Hospital and Medical Center (Muntinlupa City), St.Luke's Medical Center (Quezon

City and Taguig City), Makati Medical Center (Makati City), and Medical City (Pasig City).

The Philippine medical tourisms offers lower prices of medical services compared to its Asian neighbors (between 20 to 195 percent lower) but offset, by the high cost of medical travel--on average, 33 percent higher than Thailand and Singapore. There is also a lack of enabling infrastructure to support the needs of the medical tourists: airports, reliable power supply, telecommunications services, roads and highways, and a pool of language interpreters in languages other than English (Chinese, Korean, Japanese, Bahasa). There is a lack of capable medical professionals due to the migration of doctors and nurses to other countries.

*Industry-Academe Partnership: UP-Ayala Technology Park*

UP-Ayala Technology Park is a government-industry-academe initiative that aims to promote the development and commercialization of new technology. The Park, located in Quezon City, is a collaborative project of the University of the Philippines and Ayala Corporation that started in 1999. It offers physical facilities and assistance in business incubation and processes, tap into a network of academic researchers (for technology innovation and improvements), venture capitalists, and government agencies. The network provides a social system to share ideas, knowledge, and skills in order for start-ups to properly start and grow their businesses. UP-Ayala Park hopes to foster the creation of meaningful employment in sustainable businesses and the development of advanced skills and knowledge.

Gawad Kalinga is an innovation on processes focused on mobilizing community involvement through volunteerism to address a social concern on housing and community development. It is being replicated in different cities not only in the Philippines but in other countries like Singapore. Full support of the local government is a key success factor.

Medical tourism and the technology park is not new in the world but new aspects that the Philippine government would like to focus on. Medical tourism is an innovation on institutional configuration that results from a co-evolution of social functions and social interests with technological developments.

The UP-Ayala Technology Park is a replication of business incubation and real estate development through the triple helix collaboration. Like the other two, it is being replicated in other cities by different universities with a strong support of the government.

Table 1. Innovation Dimensions

| Dimensions of Innovation | Gawad Kalinga | Medical Tourism | UP-Ayala Tech Park |
|---|---|---|---|
| Product | Housing / Community development | Healthcare / Leisure | Real Estate |
| Service | Community engagement | Medical Travel | Business Incubation |
| Process | Volunteerism | Clustering of healthcare facilities in MM | Collaboration among government, schools, and new ventures |
| Paradigm | Community-building through involvement and partnership | Integration of health, travel, and leisure | Academically-based IT pack |
| Institution | Government, NGOs, schools, businesses | Industries, Government | Government, industries, school |

Table 2. Innovation Aspects

| Aspects of Innovation | Gawad Kalinga | Medical Tourism | UP-Ayala Tech Park |
|---|---|---|---|
| Novelty | Volunteerism | Integration of medical treatments and leisure | Business engagement of state university |
| Impact | Improved lives and community of informal city dwellers, restoration of human dignity | Job creation | New venture development and job creation |
| Equity | Sharing of resources among committess | Equity sharing to provide the poor access to healthcare | State university access to income generation potential |
| Economic and Financial Stability | Donation and value-based partnership | Private funding and management | Php 6.5 billion investment and expected earnings of 200m |
| Environmental Sustainability | Focus on urban environmental concerns | Issue of land use and environmental degradation | Environment-friendly design of IT Park |
| Transferability | Replicated in other major cities | Clustering in other major cities (Davao, Cebu) | Model for other state universities |
| Political Acceptability | Strong support from local government | Collaboration of healthcare and tourism | Strong industry, academe, government collaboration |

## POLICY IMPLICATIONS

To support the sustainability of these three innovations, following policy recommendations are given:

1. Study and inclusion of the impact of these innovations on human development, environmental issues, government regulations, physical infrastructure, and technology development.
2. Policy to assure equity (number of Filipinos that benefit from the population) as these innovations continue
3. Provision of enabling infrastructure like roads and bridges, transportation and communications facilities, and power generation
4. Use of science and technology as driver of city innovation
5. Creation of institutional policies to support industry-academe-government collaboration
6. Institution of a more progressive intellectual property legislation
7. Review of the tertiary level curriculum to support innovation and technology development inititiatives through research; promotion of consultancy work of faculty with industry partners; and strong innovation and entrepreneurship-oriented internship programs for students

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