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## A Review of Build-Operate-Transfer for Infrastructure Development: Some Lessons for Policy Reform

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Philippine Institute for Development Studies  
*Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas*

## A Review of Build-Operate-Transfer for Infrastructure Development: Some Lessons for Policy Reform

*Gilberto M. Llanto*

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# **A Review of Build-Operate-Transfer for Infrastructure Development: Some Lessons for Policy Reform<sup>1</sup>**

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## *Summary*

The Philippines has used the BOT law, as amended to motivate private sector provision of infrastructure. Using examples from selected BOT projects in the country, the paper pointed out key issues constraining the successful implementation of the BOT approach to infrastructure provision. It also indicated several factors that were instrumental in forging an effective public-private partnership in BOT projects. The paper pointed out the need to address various issues, starting from the legal framework to the level of responsibilities of the government institutions that are involved in the project cycle, i.e., from project entry level to implementation and completion. Improvements should be introduced at the policy, legal and institutional frameworks in order to improve the usefulness of this approach to infrastructure development.

Key words: Build-operate-transfer, public-private partnership in infrastructure, contracts, risk-sharing, subsidy, guarantees, arbitration, dispute settlement

## I. Introduction

This paper has a twofold objective: (a) to review the experience of the Philippines with the utilization of the BOT approach for infrastructure development and (b) to draw key lessons and recommend policy reforms on how to improve the use of this strategic instrument for infrastructure provision. The paper is organized into five sections. After a brief introduction section 2 gives an overview of infrastructure in the Philippines. Section 3 provides an analytical framework of Build-Operate-Transfer (BOT) as an approach for providing infrastructure and how it is used by developing countries such as the Philippines to provide much-needed infrastructure. Section 4 analyzes the main issues and lessons in BOT implementation and uses case studies of BOT projects in the Philippines to illustrate key points. The lessons are traced through a discussion of the project cycle or the different stages of the BOT process. The case studies highlight the differential experience with BOT as an approach to infrastructure provision: both failed and successful projects are used to illustrate key points in the Philippine experience with the BOT approach. Time and space limitation forced the paper to simply sketch in broad strokes, so to speak, the various policy issues that the government has to address in order to improve public-private sector participation (PPP) in infrastructure in general and BOT implementation in particular. A more extensive and in-depth study of BOT projects, which can overcome the limitations of drawing lessons from a few simple case studies, should perhaps be done in the near future by other researchers. The last section provides concluding remarks and some policy recommendations.

The globalization of production and distribution has compelled countries to have efficient infrastructure in order to be able to have substantial participation in global trading and production networks. Fabella (1996) tells the story of Taiwan, which followed a two-pronged strategy: improving macroeconomic stability and the provision of a competitive infrastructure. Once these conditions were met, firms on the technological frontier came and operated. Inefficient infrastructure creates a serious bottleneck and impediment to trade and growth and thus, there is a drive to meet the

infrastructure gap or to make more efficient existing infrastructure in many countries in East Asia. On the other hand, efficient infrastructure reduces transaction costs and creates value added for producers and consumers. It links producers to the global supply chains and distribution system, thereby creating access to discriminating global markets for goods and services. The rapidly developing countries in East Asia that have made substantial investments in power, telecommunications, transport and production technology have surged ahead of other, non-investing, developing countries (Llanto 2004 and 2007b)<sup>3</sup>.

The provision of infrastructure services, that is, electricity, water, telecommunications, roads, railroads, ports and airports, is not an end itself. Those infrastructure services are indirect inputs to the provision of goods and service and they impact significantly in the productivity, cost and competitiveness of the economy (Guasch, Laffont and Straub 1993); thus they matter for economic growth (Canning (1998), Calderon, Easterly and Serven (2002); Calderon and Serven (2002). A 1 percent increase in the stock of infrastructure can increase GDP by up to 0.20 percent (Guasch, Laffont and Straub 1993). The growth of international trade and rapid urbanization underscore the need to cut costs, increase efficiency and competitiveness wherein the quality of infrastructure matters a lot. The limited coverage and quality of some Asian countries' infrastructures are hindering their efforts to achieve international competitiveness<sup>4</sup>

The key role of infrastructure in economic growth cannot be ignored. A recent study done by a consortium of researchers under the World Bank, the Asian Development Bank and the Japan Bank for International Cooperation (2005) substantiates the decisive role that infrastructure has played in growth and poverty reduction in East Asia and the Pacific.

Empirical studies testing the public capital hypothesis indicated that infrastructure has a positive and significant impact on growth and productivity. Canning and Pedroni (2004) investigated the long run consequences of infrastructure provision on per capita

income in a panel of countries over the period 1950-1992. Their results provide clear evidence that in the vast majority of cases infrastructure does induce long run growth effects although there is a great deal of variation in the results across individual countries. Summarizing the results of various estimates<sup>5</sup>, Gramlich (1994) and Sturm and De Haan (1995) found output elasticities with respect to public capital of around 0.3. Wang (2002)'s estimates for seven East Asian countries for the period 1979-1998 indicated an average elasticity of 0.2% of private production to a 1% increase in public capital. On the other hand, there still is debate “about whether infrastructure provision actually fosters economic development or whether it is provided as a product of the economic development process (Button, 1998)<sup>6</sup>. A different view was that while there is a definite link between infrastructure investment and economic growth, the causality in either direction has not been established. Thus, physical infrastructure can be regarded as form of “complementary capital” that requires the existence of available productive capital (whether physical or human) for investment (and innovation) in order to realize the economic growth potential. Infrastructure in itself can only develop, not create economic potential but only where appropriate conditions exist (O’Fallon 2003).

Notwithstanding the lively debate among different researchers on the link between infrastructure and growth, the preponderance of empirical evidence shows that inadequate supply of infrastructure or the unreliability of infrastructure services may constrain investments of productive capital and lead to a restriction or reduction of output. There are too many pieces of evidence supporting the significant impacts of infrastructure on productivity and growth that are difficult to ignore (Rodriguez, 2006). The majority of studies trying to establish a linkage between (public) investments or capital and economic growth indicate that (a) public capital is complementary and promotes private capital formation, (b) core infrastructure such as roads and railways, tend to have the most impact on productivity, and (c) the direction of causation is from public capital to productivity and not the other way around (Infrastructure Canada, 2007).

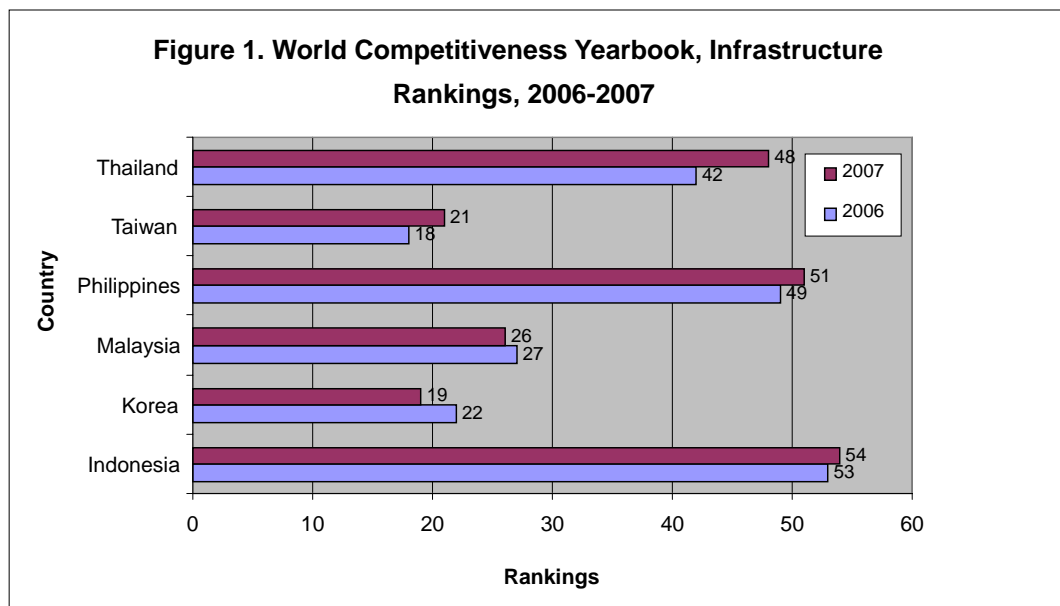
A recent empirical paper pointed out that infrastructure acts as a major driver for growth and poverty reduction in the Philippines and that infrastructure is a significant

determinant of economic growth on an aggregative basis and also at the sub-national level (Llanto, 2008). The paper found evidence that infrastructure could be an important conditioning variable in regional convergence. Llanto's results indicated the importance of investment in human capital (education) and infrastructure in promoting regional growth, consistent with the findings of other researchers (Lamberte, Albuero and Patalinghug 2003; Basilio and Gundaya 1997). Infrastructure development is critical at the sub-national level as shown by the results showing that local government infrastructure expenditure is a significant determinant of local growth. The implication is that underinvestment in infrastructure will have serious consequences for the country's capacity to grow and reduce poverty.

However, the Philippines amid globalization is failing to make substantial investments in transport, ports and shipping and communications, thereby weakening its ability to compete on a global basis (Llanto, 2004). A recent survey by the Japan External Trade Office (JETRO) of a sample of Japanese international investors about what they considered as a deterrent to increasing their investments in Asia cited underdeveloped infrastructure as a major disincentive to Japanese foreign investment in the Philippines (JETRO, 2007).

The lack of adequate transportation, telecommunications and energy facilities can adversely affect the development of existing industries and may likewise preclude new entrants from coming in. An efficient transportation and communication infrastructure provides overall mobility for goods and people alike, contributes to a reduction of input and transactions costs and enhances the efficiency of markets. Local infrastructure which may have significant spillover effects spurs local economic activities while the network characteristics of infrastructure enhances connectivity of regions and promotes domestic integration. An interesting observation is that infrastructure investments may also be defended on equity grounds because interregional infrastructure increases the accessibility of peripheral regions and raises their level of competitiveness. This could help stop the process of regional divergence (Rosik, 2006).

Infrastructure in the country has not kept pace with the requirements of a growing economy, the increase in population and urbanization. The poor state of infrastructure in the country and the lack of infrastructure investment have constrained growth (Llanto, 2004). At the regional level, empirical estimates showed that the regions with the lowest gross regional domestic product are also those suffering from the most severe lack of basic infrastructure (Llanto 2007). The Philippines has not provided infrastructure that is sufficient in quantity and quality to meet competitive challenges in the global economy as well as poverty reduction goals under such international commitments as the Millennium Development Goals. Both the Asian Development Bank and the World Bank have noted the negative impact of low quality infrastructure on the Philippines' global competitiveness. The state of infrastructure in a given country is one key determinant of its competitiveness ranking. Among the ASEAN countries, however, the Philippines is not far behind Thailand (48<sup>th</sup>, 2007) and slightly ahead of Indonesia (54<sup>th</sup>, 2007). Please see Figure 1 below.



The low level of investment in and poor conditions of infrastructure in the Philippines have increased the cost of doing business in the country and had significant



adverse impact on the perceived competitiveness of the Philippines as an investment destination. As indicated in Llanto (2008):

- The World Economic Forum in 2003-2004 ranked the Philippines 66<sup>th</sup> of 102 countries in its growth competitiveness index, partly because of the poor state of Philippine infrastructure (WEF 2004).
- In terms of overall infrastructure quality, the Philippines ranked 88<sup>th</sup> of 125 countries in the 2006 Global Competitiveness Index of the World Economic
- In terms of adequacy of infrastructure, the Philippines slid to 51<sup>st</sup> in 2007 of 61 countries from 49<sup>th</sup> in 2006 according to the 2007 World Competitiveness Yearbook (IMD 2007).

With respect to the increased cost of doing business in the country that is brought about by the inadequate and poor conditions of infrastructure, the following have been observed:

- More than half of the country's road network was in poor and bad condition, leading to vehicle operating and intercity freight costs that are more than 50% higher than in regional neighbors such as Indonesia and Thailand. Thus, the high level of congestion on the main roads is costing the Philippines as much as Php 185 billion a year in 2006 prices (World Bank 2005).
- Power tariffs for businesses in Manila were 20 to 80% higher than tariffs in nine other Southeast Asian cities (Leung and others 2003).
- About 18% of firms participating in the 2005 Investment Climate Survey reported that the inadequate transport network was a major constraint to investment (ADB-WB 2005).
- The Philippines has the highest cost in the ASEAN for exporting a container partly because of inefficiencies in port handling. The World Bank's recent Doing Business Indicators noted that the cost of exporting a 20 foot container from the Philippines is 16 to 51% higher than from the People's Republic of China, Singapore or Thailand (WB-IFC 2007).

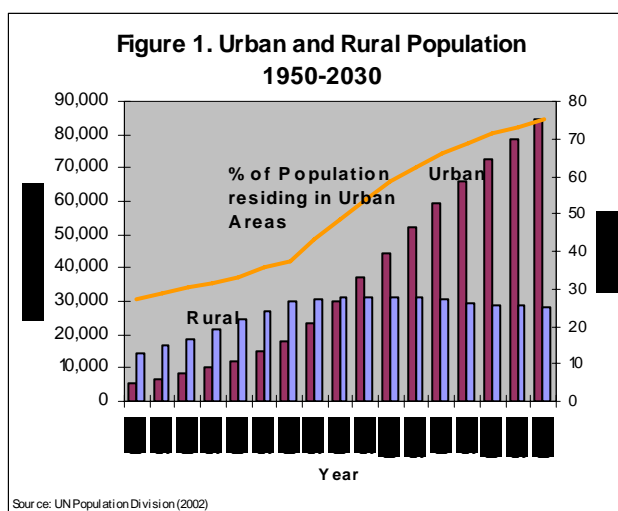
Rapid urbanization has swelled the ranks of the urban poor and has created a tremendous demand for housing and social services, secured land tenure and serviced land, which to a great extent has remained unsatisfied. Access to social services such as water supply and sanitation and solid waste management is on a decline both in terms of coverage and quality. The deteriorating coverage and lack of quality of infrastructure and service delivery have been widely considered as an impediment to growth and poverty reduction. The projected growth of the population and the rapid urbanization rate in the Philippines will put even greater pressure on the government to address the infrastructure lack. The Housing and Urban Development Coordinating Council (HUDCC) estimates that Philippine population is projected to increase from 80 million in 2002 to 98.2 million by 2015. The country has one of the highest urbanization growth rates in the world with an average urbanization growth rate of 5.1% between 1960 and 1995. More than half of the population is in urban areas and this proportion is expected to reach 60% by 2010 if current trends continue. While official data indicate that only about 20% of the 7.5 million urban households fall below the poverty income line (Pesos 13,915 per capita per year as of 2001), the poverty income line alone does not capture the dire situation of informal settlers (Llanto 2007).

The key issues and challenges in urbanization are summarized in Box 1 below.

### Box 1. Key issues and challenges in urbanization, Philippines

The World Bank after a series of consultations and workshops with stakeholders summarized the key issues and challenges in urban development.

Already, most people, 40 million, live in urban areas; urban incomes are 2.3 times rural incomes; they already account for the vast majority (70%) of economic output. The contribution of urban areas to economic growth is even greater. For example, in 2000, the largely urbanized Philippines heartland (NCR + Regions III and IV) alone accounted for 60% of economic growth. Philippines has one of the highest urbanization rates in the developing world. Though expected to slow down, urban population will continue to increase much faster than average population growth, and will account for 75% of the total population by 2030.



What are the main issues and challenges?

- *Creating enough jobs, especially in urban areas where population is growing fastest*
- *Rising share of urban poverty in national poverty*
- *Crisis in governance of larger urban-regional scale infrastructure networks, which contributes to the cost of doing business investment as well as housing*
- *Integrated urban infrastructure development*

Source: World Bank (2005)

Since the 1997 Asian financial crisis, infrastructure investment has dropped from a peak of 8.5% of gross domestic product (GDP) in 1998 to only 2.8% of GDP in 2002. In this regard, the donor community has advised the Philippine government to increase infrastructure investments to at least 5% of GDP, the average infrastructure investment norm of her neighboring countries in the past decade. To do this, the government has to expand its fiscal space through a vigorous tax reform program. The World Bank (2005) recommends the need to pursue a “credible and sustained period of fiscal reforms- in particular, increasing tax revenues. . . contingent liabilities from infrastructure programs

should be carefully accounted for and managed; guarantees should be used judiciously, based on a clear rationale and appropriate risk allocation” (Executive summary, pages xxiv to xxv).

The government has recognized the constraining effect of poor infrastructure on economic growth and development and has prioritized the removal of this serious bottleneck. The Medium Term Philippine Development Plan (2004-2010) provided broad strategies and identified critical infrastructure that have to be completed or provided by the end of the Plan period. The Medium-Term Philippine Development Plan (MTPDP) 2004-2010 also recognizes private sector participation as key to infrastructure development in the country. In a recent workshop organized by the Philippine Development Forum, it was claimed that “public-private partnership (PPP) would be the only viable option for key infrastructure development in the short-term, given the fiscal conditions of the Philippine Government”<sup>7</sup>.

The Medium-Term Philippine Development Plan stressed the importance of connectivity of an archipelagic economy by good transport and communications network. The connectivity provided by good infrastructure facilities is expected to open new economic opportunities, reduce transportation and transaction costs of business, and increase access to social services. The interconnection will also strengthen the socioeconomic, cultural and political linkages between and among regions. Eventually, connectivity will decentralize progress and bring development to the countryside.

Efficient infrastructure is important for economic integration in the ASEAN and East Asia and for narrowing development gaps. The new economic geography considers two forces that work on economic integration among countries as well as domestic regions within a country: (a) agglomeration forces and (b) dispersion forces. While agglomeration forces widen disparities among countries and within country, countervailing dispersion forces motivate the relocation of economic activities, e.g., manufacturing to lagging countries or regions as congestion in the more developed countries or regions within country starts to constrain further growth.

The Interim Report of ERIA on “Developing a Roadmap toward East Asian Economic Integration” draws attention to a sign of congestion in economic agglomeration in East Asia, and the dispersion forces that start working to influence industrial location<sup>8</sup>. Congestion and increases in production costs, e.g., high wages, difficulty in securing land, suggest that dispersion forces come in to address these constraints. The Report notes that firms have to find labor from far distance, and some of them eventually set up a new factory in a middle-size city or in a rural area. The Report cites fragmentation theory to explain that differences in location advantages such as factor prices motivate fragmentation of production processes. Differences in wage levels between ASEAN forerunner countries and Cambodia, Laos, Myanmar and Vietnam (CLMV) are still substantial, and thus, CLMV may rather have strengths, particularly for labor-intensive or natural-resource-intensive production processes. The development of economic infrastructure including logistics is crucially important for economic development through effectively utilizing globalizing forces. Economic infrastructure is vital to the efficient formation of agglomeration as well as the extension of production networks. Gill and Kharas (2007) point out that “ports and other transport modes have served as the foundation for cities, and once established, these cities tended to grow. Transport costs continue to be important in determining the size and nature of cities” (page 15.)

Proper project design and prioritization are extremely important. Effective use of regional resources for infrastructure development, including public-private partnership, is also required. In this regard, among the many important issues facing Cambodia, Laos, Myanmar and Vietnam is the need to reduce network-set-up cost and service link cost. Their geographical proximity to growth centers in forerunner ASEAN countries would be a strong point and thus, efforts for deeper integration such as the appropriate infrastructure policies are essential toward economic integration. The Philippines, being an archipelago faces a different set of challenges in establishing connectivity among its numerous islands and integrating with the Asian region and the global markets.

In recent years, many developing country governments have tried to solicit investment for public projects from the private sector; private sector capital and management expertise were seen as helping to quickly and cheaply solve the infrastructure lack through various privatization approaches such as corporatization, sell-off of state-owned enterprises, management contracts (Menheere and Pollalis, 1996; Handley, 1997) The World Bank (2005) has advised the Philippine government about the advantages of a private sector-led infrastructure development strategy, calling it as “a pillar of infrastructure development” (Executive summary, page xxiii)

Public-private partnership can play a significant role in infrastructure provision and development. Several countries have successfully used the Build-Operate-Transfer (BOT) approach, a particular form of public sector-private sector partnership to address the infrastructure needs of the economy (UNIDO 1996)<sup>9</sup> With BOT, the private sector takes care of the design, financing, construction, operation and management of the infrastructural facility and after a specified concession period, the government assumes ownership of the facility; the private sector takes on long-term risks of financing and managing an infrastructural facility in exchange for commercial returns to the investment under the ‘user-pays’ principle (Menheere and Pollalis, 1986; Handley 1997, among others).

The development of Suez Canal was done through the BOT approach (Levy (1996). The first official private facility development under the name “Build-Operate-Transfer” was used in Turkey in 1984 to develop infrastructure. Private financing was used to develop railways and roads in the western world in the second half of the nineteenth century (Menheere and Pollalis, 1996). The BOT approach has been applied to power generation, telecommunications, sewerage and water, bridges and toll roads and other facilities in the United States of America, England and Latin America. The Eurotunnel built in the early 1990s was probably the largest ever BOT project (Handley, 1997). Some other BOT projects are as follows: China’s Shajiao B Power Plant Project, Pakistan’s Hub Power Project, Thailand’s Mass Transit System Project, Thailand’s Second Stage Expressway Project, among others (Handley, *ibid.*)

The Philippines faced a severe power crisis as the nineties came to a close. Economic output plummeted as debilitating power outages crippled manufacturing and industry and the entire economy. The narrow fiscal space and the lead time it would take to commission new power plants forced the hand of the government to seek legislation for a Build-Operate-Transfer (BOT) approach that could be used to entice the private sector to help solve the power crisis.

The Philippines was reported as the first country in Southeast Asia to enact a BOT law. In 1990, the Philippine Congress enacted a landmark law, Republic Act (R.A.) 6957, which was later amended by R.A. 7718 in 1994, to provide the legal framework governing financing, construction, and operation of an infrastructure project by a private entity, called a concessionaire. The contract with the government specifies a cooperation period, that is, a period of time during which the government delegates to the concessionaire the authority to finance, build and operate a facility and to impose charges or fees on users of the facility for a profit. At the end of the cooperation period, the private investor turns over or transfers the facility to the government.

The Philippine BOT Law has been studied and used as a model for other BOT laws in neighboring countries. The BOT and its variant schemes have been widely used to apply private sector management and technical expertise and financing on infrastructure provision that would otherwise have not been provided because of the country's capital shortage and inability to finance the provision of much-needed infrastructure, and the notorious inefficiency of government operation of infrastructure. The Philippine government entered into BOT contracts with the private sector in water supply, urban rail transit, international airport terminal services and toll roads.

The Ramos administration successfully used the BOT approach to solve the critical power problem of the nineties without having to provide for an immediate cash outlay, which the narrow fiscal space effectively prevented.<sup>10</sup> The power problem has brought the economy to a tailspin as manufacturing practically ground to a halt (Box 2).

During the latter part of the Aquino administration, the power crisis adversely affected the performance of the manufacturing sector as reflected by the decline in manufacturing growth rate. For 1990-1992, average annual growth rate of the manufacturing sector was 0.16%. Installed generating capacity in 1992 was 6,949 megawatts at the close of the administration of Corazon Aquino.

The government's efforts to provide power through private sector participation, basically thru BOT projects contributed to reviving the economy. Through the BOT, the private sector constructed and rehabilitated about 5,627-MW generation capacity, or 47 percent of the country's total generation capacity. (Llanto, 2004). Among the private energy companies that accepted the challenge laid down by the government to invest in the Philippines, Hopewell was the largest Independent Power Producer (IPP) with 1,280 megawatts of installed capacity.<sup>11</sup> As of December 2007, the Department of Energy reported that the Philippines had a total installed generation capacity of 15,937 megawatts, slightly increasing from previous year's 15,803<sup>12</sup> megawatts.

**Table 1. Installed Generating Capacity in Megawatts  
1992 - 2007**

	<b>Total</b>	<b>Hydro</b>	<b>Coal</b>	<b>Geothermal</b>	<b>Diesel/Oil</b>
1992	6,949	2,257	405	888	3,399
1993	7,959	2,259	441	963	4,296
1994	9,212	2,254	550	1,074	5,335
1995	9,732	2,303	850	1,154	5,425
1996	11,193	2,303	1,600	1,446	5,844
1997	11,722	2,303	1,600	1,886	5,973
1998	12,067	2,304	2,200	1,856	5,568
1999	12,431	2,304	3,355	1,931	4,839
2000	13,185	2,301	3,963	1,931	4,987
2001	13,380	2,518	3,963	1,931	3,905
2002	14,702	2,518	3,963	1,931	3,527
2003	15,124	2,867	3,958	1,932	3,604
2004	15,548	3,217	3,967	1,932	3,669



2005	15,619	3,222	3,967	1,978	3,663
2006	15,803	3,257	4,177	1,978	3,602
2007	15,937	3,269	4,213	1,958	3,616

**Box 2.**

**Table 1. Selected Macro-economic indicators, 1986-1998**

Year	GDP (Real )  In growth rates?	Manufacturing	Employment	Export	Import	Interest rate (ppa) % per annum?	Exchange rate PhP/US\$
1986	3.42	-15.29	2.95	4.60	-1.31	-38.65	9.56
1987	4.31	5.57	-0.63	18.13	33.56	-23.12	0.89
1988	6.75	9.52	3.38	23.67	21.11	20.30	2.56
1989	6.21	5.81	1.64	10.56	27.70	21.88	3.04
1990	3.04	2.66	3.13	4.67	17.15	24.62	11.84
1991	-0.58	-0.44	1.98	7.99	-1.27	-3.29	13.03
1992	0.34	-1.73	3.12	11.13	20.48	-17.45	-7.16
1993	2.12	0.75	2.90	15.79	21.20	-24.74	6.30
1994	4.39	5.01	2.67	18.53	21.23	2.74	-2.59
1995	4.68	6.77	2.57	29.40	23.71	-2.67	-2.66
1996	5.85	5.58	5.88	17.75	20.82	1.37	1.95
1997	5.19	4.22	1.95	22.81	14.02	9.46	12.42
1998	-0.58	-1.13	-3.91	16.92	-18.79	13.58	38.76

Source: NSCB

The early harvest of relatively successful BOT projects has raised expectations among donors, the government and the private sector in using BOT schemes to solve the infrastructure lack, which investors have identified as a principal barrier to investments.

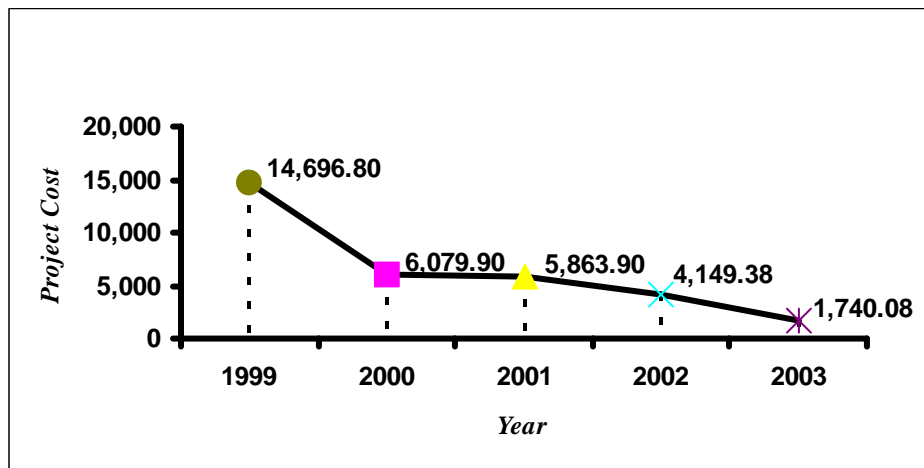
However, the role of the BOT approach in addressing the infrastructure lack in Asian developing countries seems to have diminished following the aftermath of the Asian financial crisis as private investors focused their attention elsewhere. There seems to be a retreat of attention and investment resolve.

The decline in private sector interest is widely observed in the world. The Public-Private Infrastructure Advisory Facility (PPIAF) of the World Bank reported that the decline is an international trend and is brought about by several underlying factors: the more developed middle-income countries had reached the end of the private participation cycle; the financial crises during the '90s brought about a climate of uncertainty; and controversial transactions brought to the limelight the complex political economy of private involvement in infrastructure.<sup>13</sup>

In particular, for the Philippines the BOT approach has stalled as a mechanism for private participation in infrastructure provision even as the government, which cannot adequately meet the infrastructure lack, continuously tries to woo foreign investors in infrastructure. The infrastructure lack has been described as a bottleneck to growth and failure to address it will surely undermine the country's competitiveness in the global markets and its attractiveness as a destination of foreign direct investment.

Figure 2 shows the cost of awarded projects under the Philippine program of public-private sector partnerships during the period 1999-2003. A declining trend in terms of new investments committed by the private sector every year can be seen<sup>14</sup>.

**Figure 2. Cost of Awarded Projects , 1999-2003**  
(in million US\$)



What explains this adverse turn of events in Philippine BOT implementation? Why has there been a retreat of interest and resolve to use it as a mechanism for infrastructure provision?

Popular discourse points to the need to improve the implementation of BOT by amending certain provisions of the Implementing Rules and Regulations (IRR) and/or amending the law itself in order to remove factors that have seemed to stymie a more extensive use of BOT in infrastructure provision. Still others view the retreat of interest as part of an overall cautious stance taken by private investors to reduce their exposure to the Philippines. The World Bank (2005) noted that the business environment for infrastructure “has been undermined by a number of major impediments” such as (a) “inadequate cost recovery, corruption, insufficient competition, and low credibility of regulatory and judicial institutions” . . . that are “affecting both public and private sector performance” (page 15).

It is submitted that a review of the Philippine experience with this mode of private sector participation in infrastructure provision will be critical and useful in identifying critical barriers to effective implementation. Private investors and the government alike continue to look up to BOT as an important mechanism for public-private partnership in infrastructure provision. The Medium Term Philippine Development Plan has identified BOT arrangements or schemes as a major instrument for infrastructure development (Box 3). The next section provides a brief overview of the infrastructure situation in the country, which shows many opportunities for BOT type arrangements and for private participation. The discussion in the next section sets the stage for an analysis of the Philippine experience with BOT, which will point to a number of issues or concerns that have to be resolved by policy makers.

**Box 3. BOT Projects in the Medium-Term Infrastructure Program (2005-2010)**

- Northern Inter-modal Transport Terminal Complex (Build-operate-own)
- EDSA/MRT/LRT loop project (solicited Build-operate-transfer)
- MRT 3 CAPEX project (Build-lease-transfer/Official development assistance (ODA))
- MRT 4 (Build-transfer/Build-operate-transfer)
- MRT 7 Build, gradual transfer, operation and maintenance)
- MRT 8 (Build-transfer/Build-operate-transfer)
- La Mesa Parkway (21 kilometer toll way, 5 MW hydro power-plant, 12 MCD water treatment plant, stage 1 (Build-operate-transfer)
- Expanded MVIS project (Build-operate-transfer)
- Carmen bulk water supply project (Build-operate-own)
- Alien certificate of registration card extensible automated fingerprint (Build-operate-transfer)

Source: Medium Term Philippine Development Plan (2004-2010)

## II. Overview of Infrastructure in the Philippines<sup>15</sup>

### A. Overall situation

The importance of infrastructure for developing countries cannot be understated as it is considered a major driver for growth and poverty reduction. The lack of adequate transportation, water and energy facilities, for instance, can adversely affect the development of existing industries and may likewise preclude new entrants from coming in. An efficient transportation and communication infrastructure provides overall mobility for goods and people alike, contributes to a reduction of input and transactions costs and enhances the efficiency of markets. Local infrastructure which may have significant spillover effects spurs local economic activities while the network characteristics of infrastructure enhances connectivity of regions and promotes domestic integration.

Multilateral donors such as the Asian Development Bank and the World Bank have noted the negative impact on the Philippines' global competitiveness of low quality infrastructure notwithstanding recent gains of the country in providing households and firms alike with better access to water, sanitation and electricity. As stated earlier, in terms of overall infrastructure quality<sup>16</sup>, the Philippines ranked 88<sup>th</sup> (out of 125 countries) in the 2006 Global Competitiveness Index<sup>17</sup>, slightly improving from 89<sup>th</sup> rank in 2004. On the other hand, in terms of adequacy of infrastructure<sup>18</sup>, the Philippines slid to 51<sup>st</sup> in 2007 (out of 61 countries) from 49<sup>th</sup> in 2006 according to the 2007 World Competitiveness Yearbook.<sup>19</sup> The state of infrastructure in a given country is one key determinant of its competitiveness ranking. Unfortunately, the Philippines has not provided infrastructure that is sufficient in quantity and quality to meet global economic challenges as well as poverty reduction goals under such international commitments as the Millennium Development Goals.

Notwithstanding the low global ranking in infrastructure adequacy and competitiveness, the Philippines have some notable achievements in the infrastructure sector during the past few years. The enactment of the Build-Operate-and Transfer

(BOT) Law (Republic Act 6957, as amended by Republic Act 7718 paved the way for private sector involvement in the finance, construction and operation of vital public infrastructure facilities and services. Completed BOT projects included toll roads, mass rail transit (MRT) systems, and power plants which averted an impending energy crisis in the 1990s. The present government has recognized the critical state of Philippine infrastructure and has given high priority to it in the 2004-2010 Medium-Term Philippine Development Plan (MTPDP). In the priority list is the development of roll-on, roll-off (RORO) shipping as an important component of the “Strong Republic Nautical Highway,” which links major islands, the provision of power to all barangays and the development of a reliable and integrated mass rail transit system for populous urban areas such as Metro Manila, among others.

### ***Planned Investments in Infrastructure***

In particular for infrastructure, the Medium-Term Philippine Development Plan (MTPDP) 2004-2010 lays down the following goals to be attained by the end of the planning period in relation to the promotion of decentralized development:

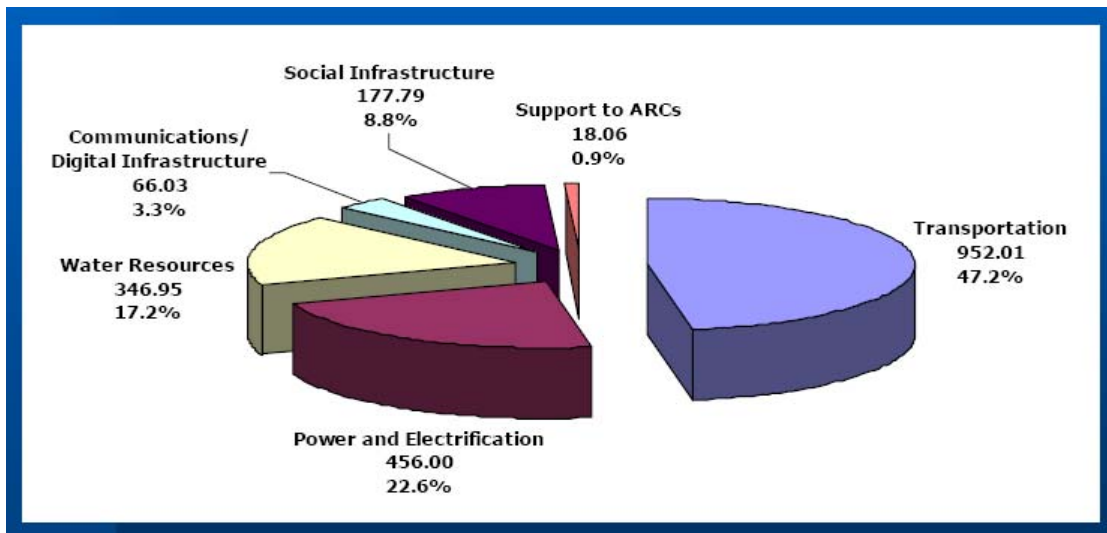
- The network of transport and digital infrastructure, which the government launched in 2002 shall have linked the entire country;
- Power and water services shall have been regularly provided to the entire country;
- Metro Manila will have been decongested with economic activity growing and spreading to new centers of government, business and community in Luzon, Visayas, and Mindanao; and
- The Subic-Clark (in Luzon) corridor will have become the most competitive international service and logistics center in the Southeast Asian region.

The government has mapped out its medium-term investment program in a document called the “Comprehensive and Integrated Infrastructure Program (CIIP)”. The CIIP contains the list of infrastructure projects which would be implemented to meet the goals and objectives of infrastructure development under the Medium term Philippine

Development Plan (MTPDP) 2004-2010. It includes projects that will be financed and implemented by private sector participation, that is, under BOT arrangements, joint venture and other public-private partnership schemes and those that will be purely public investment, that is: (a) funded by budgetary appropriation, (b) ODA loans, (c) local government units, (d) government financial institutions or (e) government-owned-and-controlled corporations.<sup>20</sup> Please see Figure 3.

The CIIP has identified priority infrastructure projects estimated at Pesos 2,016.8 billion for the period 2006-2010 and beyond. Almost half, or around Pesos 952 billion, represents transportation-related projects while Pesos 456 billion would fund power and electrification programs. The remaining investments are related to water resources, social infrastructure, support to agrarian reform communities (ARCs), and communications.

**Figure 3. CIIP Investment Requirement by Sector**

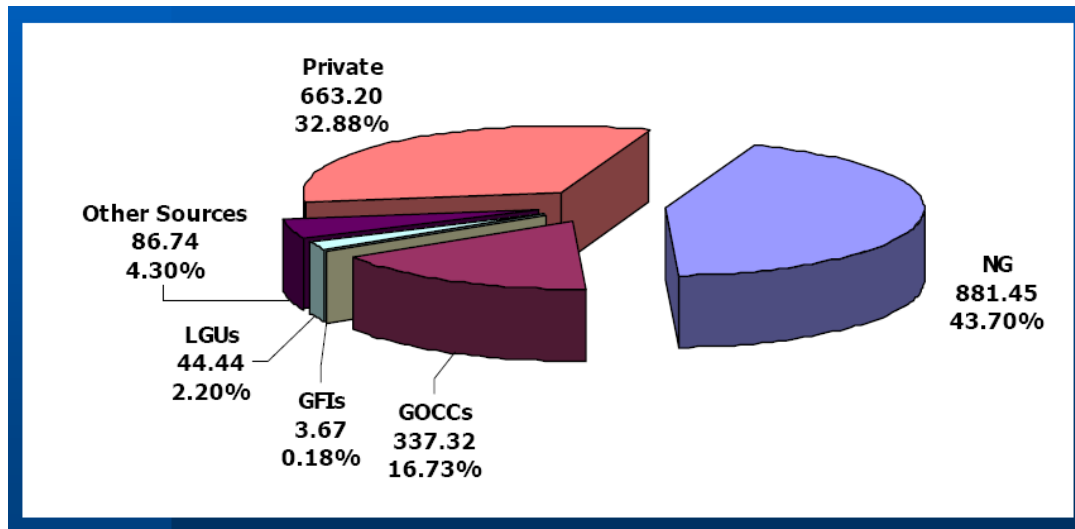


Source: National Economic Development Authority, 2007

In terms of financing source, almost half of the total proposed investments (Pesos 881 billion, 43.7%) would be sourced from the national government (NG), one-third (Pesos 663.2 billion, 33%) from the private sector and almost one fifth (Pesos 341 billion, 16.9%) from government-owned and controlled corporations (GOCCs) and government financial institutions (GFIs). Local government units (LGUs), through GFI

financing schemes, would bear only 2% of the total proposed infrastructure investment program (Figure 4).

**Figure 4. CIIP Investment Requirement by Financing Source**



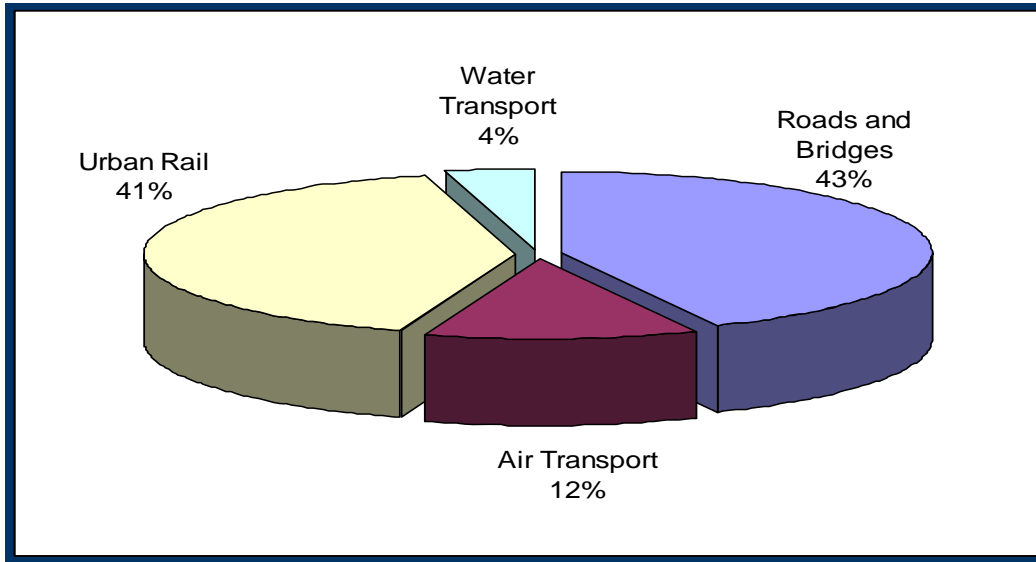
*Source: National Economic Development Authority, 2007*

To augment the funds sourced from budgetary appropriation, the government would continue to tap official development assistance from multilateral, e.g., ADB and bilateral sources, e.g., JBIC, China Export-import Bank, etc., and the capital markets.

For transportation, most of the investments will be allocated to roads and bridges (43%) and urban rail (41%) while the remaining will be allocated to air transport (12%) and water transport (4%) (Figure 5).



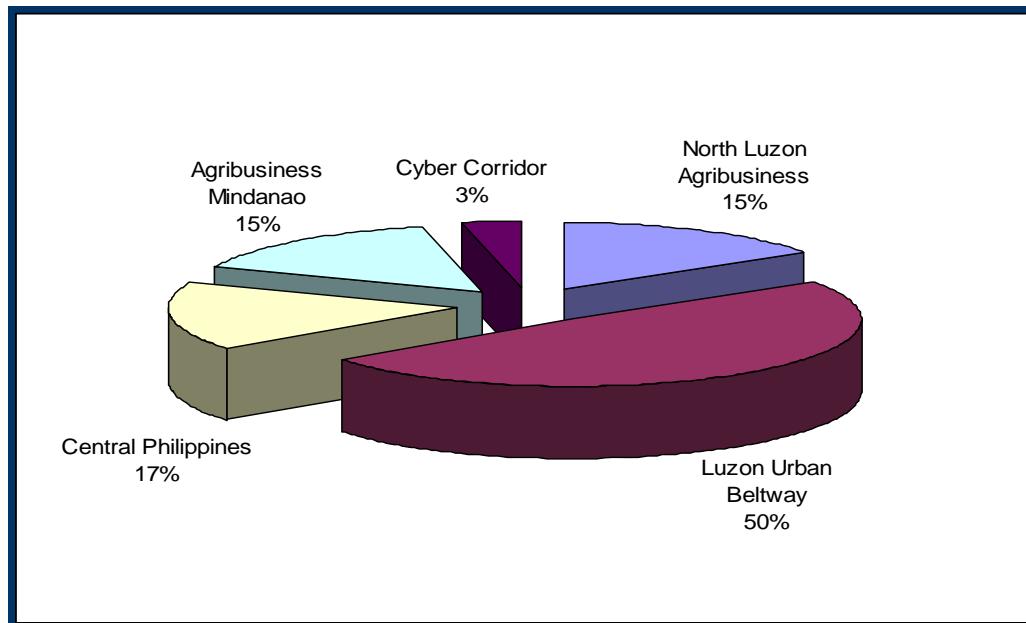
**Figure 5. CIIP, Transport Investment Requirement, 2006-2010**



*Source: National Economic Development Authority, 2006*

Geographically, half of the total proposed investments will benefit the Luzon Urban beltway super region, while proposed investments for the Central Philippines, Agribusiness Mindanao and North Luzon super-regions would each have around 15% of total proposed infrastructure investments (Figure 6). The proposed investments for the development of the Cyber Corridor represent 3% of the total investments.

**Figure 6. Geographical distribution of infrastructure investments**



The overall situation shows the inadequate state of infrastructure in the country and the limited ability of the government to provide it. It is now recognized that the serious lack of good infrastructure was the result of years of neglect of proper maintenance and under-investment in the sector. To address this problem, the Plan presented what appear to be overambitious targets that could fail to materialize because of the Philippine (central) government's narrow fiscal space. The relatively low tax effort and substantial leakages arising from inefficiencies and reported corruption in both the executive and the legislative branches of government are serious challenges that have to be squarely faced by the government. The narrow fiscal space constrains the provision not only of infrastructure but also vital services to the population while corruption and mismanagement of projects erode the image of the country as a good place to make investments.

The MTPDP rightly identified the private sector and local government units as partners in addressing the infrastructure lack. Through Build-Operate-Transfer (BOT) arrangements and other modes of private sector participation, e.g., concession agreement, management contract, the government would be able to take advantage of the private sector financing, technical and management expertise. However, the government would

have to address a number of issues in order to give the private sector a strong motivation to participate in infrastructure development<sup>21</sup>. Suffice it to say at this juncture that there is a large scope for private sector participation in infrastructure provision and development and the country has a good basic legal framework for it. Past experience shows how this strategy was used to solve the energy crisis problem of the nineties but the BOT approach has since faltered for reasons to be explained later. In this regard, the government should pursue certain reforms for a meaningful public-private partnership. It cannot afford to lose private sector expertise and resources in its quest to improve the state of infrastructure in the country.

### *Role of LGUs and GOCCs*

The local government units should provide much-needed local infrastructure, e.g. critical road links to the national arterial highway, port terminals for the government's roll-on-roll-off (RORO) terminal system for efficient transport of goods and people across the archipelago. Note, however, that many local government units are dependent on the cash-strapped national government for their internal revenue allotments (IRA) to fund local development and service delivery. The share of the IRA in total LGU income net of borrowings rose from 38 per cent in 1985–91 to as high as 65 per cent in 1992–2003 for all LGUs combined. The IRA thus effectively substitutes for own-source revenue generation, which if effectively mobilized could have been used as an effective tool for financing local development. Only the bigger cities and a few big towns have been able to raise substantial locally-generated resources to finance local infrastructure development. There is also the problem of local infrastructure projects as tending to be 'governor-centric; or 'mayor-centric' meaning that local infrastructure projects are typically pursued for the furtherance of the parochial political objectives of the local chief executive. Worse, there is also a reported syndrome of "dividing by N" the local infrastructure budget appropriated by the local sanggunians (local legislative councils), that is, apportioning a share of the local infrastructure budget among local legislators for implementation purposes. The local infrastructure budget is divided among as many members of the ruling administration for implementation. This approach, an imitation of

the much-maligned ‘pork barrel’ funds given to congressmen and senators, who help themselves to funds supposedly appropriated for the country’s development, fragments already scarce local resources and results in uncoordinated and unrelated “infrastructure projects.”<sup>22</sup> The lack of integration of those infrastructure projects with regional and national development plans has resulted into a waste of local resources and the sorry state of sub-national infrastructure (Llanto 2007). Thus, the expectation that local government units could fill the gap in infrastructure development should be tempered by (a) the fact that local government units themselves face fiscal constraints unless they become really serious about local revenue mobilization and (b) the experience on the ground showing that local infrastructure development projects may not be integrated with overall regional or national development plans. The latter is a critical issue that the national government and the local government units should address.

The case for using government-owned-and-controlled corporations (GOCCs) has to be assessed relative to their readiness to take on the task in view of fiscal problems hounding a good number of those corporations. Lenders would typically demand sovereign guarantees for loans to be taken by those GOCCs. The issue of the increasing size of contingent liabilities arising from those guarantees has to be closely examined by the government because of the fiscal risk they will create once they become actual liabilities. Total estimated contingent liabilities of the government as of 2003 were Pesos 1,672 million. The contingent liabilities of the infrastructure sector comprised 54% of total contingent liabilities as estimated by the Department of Finance. Of total contingent liabilities of the infrastructure sector, BOT projects had a share of 18.5% while buy-out costs of independent power producers made up 35%. Guarantees on projects and activities of GOCCs and government financial institutions were 43% of the total estimate. Guarantee institutions had 3% of the total estimate. (Llanto 2006).

This is not to say that GOCCs should not be part of the strategy to address the infrastructure lack because they may be able to play a significant role in infrastructure development in view of the fiscal constraints faced by the government. However, only a few of those GOCCs may have the resources to engage in infrastructure development but infrastructure provision should be in the mandate of those corporations. Many of the

GOCCs depend on government subsidies for their continuing operation and thus, they are contributory to the consolidated public sector deficit. For those GOCCs that have the resources to engage in infrastructure development and can borrow from the capital markets, the government should ensure good corporate governance, transparency and above-board procurement procedures apart from the effectively dealing with potential contingent liabilities arising from sovereign guarantees that may be demanded by lenders.

The decision to invest in infrastructure is an endogenous variable that is influenced by both technocratic and political forces. Government sometimes make the myopic decision of making across the board cuts in capital expenditures, which include infrastructure investments without due regard for the productivity-loss implications of severe cutbacks. This is usually done during times of fiscal stress when adjustment policies would dictate cuts in government spending. The most expedient spending item for a cut back is capital expenditures since governments usually succumb to political pressure to avoid lay-off of personnel. The risk posed by indiscriminate cutbacks in capital expenditures is that the cutback may have deleterious impact on the economy's productivity, especially private sector productivity, in the long-run. The other complicating factor is not just the efficiency impact of cutbacks in capital expenditures but also the equity aspect of the exercise. Should the reduction in the budget for roads be applied equally or differentially across regions? Should poorer regions be made to suffer the same proportionate cutback in road expenditures? Should the richer region be spared because infrastructure spending has to be supported in view of agglomeration and dispersion forces which to a large extent determine the spatial distribution of economic activity?

In this regard, the government has the following immediate tasks, among others: (a) expand its narrow fiscal space by improving the tax effort, eliminating inefficiencies in government procurement procedures and implementation, and combating graft and corruption; (b) reduce political risks and uncertainties which either avert potential private sector investments or delay the implementation of vital infrastructure projects and (c) establish a policy environment that promotes competition and that provides a regulatory framework that safeguards both consumer welfare and investor interest.

## **B. Sub-sectoral dimension**

### ***Transport Sub-Sector***

Considering the archipelagic geography of the Philippines, a fully-integrated transport system plays a very important role in facilitating economic activities and integrating local economies. The Philippine transportation network includes roads, bridges, airports, ports, and rail with the Department of Public Works and Highways (DPWH, for national roads and bridges) and the Department of Transportation and Communications<sup>23</sup> (DOTC, for airports, ports and rail) as implementing agencies.

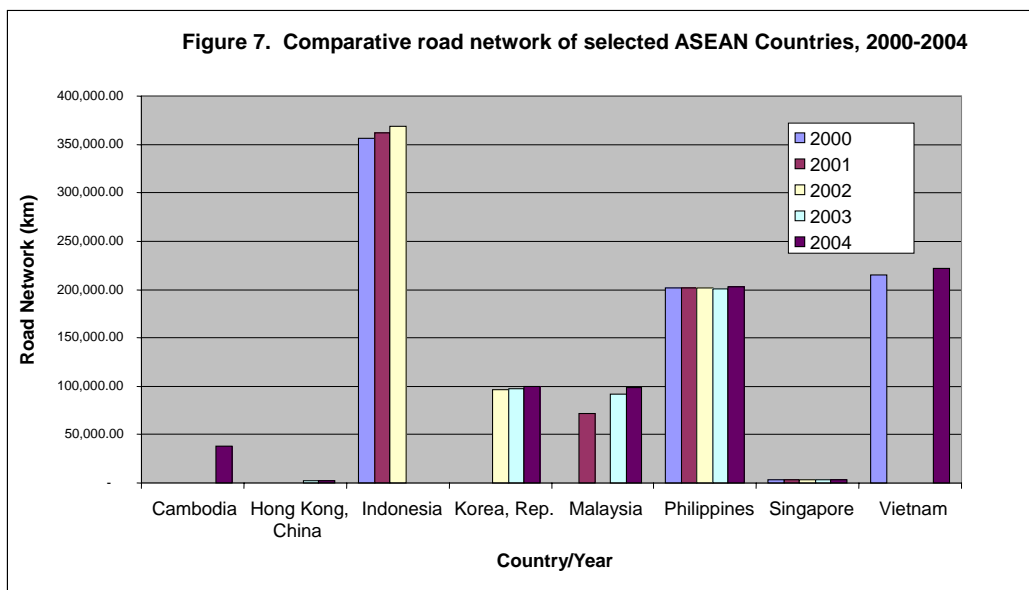
The Philippines' transport system relies heavily on the road network which handles about 90 percent of the country's passenger movement and about 50 percent of freight movement (MTPDP 2004-2010). The existing road network provides the most common means of transporting passengers and economic goods within the islands as well as inter-island, using the recently inaugurated roll-on-roll-off shipping facilities under the Strong Republic Nautical Highway. A light rail transport system is presently concentrated in the Metro Manila area, while a partially functioning heavy rail system operates a few kilometers outside Metro Manila. A string of domestic ports and airports forms the remaining components of the network of transportation infrastructure to major economic centers in the country.

Under the Medium Term Philippine Development Plan (2004-2010), transport infrastructure is envisioned to provide easier access to local and international markets,

enhance peace and order in conflict-affected areas, strengthen national unity, family bonds and tourism, and facilitate the decongestion of Metro Manila.

## Roads

Philippine roads are categorized into public roads, toll roads, and private roads. Private roads comprise an undetermined length of roads. These are roads commonly constructed and financed by large private property developers. Public roads, as the name implies, are roads that are administered, rehabilitated and maintained by the government. As of 2004, the total length of the Philippine non-toll road network, regardless of condition, was reported at 202,860 kilometers.<sup>24</sup> Compared to other ASEAN countries, the Philippine road network is relatively extensive (World Development Indicators, 2006). Density<sup>25</sup> is relatively higher than Indonesia's 0.19 kilometer and Malaysia's 0.28 kilometer but lower than Singapore's 4.72 kilometer for the year 2003.<sup>26</sup> Please see Figure 7.



Source: World Development Indicators, 2006

Public roads are categorized into national roads, provincial roads, city or municipal roads and barangay<sup>27</sup> roads (Figure 8). As of July 2007, there is a total of

29,288 kilometers of national roads nationwide<sup>28</sup>. Of this national road network, 70% are paved (13,023 kilometers concrete and 7,525 kilometers asphalt) although only 49% are in good condition. National roads account for 12% of the total public road network while barangay roads cover more than half.<sup>29</sup>

Toll roads, also known locally as “toll ways” are roads where a user pays a fixed fare or toll fee in exchange for passage or use of the road. As of 2008, the Philippines has a total of six (6) toll road networks measuring a total of 261.67 kilometers. These are in Table 2 below.

**Table 2. Philippine toll road network, 2008**

<b>Name</b>	<b>Length (km)</b>	<b>Coverage</b>
North Luzon Expressway (NLE)	83.2	Metro Manila and the provinces of Pampanga and Bulacan
South Luzon Expressways (SLE)	42.9	Metro Manila and the provinces of Batangas, Laguna, and Cavite;
Metro Manila Skyway (MMS) Stage 1,	13.5	Elevated portion of the SLE from Buendia to Bicutan;
Radial Road 1 (R-1) Expressway, Manila Cavite (Coastal Road)	6.2	Cavite and Manila, and;
Southern Tagalog Arterial Road (STAR) expressway	22.1	Sto. Tomas, Batangas to Batangas City.
Subic-Clark-Tarlac Expressway <sup>30</sup>	93.77	Zambales, Pampanga and Tarlac



For public roads, the construction and maintenance of national roads and bridges rests with the DPWH.<sup>31</sup> Local roads, i.e. provincial, city/municipal and barangay roads, are administered by the respective local government units (LGUs).<sup>32</sup> A small number of farm-to-market roads (which fall under the category of barangay roads), mostly foreign (ODA)-funded are administered by the Department of Agrarian Reform (DAR) and the Department of Agriculture (DA). Toll roads are supervised and regulated by the Toll Regulatory Board (TRB)<sup>33</sup> while private roads are maintained by the respective private owner.

The major policies on the Philippine road sector are found in the following laws:

- Republic Act (RA) 917 or the Philippine Highway Act of 1953 provides the framework for effective highway administration and the classification of roads into national, provinces, cities, and municipalities for administration and funding purposes; The barangay classification was added thru Executive Order 113 (1955), as modified by Presidential Decree 702 in 1975.
- Land Transportation and Traffic Code of 1964 (RA 4136) provides for the rules on road use.
- Republic Act (RA) 8794- imposes a motor vehicle user's charge on owners of all types of motor vehicles, creates a Road Fund that will fund road maintenance, including maintenance of local roads, and control of air pollution from motor vehicles.

There are several outstanding issues in the road sector. While the Philippine road network is extensive, a large portion continues to be in poor condition. As stated above, only 70% of the national road network is paved.<sup>34</sup> The national road network is a mere 12% of the total public road network, with barangay roads mostly unpaved and in poor condition covering almost more than half of the network. The bulk of the road network

consists of roads that are devolved to local government units. In general, the road network has deteriorated over time because of the central government's and local government units' neglect of basic road maintenance and under-investment in new roads. This is ironic because it seems that the problem does not lie with insufficiency of funds for road maintenance. RA 8794 created the Road Fund, a fund earmarked for the maintenance of national and local roads and the control of air pollution from motor vehicles. The Road Fund has accumulated to a substantial amount since the collection of a motor vehicle user charge (MVUC) from motor vehicle owners started on May 2001. Available data from the Road Board show MVUC collections from May 2001 to April 2005 of around Pesos 22.6 billion on a cumulative basis. The Land Transportation Office forecasts that total vehicle registration will grow at an average 3% per annum and thus, around Pesos 44.5 billion of MVUC collections are expected on the period 2005-2010.

The uncoordinated road works, e.g., excavation, digging, paving done by various utilities (telecommunications, water supply, sewerage) in the urban centers contribute to the deterioration of already poor road conditions. Thus, poor road maintenance, poor traffic management and uncoordinated and wasteful road works produce the daily road congestion in many urban roads especially in Metro Manila. Notwithstanding the so-called Unified Vehicular Volume Reduction Program (UVVRP)<sup>35</sup> being implemented by the Metro Manila Development Authority (MMDA), Metro Manilans continue to suffer from terrible road congestion and air pollution.<sup>36</sup> A 2006 survey commissioned by JICA revealed that the average bus travel speed along EDSA is only 15 kilometers per hour. One bus trip averaged 2 hours and 5 minutes along a 12 kilometer stretch from Magallanes Village in Pasay City to East Avenue in Quezon City at an average speed of 14 to 15 kilometers per hour (JICA 2006).

### ***Rail***

Rail transport systems provide land-based alternatives to road transport, and are also expected to cut down road traffic congestion and air pollution, reduce travel times and ultimately spur economic growth. The Philippine railway system can be divided into

two: heavy rail and light rail. The heavy rail system is currently operated by the Philippine National Railways (PNR).<sup>37</sup> The PNR network consists of two main rail lines: the North Main Line (Northrail), and the South Main Line (Southrail). Northrail is a 266 kilometer line stretching from Manila to San Fernando City in La Union, with a 55 kilometer branch line from Tarlac City to San Jose, Nueva Ecija and various non-operational branch lines. On the other hand, Southrail is a 479 kilometer line from Manila to Legazpi City in Albay, with a 5 kilometer branch line from San Pedro, Laguna to Carmona, Cavite, and two other branch lines connecting Calamba with Batangas City and Santa Cruz, Laguna. A commuter service line (about 46 kilometers) also runs from Caloocan to Carmona. The total rail network measures 1,060 kilometers but only the 479 kilometer Southrail is operational. Northbound rail services ended in the late 1980s and no direct connection currently exists between Northrail and Southrail. At present, the Northrail is being rehabilitated through a loan from the Chinese government.

Light rails have been known to move large numbers of people efficiently and reduce congestion, air pollution and business costs. The development of a light rail system in Metro Manila was envisioned to benefit the area in two ways: (a) it hopes to provide an alternative and efficient means of transportation to the already traffic stricken metropolis area and (b) it hopes to address to some extent, the urban migration and decongestion problem in Metro Manila, by encouraging people to reside outside of Metro Manila and move into areas such as Laguna, Batangas, and Cavite with the assurance of an efficient, reliable and accessible light rail system. The Philippine light rail system is administered by the Light Rail Transit Authority (LRTA).<sup>38</sup> Metro Manila has three (3) light rail transit lines, LRT line 1, LRT line 2, and the Mass Rail Transit (MRT).<sup>39</sup>

The Light Rail Transit (LRT) line 1, “LRT 1” or simply “LRT” is a 15-kilometer elevated rail system running from Baclaran, Parañaque City to Monumento, Caloocan City through 18 stations or strategic transport hubs. The LRT has been in operation since 1984 and is considered to be the first LRT system in Southeast Asia. Average daily ridership is estimated at 300,000 passengers. LRT line 2, also known as the “Megatren” or “LRT 2” is a 13.8 kilometer mass transit line from Santolan, Marikina City to Recto,

Manila traversing five cities in Metro Manila (Pasig, Marikina, Quezon City, San Juan and Manila) through 11 stations along the major thoroughfares of Marcos Highway, Aurora Boulevard, Ramon Magsaysay Boulevard, Legarda and Recto Avenue. The Megatren has been in operation since 2004. Average daily ridership is estimated at 130,000 passengers. Mass Rail Transit (LRT 3), “Manila Metro Rail Transit System”, “Metrostar Express”, “Metrostar” or simply “MRT” is a 16.8 kilometer rail line along Epifanio de los Santos Avenue (EDSA). The 13-station line commences at Taft Avenue and ends at North Avenue, serving the cities of Makati, Mandaluyong, Pasay, Pasig, Quezon and San Juan. The line is mostly elevated, with some sections at grade or underground level. The Metro Rail system is designed to carry in excess of 600,000 passengers per day and 200 million passengers a year, initially and is expandable to accommodate over 900,000 passengers per day and 300 million passengers per year. Average daily ridership is estimated at 400,000 passengers. With the high fare for bus and jeepney ride brought about by the high cost of petroleum products, train utilization is becoming intensive notwithstanding the run-down and unsafe facilities of the heavy rail system. The light rail system offers a modern and efficient transport system for metro commuters and it is experiencing increasing utilization due to the shift to mass rail transport because the high cost of petroleum products.

MRT is privately-owned and operated (by Metro Rail Transit Corporation or “MRTC”) and was constructed under a Build-Lease-Transfer contract. Under the arrangement, the DOTC operates the MRT directly and pays an annual lease fee to MRTC. Commencing operation in 1999, the MRT is part of Government’s strategy to alleviate the chronic traffic congestion along the EDSA corridor.

Various interchange links are also established among the LRT Line 1, LRT Line 2 and MRT Line 3. Moreover, food and drink stalls are located in the concourse of most LRT/MRT stations, some stations even providing spaces for shopping (clothes, shoes, bags, cellular phones, electronic load, phone accessories, magazines, jewelry, etc.) and other popular services (internet, automatic teller machines, etc.). Some stations, such as

EDSA Taft, Central Terminal, Araneta Center-Cubao and Ayala Makati are directly connected to or are near shopping malls and other large shopping areas,

### ***Strong Republic Transit System***

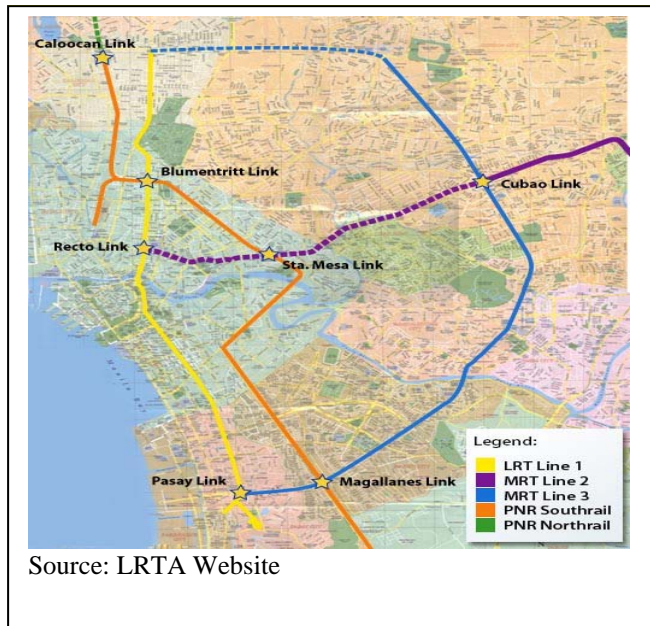
In 2003, the Strong Republic Transit System (SRTS) was launched with the intention to provide a reliable, seamless and integrated mass transit system that would be at par with very good transit systems in the world. In a nutshell, the program involves the following:

- the construction of seven (7) interconnection facilities or links to physically integrate the existing LRT/MRT lines and provide convenience to the LRT/MRT riding public.
- rehabilitation and extension of the LRT line 1 to Cavite (south end)
- the extension of MRT from North Avenue to Monumento.
- rehabilitation of the PNR
- the development of a unified fare system using “Contactless SmartCard Technology” to facilitate easy transfer of passengers between the existing lines.

The proposed projects are currently under review and are expected to be implemented within the next five years.

Under the SRTS, the existing lines have been color-coded for purposes of uniformity and ease of recall (similar to rail systems of Japan, South Korea, etc.) as shown in Figure 9.

**Figure 9. Strong Republic Transit System**



Note:

Old Name	New Name
LRT Line 1 / Metrorail	Yellow Line
MRT Line 2 / Megatren	Purple Line
MRT Line 3 / Metrostar	Blue Line
PNR Northrail	Green Line
PNR Southrail	Orange Line

In support of the SRTS and to enhance the delivery of train services, the institutional framework of the sector is presently under review. The objective is to separate the policy, planning and regulation functions from the delivery of train services.<sup>40</sup> In particular, the plan is to merge the PNR and LRTA into a Track Authority that will own the right-of-way and infrastructure facilities. The private sector can operate and maintain the different lines under this model. A Strategic Rail Authority/Office in DOTC is envisioned to carry out policy/strategy and regulatory functions.

A number of issues impact on the sector's efficiency. PNR suffers from chronic operating deficit and has largely depended on government subsidies for its operations. The proposed PNR privatization plan not yet been implemented. The routes for the

heavy rail system are single-track,(except in Metro Manila and was built to the "Cape Gauge" of 1067 mm (3 feet 6 inches) which is a narrow gauge standard resulting in lateral instability, and posing problems for high-speed operation. Thus, the maximum allowable speed is 50 kilometers per hour.<sup>41</sup> The rolling stocks, stations and the systems, including ticketing system are antiquated, inefficient and sub-standard in comparison to international benchmarks, with consequent safety and security risks. The perennial problem of informal settlements along the rail tracks has remained unsolved.<sup>42</sup>

For the Light Rail Sector, security and safety though controlled should be continuously monitored. Thus far, since its operation in 2004, there is only one (1) casualty reported at the MRT line 3<sup>43</sup> while four (4) isolated casualties were reported for LRT Line 1. The main issues here are (a) the failure to link the different lines, e.g., a missing five kilometer portion from North Avenue, Quezon City to Monumento, Caloocan City that would have linked MRT with LRT 1, (b) insufficient capacity and number of coaches, which is felt especially during rush or peak hours, causing stress on many passengers and (c) interruption of operations due to mechanical and or electrical failure, especially during adverse weather conditions; there is no dedicated power source for the light rail system.

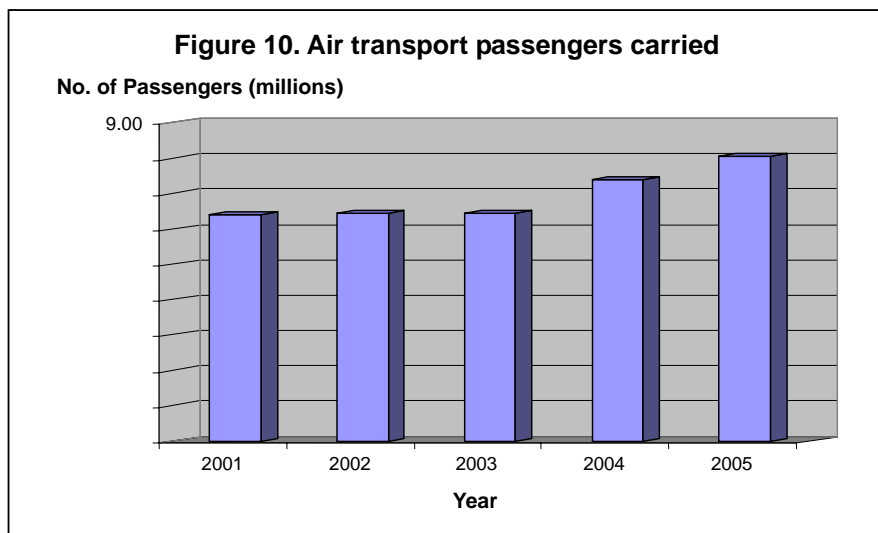
### *Airports*

The liberalization and deregulation of the Philippine civil aviation industry in 1995 was envisioned to be a catalyst for economic growth by transforming the Philippines into a major transport and logistics hub in the Asia-Pacific region. Since then, however, the industry has only responded with gradual but nonetheless significant developments. Domestically, it has accomplished the following:

- Promotion of competition which resulted in an increase in the number of domestic airline operators, decrease in airfares and improvement in the quality of service and efficiency in the industry in general.

- Development of niche markets and segmentation of the market into two: (1) major routes where traffic demand is heavier (more than 20,000 passengers annually) and serviced by the relatively bigger airlines (PAL, Cebu Pacific, and Air Philippines) and (2) minor, short-distance routes (also referred to as secondary, tertiary or missionary routes) where traffic demand is lighter and serviced by smaller airlines and aircrafts (Asian Spirit and South East Asian Airlines or “SEAir”).<sup>44</sup>
- Increase in passenger and freight volume and attraction of new international carriers with the opening of international gateways in Cebu (Visayas), Davao (Mindanao), and Clark, Pampanga (Luzon) as well as the servicing of otherwise “missionary routes” by smaller airlines.
- Execution of Air Service Agreements (ASAs) with Taiwan and Hong Kong in 1996, which allowed the sixth freedom rights – the right to carry passengers between two foreign countries by stopping or connecting in the home country.

The Philippine domestic airline industry is currently dominated by its national carrier, Philippine Airlines (PAL). PAL operations started in 1941 making the Philippines the first country in Asia to embrace air transport. In terms of traffic, the number of passengers carried indicates an increasing trend from the period 2001-2005<sup>45</sup> (Figure 10).



Source: World Development Indicators, 2006



Compared to other countries however, the Philippines ranks 34<sup>th</sup> in terms of number of passengers carried (by main companies) following Singapore (23<sup>rd</sup>), Thailand (22<sup>nd</sup>), Hong-Kong (21<sup>st</sup>), Malaysia (20<sup>th</sup>), Indonesia (16<sup>th</sup>), and Korea (14<sup>th</sup>).<sup>46</sup>

As of 2005, the Philippines has a total of 203 registered airports, broken down into private airports (118) and national airports (85) (Table 3)<sup>47</sup>. National airports are classified by the Air Transportation Office (ATO) into primary (regular) and secondary (alternate) international airports, major commercial domestic airports ("trunk line" airports), minor commercial domestic airports (secondary airports), and feeder airports. At present, there are a total of eight (8) international airports and 77 domestic and feeder airports strategically located in the major economic hubs nationwide.

**Table 3. Philippine registered airports, 2005**

<b>Classification</b>	<b>Description</b>	<b>Number</b>	<b>Location</b>
Regular international	used for the operation of aircrafts engaged in international air navigation	4	1. Ninoy Aquino International Airport (NAIA) 2. Subic International Airport 3. Clark International Airport (Diosdado Macapagal International Airport) 4. Mactan-Cebu International Airport
Alternate international	used for the operation of aircrafts engaged in international air navigation in lieu of the regular international airports	4	1. Laoag 2. Zamboanga 3. Davao 4. General Santos
Trunkline	used for the operation of aircrafts engaged in international air navigation in lieu of the regular international airports	12	Nationwide
Secondary	serve principal towns and cities with regular traffic densities	36	Nationwide
Feeder	serves towns with limited passenger traffic and are intended for use by piston aircrafts	29	Nationwide
<b>TOTAL</b>		<b>85</b>	

The birth of Philippine civil aeronautics began in 1931 with the passage of Legislative Act No. 3909 providing for the creation of an Office under the Department of

Commerce and Communications to handle the enforcement of rules and regulations governing commercial and private aviation. This was followed by the passage of the Commonwealth Act No. 168 in 1936, or the “Civil Aviation Law of the Philippines” which created the Bureau of Aeronautics to promulgate Civil Aviation Regulations and Republic Act No. 776, or the “Civil Aeronautics Act of the Philippines” 1952 which reorganized the Civil Aeronautics Board (CAB) and the Civil Aeronautics Administration (predecessor of the ATO).

Forty three years later, the government liberalized the airline industry under Executive Order (EO) 219. In particular, the EO provided for the removal of restrictions on routes fares and flight frequencies, as well as government control on routes, flight frequency, fares and charges.

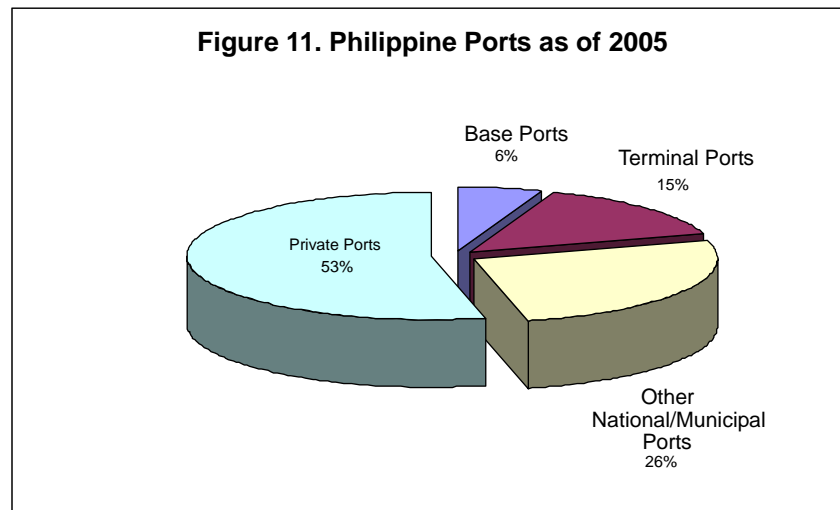
At present, there are two key agencies involved in the administration of the Philippine air transportation sector. These are the ATO and the CAB. The ATO is mandated pursuant to EO 125 / 125A, to implement policies on civil aviation to assure safe, economic and efficient air travel. On the other hand the CAB administers the economic regulation of the industry, in particular, regulating capacity, flight frequency, and airfare in the international air transport sector and is also in charge of the issuance of operating permits, airline service route approvals, and review/approval of airfares in single-airline markets. There is a proposed legislative bill converting the ATO into a corporate body while an independent oversight unit to handle economic regulation and safety concerns and an independent accident investigation group will be established within the DOTC.<sup>48</sup>

Some outstanding issues impact on the efficiency of the airport infrastructure sector. The biggest outstanding issue is the unresolved situation of NAIA International Passenger Terminal 3, whose final resolution is awaited by the public and private investors alike. The uncertainty over this issue has somewhat dampened investor interest based on various accounts in the popular media.<sup>49</sup>

Another issue is the lack of adequate funds, which delays the necessary upgrading and improvement of existing airport facilities, including lighting and/or navigational equipment to allow 24-hour operations.<sup>50</sup> Inadequate maintenance and the lack new investments have contributed to the failure to meet international standards and maximize full potential of the airports.

### ***Ports***

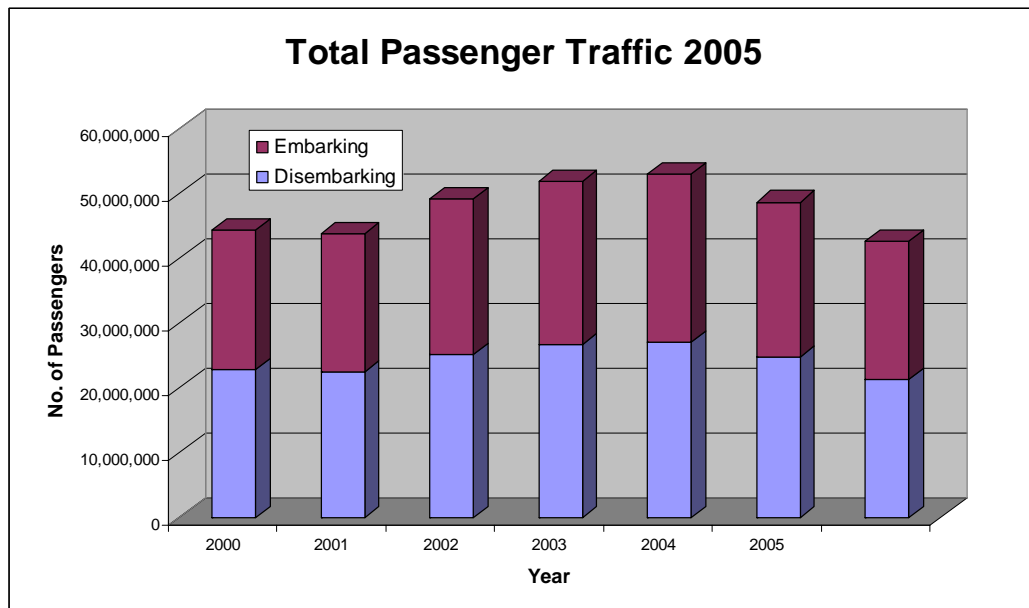
Ports handle a wide variety of goods that are critical to the economy, including petroleum and other critical imports such as food, pharmaceuticals and others. An efficient and effective port system is therefore essential to the Philippines, an archipelagic country. As of 2005, there are 414 registered ports nationwide, more than half of which (222) are privately-owned. The remaining 192 public ports are classified as base ports, terminal ports and other national or municipal ports.<sup>51</sup> (Figure 11).



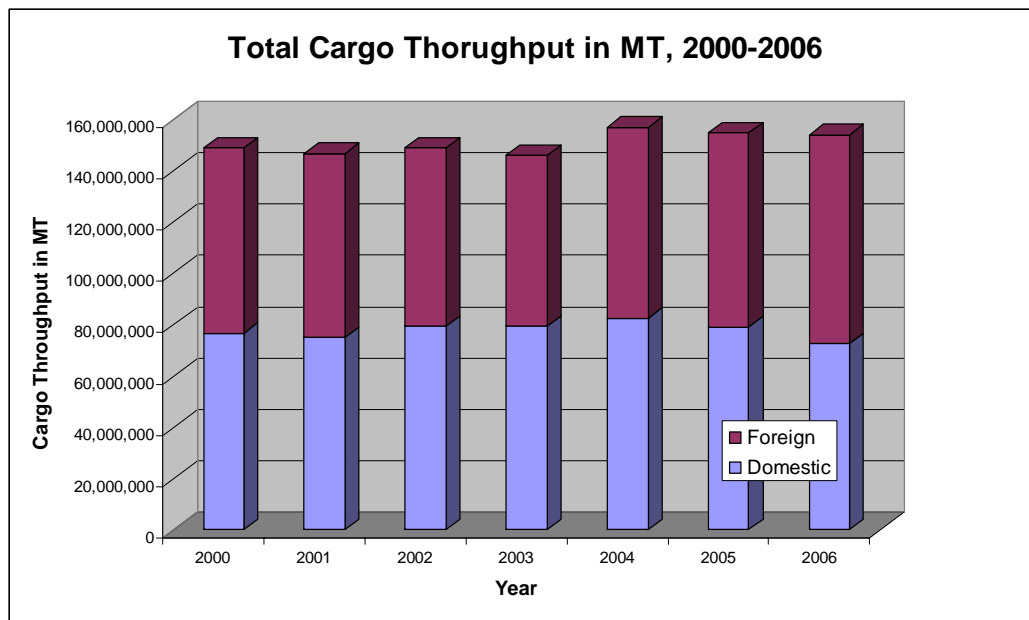
In terms of cargo traffic, the consistent upsurge of foreign cargoes from 2004-2006 was not able to raise overall cargo throughput due to slowdown in domestic cargo shipments (Figure 12)<sup>52</sup>. Port passenger traffic likewise deteriorated during the same period due to port inefficiencies, concerns about safety and the competition by other

means of transportation (Figure 13). The port of Manila ranked 31<sup>st</sup> among the top 50 worldwide in the 2005 World Port Rankings<sup>53</sup> in terms of Container Traffic with a total of 2,665 TEUs<sup>54</sup>. The Philippines is way behind other ASEAN ports in the top 50 list: Singapore (1<sup>st</sup>), Hong Kong (2<sup>nd</sup>), Busan, South Korea (5<sup>th</sup>), Port Klang, Malaysia (14<sup>th</sup>), Tanjung Pelepas, Indonesia (19<sup>th</sup>), Laem Chabang, Thailand (20<sup>th</sup>), and Tanjung Priok, Indonesia (24<sup>th</sup>).

**Figure 12.**



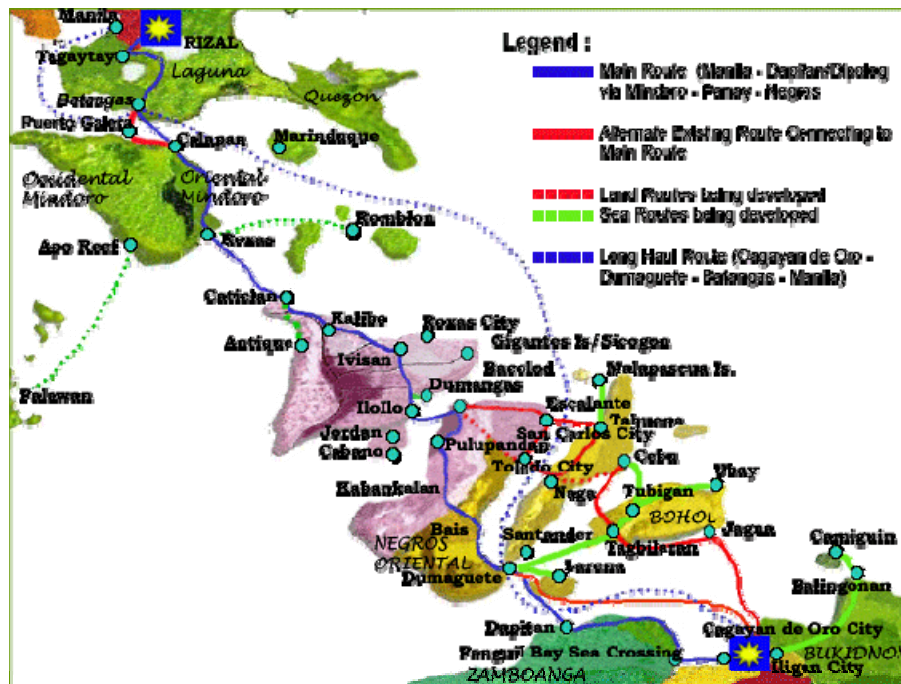
**Figure 13.**



## *Philippine Nautical Highway System/Strong Republic Nautical Highway*

In 2003, the Philippine government launched the Strong Republic Nautical Highway (SRNH) program. This involves the upgrading of existing ports to facilitate a road-roll-on, roll-off (Ro-Ro) terminal system (RRTS). The SRNH intends to connect the islands of Luzon, Visayas and Mindanao and induce more economic activities because of the improved connectivity of local markets. Executive Order (EO) 170 and subsequent issuances set the policy that the RRTS be integrated into the national highway system.

**Figure 14. Roll on-roll-off terminal system**



Source: Philippine Ports Authority

Specifically, the SRNH aims to:

- Reduce the cost of inter-island transportation through the use of a safe, efficient and cost-effective roll-on-roll-off system
- Support the agro-fisheries modernization and food security programs of the government

- Enhance tourism, transportation and commerce throughout the country and
- Encourage private sector participation in the establishment, construction and operation of RRTS facilities.

With Ro-Ro facilities, off-loading and re-transporting of cargoes and shipments would no longer be necessary. Handling time and stevedoring costs are reduced, and the goods goes to the market sooner, with better quality and lower cost of transportation.

To date, the nautical highway has already connected Luzon to different islands such as Mindoro, Panay, Guimaras, Negros and Mindanao. However, Alonzo and others (2007) have pointed out the current problem that in practice, roll-on-roll-off (RoRo) vessel operation and RoRo terminal operation in the Philippines are often viewed as separate activities—the government through the Philippine Ports Authority (PPA) or the local governments provide the port services and the private sector supplies the vessel services. They argued, however, that in principle, for any defined route, the two are actually interdependent and complementary investments (one cannot operate without the other), and there is merit in “bundling” both into a single business if integration proves to be viable. Their study of the Bicol Mainland-Masbate-Cebu connections showed that integrated operation, even under the new RRTS paradigm of charging only passage and terminal fees and eliminating certain other passenger and vehicle fees and charges, is financially viable, offering sufficient returns to attract private sector interest not just in vessel but in port operations as well.

There are also significant policy and institutional issues that have to be addressed to improve RRTS (Alonzo and others 2007). The government has to consider the separation of the RRTS from the regular ports operated by either the Philippine Ports Authority (PPA) or the Cebu Ports Authority (CPA). Most of the existing RRTS connections today have terminals within the jurisdiction of PPA (CPA in the case of Cebu province), with the contracts between PPA and the arrastre companies still in force. This is why despite EO 170 the PPA has to share with the arrastre companies a part of the terminal fees. There is a need to view RRTS differently from the regular shipping and

port operations. There should be no cargo handling in the RRTS; only the terminal fee and the passage fee have to be paid for so that the seamless travel for vehicles and passengers can be achieved.

Because the RRTS is rightly part of the highway system, another important issue is to resolve is which government body should regulate RRTS. At present, this is an institutional gap, which both MARINA and PPA are trying to fill. MARINA's role, however, is to assure the safety and seaworthiness of roll-on-roll-off vessels while the PPA should confine its role to that of leasing out the terminals to private operators or managing the ports.

The Philippine port industry is currently regulated by the Philippine Ports Authority (PPA). Pursuant to Executive Order No. 159, issued in 1987, the PPA is mandated to establish, develop, regulate, manage and operate a rationalized national port system in support of trade and national development. PPA is also tasked to undertake all port construction projects under its port system.

The PPA operates the biggest common-user ports in the Philippines/Manila thru long-term private concessions. These ports are the South Harbor (for international cargo), the Manila International Container Terminal (MICT), and the North Harbor (for domestic traffic). The management of fishing ports and wharves is handled by another government entity, the Philippine Fisheries Development Authority (PFDA)<sup>55</sup> while other public ports are municipal/city ports which are operated and owned by the respective LGUs.

Four other independent port authorities operate within the Philippine Port System. These are:

- Cebu Port Authority for the operation of the Cebu Port;
- Subic Bay Metropolitan Authority (SBMA) for the operation of the Subic freeport;
- Bases Conversion Development Authority (BCDA) has jurisdiction over the San Fernando Port in La Union; and

- Cagayan Economic Zone Authority (CEZA) for the operation of the Port Irene freeport.

The Medium-Term Philippine Development Plan (MTPDP) 2004-2010 has identified some key policy issues for the port sector as follows<sup>56</sup>:

- restructuring of the port institutions to improve port service.
- amendment of EO 170 to facilitate further expansion of the RORO Terminal System coverage
- privatization of the remaining government-owned SRNH RORO ports/ terminals
- deregulation of routes and rates to attract new players and to make the maritime transport more cost-efficient
- a comprehensive review of the present port tariff system to pave the way for a cost-based tariff system.
- modernization of vessels by owners by means of incentives pursuant to RA 9295, An Act Promoting the Development of the Philippine Domestic Shipping, Shipbuilding and Ship Repair and Ship Breaking, Ordaining Reforms in Government Policies Towards Shipping in the Philippines, and for Other Purposes.
- the establishment of a Maritime Equity Corporation of the Philippines which will acquire modern RORO vessels that can be leased to qualified operators under a lease purchase agreement.
- transfer of regulatory functions to an independent regulator (or regulators), which shall have jurisdiction over all ports.
- amendment of the PPA Charter to address, among other things, the dual role of PPA as port regulator and operator.

In addition to these are several outstanding issues in the port sector<sup>57</sup>. These are summarized in Table 4 below.



**Table 4. Issues on the Ports Sector and Action Taken**

<b>Issues in the ports sector</b>	<b>Action taken by the government</b>
<ul style="list-style-type: none"> <li>• PPA is the main port authority. Port administration is highly centralized.</li> <li>• There are inefficiencies in port administration and operation.</li> <li>• Port dues, cargo handling rates are regulated by PPA. However, its charter allows it to share 10-20% from cargo handling revenues.</li> <li>• Port development and operation is a government monopoly. Very few private ports are allowed to operate commercially.</li> <li>• RORO service was introduced. However, cargo handling charges were levied even when no service was provided.</li> <li>• Cargo handling a virtual monopoly in every port.</li> </ul>	<ul style="list-style-type: none"> <li>• EO 212 (s. 1994) was an attempt to liberalize and deregulate the ports sector through the privatization of public ports. However, the threat of labor (port workers) displacement paved the way for the non-implementation EO. In 1997, EO 410 was issued rescinding EO 212.</li> <li>• EO 59 (s. 1998) was an attempt to transfer the government monopoly of the port system to a private consortium without public bidding. This time, the business community opposed its implementation. In 2000, EO 308 was issued rescinding EO 59 and mandating competition in the privatization of the Manila North Harbor.</li> <li>• Emergence of other independent port authorities (aside from the Philippine Ports Authority). These include the SBMA (Subic Freeport), CEZA (Port Irene), BCDA (Poro Point), CPA (Cebu Ports), RPMA (ARMM ports), and Phividec (Mindanao Container Port Terminal). However, these IPAs offer little competition to PPA. In many cases, they simply follow/adopt PPA rates and policies.</li> <li>• Emergence of more private commercial ports like BREDCO, Harbour Centre, etc.</li> <li>• EO 170 (s. 2003) promotes private sector investment in the operation of RO-RO ships as well as development of RO-RO terminals (ports) as part of the Road-RORO Terminal System (RRTS). In a span of only 3 years, more ports (private and public) have been established to form the RORO links. Initial economic impact assessment of RORO indicates that it has increased transport efficiency, reduced transport cost, promoted tourism and regional trade, enhanced agricultural productivity, and RORO port development served as a catalyst for area development.</li> <li>• Port facilities and ships are required to undergo security assessments in compliance the provisions of the IMO-ISPS Code. The Office of Transport Security (OTS) was established to oversee</li> </ul>

## *Power*

Against the backdrop of complaints by the business sector about the high cost of electricity, which undermines competitiveness and the fiscal cost of a deficit-ridden National Power Corporation (NPC), the Philippine power industry was restructured in 2001 by virtue of RA 9136 or the Electric Power Reform Industry Act (EPIRA).

Broadly, the EPIRA was envisioned to: ensure a high quality, reliable, secure and affordable electric power supply; encourage free and fair competition; enhance the inflow of private capital into the sector; and broaden the ownership base of power generation, transmission and distribution by:

- Separating the competitive from the monopolistic components of the industry such as generation versus transmission, distribution versus supply of electricity.
- Unbundling the cost components of power rates to ensure transparency and to distinguish the efficient utilities from the inefficient ones
- Promoting efficiency and providing reliable and competitively priced electricity, while giving customers a full range of choices

Thus far, a few reforms have already been achieved under the EPIRA.

- creation of the National Transmission Corporation (TransCo)
- creation of the Power Sector Assets and Liabilities Management Corporation (PSALM)
- establishment of a wholesale spot electricity market (WESM)
- unbundling of power rates and
- review and renegotiation of the independent power purchase (IPP) contracts of NPC.

The Department of Energy (DOE) remains as the central energy planning and policy-making body in the energy sector. The DOE is mandated<sup>58</sup> to prepare, integrate, coordinate, supervise and control all plans, programs, projects and activities of the government relative to energy exploration, development, utilization, distribution and conservation.

Aside from DOE, the Philippine National Oil Company (PNOC) and its attached agencies, as well as the National Electrification Administration (NEA)<sup>59</sup> have remained as key institutions in the sector. Table 5 shows how the industry has been restructured.

**Table 5. Restructuring of the Power Industry**

<b>Sector</b>	<b>Activities</b>	<b>Regulation</b>	<b>Participants</b>
Generation	production or generation of electricity.	Deregulated. Open and competitive	NPC, IPPs, other private owned-plants
Transmission	transmission of electricity from the point of generation to the point of distribution	Monopoly but regulated. Rates subject to ERC approval	Transmission Company
Distribution	distribution of electricity thru transmission facilities to end-users	Regulated. Requires national franchise. Rates subject to ERC approval	Manila Electric Company (MERALCO) and several distribution utilities (electric cooperatives, private corporations, government-owned utility or existing local government unit)
Supply	sale, brokering, marketing, aggregate electricity to the end-users.	Require ERC license. Rates not subject to ERC approval	

The supply sector, which will be composed of wholesale and retail suppliers, is still being established. The supply sector is regulated and participants would have to secure a license from ERC. Because the prerequisites for open access and retail competition have not yet been firmed up, the supply sector participants have not yet been formally identified<sup>60</sup>.

### *Generation*

Despite the sector reforms, generation remains a regulated industry with NPC<sup>61</sup> plants (and its IPPs) continuing to dominate the generation sector (71%). NPC ownership is expected to give way to private ownership as the privatization of generation assets picks up.

NPC, through its Small Power Utilities Group (SPUG), also supplies 41 electric cooperatives that are either not connected to the main grid islands or located in remote areas.

### *Transmission*

Power transmission in the Philippines is a regulated industry administered by the Transmission Corporation (Transco), a government-owned and controlled corporation that assumed NPC's electrical transmission functions (including planning, construction, centralized system operation and maintenance of high-voltage transmission facilities, grid interconnections and ancillary services) beginning 2003 pursuant to the EPIRA. At present, the country has three high-voltage grids in Luzon, Visayas, and Mindanao, but only two of which, Luzon and Visayas, are interconnected

TransCo is mandated to link power plants to the country's distribution utilities and electric cooperatives which in turn deliver electricity to end-users, ensuring the reliability, adequacy, security, stability and integrity of the grid. TransCo has approximately 21,319 circuit-kilometers of transmission lines including a submarine cable system, considered the first of its kind in Asia, 93 substations with approximately 24,310 million volt amperes substation capacity<sup>62</sup>.

Due to imminent domain and right-of-way issues, the transmission assets cannot be auctioned completely. Instead, the assets (grid interconnections) and ancillary services are being offered thru open, competitive bidding, in the form of a 25-year concession, with the possibility of renewal for another 25 years. Under this arrangement, the government, through PSALM, will retain the ownership of TransCo's assets. The winning bidder will be responsible for improving, expanding, operating and maintaining these assets, and operating any related business.

As the transmission is a regulated business, the winning bidder will be governed by the Grid Code and the Transmission Development Plan as approved by the DOE<sup>63</sup>.

## *Distribution*

The distribution and sale of electricity to end-users is carried out by a total of 142 distribution utilities. This is broken down into 119 electric cooperatives, 17 private investor-owned companies (including Meralco), and 6 local-government owned utilities.

The Luzon franchise area is dominated by the Manila Electric Company (MERALCO), a listed company traded on the Philippine stock exchange, which was established in 1903. At present, it has a franchise area covering 9,337 square kilometers, 25 cities and 86 municipalities where the prime business districts and industrial estates are situated. As of 2006, it has sold 25.1 billion kilowatt hours (kwh) of electricity to its 4.3 million customers in the commercial, industrial and residential sectors<sup>64</sup>.

The Visayas and Mindanao franchise area is largely made up of electric cooperatives, private investor-owned companies and local-government owned utilities connected to Transco's transmission (138–500 kV) or sub-transmission (mostly 69 kV) systems.

## *Wholesale Electricity Spot Market (WESM)*

Section 30 of the EPIRA provides for the establishment of a wholesale electricity spot market which will provide the mechanism for determining the price of electricity not covered by bilateral contracts between sellers and purchasers of electricity. Since it is a spot market, electricity is traded in real time. At the same time, as a wholesale market, it is open to distributors, directly connected customers, large users and supply aggregators.

The WESM aims to:

- provide incentives for the cost-efficient dispatch of power plants through an economic merit order,
- create reliable price signals to assist participants in weighing investment options, and

- ensure a fair and level playing field for suppliers and buyers of electricity wherein prices are driven by market forces.

The WESM is governed by an independent board of the Philippine Electricity Market Corporation, jointly owned by the WESM participants<sup>65</sup>, which was established in November 2003. The Luzon market operations started in June 2006 while the Visayas market is still under trial operations. The Luzon WESM began its operations at a time when the generation market (supply side) was dominated by government while on the other hand the buyer side is dominated by Manila Electric Company (MERALCO).

Despite these birth pains, the WESM is hopeful that it will eventually be able to evolve into a more mature market, and be able to ensure that there is adequate investment and security of supply; price volatility risks are managed by avoiding excessive market power; and ensuring that there are adequate means of managing the exposures to price risks.

### *Privatization*

To reduce the dominance of government in the generation as well as in the transmission sectors, the EPIRA provided for the privatization of the transmission and generation assets of NPC by the Power Sector Assets and Liabilities Management Corporation (PSALM)<sup>66</sup>.

The proceeds from the sale of the generation and transmission assets are expected to reduce consolidated debt to more sustainable levels and at the same time attract new private investments which otherwise possess greater operational efficiency.

Thus far, PSALM has succeeded in privatizing a total of eight (8) plants with a combined capacity of 1,080 megawatts (MW) since 2003, despite some difficulties<sup>67</sup>. Five (5) more plants are being firmed up for privatization by end 2007, that is, Calaca Coal-Fired Power Plant (600 MW), Palimpinon Geothermal Power Plant (192.5 MW),

Panay (Dingle) Diesel Power Plant (146.5 MW), Tiwi Geothermal power Plant (275 MW) and Mak-Ban Geothermal Power Plant (410 MW).

As of 2006, the Philippines had a total installed generation capacity of 15,803 MW, slightly increasing from previous year's 15,619 MW<sup>68</sup>.

The generation mix is fairly distributed among the various sources in terms of installed generating capacity with coal and diesel accounting for the largest shares, contributing 4,177 MW and 3,602 MW respectively. This is followed by hydro plants, natural gas and geothermal plants. Non-conventional plants (solar, wind, etc.) are slowly being developed to augment the power requirements of the country.

In terms of actual generation, the Philippines generated a total of 56.7 billion kilowatt hours of electricity in 2006. Renewable energy sources accounted for 65% of the total generation with natural gas (also because of its take or pay arrangements) contributing 16 billion kilowatt hours or almost 29%, geothermal plants at 10.5 billion kilowatt hours (18%) and hydro plants at 10 billion kilowatt hours (17%). Coal continues to be an important source of power generating 15 billion kilowatt hours or 27% in 2006.

For missionary electrification, the Rural Electrification Program of the DOE envisaged to achieve 100% barangay electrification by 2008 and 90% household electrification by 2017. As of 2006, the national electrification level stood at 94.6 percent (39,671 out of the 41,945 barangays)<sup>69</sup>.

Despite the reforms set out under the EPIRA, several challenges still remain. These are as follows:

- Measures to ensure the sustained financial viability of both NPC and PSALM have to be put in place;

- Attracting new investments in the power sector in view of the economic recovery on track now;
- Better management of WESM;
- Fast-track privatization, IPP administration to establish competitive atmosphere to reflect true cost of electricity;
- Review and streamlining the ERC process

### ***Telecommunications***

The telecommunications industry in the Philippines began as early as 1905 with the birth of the first telephone company in Manila. This was followed by the establishment of the Philippine Long Distance Telephone (PLDT) Company in 1928, then under the ownership of the United States. It was eventually bought out by Filipino investors in 1967. PLDT has dominated the Philippine telecommunications services market until the liberalization of the sector in the 1990s which provided for the entry of competition, increase in telephone service areas, and a wide range of service providers, including cellular services which imprinted a remarkable growth throughout the country since its introduction in the late 1990s. Due to high maintenance and capital investment requirements that the government cannot afford and consistent with Philippine telecommunication policies, the private sector has taken the lead in the provision of telecommunication services and in making substantial investments in new technology.

The maintenance and expansion of viable, efficient, and dependable communications systems as effective instruments for national recovery and economic progress rest with the Department of Transportation and Communication (DOTC)<sup>70</sup>. In particular for telecommunications, the DOTC is supported by its attached agencies, the National Telecommunications Commission (NTC) and the Telecommunications Office (TELOF).

In January 2004, however, Commission on Information and Communications Technology (CICT) was created<sup>71</sup> as the “primary ICT policy, planning, coordinating and



implementing, regulating, and administrative entity” of the executive branch of the Philippine government relieving the DOTC of this mandate. Accordingly, both NTC and TELOF reports to CICT<sup>72</sup>.

NTC<sup>73</sup> remains as the sole body that exercises jurisdiction over the supervision, adjudication and control over all telecommunications services throughout the country thru the adoption and promulgation of guidelines, rules, and regulations relative to the establishment operation and maintenance of various telecommunications facilities and services nationwide<sup>74</sup>. The NTC is also responsible for radio spectrum management and regulation of the activities of the broadcasting sector is mandated to collect regulatory fees for its supervisory and licensing activities. On the other hand, TELOF is tasked with providing telecoms services in missionary areas or those areas that are not served by private sector operators.

There is also a proposed bill creating a Department for ICT to facilitate the convergence of information technology and telecommunications technologies with infrastructure development, education, health care, etc.

The major laws covering the industry are as follows:

- Republic Act (RA) 6849 dated 21 December 1989 provided for the installation, operation and maintenance of public telephones in each and every municipality in the Philippines.
- RA 7925, or the Public Telecommunications Policy Act of 1995, provided for the promotion of the development of Philippine telecommunications and the delivery of public telecommunications services. In particular, RA 7925 aims to promote universal access, competition, liberalization and consumer welfare, by interconnecting all public telecommunications networks and allowing greater private sector participation

- RA 8792, E-Commerce Act of 2000 covering all electronic data message and electronic document used in the context of commercial and noncommercial activities to include domestic and international dealings, transactions, arrangements, agreements, contracts and exchanges and storage of information.
- EO 264 provided for the merger of the National IT Council and the E-Commerce Promotion Council into the Information Technology and E-Commerce Council (ITECC) in 2000.

Service providers can be categorized into local exchange or inter-exchange carrier services, international gateway facility services, long distance services, and mobile services (Table 6).

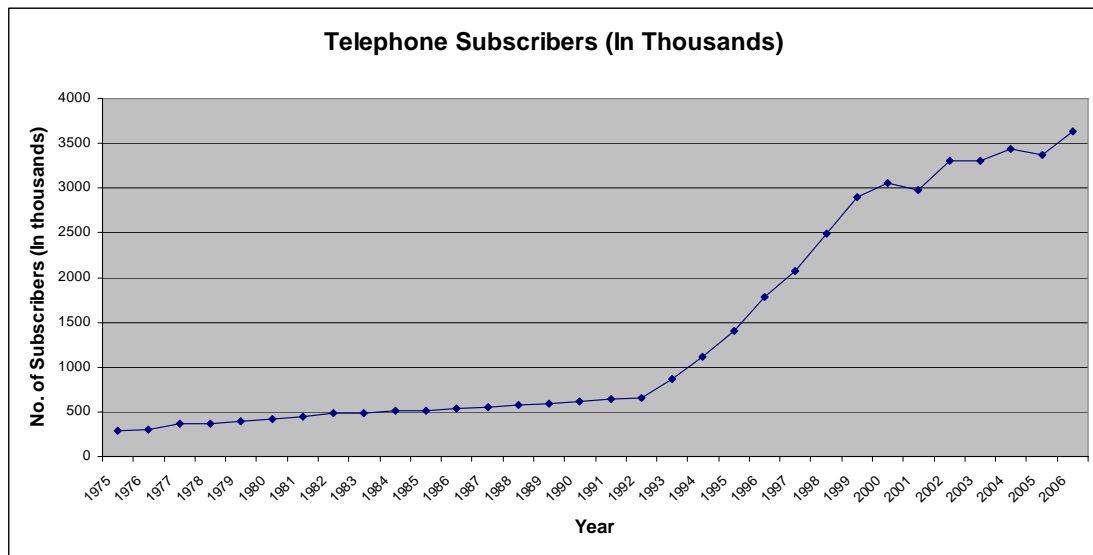
**Table 6. Telecommunications industry structure, 2002-2006**

<b>Service providers</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Local exchange carriers	74	73	73	73
Inter-Exchange Carrier Service	14	14	14	14
International gateway facility	11	11	11	11
Radio Mobile				
Cellular mobile telephone systems	7	7	7	7
Public trunk Repeater Services	11	11	10	10
Value-added services				
With Networks				
Coastal	12	13	18	18
Broadband	19	19	19	19
With Networks	186	249	292	351

*Source: National Telecommunications Commission. Annual Report 2006*

The removal of monopoly and promotion of competition has resulted in an impressive improvement in tele-density (Figure 15). The number of telephone subscribers has increased dramatically from the period 1992-1999 with the implementation of RA 7925. The advent of mobile technology however, has slowed down the rate of subscription to fixed telephone lines because it provided the much-awaited access to telecommunications services at affordable levels.

**Figure 15. Teledensity**



Despite the promotion of competition, PLDT continues to dominate the local (domestic) exchange carrier market, the inter-exchange (domestic long-distance) carrier market as well as the international gateway facility (international long-distance). For the domestic market, for instance, PLDT's installed lines accounted for 41% of the total installed lines nationwide, while its subscribed lines represents 55% of the total subscribed lines nationwide as of 2006<sup>75</sup>. The remainder is divided among Innove (21% market share on installed, but only 9% subscribed) and other small, private, or municipal companies providing services in various areas (Table 7).

**Table 7. Distribution of Subscribers per Local Exchange Carriers 2006**

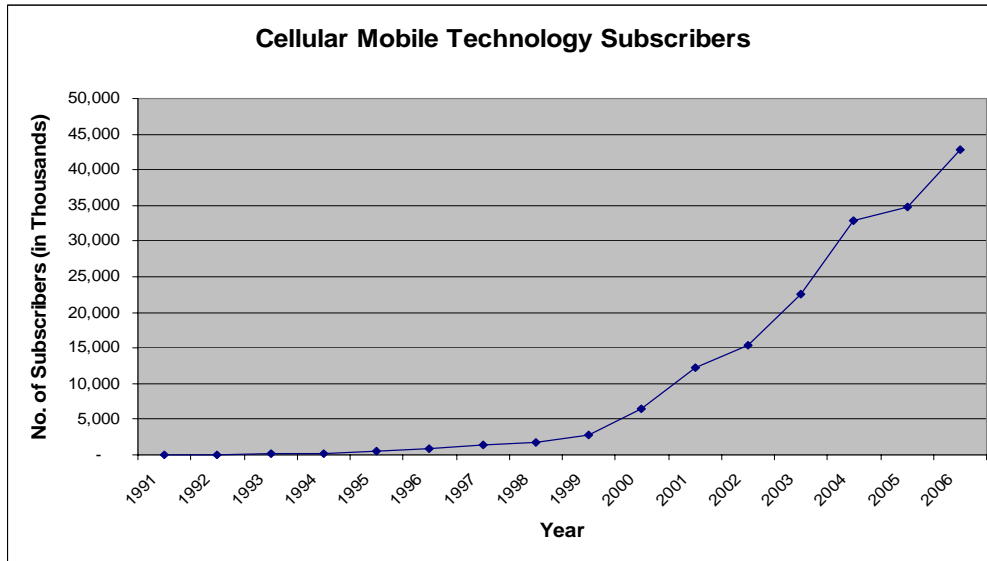
OPERATOR	INSTALLED LINES	SUBSCRIBED LINES	MARKET SHARE	
			INSTALLED	SUBSCRIBED
BAYANTEL	443,910	227,057	6.17	6.25
BELL TELECOM	489,000	271,000	6.79	7.46
DIGITEL	653,616	431,366	9.08	11.87
ETPI/TTPI	91,446	22,467	1.27	0.62
INNOVE	1,507,197	329,908	20.94	9.08
PHILCOM	213,236	53,098	2.96	1.46
PILTEL	236,561	46,202	3.29	1.27
PLDT	3,009,791	2,006,773	41.81	55.23
PT&T	129,000	14,193	1.79	0.39
OTHER OPERATORS	425,165	231,124	5.91	6.36
<b>TOTAL</b>	<b>7,198,922</b>	<b>3,633,188</b>	<b>100.00</b>	<b>100.00</b>

Source: National Telecommunications Commission, 2006

The Service Area Scheme (SAS) policy obligated new entrants to install their own local exchange service infrastructure. In particular, under the SAS, each operator was required to deliver within three to five years, 300,000 lines in various regions of the country to increase access to basic services. This imposed capital costs which were not fully recovered by the telecommunications companies through the expected increase in subscription. The entry of the more accessible and affordable cellular mobile technology services and other product and service innovations has given stiff competition to the traditional, fixed line domestic and long-distance services.

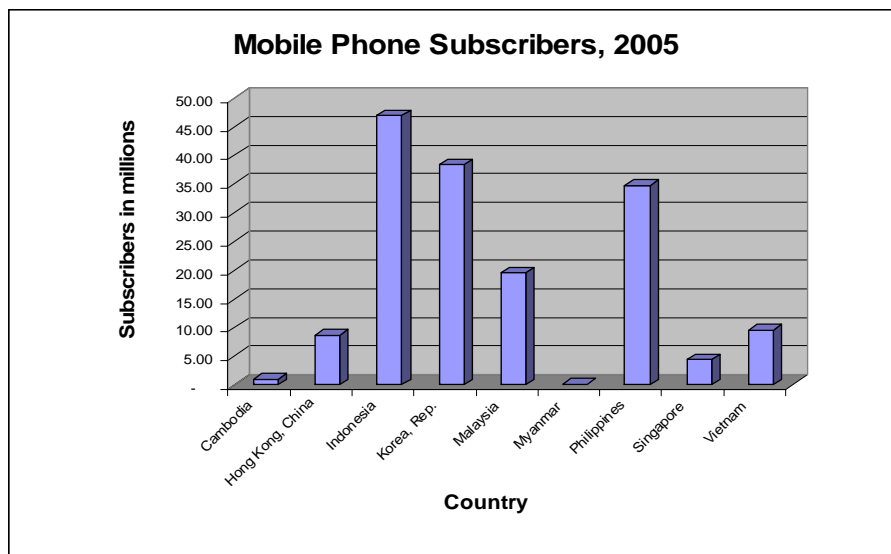
The low cost of mobile handsets and the relatively cheap cost of short messaging service (SMS) has made mobile telecommunications more popular than fixed-line in the Philippines. As of 2006, there are 42 million cellular phone subscribers nationwide. The number of cellular phone subscribers has been significantly increasing and the trend is expected to continue as incomes grow and as phone companies establish a wider and more efficient cell network (Figure 16).

**Figure 16.**



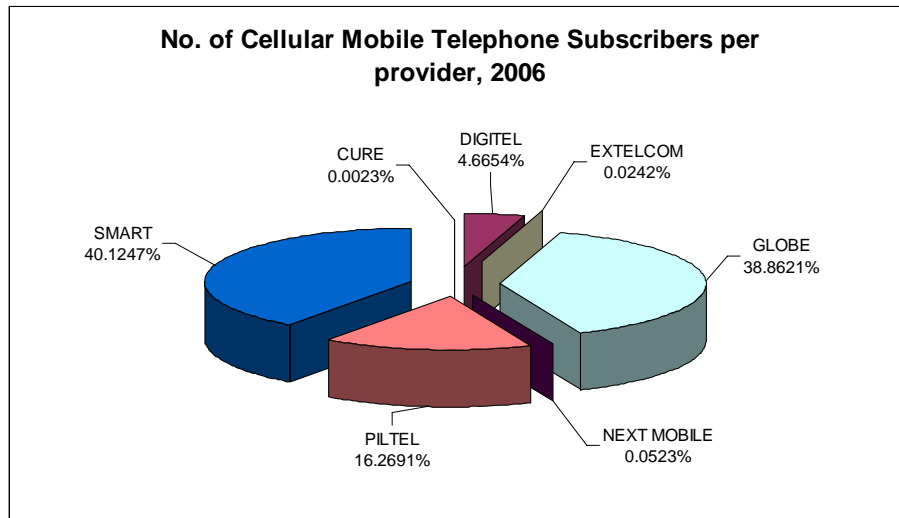
Compared to other ASEAN countries, the Philippine mobile market is quickly catching up with the Indonesian and Korean markets. In 2005, Indonesia and Korea registered a total of 47 million and 38 million subscribers respectively, while the Philippines registered a total of 35 million<sup>76</sup>. Figure 17

**Figure 17**



Due to mergers in the past ten (10) years, the Philippine mobile market is currently dominated by two (2) players, the PLDT-owned Smart Communications (and Pilipino Telephone Corporation) with 56%, and Ayala Group's Globe Telecom (and Isla Communications, or Innove Communications) with 38%<sup>77</sup>. Figure 18

**Figure 18**



Source: National Telecommunications Commission, 2006

Philippines mobile communications employs global system, a second-generation (2G) digital technology used by majority of the world market. The recent introduction of third-generation (3G) digital technology will enable high-speed, high-bandwidth video applications by cell phone and is expected to spur further growth of the industry.

The liberalization of the sector in the nineties and the subsequent market-oriented stance taken by NTC has yielded dividends in terms of a greater accessibility of telecommunications services by a growing number of the population and a declining trend in telecommunications costs. A recent report states that in telecommunications the Philippines has laid the foundations for a competitive market which has improved the access of the public to efficient means of communication and other IT-enabled services

(EMERGE Quarterly Report 2007). An example of the desire of NTC for a competitive market is its ruling that VOIP is value added service and not a franchise, the position taken by the dominant telecommunications firms. This ruling, which was first subjected to public hearings where the views of the different stakeholders were presented, has resulted in an increase of VOIP providers and a decline in telecommunications costs. Telecommunications carriers are offering as low as 5 cents per minute for overseas calls made using VOIP technology, an 87.5% drop from the usual 40 cents per minute. At least 17 firms have been given licenses to provide VOIP services.

The same report indicated that the NTC has issued on December 2005 a consultative document on the development of a competition policy framework for the information and communications technology sector. The NTC document cites the inequality in market power in the Philippine telecommunications sector where the largest two among 73 local exchange carriers account for 75% of the subscribers base, while the biggest two cellular operators control 96% of the mobile service market<sup>78</sup>. In 2004, the two largest carriers showed a net income of Php 39.2 billion against the net loss of Php 2.3 billion of the next two largest carriers. While this extreme inequality in market shares and performance is not necessarily caused by a lack of fair competition, the NTC points out that it provides opportunities for anti-competitive behavior, and hence grounds for regulatory attention. For example, a large supplier who owns and controls essential facilities, i.e., so-called bottleneck facilities that are costly to duplicate, can eliminate competition by constraining access of its rivals to those facilities. Rivals need access in order to provide telecommunications services to clients. The NTC further recognizes the advantages of incumbents who are first movers in the market. Incumbents control essential facilities and network standards and have vertically integrated facilities that may be used to cross-subsidize services and engage in predatory practices to ruin its competitors.

Realizing the lack of effective competition in the market, the NTC consultative document considered the introduction of four pro-competition policies, namely: (a) imposing obligations on carriers with significant market power (SMP), (b) mandating

local loop unbundling, (c) requiring carriers to allow for resale of their services, and (d) changing the basis of price regulation from ex ante to ex post. An important component of SMPOs is the development of an instrument that will address the problem of interconnection agreements between access provider and access seeker and the desire of public for relevant information on the subject. This instrument is the set of guidelines on reference access offers (RAO).

The guidelines will require all authorized public telecommunication entities to submit to the NTC a reference access offer (RAO) for certain access services. The RAO will contain the terms and conditions for which an access provider is prepared to provide access to its telecommunications network or facility to any requesting service provider. The end goal is to introduce more competition in the telecommunications market, which will further drive down communication costs for the consumer and business sector.

### **C. Sub-national dimension**

Being the second largest archipelagic nation in the world, the Philippines has more than 7,107 islands with a total land area of 340,574.7 sq. kilometers<sup>79</sup>. Physically, three major islands divide the country into Luzon in the north, the Visayan Islands in the middle, and Mindanao in the south. Administratively, however, the country is subdivided into numerous regions and provinces.

In terms of gross regional domestic product (GRDP)<sup>80</sup>, total GRDP increased by 5.45% from the period 2005 to 2006. This increase is brought about by the parallel growth across all the regions ranging from 2.06% (Region IX) to as high as 7.25% (Region II) (Table 8). SEPT 02

For 2006, the National Capital Region (NCR) continued to top the regional share to GRDP contributing PhP 414 million (32%), followed by Region IV-A Calabarzon (PhP 157 million, 12%) and Region III Central Luzon (PhP 107 million, 8%). Meanwhile, the Autonomous Region of Muslim Mindanao (ARMM), CARAGA (Region XIII), and



Cagayan Valley (Region II) contributed the least to total GRDP with 0.9%, 1.3% and 2.0% share respectively.

**Table 8. 2005-2006 Gross Regional Domestic Product  
(at constant 1985 prices)**

<b>REGION / YEAR</b>	<b>2005</b>	<b>2006</b>	<b>2005-2006 Growth rate</b>	<b>Per Capita GRDP 2006</b>
<b>PHILIPPINES</b>	<b>1,210,497,421</b>	<b>1,276,435,452</b>	<b>5.45%</b>	<b>14,676</b>
NCR	387,751,888	414,292,958	6.84%	37,855
CAR	27,390,829	28,338,279	3.46%	18,171
I	35,927,006	38,136,691	6.15%	7,982
II	23,701,925	25,419,614	7.25%	8,098
III	102,428,717	107,385,259	4.84%	11,442
IVA	150,502,498	157,406,451	4.59%	14,437
IVB	33,740,765	34,526,488	2.33%	12,690
V	34,453,986	35,358,229	2.62%	6,685
VI	87,498,594	91,806,935	4.92%	13,092
VII	86,112,111	90,379,775	4.96%	13,931
VIII	26,663,453	27,979,058	4.93%	6,819
IX	31,971,822	32,631,502	2.06%	10,136
X	58,555,017	62,558,765	6.84%	15,628
XI	55,425,093	57,844,052	4.36%	14,152
XII	41,934,851	44,729,136	6.66%	11,983
ARMM	10,865,931	11,311,801	4.10%	3,486
XIII	15,572,937	16,330,459	4.86%	6,912

Source: National Statistical Coordination Board, 2007

With regard to financing, total financial resources and internal revenue allotment (IRA)<sup>81</sup> in 2006 were fairly distributed among the regions with the exception of NCR, Calabarzon (IV-A) and Central Luzon (III)<sup>82</sup>, which have a larger share of total financial resources in the regions. Please see Table 9 below.

**Table 9. Regional Financing 2006**

<b>Region</b>	<b>Total Financial Resources (PhP M)</b>	<b>IRA (PhP M)</b>	<b>IRA per Capita (PhP M)</b>	<b>Other Sources (PhP M)</b>
<b>PHILIPPINES</b>	<b>103,548.70</b>	<b>48,204.70</b>	<b>554.25</b>	<b>2,222.00</b>
NCR	49,374.90	8,795.50	803.68	1,470.00
CAR	2,170.20	1,717.60	1,101.03	9.00
I	3,078.70	2,305.90	482.51	1.60
II	3,333.50	2,400.40	764.95	-
III	5,593.20	4,055.80	432.11	272.80
IVA	7,043.00	4,096.70	375.71	301.00
IVB	2,670.80	2,251.90	827.60	-
V	3,493.90	2,817.60	532.63	-
VI	4,270.40	3,187.00	454.44	-
VII	4,314.60	2,542.50	391.94	16.50
VIII	3,048.20	2,650.20	645.76	-
IX	2,324.50	1,546.10	493.02	-
X	3,398.80	2,081.40	519.96	151.20
XI	2,502.00	1,813.30	443.57	-
XII	2,509.10	1,971.80	528.21	-
ARMM	2,409.00	2,232.60	688.01	-
CARAGA	2,014.10	1,738.60	736.07	-

Source: National Statistical Coordination Board, "Philippine Countryside in Figures, 2006".

Expenditure-wise, the Commission on Audit (COA)<sup>83</sup>, reported that total expenditures for infrastructure<sup>84</sup> amounted to PhP 19.8 billion in 2005. Almost half of the total amount (48%) was sourced from the local government units (LGUs). For the National Government share, infrastructure expenditures were observed highest in NCR (29.06%), Regions IV (15.56%) and III (11.00%), while it was observed lowest for ARMM (1.73%).

**Table 10. 2005 Infrastructure Expenditure (In thousand Pesos)**

Source	Infrastructure*	Other Expenses (PS & other MOOE)	Total Expenses	% of Infrastructure Expenditures to Total
<b>LGU</b>	<b>9,461,757.00</b>	<b>136,370,640.90</b>	<b>145,832,397.90</b>	<b>6.49%</b>
Provinces	2,310,236.80	29,050,991.70	31,361,228.50	7.37%
Cities	2,453,942.00	55,314,421.90	57,768,363.90	4.25%
Municipalities	4,697,578.20	52,005,227.30	56,702,805.50	8.28%
<b>NG</b>	<b>10,347,595.20</b>	<b>695,473,483.20</b>	<b>705,821,078.40</b>	<b>1.47%</b>
NCR	3,007,366.20	517,207,675.60	520,215,041.80	0.58%
CAR	332,700.90	11,639,734.20	11,972,435.10	2.78%
I	355,785.60	6,007,453.60	6,363,239.20	5.59%
II	333,999.90	9,859,871.90	10,193,871.80	3.28%
III	1,138,812.60	20,444,121.50	21,582,934.10	5.28%
IV	1,610,178.50	24,701,786.30	26,311,964.80	6.12%
V	385,185.60	13,097,568.60	13,482,754.20	2.86%
VI	623,002.00	15,188,987.60	15,811,989.60	3.94%
VII	511,923.20	11,945,963.50	12,457,886.70	4.11%
VIII	355,235.90	11,829,921.90	12,185,157.80	2.92%
IX	298,510.90	10,745,693.00	11,044,203.90	2.70%
X	323,573.70	11,466,728.10	11,790,301.80	2.74%
XI	316,470.90	9,180,713.70	9,497,184.60	3.33%
XII	285,077.10	9,707,307.00	9,992,384.10	2.85%
Caraga	290,057.90	5,804,089.30	6,094,147.20	4.76%
ARMM	179,714.30	6,645,867.40	6,825,581.70	2.63%

\*Derived from the Total “Repair and Maintenance” expense items.  
Source: Commission on Audit, “2005 Annual Financial Report”

Against total expenditures, however, expenditures in infrastructure is generally low, 6.5% for LGUs and 1.5% for National Government, which may explain the inadequate provision of local infrastructure services in some regions. Please see Table 10.

The lack of access to adequate infrastructure services can be attributed to the uneven pace of growth among regions in the Philippines which is reflected in their respective contribution to gross regional domestic product (GRDP), and to some extent, the relative size of financial resources available to the regions. ARMM, for instance, registered the lowest GRDP, and ranked lowest in terms of electricity, telephone connectivity, and road density as shown below. On the other hand, the NCR and the Calabarzon area in Region IV, the fastest growing regions in the country consistently top the rankings for access to basic infrastructure. However, it should also be noted that infrastructure capital would also have significant effects on regional or local productivity. Network infrastructure may have both positive and negative spillover effects. The benefits of good infrastructure may be felt in areas or regions outside the region where it is located (positive externality) but the same infrastructure may also lead to negative externality when due to mobile factors, a region with a good infrastructure endowment grows faster than its neighboring regions. It is able to attract more investments and to stimulate more economic activity due to centripetal or agglomeration forces.

The under-provision of local infrastructure services in some regions such as ARMM can also be attributed to under-investment in infrastructure in the regions not only by government but also by the private sector. Not all local government units have access to or have the capability to secure other means of financing such as build-operate-and transfer (BOT), Official Development Assistance (ODA) and other financing mechanisms (bonds issuance, credit guarantees, etc.). They would have to rely on local tax revenues and the internal revenue allotment for making infrastructure investments.

To promote the development of regional infrastructure, the financial and technical capability of the local governments should also be improved. A review of the allocation formula for the internal revenue allotment (IRA) is timely considering the great need of local government units to have substantial resources for delivery of local public services and infrastructure development. Another area for improvement would be the access of local government units (LGUs) to other financing sources so that they may not be too dependent on IRA transfers. Many LGUs use the IRA for other purposes, e.g., financing local administrative services, etc. The national government can also provide not only financial support but also technical support in the planning, development and implementation of local infrastructure projects.

#### *Framework for sub-national infrastructure development*

Two major strategies for economic growth and development have a bearing on infrastructure development at the sub-national level. These are (a) decentralization and (b) the creation of so-called “super regions.” President Arroyo has taken the initiative to cluster certain regions into different “super-regions,” each with a unique development strategy.

Under the first strategy, local infrastructure development is the responsibility of sub-national governments, that is, “local government units,” comprised of provinces, cities, municipalities and barangays. Local governments would be better able to identify and finance local infrastructure requirements, which will contribute to the creation of an environment for more investments and economic activity in the local areas. Under the second strategy, major contiguous areas in the country have been identified and clustered as platforms for growth and development on the basis of the areas’ resource endowments, competitive advantages and business activities. The development of efficient transportation, communication and power infrastructure in the super regions will complement those regions’ perceived advantages for certain economic activities, e.g., information and communications technology development in the Luzon Urban Beltway.

## *Decentralization*

The Philippine administrative system is comprised of a central or national government and local territorial/political subdivisions, called collectively as local government units, which are composed of provinces, cities, municipalities and barangays (smallest administrative and political unit). For administrative convenience, all provinces are grouped into regions. National government agencies, e.g., Department of Agriculture maintain regional offices to serve the constituent provinces. The regions do not possess a separate local government, with the exception of the Autonomous Region of Muslim Mindanao (ARMM) and the Cordillera Autonomous Region (CAR), which are comprised of provinces, cities and municipalities sharing, among other things, common and distinctive historical and cultural heritage and economic and social structures. Unlike the other regions, the autonomous regions are provided legislative powers within their territorial jurisdiction over matters pertaining to, among other things, ancestral domain and natural resources; regional, urban and rural planning development; and economic, social and tourism development.

At present, the Philippines has 17 regions, 82 provinces, 1,510 municipalities, and 41,995 barangays<sup>85</sup>. This administrative and political structure coupled with the geographical attributes of the Philippines, is meant to facilitate administration and governance, especially of people in remote areas. With the intention of bringing the government closer to the people through administrative de-concentration and political devolution, RA 7160 or the Local Government Code (LGC) was enacted in 1991. Under the LGC, the basic services that were previously the responsibility of the national government were transferred to the local government units (LGUs) to wit, health (field health and hospital services and other tertiary services), social services (social welfare services), environment (community-based forestry projects), agriculture (agricultural extension and on-site research), public works (funded by local funds), education (school building program), tourism (facilities, promotion and development), telecommunications services and housing projects (for provinces and cities), and other services such as investment support. The decentralization and consequent devolution of the delivery of

basic goods and services follow the thinking that local development could be fostered by providing local areas the necessary autonomy and local power and authority.

### *Super regions*

In her State of the Nation Address (SONA) in 2006, Gloria Arroyo unveiled the administration's regional development program thru the enhancement of regional clusters or super regions in Mindanao, Central Philippines, North Luzon Agribusiness Quadrangle and Luzon Urban Beltway<sup>86</sup>. In addition, a Cyber Corridor, traversing Baguio City to Zamboanga, would focus on information and communications technology (ICT)-related investment such as business process outsourcing. By grouping selected regions and provinces according to their economic strengths, the super regions are intended to stimulate economic growth and development and harness the natural competitive advantage/s of major areas of the country as well as that of knowledge and technology and extend urban development outside of Metro Manila.

Specifically, the Mindanao super region will take advantage of the region's competitive edge in agribusiness. Efforts will likewise be undertaken to address and accelerate the development of Mindanao.

The Central Philippines Super Region is envisioned to be a premier tourist hub due to its long white beaches, rich coastal and marine resources, vast forest reserves and diverse ecosystems, varied provincial cultures and historical landmarks and warm and friendly people.

The North Luzon Agribusiness Quadrangle is envisioned to spur the country's drive towards agricultural productivity and increased food production to supply the major population centers of Luzon, as well as North Asia. This proximity to the major markets of North Asia has potential positive impact to increase in agricultural exports as well as development of tourism.

Finally, the Cyber Corridor will be an information, communications and technology (ICT) channel across the country stretching from the northern city of Baguio, down to Zamboanga in the south. The Cyber Corridor is intended to enhance the country's high-bandwidth optic fiber back-bone and digital network, to provide a globally competitive environment for business process outsourcing (BPO), contact centers, animation, medical and legal transcription, software development, e-learning, e-entertainment and gaming and other back office operations (e.g. finance and accounting, human resource development, etc.).

### *Regional Infrastructure*

In general, the more rapidly growing regions are endowed with better and more infrastructure facilities, with the NCR, where around 40% of GDP is produced, leading the pack.

As of July 2007, there are a total of 29,288 kilometers of national roads nationwide (excluding ARMM) representing 15% of the total road network<sup>87</sup>. On the other hand, local roads, which are administered by the local governments, accounted for the remaining 85%. As of 2006, Region IV recorded the highest length of public roads (11% of the total public road network) while NCR registered the lowest (2.35%).

For road density, measured in terms of kilometer of roads per 1,000 persons, the NCR ranked lowest as against other regions such as CAR (5.79, Region II (4.71) and Region XI (4.22), which have higher road densities, respectively.

Disparity in the development of public roads road is also evident in the proportion to total land area. In 2006, NCR registered the highest proportion of roads vis-à-vis its land area (7.67%) as against ARMM with the lowest (0.23%) followed by CARAGA (0.34%). Please see Table 11.



**Table 11. Public Roads by Region, 2007**

<b>Region</b>	<b>National (km)</b>	<b>Local (km)</b>	<b>Total (km)</b>	<b>Road Density</b>	<b>% of Land Area</b>
NCR	1,031	3,723	4,754	0.43	7.67
CAR	1,844	7,183	9,027	5.79	0.46
I	1,610	13,166	14,776	3.09	1.14
II	1,765	13,035	14,800	4.71	0.52
III	1,992	13,481	15,473	1.65	0.71
IV	4,589	17,763	22,352	1.64	0.48
V	2,196	7,000	9,196	1.74	0.51
VI	2,880	14,816	17,696	2.52	0.85
VII	2,034	13,694	15,728	2.42	0.97
VIII	2,370	7,342	9,712	2.37	0.42
IX	1,218	9,603	10,821	3.36	0.59
X	1,651	13,671	15,322	3.83	0.71
XI	1,447	15,805	17,252	4.22	0.75
XII	1,304	8,527	9,831	2.63	0.43
Caraga	1,357	6,276	7,633	3.23	0.34
ARMM	914	6,588	7,502	2.31	0.23
<b>Total</b>	<b>30,202</b>	<b>171,673</b>	<b>201,875</b>	<b>45.96</b>	<b>0.59</b>

Source: National Roads - Department of Public Works and Highways, 2007,  
Local Roads, - NSCB, Philippine Countryside in Figures, 2004

With regard to telephone connections, the most number of installations and subscriptions were observed in NCR and Region IV (Calabarzon) with 1.8 million and 583,234 subscribers respectively. Installations and subscriptions were seen lowest in ARMM with only 8,108 subscribers. Tele-density, measured as the number of telephone subscribers over the total population in the area under consideration, was observed highest in the fastest growing regions of the country, e.g., NCR, Regions III, IV, VII and XI. Please see Table 12.

**Table 12. Regional Telephone Statistics, 2006**

Region	Population	Lines		Teledensity	
		Installed	Subscribed	Installed	Subscribed
NCR	10,944,300	3,405,627	1,837,718	31.12	16.79
CAR	1,559,500	85,476	34,327	5.48	2.20
I	4,777,900	180,912	120,004	3.79	2.51
II	3,139,000	44,505	29,515	1.42	0.94
III	9,385,300	422,802	289,142	4.50	3.08
IV	10,903,200	1,110,997	583,234	10.19	5.35
V	5,289,500	121,525	71,637	2.30	1.35
VI	7,012,300	442,217	139,222	6.31	1.99
VII	6,487,800	481,344	224,252	7.42	3.46
VIII	4,103,200	151,652	27,766	3.70	0.68
IX	3,219,300	36,671	29,353	1.14	0.91
X	4,003,100	150,901	57,893	3.77	1.45
XI	4,087,200	324,663	107,799	7.94	2.64
XII	3,732,600	79,014	38,699	2.12	1.04
XIII	2,362,700	127,272	34,519	5.39	1.46
ARMM	3,244,800	33,344	8,108	1.03	0.25
<b>Total</b>	<b>86,972,500</b>	<b>7,198,922</b>	<b>3,633,188</b>	<b>8.28</b>	<b>4.18</b>

Source: National Telecommunications Commission

Tele-density figures show that there is great disparity in the provision of telephone facilities among the regions, which can be attributed to the concentration of demand for such facilities in the more urbanized centers. The users of those facilities, namely higher-income households and firms are clustered around major urban areas. On the other hand, the entry of cellular mobile technology has provided residents even in remote areas that have no access to fixed line facilities, access to the latest communications technology. The rising number of overseas Filipino workers in global markets, who come from regions outside the urban areas such as Metro Manila, Cebu and other urban centers, has fueled demand for mobile telephony.

With respect to access to electricity, all Philippine cities are already 100% energized as of 2006<sup>88</sup>. For the barangays however, only the barangays in NCR have

been reported to be 100% energized. All other regions in Luzon are within 95%-99% level of barangay electrification except for Regions V (Bicol Region) and Region IVB (MIMAROPA) which includes the island provinces of Mindoro, Marinduque, Romblon and Palawan. In the Visayas, the level of barangay electrification is within the range of 89%-98%. In Mindanao, the range is slightly lower at 83% to 95% with the exception of the ARMM which is only 69% energized. The barangay electrification program is expected to be completed within 2008. Please see Table 13.

**Table 13. Barangay Electrification Program, 2006**

Region	Municipality Cities			Barangays		
	Coverage	Energized	%	Potential	Energized	%
NCR	17	17	100.00	1,693	1,693	100.00
CAR	73	73	100.00	1,108	1,067	96.30
I	116	116	100.00	3,027	3,018	99.70
II	97	97	100.00	2,375	2,260	95.16
III	99	99	100.00	2,231	2,216	99.33
IVA	71	71	100.00	1,946	1,942	99.79
IVB	69	69	100.00	1,414	1,297	91.73
V	113	113	100.00	3,410	3,199	93.81
VI	132	132	100.00	3,870	3,782	97.73
VII	121	121	100.00	2,713	2,670	98.42
VIII	142	142	100.00	4,372	3,924	89.75
IX	72	72	100.00	1,864	1,548	83.05
X	85	85	100.00	1,841	1,720	93.43
XI	43	43	100.00	894	834	93.29
XII	46	46	100.00	1,024	927	90.53
Caraga	73	73	100.00	1,308	1,255	95.95
ARMM	99	99	100.00	2,606	1,811	69.49
<b>Total</b>	<b>1,468</b>	<b>1,468</b>	<b>100.00</b>	<b>37,696</b>	<b>35,163</b>	<b>93.28</b>

Source: Department of Energy

#### **D. Comparison with other countries**

A general observation is that countries in East Asia that have made substantial infrastructure investments have realized rapid economic growth. Infrastructure has given

such countries tremendous opportunities to integrate their domestic markets with the global trading system and international capital markets, resulting in greater exports of goods and services, the advent of new technologies and innovation and higher outputs and levels of employment. Rapid economic growth has translated into higher standards of living and significant reductions in poverty in those countries. The opposite is also commonly observed: inadequate infrastructure discourages investment and leads to a general climate of economic decline. Poverty levels are deeper in countries that do not have sufficient infrastructure. Efficient infrastructure reduces transaction costs and creates value added for producers and consumers. It links producers to global supply chains and distribution systems, thereby creating access to discriminating global markets for goods and services. The rapidly developing countries in East Asia that have made substantial investments in efficient power, telecommunications, transport and production technology have surged ahead of other, non-investing, developing countries<sup>89</sup>.

Data from the *Asian Development Outlook*, which is published by the Asian Development Bank (ADB) show a lower per capita GDP of the Philippines in comparison with a sample of economies in East and Southeast Asia that includes the four newly industrializing economies (NIEs) of Hong Kong, Singapore, South Korea, and Taiwan. The average annual growth rate of Philippine GNP taken from the *World Development Report* published by the World Bank is also lower than those of its comparators. The Philippines is ahead only of Indonesia in per capita GDP in the sample of economies shown.

Recent studies indicate that electricity generation costs in the Philippines are among the highest in the region and inter-city freight rates are up to 50 percent higher than those of other Southeast Asian countries. Inefficient port infrastructure explains around 40 percent of predicted maritime transport costs for coastal countries while cargo handling accounts for 46 percent of sea transport costs in the Philippines (Limao and Venables 2000; Clark, David and Dollar 2004)<sup>90</sup>. These inefficiencies get reflected in the cost of transport. A recent survey of the World Bank (Cross-Border Trading, 2006) indicates that the Philippines has the highest cost of exporting a container among ASEAN

countries (Basilio, Llanto and Rodolfo 2007)<sup>91</sup>. According to the World Bank’s Doing Business Indicators, it costs 60-300 percent more to export a 20-foot container from the Philippines than from China, Singapore or Thailand.

Table 14 shows a comparison of the cost of exporting a container from several Asian countries.

**Table 14. Cost of Exporting a Container (20-footer)**

COUNTRY	In US Dollars
Philippines	1,336
Thailand	848
China	335
Singapore	382

Source: World Bank (2006)

*NOTE: The cost cited above consists of several items/charges – documentation, inland transportation, customs clearance and technical control, ports and terminal handling. The cost does not include ocean freight.*

The World Bank (2007) reports that compared with other Asian neighbors, the Philippines is in the bottom in most of different categories of infrastructure- railroads, port and air transport. Philippine ports are now rated as the least competitive among those in eight major Asian countries (Table15).

**Table 15 : Infrastructure Ranking in the Global Competitiveness Report**

Country	Overall Infrastructure	Railroad	Port	Air	Electricity	Telecoms
China	3.5	3.7	3.7	3.9	4.2	5.4
India	2.9	4.7	3.2	4.8	3.0	6.0
Indonesia	3.7	3.2	3.7	4.1	3.6	3.9
Korea	5.2	5.4	5.3	5.7	6.1	6.5
Malaysia	6.1	4.9	6.1	6.2	5.9	6.0
Thailand	4.9	3.7	4.5	5.6	5.3	6.1
Vietnam	2.7	2.8	3.1	3.9	3.4	4.9
Philippines	2.3	1.5	2.4	3.9	3.6	4.8
<i>Ranking</i>	8 of 8	8 of 8	8 of 8	6 of 8	5 of 8	7 of 8

Source: World Economic Forum, “The Global Competitiveness Report, 2003-2004.”  
 Legend: 1= poorly developed and inefficient; 7= among the best in the world.

On the other hand, the access to social services such as water supply and sanitation and solid waste management is also on decline both in terms of coverage and quality. Consider the following situation: More than one third of urban families live in makeshift dwellings. Rental housing markets are almost nonexistent because of strict rent-control laws. Access to land is a key constraint on housing for the urban poor. Only 48.5% of households in urban areas have access to the community water system and at least 13% of urban households lack potable water source near their homes. One out of five poor households has no toilet facility (Ballesteros, 2005; Llanto, 2005). This deteriorating coverage and quality of infrastructure and service delivery have been widely considered as an impediment to growth and poverty reduction.

Recently, the Japan External Trade Office (JETRO) conducted a survey among a sample of Japanese international investors about what they consider a deterrent to increasing their investments in Asia. Underdeveloped infrastructure was cited as a major disincentive to Japanese foreign investment in the Philippines. The Philippines was third, with India and Vietnam in the top two slots.<sup>92</sup> In the Philippines, local and foreign

companies blame the high costs of doing business on the poor state of the country's infrastructure. Bad roads and poor rural transport infrastructure add to the costs of doing business, as does the price of electricity, which is the highest in the region (ADB 2005). In 2003–04, the World Economic Forum ranked the Philippines 66th out of 102 countries on its growth competitiveness index, partly because of the poor state of Philippine infrastructure (World Economic Forum 2004). A World Bank investment climate assessment also found that infrastructure was a major concern among the 650 or so private firms surveyed (World Bank 2005)<sup>93</sup>.

### III. The Build-Operate-Transfer Approach for Infrastructure Provision

Governments have traditionally been in charge of providing and financing infrastructure based on the conviction that infrastructure partakes the nature of a public good that the public sector is obligated to provide. In fact, many countries in East Asia report that it is still government or the public sector that provides most of the infrastructure in the region<sup>94</sup>. However, as earlier discussed pure public sector provision has yielded to private participation in infrastructure as a mechanism for the provision of infrastructure. Several factors have driven many countries to use private participation as an important instrument to provide infrastructure (Box 4).

#### **Box 4. Reasons for Private Participation in Infrastructure**

- Investment requirements exceed the capacities of national utilities and governments;
- The performance of the infrastructure sector has, in general, not met international standards;
- The managerial and technical resources available to the government are inadequate;
- Innovations in technology (for example, small but economic combined-cycle power plants fueled by gas) permit the unbundling—vertical and horizontal—of the power sector);
- Demonstration effects arising from the success of privatization and unbundling efforts, for example, in the United Kingdom) and the possibility of using regulation to protect the public interest (for example, the incentive regulation and yardstick regulation used in Spain) are making new approaches to upgrading infrastructure viable);
- The limited coverage and quality of some countries' infrastructures are hindering their efforts to achieve international competitiveness.

Source: Malthotra (1997)

The Build-Operate-Transfer (BOT) approach is part of a range of ways in which the private sector participates in infrastructure provision. It has been widely viewed as a



pragmatic approach in infrastructure provision in countries where severe budgetary constraints limit government's capacity to provide it. Other modes of private participation in infrastructure are management contracts, leasing, divestiture by state-owned enterprises, concessions and joint venture. A good example of a joint venture is the Manila North Tollways, large toll road project in the country, which is discussed below. What may be emphasized here is that the clarity of the roles of government and the private sector and the close cooperation between the contracting parties led to a successful a public-private partnership in this tollway project.

### **Economics of BOT and anatomy of BOT contracts<sup>95</sup>**

#### *The economic argument for BOT*

Generally, people would expect that the service from a given infrastructure facility should be freely given by the government as part of the service it is mandated to provide the citizenry. In reality, the service is not free because general taxation finances this type of expenditure as well as other expenditures done in the pursuit of development objectives.

An argument for government provision of infrastructure facilities relies on a case of market failure. Canlas (2006) points out that for a variety of reasons, even if people value a service from a given infrastructure project, say, from a road or a bridge, they will hesitate to reveal the price that they are willing to pay for the service. If users can free ride, they will. Thus, it may not be possible technologically and at reasonable cost to exclude potential users from non-users of the service. Once the service is provided to one, it must be provided to all. In other words, that service partakes of the nature of a public good, which the government is forced to provide.

Pricing of the service is not possible and so if one were to rely on markets guided by a price system, the project will never be built. No market will emerge to exclude those who are not willing to pay for the cost of the service. As a result, a need is not met and in

the overall, society's welfare suffers. And so the government steps in to provide the service through a tax-and-subsidy scheme.

However, in some cases—such as, toll roads and bridges-- pricing is possible. The services from these infrastructure projects can be extended only to those willing to pay the charges. Unlike some pure public goods wherein markets fail, it is possible to exclude non-payers in a relatively inexpensive way. User charges can be imposed, allowing project investors to recover operating costs plus normal profits. In this setting, private sector provision of infrastructural facilities is an option.

This works to the advantage of the government. As pointed out earlier, the provision and financing of some infrastructural facilities by the private sector (technically, a concessionaire) presents government an option to focus its scarce resources elsewhere. A narrow fiscal space, that is, severe budgetary constraints can lead to drastic cuts in discretionary spending of the national government wherein infrastructure spending cuts are first resorted to before cuts on social expenditure are introduced<sup>96</sup>.

In this context, a BOT approach as a particular form of private sector provision of infrastructural facilities may be used. The prospects of commercial returns arising from a 'user-pays' principle motivate private risk capital to consider investing in long-lived, lumpy infrastructure facilities. To be able to realize a mutually agreed-upon rate of return to investment, the concessionaire relies mainly on a user charge that is regulated. However, achieving the rate of return that would satisfy private investors will depend on, among others, the openness of the regulator on the matter of allowing cost-recovering user charges. People who pay the administered fee can avail of the service provided by the project. Those not willing to pay are excluded. Thus, since pricing is possible, users, instead of taxpayers, pay for the operating cost. Much-needed infrastructure service is provided and the concessionaire profits from the investment.

Setting the user fee at entry level and its predicted time path during the cooperation period are vital to achieving the desired financial stability and profitability of the project. A highly regulated fee structure that disallows cost recovery and the generation of normal profits may create disincentives on the part of the concessionaire. Project financiers carefully assess the financial viability of the BOT project and its vulnerability to regulatory and political risks. In this regard, project financiers may view a tightly regulated fee-setting procedure as putting loan servicing excessively at risk. Evidently, it is important to pay close attention to the creditors' preference; otherwise, financial closure will be very difficult to obtain, which endangers the BOT project.

Administering the user fee rests on a number of factors. One factor to consider is the price elasticity of demand for the infrastructure service. Very high user charges may discourage many potential users from availing of the service. If target revenues are not realized, the project may lose, and eventually fail. In this regard, the two parties negotiate at the start possible monetary and non-monetary incentives to the project, which are then built into the contract.

On the institutional arrangement, there is a need for a strong partnership between the concessionaire and the government granting authority throughout the period of cooperation, which is a long period of time since long-lived investment assets are involved. The strength and durability of the partnership depend to a great extent on the presence of technical, legal, and financial expertise at the level of the granting authority. Such expertise, if present, enables the government agency concerned to engage the concessionaire in meaningful discussions or dialogue on a wide range of relevant issues at project-entry level, during project construction and during project implementation or operation.

An implicit requirement is continuing commitment of the contracting parties during the cooperation period to operate the infrastructure facility according to the terms and conditions spelled out in the BOT contract. That commitment is bolstered by the

presence of a mutually agreeable concession agreement or contract governing the BOT project.

*BOT contract as an incomplete contract*<sup>97</sup>

Several factors impact the production of a concession agreement that is mutually acceptable to the government and the private concessionaire. An example of such factors is the allocation of risk between private investor and the government. Risk allocation and contingent claims of the concessionaire in case a particular state of nature occurs are spelled out in the concession agreement or contract between the private investor and the government.

The contract is a comprehensive document that spells out private property rights, decision rights, risk-sharing arrangements, and third-party intervention if contractual disputes arise and in general, the duties and responsibilities of the private concessionaire and the government granting authority. In view, however, of imperfect information and limited ability of the parties to anticipate all possible states of nature at the time of contract writing, all such contracts are essentially incomplete.

What makes BOT contracts incomplete? Infrastructure investments are long-term contracts involving the production and operation of long-lived assets financed by long term financial instruments. In BOT contracts, long-term obligations are committed *ex ante* while the benefits are realizable *ex post*. This creates a potential 'hold-up' problem. Williamson (1975 and 1985)<sup>98</sup> identified the possibility of "hold up," a principal-agent problem which basically predicts this: after the long-term investment, e.g., an infrastructure facility, has been made *ex ante* by one party to a transaction, the other party may behave opportunistically *ex post*. The latter party can do this by reneging on the agreement to use the contracted facility or threatening not to use it if the price for the service given by the infrastructure facility is not lowered. Because of the sunk cost already made, the first party loses. Because of the difficulty of protecting such long-term

investments made *ex ante* by a properly-designed contract, incentives are not properly aligned. Under-investment in such infrastructure facilities may occur because the potential investor fears the possibility of a ‘hold-up,’ that is, future exploitation. Williamson assumes that high transaction costs prevent some aspects of the future trade from being contracted *ex ante*. The contracting parties have to leave contingencies open to future renegotiation and, thus, contracts become necessarily incomplete.

Grossman and Hart (1986) formalized the “hold-up” problem in contracts by distinguishing between *ex ante* transaction costs (writing costs) and *ex post* transaction costs (non-verifiability by a third party, say, the judicial system, of valuation of trade variables). The former assumes that contractual contingencies are costly to specify, whereas the latter assumes observable but non-verifiable information on the parties’ valuation of future trade exchange or contractual obligations. Grossman and Hart explain that incompleteness of contracts results from a combination of investment specificity and the cognitive and informational boundaries of the judicial system, which decide on the enforceability of contracts. Hart and Moore (1988) carried on this non-verifiability and enforceability assumption further by pointing out the judges’ inability to verify whether a relevant state of nature had occurred. Moreover, they postulated that long-term contracts reflect the incapacity of parties to prevent *ex post* renegotiation. This renegotiation framework introduces another phase—the *ex interim* period—when the realization of a state of nature that calls for the renegotiation option is occurring or has just occurred.

Overall, four possible reasons explain the presence of incomplete contracts: (i) unforeseen contingencies, (ii) existence of writing costs, (iii) the non-verifiability of valuations and states of nature, which create enforcement problems and (iv) the lack of commitment not to renegotiate<sup>99</sup>. These constrain the production of an efficient contract that can address information, risk and uncertainty arising from BOT contracts. Thus, bounded rationality<sup>100</sup> is a major explanation for the inability to design optimal long-term BOT contracts. Brousseau and Fares (1998) explains that “bounded rationality of all agents” and “radical uncertainty” are the key reasons why agents cannot write complete contingent contracts and precisely state *ex ante* each party’s behavior.

However, notwithstanding bounded rationality, in reality the contracting parties (that is, the government granting authority and the private proponent/investor) try to envisage and assess all possible future states of nature. Then, they try to devise and agree on mutually agreeable measures that will be utilized upon the occurrence of future states to minimize adverse impact on commitment. Although in practice, not each and every future state of nature may be addressed in contingent contracts, the contracting parties can design contracts that provide approximate solutions to alternative realizations of the future.

In the context of BOT, examples of such alternative future states unexpected, prolonged delays in construction, glitches during operation, drastic changes in the political environment and many others. Thus, the contracting parties labor to design contracts that identify measure for dealing with every imaginable future states such as provisions for performance bonds, operation bonds, liquidated damages, buy-outs, early termination, step-in rights, and others. However, notwithstanding the best efforts of the contracting parties, bounded rationality imposes a natural limit to the design of optimal contracts. It is difficult to write *ex ante* into the contract the range of all possible contingencies and the appropriate interventions, which are seen only *ex post* during actual project implementation and operation. As is commonly asserted, hind sight is 20/20 vision! Given real world complexities, contracting parties must recognize the limits imposed by bounded rationality and the need to maintain open and transparent lines of communication and to make relevant, project-related information accessible to either party.

Some aspects of the future states of the world, e.g., a change in the legal environment or drastic market movements, may be unforeseen or could not be anticipated by the contracting parties in advance. The uncertainty of future events, some of which are exogenous, drives the contracting parties to agree on revisiting the contract in some future time to be able to deal with contingent events. Thus, BOT contracts have to provide for contract renegotiation when some unanticipated states of nature occur. Contracting parties, especially the government, have to provide some form of assurance or guarantee to take care of risk and uncertainty that may weaken long-term commitment.

Even if these states of nature may be described or appreciated, writing them into the contract can be costly. Transaction costs may be high especially if there is lack of financial, economic and legal expertise to prepare optimal or near-optimal contracts. Furthermore, whoever is responsible for enforcing the contract (e.g., the court) may not be able to verify whether or not a particular state of the world has occurred, or whether or not a party's representation is true. It is also possible that the prevailing legal system does not allow parties to prevent renegotiation (i.e., renegotiation is always an option). In this regard, the contracting parties must ensure that renegotiation does not happen upon the instance of a trivial event or state of the world. It is always the rule of stable long-term partnerships to avoid having to enter into a renegotiation because of trivial reasons or political whim or caprice. The Philippine legal framework for BOT actually confirms this—there is a provision on contract re-opening for renegotiation purposed under the BOT Law's Implementing Rules and Regulations (BOT IRR).

Thus, if contracting parties are often unable to legally bind themselves not to renegotiate, the possibility of renegotiation constrains the set of feasible contracts. The contracting parties want a stable contract and a long-term commitment to mutually-agreed upon contract provisions. It is indeed desirable to have stable contracts but the nature of BOT-type arrangements results in incomplete contracts, which makes BOT project implementation a difficult and complex exercise.

The problem with incomplete contracts is that moral hazard problems and strategic behavior may arise during implementation of BOT-type arrangements. The main objective, therefore, of the parties is to produce a contract that addresses information asymmetry, contingent events in the future, risk-sharing arrangement and settlement of disputes between the parties, among others. Ambiguity of language is bound to occur in a written contract, which can give rise to a contractual dispute. The contracting parties have to agree on the venue for arbitration as well as the third-party arbitrator in case of contractual dispute. Third-party arbitration may involve lower transaction cost than court arbitration but the third party arbitrator must have integrity

and credibility in order to avoid the risk of decisions being assailed by a losing party. Hence, both parties choose to provide explicitly for the approach to arbitration in the contract, the mode of dispute settlement and a commitment to abide by the decision of a third-party arbitrator agreed-upon by the contracting parties.

### **Description of a typical BOT project<sup>101</sup>**

BOT is an approach where:

“...a private party or concessionaire retains a concession for a fixed period from a public party, called principal (client), for the development and operation of a public facility. The development consists of the financing, design and construction of the facility, managing and maintaining the facility adequately and making it sufficiently profitable. The concessionaire secures return of investment by operating the facility and, during the concession period, the concessionaire acts as owner. At the end of the concession period, the concessionaire transfers the ownership of the facility free of liens to the principal at no cost”.  
[Verhoeven (1995) as cited in Menheere and Polais (1996)]

The degree of success of a project delegated by the government to the private sector rests on several factors. Apart from the problem with finding an efficient contract as discussed above, several factors that impact on the successful implementation of a BOT project are indicated in various stages of development of a BOT project. These factors affect project quality at entry level, during contract writing and implementation, and in the course of regulating user fees.

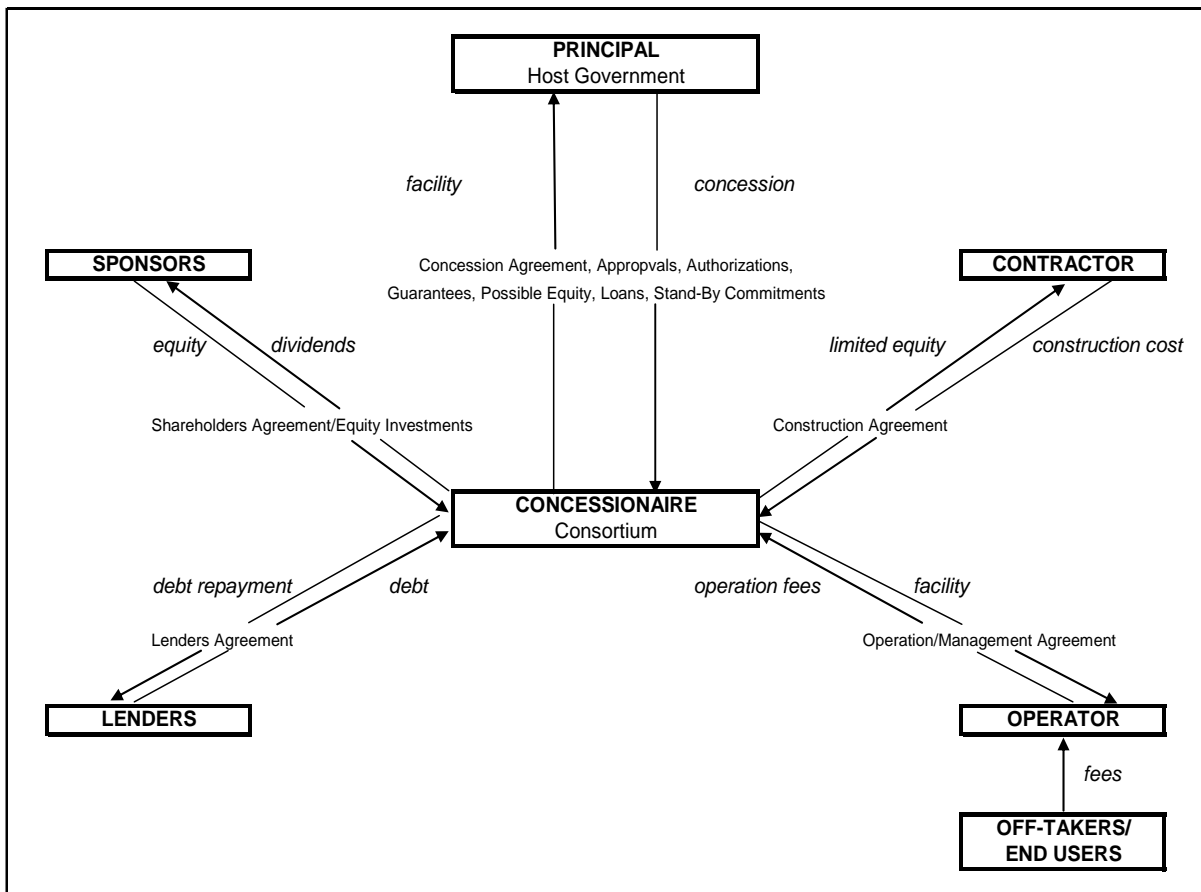
Understanding the whole BOT approach starts from an appreciation of the interplay of various actors in the project structure, the timing of the BOT process, the goals and incentives each participant/actor in the BOT process aspire for, the risks they



face in attaining those goals and the ways they mitigate those risks through various contractual arrangements.

Although BOT may be a popular alternative, it is a complex approach because of the presence of different actors with particular goals, objective functions and interests, the need to reconcile or harmonize these varying objectives to meet a particular infrastructure goal, the presence of many risks affecting BOT projects and the need for the different actors to agree on risk sharing allocation and the use of risk management techniques to minimize those risks. Figure 19 shows the complex relationship among different actors in a BOT project.

**Figure 19. Typical BOT Project Structure**



## **Major participants in the BOT process**

There are several variations of the BOT approach, depending on project specifications that attempt to address particular infrastructure problems. The Philippine BOT law allows several variations: Build-operate-transfer, build-operate-own, build-transfer, and so on. There remains, however, a generic structure for these projects. The principal (usually the government) will grant the concession to the concessionaire, which is typically a consortium of companies. The role of the concessionaire is to develop, finance and construct the infrastructure project. The concessionaire sources funds from both sponsors and lenders. Finally, the contractor builds the facility which is subsequently managed by the operator.

### *Principal*

In general, a host government draws up a list of infrastructure investments in accordance to the country's overall economic and development plan. If the government is constrained to fully financially support the infrastructure investments, it then solicits proposals from private companies to implement those infrastructure investment projects. A competitive tender of infrastructure projects defines the mode of procurement.

However, depending on the BOT law of a country private participants may submit unsolicited proposals to undertake a specific infrastructure project.

The host government either approves or disapproves the unsolicited project proposal. Upon approval of a solicited or unsolicited project, the host government typically grants the private company a concession that may last anywhere from ten to twenty five years (or more). The principal (that is, the government) takes ownership of the facility and the assets after the concession period.

It is well known that developing country governments rarely adopt a laissez-faire approach to these projects. Sometimes they provide a portion of the required financing or

provide guarantees, subsidies or similar support to make the project more attractive and viable to private investors<sup>102</sup>.

### *Concessionaire*

Once all the relevant review and approval processes are followed, the concession is granted to the concessionaire, which is usually a group of companies interested in undertaking the design, finance, construction and operation and maintenance of the infrastructure project or facility. The property rights of the facility (or the assets) rest with the concessionaire during the specified concession period wherein the private investors/owners try to recover their investments and earn profits.

### *Investors (Shareholders and Lenders)*

An integral part of the undertaking of the BOT project is the presence of credible and capable investors to provide the financing needed. These investors include shareholders and lenders. Shareholders infuse money in exchange for equity and lenders provide credit financing to the consortium which negotiates with the principal for certain guarantees or credit enhancements to make the project attractive to the lenders. There are two broad categories of equity providers: (i) those that have a direct interest in the operation of the project such as contractors, operators or the host government itself and; (ii) those that are solely involved as equity investors such as public shareholders and other institutional investors. Lenders are oftentimes commercial banks, insurance companies, multilateral lending institutions, and the like.

### *Contractor*

BOT projects involve large-scale building and construction of a facility. In practice, the concessionaire taps the services of a contractor to construct the facility under the project. In some instances, the contractor is part of the consortium for reasons which will be discussed later. The contractor also hires subcontractors, suppliers and consultants.

## *Operator*

After completing the construction of the infrastructure facility, the concessionaire then secures the services of the operator to manage and operate the facility. The operator is oftentimes one of the entities in the consortium which has an intimate knowledge of the business and the local environment.

### **IV. Some Key Lessons from the Philippine Experience**

The Philippine BOT Center<sup>103</sup> reports that as of June 2006, there are a total of 90 private sector participation projects (PSP) with an aggregate estimated cost of US\$ 23 billion, which are either completed/terminated, operational, awarded or under construction, or in the pre-award stage. Seventy four out of the 90 PSP projects amounting to about US\$ 20 billion represent those which are already completed, in operation, awarded and under construction.

After comments on the legal framework, this section discusses key lessons from the Philippine experience by using as frame the different stages of the BOT stages. The following discussion looks at the project cycle and examines the experience of three BOT projects: the first two projects indicate flaws in BOT implementation with the third highlighting a successful experience.

### **Overview of BOT Law and proposed amendment to the law<sup>104</sup>**

The Philippine Congress enacted Republic Act (RA) 6957 in 1990 and later amended it through RA 7718 in 1994 to develop a comprehensive legislative framework for public-private partnership (PPP) in infrastructure projects. Subsequently, many other countries have emulated its approach and adopted their respective legislation for private sector participation in infrastructure projects. Today, BOT is a familiar approach to infrastructure provision in many developing countries worldwide.

As earlier recounted, the Philippine government has taken a keen interest in harnessing private sector expertise and financing to provide services that have traditionally been undertaken by the government. The possibility of pricing infrastructure services and the availability of technologies capable of excluding non payers from availing of the service have made these arrangements possible. In the Philippines, this has occurred for example, in the Bureau of Immigration's information technology project, in the MRT-3, the light rail transport along the main highway of Metro Manila, the Epifanio de los Santos Avenue (EDSA) and others. In BOT projects the government has allowed the commercial exploitation of state-owned land through the construction of infrastructure, such as, shopping centers and government central headquarters with office accommodation. At the local level, project proposals received by local government units (LGUs) include public markets, bus terminals, and shopping centers.

The BOT law comprises 13 sections. The law was amended in 1994 through provisions that (a) expanded the range of contracts that government authorities may conclude; (b) specified a procedure for the approval of projects falling within a given cost range; and (c) stipulated a procedure for the treatment of unsolicited proposals. The detailed rules and procedures for project preparation, approval, evaluation, bidding, and implementation are contained in the BOT Law's implementing rules and regulations (IRR). The members of the committee in charge of the IRR are from key government oversight and implementing agencies, e.g., NEDA, Department of Finance (DOF), Department of Public Works and Highways (DPWH), Department of Transportation and Communication (DOTC), Department of Energy (DOE), Department of Agriculture (DA), and the BOT Center, which is attached to the Department of Trade and Industry (DTI). The IRR has been updated twice since the first BOT law was adopted in July 1990.

There is a recent attempt to amend the IRR in order to make it more responsive to private sector demand for speedier review and approval of project proposals. A proposed amendment to the IRR wants to change the institutional framework from the traditional

assignment of project identification to the line agencies and the review and approval by the NEDA-ICC to assigning instead to line agencies the responsibility of identifying, selecting and approving projects. This has not been unchallenged (Llanto 2007a). While the intent of the government was to facilitate the project approval process, what it did not realize was the conflict of interest situation to which the proposed change will cast line agencies. This is bad public policy. There is a conflict of interest situation because line agencies will now do the job of identifying, reviewing and approving projects to be submitted to NEDA-ICC. Under the proposed change, the line agencies will prepare and submit their list of priority projects for approval by NEDA-ICC. This reduces this oversight body into some sort of 'clearing house' for projects earlier identified as priority by line agencies. A better approach is to maintain the traditional process of giving the oversight agencies the responsibility for project review and approval and assigning line agencies the role of identifying and preparing project proposals. To shorten the approval process, which is the objective of the proposed IRR amendment, the endorsement by the line or implementing agency of a BOT project should already constitute a "first pass" approval. NEDA-ICC approval will be the "second pass," which will then mean the elevation of the project to the NEDA Board, chaired by the President of the Republic for final approval (Llanto 2007a).

The BOT law has five main focus areas. It starts with a declaration of policy that confirms the private sector's role as the main engine for growth and development of the Philippine economy (Section 1). It also provides for the granting of appropriate incentives aimed at encouraging the private sector to finance the construction, operation, and maintenance of infrastructure and development projects that would otherwise be financed by the government. Incentives proposed in the law include (a) financial incentives; (b) a climate of minimum government regulation; and (c) specific government undertakings.

Section 2 is a list of definitions. A prominent feature is the variety of contractual arrangements for PPP in infrastructure that are individually defined. In its original version, the law mentioned only two contractual forms, namely, BOT and build-and-

transfer (BT). In 1994, additional BOT variants were added and defined, namely, BOO, BLT, BTO, CAO, DOT and ROT<sup>105</sup>.

Section 2 contains additional definitions. “Private-sector infrastructure and development projects” are defined listing the areas within which private investment may be sought<sup>106</sup>. The definition confirms that project finance may be sourced domestically or internationally. In view of restrictions on the operation of public utilities provided for by the Constitution of the Philippines, the law confirms the requirement that the facility operator of a public-utility franchise must be Filipino or a corporation that is at least 60% Filipino owned. A final condition is that no more than 50% of the project cost may be provided through direct government funding or official development assistance (ODA).

Finally, Section 2 also contains separate definitions for: “project proponent”, “contractor”, “facility operator”, “direct government guarantee”, “reasonable rate of return on investments and operating costs” and “construction”.

Section 3 provides the basic authority for government agencies to contract with private- sector entities. The government agencies with contracting authority are listed as: government infrastructure agencies, government-owned and controlled corporations (GOCC) and local government units (LGUs). This authority is qualified by the requirement that projects should be “financially viable” and that the contractors should have “extensive experience” in projects of this nature.

Section 4 lays down the procedure for initiating projects for bidding under the law. Government agencies, GOCCs and LGUs, are required to prepare “priority” projects that are included in their respective development programs. These are then advertised as eligible for private financing every six months.

Section 4 also specifies nominal peso limits for the approval of projects under a particular mode. A distinction is made between national projects and projects initiated by LGUs. The NEDA Board is the final approving authority for national projects.

Depending on the value of the project, either the NEDA Board or the ICC is responsible for approving a project. Projects above P 300 million, for instance, are approved by the former. Below this amount, the ICC approves the project while the NEDA Board merely notes.

A different approval process applies to projects of LGUs that have constitutionally enshrined autonomy. The law, however, requires local government projects to be confirmed by various local authorities depending on the total cost of the project. Confirmation is required from municipal government councils (for projects costing up to P 20 million), provincial development councils (for projects costing between Pesos 20 and P 50 million), city development councils (for all projects up to Pesos 50 million), regional development councils (for projects costing between Pesos 50 and Pesos 200 million) and the ICC (for projects costing above Pesos 200 million). While not explicitly stipulated in the BOT law, final approval of local government projects is vested in the Local Sanggunian as provided for in the Local Government Code (LGC).

Section 5 describes the treatment of unsolicited proposals. It is a major addition to the amended BOT law. It allows national and local government agencies to accept unsolicited proposals, subject to certain conditions, namely: (a) the project should involve a “new concept or technology”; (b) may not be part of the list of “priority” projects identified by the agency under Section 4; and (c) no direct government guarantee, subsidy or equity is required. Section 5 also requires the agency to solicit a comparative proposal or what is commonly termed as “Swiss challenge”. The agency receiving an unsolicited proposal after verifying compliance with these conditions, must advertise comparative or competitive proposals for three consecutive weeks and may accept the original proposal if no other proposal is forthcoming after a period of 60 working days. The law gives the original proponent the right to match the competing proposal within 30 working days.

Section 6 outlines the procedure to be followed in project bidding. It directs the head of an infrastructure agency or LGU to advertise approved projects at least once a



week in newspapers of general and local circulation for three consecutive weeks. A two stage/two envelope bidding procedure must be followed. Consortium bidders are required to present proof that they are jointly and severally liable for the project completion. Withdrawal of a consortium member before project completion may be a ground for contract cancellation.

The section also prescribes the method for evaluating winning bids in the case of BOT, BT and BLT contracts. For a BOT contract, the law requires the bid to be awarded to the bidder whose bid is the lowest based on the present value of its proposed tolls, fees, etc over the fixed term of the project. In the case of a BT and BLT contract, the bid must be awarded to the lowest complying bidder based on the present value of its proposed schedule of amortization payments. There is a proviso, however, that preference must be given to a Filipino “contractor if its bid is equally advantageous to the bid of a foreign “contractor”.

Section 7 outlines the circumstances under which a contract may be awarded through direct negotiation. This is permitted in four situations:

- If only one bidder applies for prequalification;
- If there is only one pre-qualified bidder;
- If more than one bidder is pre-qualified, but only one submits a compliant bid; or
- If more than one bid is received, but only one is compliant.

Prospective bidders can appeal their disqualification. Appeals must be directed to the head of the agency in the case of a national project and to the Department of Interior and Local Government (DILG) for a local project. The law also specifies time limits within which appeals must be lodged and acted upon.

Section 8 describes the “Repayment scheme”. This section is wide-ranging and deals not only with the manner in which a project proponent recovers its investment, but

also with the regulation of tolls, fees and other charges that a proponent may levy, its maintenance obligations, and various other issues.

The section confirms that a BOT proponent can recover its investment by levying tolls, fees and other charges that are “reasonable” and should not exceed those specified in the contract. Repayment can also be done by granting the proponent a revenue share or some non-monetary payment, such as, granting of a share in “reclaimed land”. In the case of a BT contract, the proponent is repaid through amortization payments that follow the scheme proposed in the bid and incorporated in the contract.

Negotiated contracts granting a natural monopoly or contracts where the public has no access to alternative facilities, tolls, fees and other charges are subject to government regulation based on a reasonable rate of return. The section contains various provisos:

(a) the term for which tolls, fees and other charges may be collected must be fixed in the bid and may not exceed 50 years;

(b) tolls, fees and other charges may be adjusted during the lifetime of the contract using a predetermined formula based on official price indices and included in the instructions to bidders and the contract;

(c) tolls, fees and other charges and adjustments must take into account the reasonableness of the rates to end-users; and

(d) the proponent must undertake the necessary maintenance and repair of the facility during the lifetime of the contract.

Section 9 provides for “contract termination”. It stipulates that if a contract is terminated through no fault of the proponent or by mutual agreement, the government must compensate the proponent the actual expenses incurred plus a reasonable rate of return that may not exceed the rate stipulated in the contract. Government is required to insure this interest with the Government Service Insurance System (GSIS) or an insurer

accredited with the Insurance Commission (IC). The bidding terms are required to allow for costs of such insurance.

The section further allows a proponent to terminate a contract if government defaults on “certain major obligations” and (a) the default cannot be remedied or (b) it can be remedied but the government fails to do so for an unreasonable length of time. Termination must be preceded by prior notice, specifying the effective date of termination. The proponent must be compensated a reasonable equivalent or proportionate cost.

Section 11 confirms that each project must be undertaken in accordance with the approved plans, specifications, standards and costs and that it is subject to the supervision of the agency or LGU concerned. This should be read along with Section 14, which stipulates that all projects are coordinated and monitored by the Coordinating Council of the Philippine Assistance Program. In 2002, the CCPAP was renamed the BOT Center under EO 144.

Section 13 mandates the issuing of the IRR by a committee. The IRR sets out the criteria and guidelines for the evaluation of bid proposals and list the financial incentives and arrangements that the government may extend to projects. The committee is also mandated to amend the IRR from time to time after undertaking public hearings and publication.

Sections 10, 12 and 15 to 18 contain various miscellaneous provisions. These include Regulatory Boards, Investment Incentives, Coordination and Monitoring of Projects, Repealing Clause, Separability Clause and Effectivity Clause.

### ***An assessment***

On the whole, the BOT Law is a good basic law but it can stand improvement together with some amendments to its implementing rules and regulations (IRR). An

indispensable condition for the successful implementation of the BOT Law is a legal environment where property rights and contractual agreements are protected and enforced. The present BOT Law's framework for private sector investment in infrastructure has to be clarified by a clear allocation of roles, functions, and duties across the spectrum of participants to the BOT project.

A primary consideration is to be able to distinguish between the roles of the enabling legal framework (the BOT Law itself) and the IRR. The BOT law should provide the enabling framework and clearly allocate roles, functions, powers, duties, and rights among government agencies, namely, the oversight agencies and the implementing agencies involved in the project cycle. It is, after all, a primary statute that establishes government policy and the institutional framework for implementing that policy.

On the other hand, the IRR are normally technical or operational in nature. Thus, they should never be a verbatim copy of the enabling law. What we have now, however, is a BOT law that contains both the enabling policy framework and too many details that are technical or operational in nature. Ideally, the details should be in the IRR so that the government may have the flexibility to change any of them in view of rapid changes in technology, financial markets, and other factors that impact a BOT project. Because it is hard to anticipate such future changes, having a detailed BOT law may therefore not work in favor of the country inasmuch as the task of amending the law to respond to changes and innovations could be a complicated and time-consuming process.

Hence, it will be much more efficient to have a primary statute that clearly specifies state policy and assigns roles and functions to government institutions and the private proponent and an administrative procedure based on the IRR that may be amended from time to time as the need arises. The primary statute must affirm government's binding commitment to honor and defend contractual rights and obligations. The law must counter ruinous attacks on contracts, especially after a relatively long period of time has elapsed since the contract was signed, by limiting options to annul or void contracts on procedural grounds. This includes providing for

greater transparency with regard to the content of contracts. The IRR should stipulate the operational details for smooth and transparent implementation of the BOT process to avoid potential disputes that may require tedious court intervention at a later stage of the process.

At the same time, the past experience with BOT implementation indicates the need to provide a clear legal and regulatory framework not only for BOT projects but also for public-private partnerships (PPP) in general in government infrastructure projects. Such framework must give enough flexibility to the implementing agencies and the oversight body to adjust the rules and regulations governing PPPs as may be required by the passage of time and specific circumstances. In sum, the idea is to have a good and solid basic law for PPP and detailed IRR that is flexible and transparent, which could be changed in view of a change in the legal, financial, technological and economic environment for infrastructure investments. Contract renegotiation may also be called for and should be provided for in the implementing rules and regulations. The IRR can usually be amended more easily by way of an administrative procedure, thereby avoiding delays that may arise from a usually lengthy and ponderous legislative process.

A specific provision that needs a clear and unambiguous interpretation is the provision on unsolicited proposals and the grant of subsidies to BOT projects. The BOT Law grants subsidies and guarantees only to solicited BOT projects but the provision speaks of direct subsidies. As shown in the Casecanan case (Box 5), the Department of Agriculture was able to get a legal opinion that this unsolicited project deserved a performance undertaking from the government, that is, a subsidy because the farmers are the direct beneficiaries of Casecanan project, not NIA, which will only get an indirect subsidy! On the other hand, there could be in the horizon critical projects requiring some form of subsidy which may not see the light of day in the absence of such subsidies because they would be submitted under the unsolicited mode.

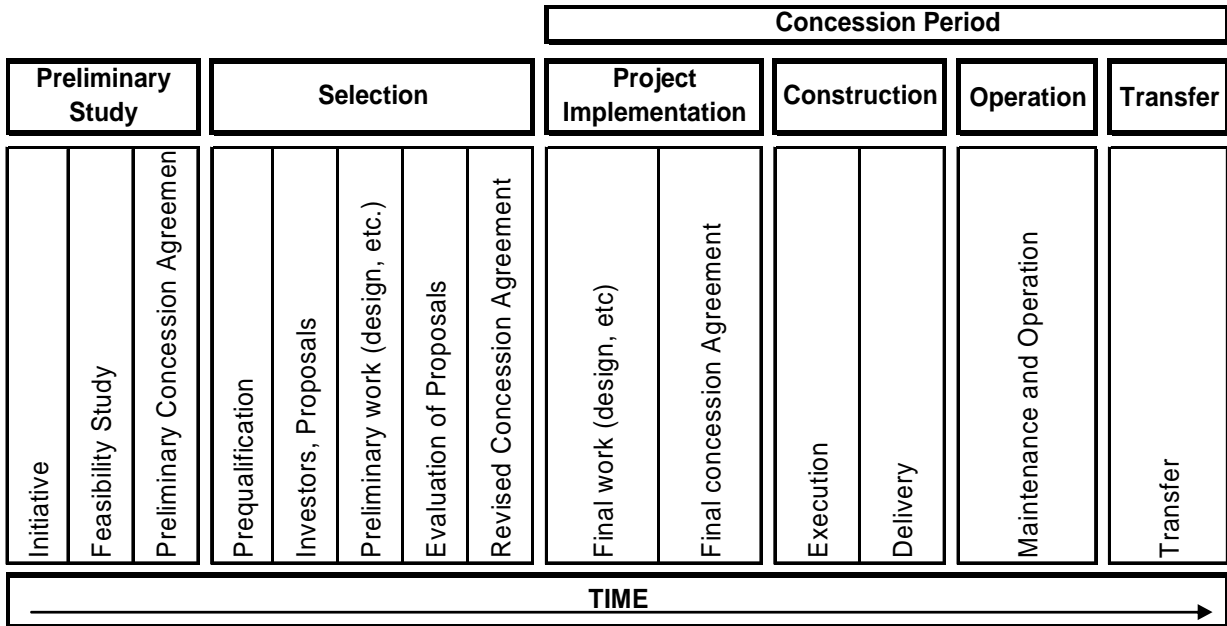
At the minimum, an effective implementation of BOT projects hinges on the following: (a) legal and economic environment that is conducive to a mutually beneficial

partnership between the private sector and the public sector; (b) clarity in articulating the duties and responsibilities of the parties to the contract; (c) certainty of recovering investments and availability of mechanisms for dealing with risks and unforeseen events; and (d) transparency and credibility of the government's processes for review and approval of proposed BOT projects and the associated contracts for implementation. A draft bill amending the current BOT law prepared by a team composed of Canlas, Llanto, Botha and Pallarca (2006) is herein provided as Annex A.

### **Stages in the BOT process: the project cycle**

Most BOT projects undergo six identified stages: preliminary study, selection, project implementation, construction, operation and transfer. Figure 20 below shows these six stages and the principal activities contained in each of them. The whole process can be roughly divided into two parts: (a) review and approval of the project and contracting process before the cooperation or concession period and (b) implementation during the concession period. During the first part of the process a feasibility study is done; the proposed project is approved and is then awarded to the concessionaire who builds, finances and operate the facility. In the second part the concessionaire starts to implement the project by obtaining the necessary requirements, designing the facility and constructing it. The facility is then used to generate revenues for the concessionaire and, after a specified period, transfers the ownership of the facility and its assets to the host government.

**Figure 20. Stages in the BOT Process**



Adapted from Menheere and Polais (1996)

*Review, approval and contracting process*

In the case of the Philippines, the government identifies the infrastructure priorities and the facilities that have to be built. The basic documents that justify the infrastructure projects are the Medium-Term Philippine Development Plan and its companion document, the Medium Term Public Investment Program that lists the priority infrastructure projects that the public sector and the private sector, respectively are expected to design, finance and construct. Some of those projects are identified as projects that may be implemented through the BOT approach. The concerned government agency prepares a feasibility study on a project identified to be implemented under the BOT approach, e.g., the Department of Transportation and Communication prepares a feasibility study on a toll road project or it may contract independent parties to conduct a feasibility study to determine the economic viability and desirability of the project. The preliminary study equips the government agency to start the competitive tendering process as provided by the procurement law.

Under Republic Act 9184 or The Government Procurement Reform Act of 2003 competitive bidding procedures remain to be the central tenet of government procurement policy. Philippine procurement law requires competitive bidding for infrastructure projects. Section 5 of Republic Act 9184 defines competitive bidding as a “method of procurement which is open to participation by any interested party and which consists of the following processes: advertisement, pre-bid conference, eligibility screening of prospective bidders, receipt and opening of bids, evaluation of bids, post-qualification and award of contract”. The governing principles on government procurement are well-laid out in Section 3 of Republic Act 9184: all procurement of the national government, its departments, bureaus, offices and agencies, including state universities and colleges, government-owned and/or controlled corporations, government financial institutions and local government units, shall, in all cases be governed by these principles: Transparency in the procurement process and in the implementation of procurement contracts.

- a. Competitiveness by extending equal opportunity to enable private contracting parties who are eligible and qualified to participate in public bidding.
- b. Streamlined procurement process that will uniformly apply to all government procurement. The procurement process shall be simple and made adaptable to advances in modern technology in order to ensure an effective and efficient method.
- c. System of accountability where both the public officials directly or indirectly involved in the procurement process as well as in the implementation of procurement contracts and the private parties that deal with government are, when warranted by circumstances, investigated and held liable for their actions relative thereto.
- d. Public monitoring of the procurement process and the implementation of awarded contracts with the end in view of guaranteeing that these contracts are awarded pursuant to the provisions of this Act and its implementing rules and regulations, and that all these contracts are performed strictly according to specifications.

The government must expedite the drafting of the Implementing Rules and Regulations that will govern the procurement of foreign-assisted projects. It was reported



(16<sup>th</sup> ODA Portfolio Review, 2007) that during the Philippines Development Forum in March 2008, both the government and development partners (donors) agreed to work together in the drafting of those rules. Both committed to finalize the rules by end 2008.

Reviewing the Philippine experience, it seems that government agencies have found it difficult to move BOT projects from the identification to approval stage because of weak technical capacity, and insufficient legal and financial expertise. Implementing government agencies should be ready with clear bid documents, technical specifications and terms of reference but to have bid-ready projects those agencies will need time, expertise and sufficient funds. The problem starts with the inability to prepare a good feasibility study because of weak capacity in the agency. The poor quality of project proposals submitted for review by the NEDA-ICC often results in a lengthy and tedious review process, which unfortunately is blamed on the reviewing agencies (the NEDA-ICC). It is not uncommon for infrastructure project proposals in general to be sent back to the implementing agencies because of failure to address particular issues, e.g., right-of-way problem, lack of realistic plans for the relocation of informal settlers, environmental concerns, questionable project viability because of assumptions used in the financial model, and others.

While the Philippine government takes the initiative with respect to solicited projects on the one hand, private sector proponents may also take the first step through the submission of unsolicited proposals on the other hand. An amendment to the basic BOT Law in 1994 opened the way for private sector proponents to directly submit to the government unsolicited project proposals that they think could address some infrastructure lack. This has been hailed as a good opportunity for stimulating private sector interest in infrastructure provision in the country, considering especially the huge financing requirement of establishing an efficient infrastructure facility, e.g., modern international airport, toll roads, and others. The BOT Law provides certain conditions that have to be met by unsolicited proposals. More specifically, section 4-A (BOT Law, as amended) provides the following: “Unsolicited proposals for projects may be accepted by any government agency or local government unit on a negotiated basis: provided that all

the following conditions are met: (1) such projects involve a new concept or technology and/or are not part of the list of priority projects; (2) no direct government guarantee, subsidy or equity is required; and (3) the government agency or local government unit has invited by publication, for three consecutive weeks, in a newspaper of general circulation, comparative or competitive proposals and no other proposal is received for a period of sixty (60) working days; provided further that in the event another proponent submits a lower price proposal, the original proponent shall have the right to match that price within thirty (30) working days.” (Underscoring supplied)

Unsolicited projects are an avenue for some government agencies for the following reasons<sup>107</sup>:

- Lack of good feasibility studies on a given project, arising from lack of expertise of the implementing agencies in preparing them and funding constraints for hiring consultants to help in the preparation of those studies
- Having to source the initial investment cost of feasibility studies from the implementing agencies’ already-constrained annual budget covers
- Lack of or improper coordination among agencies that may be involved in a given BOT project.

On the other hand, unsolicited proposals also create an incentive for non-transparent, back room negotiations for ill-prepared but politically vested projects that are submitted to the unsuspecting implementing agency for approval and subsequent endorsement or recommendation to the NEDA-ICC. In principle, the lack of competition and transparency creates risks that the project foisted on the public may not be the most efficient project among alternative options.

Acceptance by the government agency of an unsolicited project proposal does not end its problem. Reviewing the unsolicited proposal may burden the ill-equipped government agency, which in the first place is not capable of identifying projects for competitive bidding. The government agency’s inability to effectively evaluate legitimate unsolicited bids is the source of frustration on the part of private investors.

The lack of project identification and preparation capacity has resulted to the inconsistent application of Section 4 (Priority Projects) in the BOT Law and has opened up opportunities to crowd out projects in the priority list. It should be stressed that the BOT Law allows the submission of unsolicited projects under certain conditions. This has created the incentive for the submission of unsolicited proposals, which are the exceptional case under the BOT law since there is policy preference for solicited proposals. Ironically the exceptional case seems to have become the preferred mode of submission by the private sector. The lack of competition and transparency in unsolicited proposals has led to flawed design and unwarranted risks for the public sector. Typically, during project negotiation, private proponents would get the assent of their public sector counterparts in covering certain risks that should appropriately be accorded to the private proponents. Please see Box 5 for an example of an unsolicited project and what the World Bank (2005) termed as ‘how not to do a BOT project.’

### **Box 5. The Casecnan Transbasin Multipurpose Project**

In 1983, the National Irrigation Administration commissioned a feasibility study of the Casecnan Transbasin Project to provide irrigation and electricity services. Several factors hindered the contemplated project: huge capital requirement, uncertain energy production of the project, complex design, environmental issues and the long construction period estimated at 12 years. In May 1993, the government decided to use the BOT scheme to finance and build the project. The Casecnan Water and Energy Consortium (CWEC) submitted an unsolicited proposal in May 1994. The NIA sought NEDA-ICC clearance in 1995. The ICC identified serious flaws in the proposed project: environmental concerns, uncertain cash flow, which weakens project viability and significant hydrologic risks. After lengthy deliberations, the ICC finally approved the project in-principle subject to fulfillment of several conditions, e.g. issuance of Department of Justice opinion on the legality of the contract between NIA and CWEC, compliance with environmental requirements, etc. The government went ahead with this BOT project but only after agreeing to provide a guarantee for the hydrologic risk. The identified hydrologic risk put in question the viability of the power component of the project.

Among others, there are at least three important lessons to be derived from a review of the experience of the Casecnan Transbasin Project:

- (a) *the project identification and approval process.* There should be prior approval of the project proposal by the NEDA-ICC before a government agency enters into an agreement with a private sector proponent. Apparently, NIA had some form of agreement prior to securing NEDA-ICC approval.
- (b) *transparent risk-sharing arrangement with the private proponent.* In particular, the following should be thoroughly observed: risk identification, determination of project viability given certain assumptions and appreciation of risks involved, efficient allocation (risk-sharing) between the government and the proponent.
- (c) *clear rule or regulation on the non-applicability of subsidy, in whatever form, to unsolicited projects.* Section 10.1b of the IRR of RA 7718 states that no direct government guarantee, subsidy, or equity could be given to an unsolicited project. There was a view by the reviewers that Casecnan project did not involve a new concept or technology. Neither could the technology being proposed by the proponent be considered new. However, in the case of Casecnan, NIA asked the DOF to issue a performance undertaking for its obligation to CWEC. The DOF expressed its reservation to the request given that the NIA BOT obligation would require an annual subsidy of PhP1.2 billion for twenty years. Under the BOT Law, the government cannot provide a subsidy to unsolicited proposals. However, the Department of Agriculture produced a legal opinion stating that the subsidies to the Casecnan project are indirect. (The BOT law prohibits the grant of direct guarantee or subsidy.) According to DA, the farmers would be the actual beneficiaries of the subsidies because of improved irrigation services and that the NIA would only act as a contractor. The DBM expressed the opinion that the PhP1.2 billion annual requirement of NIA is a direct subsidy and that the government would effectively subsidize NIA, which in turn would use it to pay for the water delivered by CWEC. NIA has earlier agreed to pay CWEC for the annual delivery of water estimated at 809.1 million m<sup>3</sup> regardless of whether the water was actually delivered or not.

Source: WB, Meeting Infrastructure Challenges (2005); NEDA

The National Economic and Development Authority proposed the establishment of a project preparation facility in the late 1990s. Although the Department of the Budget and Development (DBM) has been quite sympathetic to the idea and appears supportive, the lack of fiscal space, in other words, severe budgetary constraints has hampered the allocation of such funds to the implementing agencies. However, in the light of the adverse impact on project quality at entry of weak capacities of implementing agencies, it is now timely to consider the provision of funding for a project development facility from budgetary resources and/or to solicit grant assistance from donor-partners to jumpstart the

process. The weak capacities of government agencies result in poor project quality at entry and a basic reason for this is the inability of those agencies to procure the best talent to help with project identification and review. The implementing government agencies may not be able to hire and retain high quality financial, management and legal expertise in view of the very real problem of low government salaries. Those experts may not have the incentive to stay long with the implementing government agencies. However, access to a project development facility that provides resources to implementing agencies to procure domestic expertise or even foreign expertise to give advice on BOT projects, may be an alternative route to strengthen capacities in those agencies.

#### *Procurement process*

There are two basic avenues for the BOT approach: solicited and unsolicited project proposals. The former refers to the general *public selection* or *public bidding process*. The standard procurement process is through a competitive bidding process. The implementing agency disseminates a request for submission of expression of interest to provide a particular infrastructure facility and upon receiving applications it requests some pre-qualified consortia to submit their proposals. This presumes that the implementing agency has done some basic feasibility study of the proposed infrastructure facility. The proposals are then subject to competitive evaluation. The Philippine government uses the “two-envelope system” to evaluate the proposal. Under the two-envelope system, the evaluation based on technical merits is followed by financial evaluation that considers the financial viability and economic benefits of the project. The concession is then awarded to the proponent, which has successfully passed the technical and financial evaluation.

The Philippine BOT law allows the submission of unsolicited proposals. Table 16 shows a list of unsolicited projects awarded between 1994 and 2006.

**Table B.3: Unsolicited Projects Presented to BOT Center and ICC Secretariat, 1994–2006 (operational and awarded)**

Project title and Status	Sponsor agency	Sector	Type/variant	Estimated project cost (millions)	Year approved	Status	Winner	Was "right to match" a factor?
<b>Under concession/operational</b>								
Alien Certificate of Registration I-Card Project	BI	Information technology	BOT	\$2.80	2003	Ongoing	Original proponent	No
Caliraya-Botocan-Kalayaan Power Plant Project	NPC	Power/water	BROT	\$450.00	n.a.	Operational	Original proponent	Yes
Casacnan Multipurpose BOT Project	NPC	Power/water	BOT	\$650.00	1994	Operational	Original proponent	No
Computerization of the Civil Registry System	NSO	Information technology	BTO	\$65.00	1996	Operational	Original proponent	No
San Roque Multipurpose Project	NPC, NIA, DENR, DPWH	Power/water	BOT	\$1,141.00	1996	Operational	Original proponent	No
<b>Subtotal: 5 projects</b>				<b>\$2,308.80</b>				
<b>Awarded/under construction</b>								
Land Titling Computerization Project	LRA	Information technology	BOO	\$82.00	1998	Ongoing	Original proponent	No
Machine-Readable Passports and Visas Project	DFA	Information technology	BOT	\$50.30	1995	Terminated by DFA	Original proponent	No
San Pascual Cogeneration Power Plant Project	NPC	Power	BOO	\$400.00	1995	Operational	Original proponent	No
Pampanga GIS Center	Pampanga Province LGU	Information Technology	BTO	\$0.96	n.a.	Ongoing	Original proponent	No
Tarlac Public Market	Tarlac City LGU	Property development	BOT	\$3.88	n.a.	Ongoing	Original proponent	No
Roxas Commercial Center	Roxas, Isabela LGU	Property development	BOT	\$1.00	n.a.	Ongoing	Original proponent	No
<b>Subtotal: 6 projects</b>				<b>\$538.14</b>				
Ninoy Aquino International Airport Terminal III Development Project <i>Cancelled</i>	DOTC	Transport	BOT	\$369.15	1995	Partially completed but not in operation. Contract nullified.	Third party	Yes
<b>Subtotal: 1 project</b>				<b>\$369.15</b>				

Source: BOT Center, NEDA-ICC.

Note: n.a. = not available.

Sponsor agency: BI = Bureau of Immigration, DENR = Department of Environment and Natural Resources, DFA = Department of Foreign Affairs, DOTC = Department of

Under the unsolicited mode a private proponent directly submits a proposal to the government. In contrast to the solicited mode where government takes the initiative in asking private parties to submit a project proposal, the private party makes the first move under the unsolicited mode as illustrated in Box 5 above. If deemed acceptable, the

proposal is opened up to some form of competition. The Philippines uses an approach called “Swiss challenge” to determine who will undertake the project. After the necessary evaluation process, the project is granted to a concessionaire.

Under Section 5, the implementing agency may accept the original unsolicited proposal if no ‘competing’ proposal is submitted after a period of 60 working days. The original proponent is allowed to match the competing proposal within 30 working days. The main critique against the Swiss challenge procedure is the limited time that is allowed for potential competitors to mount a credible challenge, which discourages other potential private participants. It seems that so far only one unsolicited proposal submitted under the Swiss challenge has won over the original proponents of unsolicited proposals. The World Bank (2000) indicated the ineffectiveness of the Swiss challenge in actual practice although in theory it seems to overcome the lack of competition associated with unsolicited projects. Box 6 summarizes the experience with the only unsolicited proposal that a competitor won over an original proponent under the Swiss challenge. While that competitor was able to mount a successful challenge, that is, the unsolicited BOT contract was awarded to it, legal infirmities weighed down the concerned project, which led to a protracted and yet unresolved arbitration process.

**Box 6 Ninoy Aquino International Airport (NAIA) Terminal III<sup>108</sup>**

Terminal III is a 189,000 square meter facility, which started construction in 1997 and was intended to start operations in 2002. The modern US\$640 million facility was designed by Skidmore, Owings and Merrill to have a capacity of 13 million passengers per year or 33,000 passengers daily at peak or 6,000 passengers per hour. Based on design, it has the following features: a four-level shopping mall connecting the terminal and parking buildings; a parking building with 2,000 car capacity and outdoor parking facility which can accommodate 1,200 cars; thirty four air bridges and twenty contact gates with ability to service twenty-eight planes at any given time; seventy flight information terminals; 314 display monitors with 300 kilometers of fiber optic I.T. cabling; twenty nine restroom blocks; five entrances in the departure area equipped with X-ray machines; and seven large baggage carousels, each with individual flight display monitors.

The original proposal for the construction of a third terminal in Metro Manila was submitted by Asia's Emerging Dragon Corporation (AEDP). The unsolicited proposal was subjected to a Swiss challenge by other interested parties. The AEDP lost the bid to PairCargo and its partner Fraport AG of Germany. Fraport AG and PairCargo then contracted the Philippine International Air Terminals Corporation (PIATCO) to undertake the construction and subsequent operation of the terminal. PIATCO is wholly owned by Fraport AG (Operator of Frankfurt airport in Germany), Security Bank and Trust Co., Equitable Banking Corporation, Chuah Hup Holdings Co., and Philippine Airport Ground services (PAGS). Construction of the terminal was begun under the administration of Joseph Estrada.

The BOT Contract included the (a) Concession Agreement signed on July 12, 1997, (b) the Amended and Restated Concession Agreement dated November 26, 1999, (c) the First Supplement to the Amended and Restated Concession Agreement dated August 27, 1999, (d) the Second Supplement to the Amended and Restated Concession Agreement dated September 4, 2000, and (e) the Third Supplement to the Amended and Restated Concession Agreement dated June 22, 2001.

The original agreement required PairCargo and Fraport AG to construct and subsequently operate the international airport within a twenty-five year cooperation period. After 25 years of operation, NAIA Terminal III will be handed over to the Philippine Government. The government offered to buy out Fraport AG for \$400 million, to which Fraport agreed. Before the terminal could be fully completed, current president Gloria Macapagal-Arroyo formed a committee to evaluate the agreement to buy out Fraport AG. The Arroyo administration eventually abrogated PIATCO's BOT Contract for allegedly having been anomalous in certain important respects. In a subsequent decision, the Philippine Supreme Court upheld the Philippine Government's position on the matter and declared the BOT contract "null and void" for, among other things, having violated certain provisions of the BOT law. In particular, the decision was based on (1) the absence of the requisite financial capacity of the PairCargo Consortium (predecessor of PIATCO), which is required under the BOT Law, (2) material and substantial amendments to the 1997 Concession Agreement, which deviated from the original contract bid upon, which is contrary to public policy, (3) the amendments in the 1997 Concession Agreement provided for a direct government guarantee which is expressly prohibited by the BOT Law and its Implementing Rules and Regulations. The Supreme Court found that the original contract was revised to allow for a Philippine Government guarantee of PIATCO's obligations to its creditors, contractors and suppliers. The BOT law disallows the granting of such sovereign guarantees. The project in question is an unsolicited project and thus, it does not qualify to receive government guarantees. PIATCO maintains that the provisions cited by the Supreme Court do not amount to a prohibited sovereign guarantee by the Philippine Government.

On December 2004, the NAIA Terminal III was expropriated by the Philippine Government through an order of the Pasay City Regional Trial Court subject to payment of an initial amount of three billion pesos (US\$66 million at Pesos 45: US\$1) to PIATCO. The Philippine Government paid PIATCO the said amount on the second week of September 2006. PIATCO and Fraport AG also filed compensation claims before international parties, particularly, (a) the Singapore-based International Chamber of Commerce (ICC) Court of Arbitration for PIATCO's US\$565 million claim against the Philippine Government and (b) the World Bank's International Center for the Settlement of Investment Disputes (ICSID) in Washington, D.C. for Fraport AG's US\$425 million counterpart claim. In August 2007, of compensation for NAIT-Terminal III, the International Center for the Settlement of Investment Disputes dismissed



Fraport AG's claim of compensation for NAIA Terminal III, saying it had no jurisdiction over the matter. On the other hand, PIATCO indicated that it remains open to reaching an amicable settlement with the Philippine Government.

According to the Philippine Government, NAIA-III is 98% complete and will require at least an additional USD6 million to complete. The government is in the process of negotiating a contract with the builder of the terminal, Takenaka of Japan. Another factor that has delayed the terminal's opening was the investigation on the collapse of a 100 square meter area of the terminal's ceiling. It seems that concerns over safety and other Proposed test runs for Terminal III have been postponed indefinitely pending the results of the investigation and the inspection of the airport terminal<sup>109</sup>.

The lack of effective competition in unsolicited proposals has encouraged suggestions to constrain or restrict the usage of this mode of infrastructure provision. One step is to follow a strict application of the conditions allowed by the BOT Law to the submission of unsolicited proposals, namely, that the proposed project be a new concept or technology and that no direct government guarantee, subsidy or equity can be given to the unsolicited project. To further constrain the space of unsolicited proposal, it can be added that Section 5 of the BOT Law should be amended (a) to lengthen the time period for laying a Swiss challenge and (b) to prohibit the grant of direct and *indirect* guarantee, subsidy, *performance undertaking* or equity to the unsolicited BOT project (underscoring supplied).

There is a need to review whether or not it is really useful to have a provision in the BOT law on unsolicited proposals. These have been the source of controversy in many discussions because their inclusion leads to a situation where the element of competition gets missing, notwithstanding the so-called Swiss challenge that has been devised by legislators as a "cure" to the lack of competition. Building capacities in the implementing agencies for identifying projects for competitive bidding will minimize, if not eliminate, the need for a provision on unsolicited proposals. On the other hand, there may be merit in allowing private proponents to submit unsolicited proposals because of their access and familiarity to cutting edge technology and innovations that could inform BOT projects. The country may benefit from having efficient, cost-effective and

innovative infrastructure facilities that may be provided by those unsolicited projects. In this regard it would be useful to improve the mechanism for allowing challenges to the unsolicited project. The selection process could be made contestable by giving potential challengers sufficient time to match the unsolicited project with their own proposals. Transparency and integrity of the selection process would be indispensable.

Hodges and Dellacha (2007) point out that channeling unsolicited proposals into a transparent, competitive process gives other companies a fair chance of winning the tender. This can reduce the risks while preserving the potential for innovative solutions. They describe a two stage process followed by most countries: stage 1 consisting of several procedures for approving the unsolicited proposal and stage 2 when competitive tender is made. Stage 1 is the approval stage. During this stage, the unsolicited proposal is submitted and reviewed by the responsible government body. Preliminary acceptance of the proposal leads to the submission of a full, detailed proposal, which is reviewed and may be approved for a competitive process or rejected. If accepted, an open competitive tender follows (stage 2). Rejection does not necessarily mean the end of the proposal. In some countries, a proponent may submit a modified version. In Chile, the government may use the unsolicited project concept in a public bid after a period of three years. In the second stage, the project is competitively bid under any one of three systems: bonus, Swiss challenge or best and final offer. The three systems are shown in Box 7.

### **Box 7. Competitive Tender of Unsolicited Proposals**

- ✓ *Bonus system:* Chile and Korea uses a system to promote unsolicited proposals that awards a bonus in the tendering procedure to the original project proponent. This bonus can take many forms, but most commonly it is an additional theoretical value applied to the original proponent's technical or financial offer for bidding purposes only.

- ✓ *Swiss challenge system:* Used in Guam, Philippines, India, Italy and Taiwan, it gives the original proponent the right to counter-match any better offers. If the original proponent does not match the better price, the project is awarded to the third party. In Guam, if the original proponent matches the better price, the government awards the project on the basis of technical merit.
- ✓ *Best and final offer system:* Here the key element is multiple rounds of tendering, in which the original proponent is given the advantage of automatically participating in the final round. In South Africa, the two most advantageous bids are selected for a final bidding round. If the original proponent is not one of these two, it will still automatically be allowed to compete in the final round. In all cases, the final round is an open competition during which the preferred bid will be selected with no bonuses or advantages given.

Source: Hodges and Dellacha (2007)

### *Project implementation and construction*

After satisfaction of the necessary legal, environmental and social requirements and the availability of the necessary financing, the construction of the infrastructure facility begins. This is usually undertaken by the contractor who has hired the construction crew, suppliers and technical and project management consultants and has done the project design and detailed engineering for the infrastructure facility. It is important to ensure that the private proponents including the contractor will have not only the management and technical expertise but also the financial muscle to move the infrastructure project to completion and subsequent operation. A supportive policy environment will be a fundamental requirement for private risk capital to be channeled toward lumpy, long-gestating infrastructure projects. Adopting transparency as a policy in developing the joint venture helped in firming up the partnership between government and the private sector. See Box 8 for a good example of a successful public-private sector partnership in infrastructure provision.

### Box 8. Manila North Tollways-North Luzon Expressway<sup>110</sup>

The North Luzon Expressway (NLE or NLEx), also called North Diversion Road, is a limited-access toll expressway that connects Metro Manila to the provinces of the Central Luzon region in the Philippines. It is one of the two branches of the Road-8 major radial road of Metro Manila (Quirino Highway is the other).

The expressway begins in Quezon City at a cloverleaf interchange with Epifanio de los Santos Avenue (EDSA): a logical continuation of Andres Bonifacio Avenue. It then passes through Quezon City, Caloocan City, and Valenzuela City in Metro Manila. Meycauayan, Marilao, Bocaue, Balagtas, Guiguinto, Plaridel, and Pulilan in Bulacan. San Simon, San Fernando City, Mexico and Angeles City in Pampanga. The expressway currently ends at Mabalacat and merges with the MacArthur Highway, which continues northward into the rest of Central and Northern Luzon.

A planned spur route from the San Simon interchange connecting to the existing Subic-Tipo Highway has been temporarily postponed, because of the on-going construction of an interconnection between the North Luzon Expressway and the Subic-Clark Expressway, the latter serving as a direct link between Subic and Clark. The interconnection is located at least 3 kilometers north of Sta. Ines Exit.

The expressway, including Andres Bonifacio Avenue, has total length of 88 kilometers. The expressway segment has a length of 84 kilometres. It is currently being extended by 44 kilometers, starting from its current end in Mabalacat, Pampanga up to Tarlac City in Tarlac. Its extension is part of the Subic-Clark-Tarlac Expressway Project. It may be extended up to Laoag City in Ilocos Norte and there are plans to have a spur route going to Baguio City to provide motorists going to the summer capital a fast and safe journey. The extension passes through (in the future) the rest of Tarlac City, Gerona, Paniqui, and Camiling in Tarlac, Bayambang, Basista, Malasiqui, Villasis, Urduyeta City, Binalonan, Pozzorubio, and Sison in Pangasinan, Rosario in La Union, and Tuba, and Baguio City in Benguet.

Originally controlled by the Philippine National Construction Corporation or PNCC, operation and maintenance of the NLEx was transferred in 2005 to the Manila North Tollways Corporation, a subsidiary of the Lopez Group of Companies. A major upgrade and rehabilitation has been completed in February 2005 and the road has now similar qualities as a modern French tollway. The main contractor of the rehabilitation work was Leighton Contractors Pty. Ltd (Australia) with Egis Projects, a company belonging to the French Groupe Egis as the main subcontractor for the toll, telecommunication and traffic management systems. To help maintain the safety and quality of the expressway, various rules are in effect, such as restricting the left lane to passing vehicles only and banning overloaded trucks.

The tollway has two sections: an open section and a closed section. The open section (within Metro Manila) charges a flat toll based on vehicle class and is employed to reduce the number of toll barriers (and associated bottlenecks) within the metropolis. The closed section is distance-based, charging based on the class of vehicle and distance traveled. Class 1 vehicles can use an electronic toll collection system (called EC Tag) to reduce wait times and congestion at toll barriers. A prepaid magnetic card (the NLE Badge) is provided as an alternative payment for

class 2 and 3 vehicles. Both systems connect to accounts that can be replenished in various ways. Travelers not using EC Tag or the NLE Badge on the closed system will instead be issued tickets describing tolls for the various exits. In order to save costs concerning toll barriers at exits, many exits on the NLEX have exit and entrance ramps running alongside each other so that both may be serviced with a single toll barrier.

The Lopez Group took on the challenge of providing an efficient transport facility north of Manila and ventured into road infrastructure to improve and upgrade the NLEX. Through First Philippine Infrastructure Development Corporation (FPIDC), the Group partnered with the Philippine government through the Philippine National Construction Corporation (PNCC). PNCC's franchise allows it to enter into joint venture schemes, to choose its partners, without the need for public bidding. The resulting joint venture created the Manila North Tollways Corporation (MNTC) which was mandated to finance, rehabilitate, operate and maintain the NLEX until 2030. MNTC also invited Egis Projects S.A. of France, Leighton Asia Limited of Australia, and PNCC to partner with it through equity funding and construction activity<sup>111</sup>.

The rehabilitation of the North Luzon Expressway is a joint venture between the government and the private sector, for which the Manila North Tollways Corporation was granted the concession to finance, redesign, rehabilitate, expand, operate and maintain the NLEX under a Supplemental Toll Operation Agreement (STOA). The STOA was signed in April 1998 by the MNTC, the Philippine National Construction Corporation (PNCC) and the Republic of the Philippines acting through the Toll Regulatory Board (TRB). It was subsequently approved by former President Fidel V. Ramos in June 1998.

Under the STOA, all usufructuary rights, interests and privileges of PNCC were transferred to MNTC. This gives MNTC the right to collect toll fees during the concession period of 30 years so that it may continue to maintain the expressway, recover its investment, and settle the long-term loans used to finance the project. The new NLEX uses a reasonable and internationally-accepted direct road-user fee principle for revenue collection. Unlike government infrastructure projects that are subsidized by taxes (which, in effect, makes non-users of the infrastructure pay for its services through the taxes they pay), the toll fees will only be paid by those who directly use the NLEX. Investments for the NLEX project may only be recovered through toll fees, and not through tax revenues. This ensures that people who do not use the NLEX will not be burdened with the cost of the project. After the concession period, the project roads - plus all developments - will revert to the government at no cost<sup>112</sup>. Those who do not want to use NLEX have the option of using the parallel (non-toll) road called the MacArthur Highway to reach destinations north of Manila.

Because of the benefits reaped by the country through the rehabilitation of the NLEX, other developing countries are actually using the project as the model for government and private sector partnership. The private sector's investing in infrastructure development projects is essential since it enables the government to use its limited resources for other vital services like education, housing, agriculture, and health. The project financing for the project, acknowledged by Project Finance magazine in its February 2003 issue as a "considerable benchmark for transport financing in Asia," was obtained despite the country's low credit rating. The project was named the "Asia Pacific Transport Deal of the Year" in 2001 by the same publication<sup>113</sup>.

A review of Philippine experience with infrastructure projects, not just BOT projects, shows that delays in project implementation would usually arise due to a rise in project costs, construction problems, right-of-way problems and others. Implementing government agencies would then make representation with the oversight ICC body for contract variation to support the requested increase in project funding sought by contractors. The proposed increase in project funding may arise from an expansion in the scope of a project, alteration of design and other factors. However, poor project quality at entry is a common denominator. Poor or complex project designs and inefficient project management and construction are common causes of the escalation of project costs. Sometimes, implementing government agencies cite inflation and currency movements as a reason for cost escalation. However, it cannot be denied that poor project planning, identification and preparation together with inefficient project implementation are the real reasons for the reported cost overruns<sup>114</sup>.

The 16<sup>th</sup> ODA Portfolio Review (2007) reported the following as top three causes of cost increases of projects that underwent NEDA-ICC review in 2007: (i) increase in unit cost of labor, materials and equipment/ price adjustment/ price escalation with 29 percent of the total causes of cost increases of projects; (ii) changes in scope which accounts for 25 percent; and (iii) high bids with 22 percent (Table 17).

**Table 17: Breakdown of Cost Increases**

<b>Reason for cost increase</b>	<b>Amount in Pesos Million</b>	<b>% to total</b>
Total (21 projects)	33, 499.92	100.00
Increase in unit cost of labor, materials, equipment/ Price adjustment/price escalation	9,705.39	28.97
Changes in scope- variation orders, supplemental agreements	8, 267.84	24.68
High bids (bids above ABC/AAE)	7,241.18	21.62
IDC, VAT and other taxes	3, 372.63	10.07
Foreign exchange movements	2,003.92	5.98

Increase in cost of consulting services	1,522.34	4.54
Increase in administrative costs	1, 260.57	3.76
Increase in cost of right-of-way, land acquisition, resettlement costs, price adjustment of land	106.06	0.32

In this regard, the 16<sup>th</sup> ODA Portfolio Review submitted by NEDA to Congress has called attention to the (a) greater and more serious attention by the implementing and oversight agencies on project preparation and planning, risk assessment, review of feasibility studies, among others to come up with better project proposals; (b) implementation readiness of a project, including the availability of counterpart funds before loan and contract negotiation; and (c) adequate or accurate estimation of contingencies during project design. The specific bottlenecks to the efficient implementation of ODA-funded projects, which also hold true for BOT projects are summarized in Box 9.

**Box 9. Bottlenecks to Efficient Implementation of ODA-funded Projects**

*Cost Overruns.* These are caused by (a) additional civil works (changes in scope/ variation orders/ supplemental agreements); (b) increase in right-of-way/ land acquisition/ resettlement costs; (c) increase in unit cost of labor, materials and equipment; (d) high bids (bids above Approved Budget for the Contract/Approved Agency Estimate); (e) currency exchange rate movement; (f) increase in consultancy services; (g) increase in administrative cost; and, (h) claims for price escalation.

*Budget/Financing Issues.* The re-enactment by Philippine Congress of the budget for 2006 limited the financing cover for ongoing projects to its 2005 levels. This also meant that no new appropriation was allocated for newly approved projects.

*Procurement.* Delays in procurement were brought about by (a) lengthy review process, (b) restraining orders filed by losing bidders, (c) suspended bidding proceedings due to contested procedures by one of the bidders or delay in approval by the financing institution and, (d) failure in bidding/re-bidding of contracts.

*Right-of-Way (ROW)/Land Acquisition.* ROW and land acquisition bottlenecks remain to be a major bottleneck due to (a) delayed judicial action on the titling of acquired properties; (b)

unresolved issues on land ownership; (c) relocation site no longer available; (d) new batch of informal settlers re-occupied the previously cleared areas; and, (e) change in local government leadership, priorities and commitments.

*LGU issues.* LGUs capacity to put up the required counterpart for projects continues to be a problem. Other LGU issues include the limited technical capability of some LGUs particularly those in the lower income class and changes in LGU leadership, priorities and commitments.

*Contractor Performance.* Poor performance of the contractors were noted in terms of weak management, late mobilization and/or insufficient equipment and materials on site, insufficient technical manpower, technical problems, i.e., frequent breakdown of equipment and changes in design concept and uncertainty in the financial capability of the contractor.

*Sustainability.* There were also instances of weak post-completion performance monitoring, operation and maintenance for some completed projects which raised concerns on the sustainability of the projects.

Source: 2006 ODA Portfolio Review

### *Operation*

After the facility is built, the concessionaire designates an operator to operate and maintain the facility. The operation lasts until the termination of the concession period. Critical at this stage is the efficient operation and maintenance of the infrastructure facility. Clear assignment of roles and responsibilities helps a great deal in ensuring that the service to be provided through the infrastructure facility will meet certain performance standards. The best Philippine experience with this stage of infrastructure project operation and maintenance is the globally-renowned water concession operated by Manila Water Company. Box 10 summarizes the experience.



## **Box 10. Manila Water Concession: Key Lessons and Challenges**

The privatization objectives were as follows:

- ◆ Expand service coverage
- ◆ Improve delivery of service
- ◆ Increase operating efficiency

The MWSS was responsible for delivering water service and to do this, it employed 7,000 people. After August 1, 1997, through the concession agreement, the two selected operators or concessionaries, namely, Manila Water Company and Maynilad Company were required to deliver the service in behalf of MWSS and in return for investment, they will get reimbursed.

Delivery of water is done through an infrastructure that is very expensive to maintain, such as aqueducts, treatment plants, pump stations, meters, branch offices, and leased water facilities. These facilities are owned by the MWSS but the concessionaires are allowed to use these facilities under the privatization arrangement. Under the Asset Management Obligation the concessionaries are required to operate, maintain, refurbish, expand, etc. This involves a very challenging service obligation such as provision of water supply; sewerage and sanitation; and, customer service.

The service obligation drives the tariffs. Labor and power accounts for 70% of operating costs. The Manila Water Company, Inc. (MWCI) has invested US\$70-80 million on an annual basis over the next 10-15 years. Full cost recovery is very important for the private sector to sustain capital investment. The regulator reviews the concessionaires' business plans and rate rebasing every five years. During the interim period they get inflation adjustment. This is because 100% of the debts are in hard foreign currency. Adjustments are given to cushion the concessionaire from foreign currency differential as well as unlikely events such as El Nino.

Manila Water is also one of the organizations that can claim to service the needs of the poor. It has provided interconnections or piped water supply to over 850,000 people in informal settlements or low income areas such as the Manggahan floodway with 60,000 households. It has also invested more than US\$200 million to make interconnection possible for hundreds of thousands of households. Sewerage is one of the neglected areas of the water sector. It has very small coverage and this will drive MWCI's expenditure plan over the next 15 years. World Bank will help provide US\$64 million to expand the coverage.

### *Lessons Learned*

1. The concession approach may be appropriate in Metro Manila but may not be in some other areas. It depends on the reform objectives.
2. There are investible resources. Competitive bidding is important but the windfall gain accruing to the government might send the wrong signal to the customers that the resource is cheap and abundant. Using the lowest priced service as a rule to select a concessionaire might limit the flexibility of the players in terms of addressing shocks such as the major devaluation that was experienced in 1997.
3. Trust and confidence of employees are necessary.
4. Key determinants of success are good timing and political will of then Pres. Ramos. He had a dedicated team that oversaw the transaction to be completed in less than 24 months;

- there were clear objectives supported by the private sector.
5. It takes time to establish credibility of winning concessionaire.
  6. There is a need for appropriate arbitration mechanisms; review of contract considering the changing operating environment; the concession requires full asset recovery.
- It is important to have a good cash flow and to maintain affordable tariffs.

Source: From a presentation made by Mr. Virgilio Rivera, Business Development Group Head of Manila Water Company, Roundtable Discussion with the Business Sector on the Amendments to the BOT Law, February 21, 2006, Holiday Inn, Pasig City, conducted by Economic Policy Reform and Advocacy (EPRA).

### *Transfer*

Upon completion of the cooperation or concession period, the ownership of facility and all its assets is then transferred to the host government. Transfer can also be done prior to the expiration of the concession period but the concessionaire has to be compensated properly for the investments made in the project. The government may then operate the facility itself or decide to hire an independent operator. There is yet no experience in this area because at present the BOT/concession agreements are still operating within the contract or concession period.

### **Goals and typical contractual agreements of the major participants**

The presence of several actors and the different stages of a BOT project result to a complex relationship, which make imperative close cooperation and collaboration to ensure that the project will push through to completion and efficient operation with a minimum of problems. The participants in the BOT project may have different objectives and goals, which sometimes may conflict directly with each other. For instance, the host government may want to provide the widest access possible to the use of the infrastructure facility and this may involve controlling fees or regulating fee increases in order to make the facility affordable to members of the community.

On the other hand, the concessionaire and the investors who want to make profits or have a high return on their investments may consider charging higher user fees for the

facility. Lenders aim to make their long-term loans safe and profitable. Equity investors want to have a high return on investment in proportion to the risks they face. The contractor wants to increase the price of their contract for the construction of the facility. The users aim to use the facility at the least cost to them. In certain cases, there could even be expectations that the government should provide the facility for free. Therefore, there must be some mechanism that will provide the incentives to balance these diverse and oftentimes conflicting goals. The *contract* is the principal means by which parties align their individual goals to make the project operational. There will naturally be a great number of contracts among all the involved parties in the BOT project. The following are the main contracts that are inherently present in all these projects:

### *Concession Agreement*

This is the agreement between the host government and the concessionaire. It is the main contract in a BOT project. Under the concession agreement the following are specified:

- The concession period—the starting date and the terminal date
- The structure of the concessionaire
- The financial scheme
- The construction duration and process
- Tariff structure with tariff revision provisions
- Rights and obligations of both parties, that is, the government and private party
- Guarantees (financial and material)

### *Loan Agreement*

The loan agreement is made between the lenders and the concessionaire and specifies the amount to be lent with the specific repayment period and mode, the different guarantees and the agreed terms of the. The limited recourse nature of BOT projects may prompt lenders to demand adequate security. This contract may include the provision that project revenues be stored in one or more special debt reserve escrow account to ensure payment of senior debt before any distributions can be made to equity investors (Augenblick and Custer, 1998). Other guarantees may include the right for the lenders to take over the operation of the facility in the event that the concessionaire is not able to

meet financial obligations. In other instances, the concessionaire negotiates with the host government for guarantee of the loans made with creditors.

#### *Shareholder Agreement*

The shareholder agreement is between equity investors and the concessionaire. Equity financing is oftentimes raised by the consortium's own capital funds although other external equity investors may infuse funds. The contract specifies the detailed agreement on the mode of payment and the distribution of revenues and dividends to the investor and the prescribed debt to equity ratio.

#### *Construction Contract*

The contract between the construction contractor and the concessionaire is usually a fixed price turnkey contract. There also may be a single overall contract which encompasses both design and construction. The fixed price turnkey contract may be the most efficient contract to reduce the risks related to project time, quantity and costs. The penalties for late delivery of the contractor are stipulated in this contract.

#### *Operation and Maintenance Contract*

This contract plays a very vital role since this has serious implications on the revenue generating capability of the project and the longevity of the asset. Specifics may include the level of rates or user charges for the facility, the formula or procedure for rate adjustment, details of the use of the facility, reimbursement for maintenance costs and others.

To be successful, a BOT project should be able to harmonize and reconcile all these contracts to meet a common end: an efficient infrastructure that provides good service to the public and satisfactory rates of return to investors, shareholders, the operator and lenders. Harmonization is not an easy task as indicated by the earlier discussion of incomplete contracts. It should be borne in mind that these contracts reflect the risk-bearing ability of the parties concerned and the tendency for any party is always

to minimize the risks it faces and transfer these as much as possible to parties most able to bear them. This requires a very good understanding of the nature of the risks faced by all actors, e.g., the likely events that would trigger the occurrence of the risk and the appropriate risk mitigation instrument. Transparency in contracting which specifies who is responsible in bearing a particular risk will help to ensure that opportunistic behavior and confusion will be minimized. The next section presents some of the most common risks that a typical BOT project will face and of the risk management and mitigation responses that can be incorporated in the contract.

### **Risks in BOT projects**

Exposure to risks is oftentimes greater in the earlier stages of the project and so monitoring must be more intense during the early stages. The most common risks in a typical BOT project are listed below.

#### *Completion Risk*

In any typical BOT project, there is a risk that the construction may not be completed on time and in the agreed price. The solution to this risk is for the concessionaire to offer a fixed price, firm date, turnkey construction contract with concomitant penalties stipulated by liquidated damages. This clause states the monetary damages payable by the contractor for each unit of time delay in the completion of the project or the completed project's inability to meet specifications. Thus, cost overruns, hidden defects, and other related problems become the responsibility of the construction contractor. The price of the turnkey contract then reflects the risk that the construction contractors have to bear. Another way to obviate completion risk is for the consortium to include the construction contractor as a partner or participant in the consortium. In this way, the information asymmetry between the concessionaire and the construction contractor, which may give rise to moral hazard problem, will be eliminated.

### *Performance and Operating Risk*

There is also a risk that a project will not perform according to what is expected from it. These failures may include technical failures, interruption and management or labor incompetence. This may be mitigated by warranties from the construction contractors and equipment suppliers and also by performance guarantees in the operating and maintenance contract.

### *Cash Flow Risks*

Disruptions of cash flow may jeopardize the repayment of debt to the project's lenders. These disruptions are usually precipitated by a change in market demand conditions: for instance, sudden disruption of tariff revenue brought about by a downturn in purchasing power of the consumers. The usual response is to specify in the contract the opening of an escrow account as what was discussed earlier. Another is for the host government to guarantee a portion of the revenues generated by the facility, for instance, a minimum off-take agreement.

### *Inflation and Foreign Exchange Risks*

Rapid inflation and exchange rate spikes may alter the returns to both lenders and equity investors. These risks are deemed to be beyond the control of lenders and equity investors but may be addressed by government policy action. This is the reason why host governments are almost always asked to provide cover for these risks. For instance, indexation of user-fees and revenues from off-take contracts are used to cover for the risk of inflation. Governments are also asked to provide sufficient foreign currency in case of supply disruptions or index the tariff rates to the rate of inflation to preserve the real value of profits.

### *Insurable Risks*

Insurable risks, e.g., manpower casualty, can be sufficiently covered by various form

of insurance. The insurance may come from commercial sources or from government guarantees.

### *Force Majeure*

These risks are sometimes uninsurable or can be insured at a very prohibitive cost. The government may be asked to cover or seek cover for force majeure risks that are uninsurable. Force majeure risks are often insured by entities such as the Overseas Private Investment Corporation (OPIC) and the Multilateral Investment Guarantee Agency (MIGA).

### *Political Risks*

These risks may, in general, include any deviation by the host government from any specific undertakings or agreement provided in the project. It also includes risks such as those precipitated by political violence—war, insurrections, or sabotage that may disrupt the operation of a BOT facility. This also includes problems of law and order, the threat of expropriation or nationalization by the host government or even a change in political leadership, which questions the legality or appropriateness of a BOT project approved by the predecessor government. Foreign commercial lenders and equity investors want to seek political risk insurance from sources such as the government itself (through sovereign guarantees), export credit agencies or other multilateral agencies.

### *Regulatory Risks*

The regulatory regime also posts some risk with regard to tariff rates, volume or quality of services. Rules may be hazy or easily subjected to political intervention, which put at risk the viability of the BOT project, e.g., fixing or controlling charges/fees, unclear formulas for rate or fee adjustment, and others. The creation of credible and independent regulatory agencies is seen as the first step to mitigate such regulatory risks.

## Risk mitigation instruments

One of the means for a BOT project to succeed is to mitigate the risk that can be identified. Risks are often within the control of one or more of the participants but some are out of the participants' hands. A basic principle is that the party who is in the best position to manage the risk should bear that particular risk and should be duly compensated for it. However, Philippine experience shows that in some cases, commercial risk that more properly belongs to the private sector has been assumed by the government (Box 11). The government should be more careful in the future with the assumption of risks that properly should be absorbed by the private sector. The earlier case study of Casecnan is a very vivid picture of what the government should not have done in the first place because the burden was unnecessarily put on the shoulder of the unsuspecting taxpayer.

<b>Risk</b>	<b>CASECNAN</b>	<b>MRT 3</b>	<b>SAN MATEO LANDFILL</b>	<b>NAIA 3</b>	<b>STAR</b>
Construction	Private proponent	Private proponent	Private proponent	Private proponent	Private proponent
Exchange Rate	government	government	government	government	government
Interest Rate	Private proponent	Private proponent	Private proponent	Private proponent	Private proponent
Performance	Private proponent	Private proponent	Private proponent	Private proponent	Private proponent
Raw Water/Hydro	government	n.a.	n.a.	n.a.	n.a.
Operating Cost	Private proponent	Private proponent	Private proponent	Private proponent	Private proponent
Demand	government	government	government	Private proponent	Private proponent

Source: NEDA



There may be some risks that cannot be or are too prohibitively costly to insure. To encourage private investors, the government usually intervenes by providing guarantees, subsidies and similar support. It seems that BOT projects in developing countries are in reality rarely a 100 percent private undertaking with no commitment from the host governments. There are several factors such as underdeveloped capital markets, political instability, regulatory uncertainty and others that may deter private investments in infrastructure and thus, the government steps in to eliminate or minimize such risks to the project. The following are the some of the common support given by governments for the development and implementation of BOT projects:

✓ *Political and Bureaucratic Support*

Strong political support by the highest leadership of the country is an effective way to facilitate the acceptance of any project. A president, prime minister or key legislators championing the cause of private participation in infrastructure can thwart bureaucratic resistance from entrenched public sector entities, which could have an interest to build and operate the facility itself instead of the private sector. The political leadership can as well convince the doubting citizenry about the importance of the BOT facility through effective communication of its advantages to the community and transparent procedures for review and approval of the project, among others. The successful experience with the privatization of water supply distribution in Metro Manila showed what a determined president could do for the welfare of the people.

✓ *Assured Supplies*

Government may provide some logistical support such as land, right-of-way, raw materials or steady supply of energy required during the life of the BOT project.

✓ *Assured Revenues*

In instances when the government is a major purchaser of a BOT output, it commits to a steady revenue stream to make the project viable, thereby attracting both lenders and equity investors to provide funding to the project. For instance, the

government could pledge a “minimum off-take” or “take or pay” guarantee for the power generated from BOT-built power plants or guarantee ridership in a rail project in order for the concessionaire to be able to pay off both debts to lenders and dividends to equity investors.

✓ *Loans/Equity Contributions*

In some instances, government may provide loans or infuse capital to BOT projects. This helps the concessionaire to be more independent from lenders and sponsors and gives it more bargaining power to negotiate for construction contracts and equipment supplies. Transparency is also the reason why governments provide loans and equity. The government can demand transparency of the project’s financial structure in return for the support.

✓ *Earning Assets*

Government can also allow public sector assets to be used by the concessionaire to pay capital costs, debt service and operating expense. Some examples are public toll roads, which are made available to the concessionaire after award of the operation and maintenance of the toll road. In the case of Metro Manila rail projects, private proponents have been allowed to exploit the commercial opportunities in certain stations by renting space to various establishments.

✓ *Regulatory, Fiscal and Other Support*

There may be legislation needed to help the private company push through with the project. Enabling laws can be passed by legislators to make the legal and regulatory environment conducive to long- term private investments. Some form of tax incentives such as tax holidays, exemption from stamp and customs taxes may also be given to BOT concessionaires. Salaries of foreign expatriates may also be exempt from local taxes. In the case of the Philippines, the BOT as earlier stated is a good basic law but it stands some improvement. The same may be said of the Implementing Rules and Regulations,

which should provide a transparent and facilitative process to get BOT projects competed and subsequently implemented.

✓

*Project Risk Support*

In case of project failure or interruption in the cash flow of the facility, government can intervene to provide loans on a standby basis over a fixed period of time to provide for debt service.

✓

*Inflation and Foreign Exchange Cover*

These covers may come in the form of price escalation clauses initiated by the government. Indexation of user fees or tariffs to inflation is the most common form of support although the form and timing may be politically costly and time consuming to develop or organize. In the case of rapid foreign exchange fluctuation, the government must be able to assure foreign investors of the convertibility of local currency earnings into foreign currency and that it will provide sufficient foreign currency to meet the demand of these investors.

✓

*Sovereign Guarantees*

Sovereign guarantees are called upon in the event that the concessionaire defaults in the payment of a loan to its lenders.

✓

*Protection from Competition*

Government can influence the environment to make the BOT project more viable. For instance, it can stop the development of parallel non-toll routes to make the toll routes more profitable during the concession period.

## **Institutional framework**

Under the current IRR of the BOT Law, implementing agencies prepare BOT projects for competitive bidding or undertake the feasibility studies and submit the necessary documents for review and approval by the NEDA ICC. Unsolicited project proposals, including the draft contract are also reviewed by the oversight agencies composing the ICC upon endorsement by the implementing agencies. In the case of unsolicited projects, the NEDA ICC gives approval upon finding merit and the implementing agencies are then asked to hold a Swiss challenge and make an award.

However, there have been recent attempts to amend the BOT Law IRR with the end-in view of facilitating the project approval and award process. The proposed amendments to the BOT Law IRR have two main parts: (a) assigning implementing agencies to review and approve specific BOT projects and contracts while confining the NEDA-ICC role to merely checking whether the BOT project concerned is in the priority list and (b) shortening the processing time for BOT projects. BOO projects would still need approval by the President of the Philippines after recommendation by the NEDA-ICC. Under the proposed amendments to the BOT Law IRR, implementing agencies will prepare a list of priority projects and submit this to the NEDA-ICC for approval. This will effectively make the NEDA-ICC a mere “clearing house” for preferred BOT projects. As formulated in the draft rules, government agencies will prepare their “list of priority projects.”

There must be a transparent institutional framework for project identification, review and approval. The Philippine experience shows the importance of having oversight agencies that have the responsibility for project review and approval while line departments or ministries (agencies) are responsible for identifying and preparing terms of reference and scope of work for BOT projects to be tendered. Line ministries should not be involved in project review and approval because this will conflict with their role in identifying projects that may be financed and constructed under the BOT approach.

An effective implementation of the BOT approach and, in general, public-private partnership requires more accountability on the part of the implementing agencies. Their officials should be accountable for the procurement contract as well as monitoring of the BOT project. Monitoring requires vigilance over delivery by the private proponent of its contractual obligations. The implementing agencies and the oversight agencies should observe transparency, from project identification to procurement to contract implementation. A copy of the signed contract should be available to the implementing agencies and the oversight agencies. As well, BOT contracts are imbued with public interest and should likewise be accessible to the public.

The government should also allow the private proponent to levy user charges that provide a return commensurate to the opportunity cost of its invested funds and that ensure appropriate maintenance of the infrastructure facility. This will ensure project viability. The proper allocation of cost- and risk-sharing is likewise vital. Some risks are uninsurable. In this case, the partnership must allow for some form of co-insurance that provides for sharing of the identified risks.

### **Contracts and regulation**

Another difficult area is contract writing, where implementing agencies must have a good understanding of the obligations of each party in a project; financial terms and conditions for the financing provided by external creditors, including guarantees, subsidies, or equity to be provided if the project is eligible; and contractual provisions on risk allocation, including assisting the project secure financing and ensuring its financial viability and sustainability. Implementing agencies do not necessarily have the skills for contract writing.

The result is that during negotiations, the implementing agencies may not be adequately informed about the implications of the contractual provisions they have committed to the private partner. Obviously, the implementing agencies must develop capacity not only for contract writing but also for monitoring of contract implementation.

An example of a complex area is the provision on *Contract Termination*, a standard provision in contracts here and abroad. The language for the said provision should be thoroughly understood by the government agency concerned, reviewed and tailored to ensure that the government's (that is, public) interest is protected. The private investor interest will almost surely be protected given their access to the best legal advice that money can buy. On the other hand, creditors normally demand provisions on contract termination as a protection. They do not lend to projects unless such provisions are expressed with clarity and could be enforceable.

### **Third party evaluation of projects**

It will also be good to introduce as a norm the evaluation of projects during actual implementation and also after a period of time following their implementation. The idea is to assess whether or not actual project implementation delivers the development outputs envisaged during the proposal and approval stages. The evaluation should be done by independent organizations such as reputable research and academic institutions. Implementing ministries or agencies and the private proponent/operator of the BOT project should make available to third party evaluators such data as may be necessary for proper evaluation.

## **V. Conclusion and Policy Recommendations**

The energy crisis in the late 1980s and the weak fiscal position of the government forced the Philippine government to seek private sector support in carrying out infrastructure priority projects. In December 1990, the Philippine Congress enacted the Build-Operate-and-Transfer (BOT) law, otherwise known as Republic Act No. 6957, "An Act Authorizing the Financing, Construction, Operation and Maintenance of Infrastructure Projects by the Private Sector and for other purposes." Said law was

subsequently amended by R.A. No. 7718 in April 1994 to increase private investment in other infrastructure sector among other features. The first wave of BOT projects involved the execution of power purchase agreements (PPA) between the National Power Corporation (NPC) and independent power producers (IPPs). Other BOT projects such as mass rail transit, tollways, etc. followed.

Using examples from selected BOT projects in the country, the paper pointed out key issues constraining the successful implementation of the BOT approach to infrastructure provision. It also indicated from those examples several factors that were instrumental in forging an effective public-private partnership in infrastructure projects. At the minimum, an effective implementation of BOT projects hinges on the following: (i) a legal and economic environment that is conducive to a mutually beneficial partnership between the government and private participants; (ii) clarity in articulating the duties and responsibilities of the parties to the contract; (iii) certainty of recovering investments and availability of mechanisms for dealing with risks and unforeseen events and for arbitration in case of dispute between the contracting parties; and (iv) transparency and credibility of the government's processes for review and approval of proposed BOT projects and the associated contracts for implementation.

Recent experience with the implementation of the build-operate-transfer (BOT) Law indicates the need to address various issues, starting from the legal framework to the level of responsibilities of the government institutions that are involved in the project cycle, i.e., from project entry level to implementation and completion. Improvements should be introduced at the policy, legal and institutional frameworks in order to improve the usefulness of this approach to infrastructure development. Because of the complexity of the BOT process for infrastructure development it will be useful to consider the following policy recommendations arising from lessons culled from the Philippine experience with the implementation of this approach. It is submitted that pursuing reforms along the following policy recommendations will serve to strengthen public-private partnership and the use of BOT as a particular approach to infrastructure provision:

1. The government should provide an enabling framework for private participation in infrastructure provision, that clearly allocate roles, functions, powers, duties, and rights of the government and the private sector. A specific instrument for private participation in infrastructure provision is the Build-Operate-Transfer approach.
2. A clear policy framework on the BOT approach should be stated in a law or official policy pronouncement, e.g., Executive Order, Memorandum Circular, Administrative Order or any such official instrument to announce policy. Such a law or official policy statement should have a clear statement of the role, responsibilities, functions of the parties to the BOT contract. The Implementing Rules and Regulations should be transparent and unambiguous in interpretation over such matters as contractual obligations, risk sharing arrangement, tariff setting, recovery of investments, contract variation, dispute settlement, arbitration and others concerns of the parties involved in the BOT contract.
3. The BOT law should be considered the primary statute that establishes government policy and the institutional framework for implementing BOT. There should be accompanying implementing rules and regulations (IRR) of the BOT law that specify the administrative procedure for implementation. The IRR may be amended from time to time as the need arises. This will provide the government both the legal basis for the BOT approach (that is, a primary statute) as well as the flexibility (through the IRR) to respond to changing needs and circumstances of the economy, the financial markets, private investors and other stakeholders, that may impact on the efficient implementation of the BOT approach.
4. Competitive bidding procedures remain the central tenet of government procurement policy. Competitive bidding provides the best prospects for efficient provision and implementation of the infrastructure project at the least possible cost to the economy. The BOT law should thus forthrightly express the government's preference for competitive bidding and affirm that direct negotiation and unsolicited proposals remain



the exception. Ideally, unsolicited proposals should not be part of the approach to infrastructure provision because they create incentives for non-transparent and dubious “back of the room” negotiations between the proponent and potential implementing agency.

5. There should be a clear institutional framework for identification of projects, preparation of project proposals, review and approval of BOT projects and contract. Both implementing agencies and oversight agencies should be accountable to the public over their decisions. It is the oversight agencies composed of the Department of Finance, Department of the Budget and Management and the National Economic and Development Authority, principal members of the NEDA-Investment Coordination Committee that should be chiefly responsible for the review and approval of BOT projects and contracts. The Department of Justice should provide the necessary legal advice and review BOT contracts while the Bangko Sentral ng Pilipinas joins this group to take care of potential impact on the financial system and balance of payments of foreign-funded infrastructure projects. Implementing agencies, which are the proponent agencies in charge of identifying and packaging project proposals should not be allowed to be members of the Investment Coordination Committee that reviews and approves those projects. Other agencies, e.g. the Department of the Environment and Natural Resources may be tapped when needed to give information or advice that oversight agencies will need to make a good decision.

6. The BOT law should affirm the government’s binding commitment to honor and defend contractual rights and obligations. This includes providing for greater transparency with regard to the content of contracts.

7. The government should build capacity for project design, technical analysis, contract review, monitoring the implementation of BOT infrastructure projects. It is also important to give implementing agencies the responsibility of monitoring BOT projects at different stages of development, that is, from project entry, construction to

implementation and of reporting these to the oversight agencies and the Office of the President.

8. The government with initial assistance from donors should establish a project preparation or development facility that could be tapped by government agencies for BOT project identification and the development of BOT proposals for tender or competitive bidding. The project development facility should be given the appropriate amount of budgetary support once institutionalized.

9. The independent ex-post evaluation of the BOT project should be made a regular activity of the government in order to assess whether or not it is delivering the envisaged development outputs. Third party evaluators from the academe, civil society and professional associations could be tapped for this task.

10. The BOT law or official policy pronouncement should allow the private proponent to levy user charges that provide a return commensurate to the opportunity cost of its invested funds. This will ensure project viability and will reduce or minimize the amount of subsidy that government provides. It seems unfair to use revenues from general taxation to finance or provide subsidy or support to a BOT project, which is availed of by particular segments of the population, that is, the users.

*September 17, 2008*

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<sup>1</sup> This paper partly draws from Llanto, Gilberto M. "Build-Operate- Transfer for Infrastructure Development: Some Lessons from the Philippine Experience," paper submitted to the ERIA Research Project on International Infrastructure Development in East Asia: Toward Effective and Balanced Regional Integration, January 20, 2008 and from Canlas, Dante, Gilberto M. Llanto, Rhea Botha and Domingo Pallarca. (2006)." A Proposed BOT Bill to Enhance Public-Private Partnership in Infrastructure Development." A report submitted to EMERGE Project and the Department of Trade and Industry. June 01.

<sup>2</sup> Senior Research Fellow. The author acknowledges the research assistance of Karl Jandoc and Adora Navarro.

<sup>3</sup> Gilberto M. Llanto, Infrastructure Development: Experience and Policy Options for the Future, Philippine Institute for Development Studies Perspective Series No. 7, Makati City and Gilberto M. Llanto, "Infrastructure and Regional Growth," in *The Dynamics of Regional Development: the Philippines in East Asia*, edited by Balisacan, A. and H. Hill, Quezon City: Ateneo de Manila University Press, 2007.

<sup>4</sup> Malhotra, Anil. (1997) Private participation in infrastructure: lessons from Asia's power sector. Finance and Development, December.

<sup>5</sup> Other economists criticized that the estimated output elasticities were implausibly high. Sturm, Jacobs and Groote (1999) mentioned the criticisms made on Aaron (1990), Hulten and Schwab (1991) and Munnell (1992).

<sup>6</sup> Button (2002) notes the inconclusiveness of empirical evidence on this matter, citing problems with data and techniques that are used to provide empirical estimation on the relationship between infrastructure and economic growth.

<sup>7</sup> Report of the Philippine Infrastructure Workshop (page 4), "Philippines Infrastructure and Business Climate Workshop," Makati Shangri-la Hotel, Makati City, March 1, 2006

<sup>8</sup> ERIA Interim Report, July 19, 2007

<sup>9</sup> UNIDO cites BOT as an approach for medium and large scale infrastructure in several countries. See United Nations Industrial Development Organization (UNIDO), (1996) *Guidelines for Infrastructure Development through Build - Operate - Transfer (BOT) Projects*, Vienna, pp. 2-17, 38-60.

<sup>10</sup> Handley (1997) commented that the country has had the most successful independent power producing BOT programme in the region as a result of its BOT approach.

<sup>11</sup> <http://www.converger.com/eiacab/philippi.htm>

<sup>12</sup> Source: Department of Energy

<sup>13</sup> 2003 Public-Private Infrastructure Advisory Facility (PPIAF) Annual Report

<sup>14</sup> Source: Build-Operate-Transfer (BOT) Center

<sup>15</sup> This is from Llanto (2008).

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<sup>16</sup> Overall infrastructure quality is measured in terms of Railroad infrastructure development, Quality of port infrastructure, Quality of air transport infrastructure, Quality of electricity supply and telephone lines. This section is drawn from Llanto (2008) paper submitted to the Asian Development Bank and the National Economic and Development Authority.

<sup>17</sup> World Economic Forum, “Global Competitiveness Report”, 2006

<sup>18</sup> Adequacy of infrastructure is measured in terms of the extent to which basic, technological, scientific and human infrastructure resources meet the needs of business.

<sup>19</sup> International Institute for Management Development (IMD), “World Competitiveness Yearbook, 2007”

<sup>20</sup> National Economic and Development Authority, “Comprehensive and Integrated Infrastructure Program (CIIP)” Presentation to NEDA Board, 22 May 2007.

<sup>21</sup> This is a point discussed in Section 4 of this paper.

<sup>22</sup> Some examples are cemented basketball courts that are used for drying rice and corn, waiting sheds for pedestrians, street lighting, farm-to-market roads, etc., which form part of an incoherent local investment plan

<sup>23</sup> Reorganized in March 1897 pursuant to Executive Order Nos. 125, and 125-A, DOTC is the executive department of the Philippine government responsible for the maintenance and expansion of viable, efficient, and dependable transportation and communications systems as effective instruments for national recovery and economic progress. Attached to the DOTC are the Land Transportation Office (LTO), Land Transportation Franchising and Regulatory Board (LTFRB), Air Transportation Office (ATO), Manila International Airport Authority-Ninoy Aquino International Airport (MIAA-NAIA), Mactan-Cebu International Airport Authority, Philippine Ports Authority (PPA), Maritime Industry Authority (MARINA), Philippine Coast Guard, Philippine National Railways Corporation (PNR), Light Rail Transit Authority (LRTA) and Metro Rail Transit Corporation (MRTC).

<sup>24</sup> World Bank website. “Transport in the Philippines” <http://go.worldbank.org/7T9R5GE2Q0>

<sup>25</sup> Density = Kilometer of roads divided by the total land area of the country in kilometers. International Road Federation (IRF) World Road Statistics, 2006.

<sup>26</sup> IRF, “World Road Statistics, 2006”.

<sup>27</sup> “Barangay”, (formerly, “barrio”), is the smallest local government (political) unit in the Philippines.

<sup>28</sup> DPWH Website, Infrastructure Statistics, July 2007.

<sup>29</sup> Infrastructure Chapter of the “Medium Term Philippine Development Plan, 2004-2010”, NEDA

<sup>30</sup> The Subic-Clark-Tarlac expressway was inaugurated on March 19, 2008 and was opened on April 18, 2008.

<sup>31</sup> Pursuant to Executive Order No. 124 dated January 30, 1987, the DPWH is mandated to undertake (a) the planning of infrastructure, such as roads and bridges, flood control, water resources projects and other public works, and (b) the design, construction, and maintenance of national roads and bridges, and major flood control systems.

<sup>32</sup> Pursuant to RA 7160 or the Philippine Local Government Act of 1991

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<sup>33</sup> The TRB was created by virtue of Presidential Decree No. 1112, the Toll Operation Decree. It possesses regulatory authority over all toll facilities in the Philippines, and is authorized under its aforesaid charter to enter into contracts in behalf of the Republic of the Philippines, with qualified persons, natural or juridical, for the construction, operation and maintenance of toll facilities.

<sup>34</sup> Paved roads refers to the length of all roads that are surfaced with crushed stone (macadam) and hydrocarbon binder or bituminized agents, with concrete or with cobblestones.

<sup>35</sup> Under the UVVRP, all motor vehicles are prohibited to operate on certain days of the week depending on the last digit of the vehicle's license plates: those ending in 1 and 2 are banned on Mondays; 3-4 on Tuesdays; 5-6 on Wednesdays; 7-8 on Thursdays and 9-0 on Fridays in all, national, city and municipal roads of Metro Manila, from 7 a.m. to 7 p.m. Exempted from the UVVRP are Provincial buses, shuttle buses, school buses and motorcycle units.

<sup>36</sup> The MMDA was created by virtue of RA No. 7924 dated March 1, 1995, to complement the efforts of the Metro Manila LGUs in providing metro-wide services within Metro Manila including (1) Development planning; (2) Transportation and traffic management; (3) Solid waste disposal and management; (4) Flood control and sewerage management; (5) Urban renewal, zoning, land use planning and shelter services; and (6) Health sanitation, urban protection and pollution control and public safety.

<sup>37</sup> PNR is a government corporation created by virtue of Congressional RA No. 4156 dated June 20, 1964

<sup>38</sup> LRTA is a wholly owned government corporation created on July 12, 1980 under Executive Order (EO) No. 603, as amended by EO No. 830 dated September 1982, and EO No. 210 dated July 7, 1987. The LRTA is primarily responsible for the construction, operation, maintenance and/or lease of light rail transit systems in the Philippines.

<sup>39</sup> Sources of information in this section: Light Rail Transit Authority (LRTA), Metro Rail Transit Corporation (MRTC) and the Department of Transportation and Communication (DOTC).

<sup>40</sup> National Economic and Development Authority, "Medium-Term Philippine Development Plan, 2004-2010".

<sup>41</sup> Wikipedia.org, "Philippine National Railways

<sup>42</sup> With the exception of a few kilometers running along Makati City and some portions of the Northrail line, where informal settlers have been moved to government housing projects.

<sup>43</sup> Wikipedia.org, "Manila Metro Rail Transit System",

<sup>44</sup> Manuela, Wilfred S., Jr., "The Evolution of the Philippine Airline Industry", 2005, Airlines e-zine edition, Issue No. 36

<sup>45</sup> World Bank, "World Development Indicators, 2006".

<sup>46</sup> International Institute for Management Development (IMD), "World Competitiveness Yearbook, 2007"

<sup>47</sup> National Statistical Coordination Board, "Philippine Statistical Yearbook 2006"

<sup>48</sup> National Economics and Development Authority, "Medium-Term Philippine Development Plan 2004-2010."

<sup>49</sup> This issue is discussed in section 4.

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<sup>50</sup> Carlos, Meneleo Jr., J., “Seamless Infrastructure Network” presented at the State of Philippine Competitiveness National Conference, National Competitiveness Council, 18 July 2007

<sup>51</sup> National Statistical Coordination Board, “Philippine Statistical Yearbook”, 2006.

<sup>52</sup> Philippine Ports Authority, “Port Performance 2006”

<sup>53</sup> World Container Port League 2005 (Top 50), Containerisation International Yearbook, 2005

<sup>54</sup> TEU = “Twenty-Foot Equivalent Unit,” a standard linear measurement used in quantifying container traffic flows. As examples, one twenty-foot long container equals one TEU while one forty-foot container equals two TEUs (i.e.,  $40' \div 20' = 2$ ).

<sup>55</sup> PFDA is a government owned and controlled corporation attached to the Department of Agriculture, and mandated to promote the development of the fishing industry through the provision of post-harvest infrastructure facilities and essential services that improve efficiency in the handling and distribution of fish and fishery products and enhance their quality. This mandate is pursuant to Executive Order No. 772 dated February 8, 1982 amending P.D. 977.

<sup>56</sup> National Economic and Development Authority (NEDA), “Medium-Term Philippine Development Plan (MTPDP) 2004-2010”.

<sup>57</sup> This section draws from Llanto, Basilio and Basilio (2005)) and Basilio, Llanto and Rodolfo (2007).

<sup>58</sup> Pursuant to RA 7638 or the Department of Energy Act of 1992

<sup>59</sup> RA 6038 dated 04 August 1969 provided for the creation of NEA. At present, NEA is mandated to implement the government’s rural electrification program and to prepare the electric cooperatives to operate in a competitive electricity market by strengthening their technical, financial and institutional viability .

<sup>60</sup> A NEDA source said that ERC is presently processing some of the applications.

<sup>61</sup> NPC was first established under Commonwealth Act No. 120 approved by President Manuel L. Quezon on November 3, 1936 and reorganized pursuant to RA 6395 as amended. The Corporation has evolved through the years responding to the mainstream needs of the economy and will continue to maintain its mandated functions until its gradual privatization as stipulated under the EPIRA

<sup>62</sup> Source: National Transmission Corporation

<sup>63</sup> Won the recently conducted competitive bidding. Has yet to make the initial payment amounting to US\$ million.

<sup>64</sup> Source: Manila Electric Company

<sup>65</sup> WESM Rules

<sup>66</sup> Pursuant to the EPIRA, PSALM is mandated to take ownership, manage, privatize and dispose of all existing generation assets, liabilities, real estate and other disposable resources of NPC including its contracts with independent power producers. PSALM also administers the collection of the universal charge

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<sup>67</sup> Masinloc Power plant was bidden out in December 2003 and was awarded to YNN Consortium for the purchase price of US\$ 561 million. YNN Consortium, however, defaulted on its obligation to pay the 40% and Masinloc was bid anew and awarded recently to AES Corporation. Privatization of TransCo concession was also unsuccessful.

<sup>68</sup> Source: Department of Energy

<sup>69</sup> Source: Department of Energy

<sup>70</sup> As reorganized in March 1987 pursuant to Executive Order Nos. 125, and 125-A

<sup>71</sup> Pursuant to EO 269

<sup>72</sup> The current administration later assigned NTC to be under the supervision of DOTC.

<sup>73</sup> Created pursuant to Executive Order (EO) No. 546 dated 23 July 1979

<sup>74</sup> Pursuant to EO 125-A of 1997

<sup>75</sup> National Telecommunications Commission, 2006

<sup>76</sup> World Bank, "World Development Indicators, 2006"

<sup>77</sup> National Telecommunications Commission, 2006

<sup>78</sup> Based on 2004 NTC Annual Report figures on subscription base.

<sup>79</sup> Based on 2005 estimated land area certified by the Philippine Lands Management Bureau.

<sup>80</sup> Similar to GDP, conceptually there are three approaches for measuring Gross Regional Domestic Product (GRDP), namely, production approach, expenditure approach, and income approach. Production approach expresses GRDP as the total value of final goods and services produced by all production units in a region within a certain period (usually one year period). Expenditure approach expresses GRDP as the total of final demand components, covering the consumption expenditure of households and private non profit institutions, government consumption, gross domestic fixed capital formation, increase in stock and net export within a certain period. Income approach expresses GRDP as the total income by production factors engaged in the production process in a region. The income components of the production factors may take the form of wages or salaries, land rent, capital interest and profit margin. The profits include income tax and other direct taxes.

<sup>81</sup> Pursuant to Sec. 285 of RA 7160 or the Local Government Code of 1991, LGUs shall have a share in the national internal revenue taxes.

<sup>82</sup> National Statistical Coordination Board, "The Philippine Countryside in Figures, 2006

<sup>83</sup> Source: COA 2005 Annual Financial Report for National and Local Government

<sup>84</sup> Derived from "Repair and Maintenance" expenses (in lieu of capital outlays) under the new Government Accounting System (NGAS)

<sup>85</sup> National Statistical Coordination Board, "Philippine Countryside in Figures, 2006

<sup>86</sup> [www.gov.ph](http://www.gov.ph), "State of the Nation Address

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<sup>87</sup> Department of Public Works and Highways (DPWH)

<sup>88</sup> Source: Department of Energy

<sup>89</sup> Llanto, Gilberto M. “Infrastructure and Regional Growth,” Chapter in a volume edited by Hal Hill and Arsenio Balisacan, sponsored by the Asian Development Bank and the Australian National University to be published in 2007.

<sup>90</sup> Cited in Llanto, Gilberto, Henry Basilio and Leilanie Basilio, “ Competition Policy and Regulation in Ports and Shipping,” PIDS Discussion Paper Series No. 2005-02, 2005.

<sup>91</sup> Basilio, Henry, “Trade in Maritime Transport Services,” unpublished paper, March 2007.

<sup>92</sup> *FY 2006 Survey of Japanese Firms’ International Operations*, JETRO, March 2007

<sup>93</sup> Llanto, Gilberto M. “Infrastructure and Regional Growth,” Chapter in a volume edited by Hal Hill and Arsenio Balisacan, sponsored by the Asian Development Bank and the Australian National University to be published in 2007.

<sup>94</sup> Country representative comments made during the Workshop of Economic Research Institute of Asia (ERIA) infrastructure project (final meeting), JETRO-IDE Research Center, Bangkok, Thailand, January 20-21, 2008. The countries represented in the workshop are the following: People’s Republic of China, Indonesia, Myanmar, Thailand, Cambodia, Malaysia, Philippines, Singapore, Lao PDR, Vietnam, Japan and India.

<sup>95</sup> This was prepared by Prof. Dante Canlas as part of a technical memorandum on a review of the (Philippine) BOT law conducted by Dante Canlas and Gilberto Llanto on May 14, 2006.

<sup>96</sup> The national budget may also be maintained in current peso terms during times of fiscal stress

<sup>97</sup> I am indebted to Adora Navarro for a good review of the literature on incomplete contracts theory, which is partly incorporated in this section. The paper was written under the supervision of the author

<sup>98</sup> Williamson, O. E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. The Free Press, New York. ; Williamson, O. E. 1985. *The Economic Institutions of Capitalism*. The Free Press, New York.

<sup>99</sup> Tirole’s 1994 and 1999 papers reject the non-verifiability assumption since contracting parties can always implement a “revelation mechanism.” In Tirole’s view, if parties are risk-averse, a mechanism may be devised that will induce parties to reveal information that may be used to design an optimal contract.

<sup>100</sup> The *New Palgrave – A Dictionary of Economics* [1987] uses the term ‘bounded rationality’ to designate “rational choice that takes into account the cognitive limitations of the decision-maker—limitations of both knowledge and computational capacity.”

<sup>101</sup> The description on BOT approach in this section draws heavily from two major references: Menheere and Pollais ( 1996) and Augenblick, M. and B. Custer, Jr. (1990). I am indebted to Karl Jandoc, research associate for summarizing the work of these authors.

<sup>102</sup> Philippine BOT Law is clear about not providing “direct government guarantee, subsidy or equity” to unsolicited projects.



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<sup>103</sup> Pursuant to Section 12 of RA 7718 the Coordinating Council of the Philippine Assistance Program (CCPAP) was identified as the agency responsible for the coordination and monitoring of projects implemented under the BOT Law. CCPAP was later reorganized and converted into the Coordinating Council for Private Sector Participation (CCPSP), by virtue of AO No. 67, series of 1999, as amended by AO No. 103, series of 2000. EO 144 dated November 2002 provided for the conversion of the CCPSP to the current BOT Center and transferred as an attached unit from the Office of the President (OP) to the Department of Trade and Industry (DTI). The BOT Center is mandated to provide project development assistance and monitoring functions in addition to promotion and marketing of the BOT/PSP program to prospective investors/developers and government agencies.

<sup>104</sup> This is taken from the Technical Memorandum entitled “A Proposed BOT Bill to Enhance Public-Private Partnership in Infrastructure Development” prepared by Dante B. Canlas and Gilberto M. Llanto, with inputs from Rean Botha and Rowena Cham, for the DTI-BOI under the EMERGE Project, June 10, 2006,

<sup>105</sup> These abbreviations refer to build-own-operate, build-lease-transfer, build-transfer-operate, contract-add-operate, develop-operate-transfer & rehabilitate-operate-transfer, respectively

<sup>106</sup> Power plants, highways, ports, airports, canals, dams, hydropower projects, water supply, irrigation, telecommunications, railroads and railways, transport systems, land reclamation projects, industrial estates or townships, housing, government buildings, tourism projects, markets, slaughterhouses, warehouses, solid-waste management, information technology, networks and database infrastructure, education and health facilities, sewerage, drainage and dredging

<sup>107</sup> This is discussed in detail in Llanto (2007b).

<sup>108</sup> References for Terminal III Issues:

- (a) Rimando, Lala, “Government Wins One of its Biggest International Arbitration Cases” NewsBreak (online), Public Trust Media Group, Inc. Friday, 17 August 2007.
- (b) Santos, Rafael S. “Businessmen remind government to keep policy on course” Manila Times, Thursday, September 14, 2006.
- (c) Supreme Court Jurisprudence, En Banc Decision, Agan Jr. vs. Piatco, G.R. No. 155001, 155547 and 155661, May 5, 2003.
- (d) Landingin, Roel, “A commercial compromise: a less than perfect solution may be the only way to open NAIA-3,” Newsbreak, Sunday, February 11, 2007  
[http://www.newsbreak.com.ph/index.php?option=com\\_content&task](http://www.newsbreak.com.ph/index.php?option=com_content&task) (date accessed January 14, 2008)
- (e) [http://en.wikipedia.org/wiki/Ninoy\\_Aquino\\_International\\_Airport](http://en.wikipedia.org/wiki/Ninoy_Aquino_International_Airport)

<sup>109</sup> News sources recently reported another portion of the ceiling collapsing after a strong typhoon visited Metro Manila.

<sup>110</sup> Source: [http://en.wikipedia.org/wiki/North\\_Luzon\\_Expressway](http://en.wikipedia.org/wiki/North_Luzon_Expressway) (date accessed January 14, 2008)

<sup>111</sup> This paragraph and subsequent paragraphs are from <http://www.mntc.com/nlex/overview2.htm> (date accessed January 14, 2008)

<sup>112</sup> Ibid

<sup>113</sup> Ibid.

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<sup>113</sup> This section draws on Canlas, Dante, Gilberto M. Llanto, Rhean Botha and Domingo Pallarca (2006) and Llanto (2007).

<sup>114</sup> Per the ODA Act of 1996, cost overrun is defined as additional costs over and above the ICC-approved project cost.

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## Annex A. A Proposal for an Amended BOT Law

By

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We propose that RA 7718 be amended in pursuit of the goal of the government to enhance PPP in infrastructure development, in general, and promote the use of BOT schema and its variants, in particular. The legal framework we are proposing must be conducive to the protection and enforcement of property and contractual rights, backed by a substantive IRR of maximum clarity. To make the IRR operationally efficient, some institutional reforms are indicated.

Implementing Agencies (IAS) must be empowered to render a first-pass approval in line with the desire to make them assume project ownership. Capacity building aimed at raising the technical, financial, and legal expertise of the IAs is crucial. Meanwhile, the oversight function the ICC exercises over BOT projects may be delegated to a subcommittee whose membership may be stipulated in the IRR. The requirements for a second-pass approval to be retained by the ICC should be focused on aligning any form of government support being contemplated with the existing policies on government procurement, and special fiscal and investment incentives.

The table below shows the sections of the existing law that can be relegated to the IRR. This is followed by a proposed bill amending the current BOT law.

Sec 1: Declaration of Policy	Retain in law with amplification
Sec 2: Definition of Terms	Replaced with a new section (Scope of PPP Contractual Arrangement)
Sec 3: Private Initiative in Infrastructure	Retain in law
Sec 4: Priority Projects	Retain in law with amendment Relegate approval limits to IRR.
Sec 5: Unsolicited Proposals	Subsume under Section on public bidding; unsolicited mode can be undertaken under exceptional cases.

Sec 6: Public Bidding of Projects	Re-affirm in the law the principle of competitive bidding as the principal means of procuring private investment. Law also needs to confirm the principle of publication of contract terms and notification to Congress Relegate provisions dealing with (a) advertisement of project opportunities; (b) financial criteria for identifying winning bids; (c) liability of bidders; and (d) bidding procedures to IRR
Sec 7: Direct Negotiation of Contract	Subsume under section on public bidding of projects, Reaffirm principle that direct negotiation may be entered into only in exceptional circumstances (subject to appeal and safeguards) in law. Relegate provisions dealing with the circumstances under which direct negotiations may be entered into to IRR.
Sec 8: Repayment Scheme	Relegate to IRR
Sec 9: Contract Termination	Reaffirm in the law the principle of government liability for no-fault contract termination.
Sec 10: Regulatory Boards	For deletion
Sec 11: Project Supervision	Subsume/incorporate in the Section on monitoring
Sec 12: Investment Incentives	Retain in law but should be made consistent with Omnibus Investment Code/Investment Priorities Act
Sec 13: Implementing Rules and Regulations	Retain in law with streamlined membership
Sec 14: Co-ordination and Monitoring	Retain in law to include auditing

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**A Bill Seeking to Amend Republic Act no. 7718**

**Section 1. Declaration of policy.**

1. It is the policy of the State to:

a. recognize the indispensable role of the private sector as the main engine for national growth and development;

b. create an enabling environment for public-private partnership (PPP) projects, that is, private-sector investment in public infrastructure for efficient provision of public services;

c. recognize the long-term nature of private investment in infrastructure and services and to mitigate the associated risks by ensuring that the validity and enforceability of contracts are respected through the due process of law;

d. encourage private investment in public infrastructure and/or public services that:

(i) yields value for money for the State by allocating risks to the party best able to manage them;

(ii) is affordable in light of overall budgetary sustainability, forward commitment in relation to public expenditure and the potential returns on private-sector investment;

(iii) maximizes the benefits of private-sector efficiency, expertise, flexibility and innovation;

(iv) is financially viable; and

(v) is desired in light of economic and social benefits and costs;

e. ensure a clear and transparent allocation of roles and functions between the oversight and implementing agencies at the national level to ensure the effective implementation of this Act and to encourage the same at local government level;

f. secure private investment through open and competitive bidding procedures and to permit non-competitive procedures only in exceptional circumstances as allowed by this Act, its Implementing Rules and Regulations (IRR), and consistent with the provision of RA 9184;

g. ensure a consistent approach among government agencies at both national and local levels in the identification, design, assessment, solicitation and management of projects;

h. build the capacity of government agencies and local government units (LGUs) to avail themselves of investment opportunities under this Act;

i. review regularly the progress of the achievement of this policy and to report to Congress on the same.

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2. The NEDA Board shall oversee the implementation of this state policy by all agencies of government at the national and local levels and shall submit an annual report to Congress on the progress achieved. To this end, the NEDA Board, through the Investment Coordination Committee (ICC), shall request national agencies and local government units to submit progress reports of PPP projects.

3. The NEDA Board shall issue the IRR consistent with the provisions of this Act and on any matter it deems appropriate to assist with the implementation of policy. The IRR shall be published in the *Official Government Gazette* and Congress shall likewise be notified of the same within one (1) month of the IRR's publication.

4. For the purpose of this section and subsequent reference in the following sections, "government agency" refers to implementing agencies of the national government, including, government-owned and controlled corporations.

## **Section 2. Scope of Contractual Arrangements**

Government agencies and LGUs may select from the list of contractual arrangements provided below. Each agency, however, may adopt other contractual arrangements that may be decided upon during contract negotiations. New contractual arrangements not listed under this Act may be adopted but shall be approved by the ICC.

- a. ***Build-operate-and-transfer (BOT)***: A contractual arrangement whereby the project proponent undertakes the construction, including financing, of a given infrastructure facility, and the operation and maintenance thereof. The project proponent operates the facility over the fixed term during which it is allowed to charge facility users appropriate tools, fees, rentals, and charges not exceeding those proposed in its bid or as negotiated and incorporated in the contract to enable the project proponent to recover its investment, and operating and maintenance expenses in the project. The project proponent transfers the facility to the government agency or LGU concerned at the end of the fixed term which shall not exceed fifty (50) years: Provided, That in case of an infrastructure or development facility the operation of which requires a public-utility franchise, the proponent must be Filipino or, if a corporation, must be duly registered with the Securities and Exchange Commission (SEC) and owned up to at least sixty percent (60%) by Filipinos.

"The build-operate-and-transfer shall include a supply-and-operate situation, which is a contractual arrangement whereby the supplier of equipment and machinery for a given infrastructure facility, if the interest of the Government so requires, operates the facility providing in the process technology transfer and training to Filipino nationals.

- b. ***Build-and-transfer (BT)***: A contractual arrangement whereby the project component undertakes the financing and construction of a given infrastructure or



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development facility and after its completion turns it over to the government agency or LGU concerned, which shall pay the proponent on an agreed schedule its total investments expended on the project, plus a reasonable rate of return thereon. This project, including, critical facilities which, for security or strategic reasons, must be operated directly by the government.

**c. *Build-own-and-operate (BOO)*:** A contractual arrangement whereby a project proponent is authorized to finance, construct, own, operate and maintain an infrastructure or development facility from which the proponent is allowed to recover its total investment, operating and maintenance costs plus a reasonable return thereon by collecting tolls, fees, rentals or other charges from facility users: Provided, that all such projects, upon recommendation of the ICC, shall be approved by the President of the Philippines as chair of the NEDA Board. Under this project, the proponent that owns the assets of the facility may assign its operation and maintenance to a facility operator.

**d. *Build-lease-and-transfer (BLT)*:** A contractual arrangement whereby a project proponent is authorized to finance and construct an infrastructure or development facility and upon its completion turns it over to the government agency or LGU concerned on a lease arrangement for a fixed period after which ownership of the facility is automatically transferred to the government agency or LGU concerned.

**e. *Build-transfer-and-operate (BTO)*:** A contractual arrangement whereby the public sector contracts out the building of an infrastructure facility to a private entity such that the contractor builds the facility on a turn-key basis, assuming cost overrun, delay, and specified performance risks.  
"Once the facility is commissioned satisfactorily, title is transferred to the implementing agency. The private entity, however, operates the facility on behalf of the implementing agency under an arrangement.

**f. *Contract-add-and-operate (CAO)*:** A contractual arrangement whereby the project proponent adds to an existing infrastructure facility which it is renting from the government. It operates the expanded project over an agreed franchise period. There may, or may not be, a transfer arrangement in regard to the facility.

**g. *Develop-operate-and-transfer (DOT)*:** A contractual arrangement whereby favorable conditions external to a new infrastructure project, which is to be built by a private project proponent, are integrated into the arrangement by giving that entity the right to develop adjoining property, and thus, enjoy some of the benefits the investment creates such as higher property or rent values.

**h. *Rehabilitate-operate-and-transfer (ROT)*:** A contractual arrangement whereby an existing facility is turned over to the private sector to refurbish, operate and maintain for a franchise period, at the expiry of which the legal title to the facility is turned over to the government. The term is also used to describe the purchase of

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an existing facility from abroad, importing, refurbishing, erecting and consuming it within the host country.

**i *Rehabilitate-own-and-operate (ROO)*:** A contractual arrangement whereby an existing facility is turned over to the private sector to refurbish and operate with no time limitation imposed on ownership. As long as the operator is not in violation of its franchise, it can continue to operate the facility in perpetuity.

### **Section 3. Private Delivery of Public Infrastructure and/or Services.**

1. A government agency or LGU may contract with the private sector for the delivery of public infrastructure and / or services in any of the following areas:

- a. energy, including oil and gas;
- b. transport, including railways, roads, tunnels, bridges, ports, canals, channels, airports, pipelines;
- c. water, including, water storage and wastewater;
- d. communications;
- e. information technology;
- f. education;
- g. health;
- h. tourism;
- i. culture, sports, and leisure facilities;
- j. government buildings, industrial estates and townships, and housing;
- k. markets, warehouses, and slaughterhouses;
- l. any other area as may be prescribed.

2. Contractual arrangements that may be utilized for the purposes of projects contemplated in Section 2 shall be determined during the negotiations between the government agency or LGU, on one hand, and the private sector, on the other.

3. For the purpose of this section and subsequent reference in the following sections, “prescribed” means prescribed in the IRR issued in terms of this Act, except as otherwise indicated.

### **Section 4. Project Preparation.**

1. Each government agency or LGU shall within its area of responsibility prepare a project for approval by the approving authority contemplated in Sec 5 in the manner as prescribed.

2. Prior to preparing a project for approval, the head of the responsible government agency or LGU shall review or assess:

(a) the risks associated with the proposed project taking into account the various methods for sharing these risks; and

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(b) the economic and financial feasibility of the proposed project, including, a comparison of the costs and benefits of implementing the project in terms of this Act with the costs of implementation in another form.

3. A government agency or LGU that lacks the capacity to prepare a project in the manner as prescribed (including the pre-bidding, bidding and contract management stages of the project) can tap the Project Development Facility (PDF). The PDF will be a fund whose start-up money will come from the national government budget or where feasible, grants from donors of official development assistance (ODA). In the case of a government agency, the PDF shall be appropriated within its budget ceiling, to enable the government agency to solicit assistance or expert advice as necessary. In the interest of sustainability, the winning bidder for a PPP project shall be required to compensate for the cost the government agency expended in developing the proposal. In the case of LGUs, the DOF shall act as custodian of the PDF and the winning bidder for a LGU-initiated PPP project shall likewise compensate the cost expended in developing the proposal. In the event that resources from the PDF are unavailable to render the required assistance within the prescribed period, the government agency or LGU shall report the same to the ICC and NEDA Board, respectively.

4. The NEDA Board, upon receiving such report, shall:

- (a) request the Department of Budget and Management (DBM) to allocate alternative resources from within government to assist the government agency;
- (b) seek such additional resources as may be available to government to assist the government agency or LGU; or
- (c) based on the overall priorities of the Medium Term Philippine Development Plan (MTPDP) and the government agency's prioritized projects appearing in the Medium-term Public Investment Program (MTPIP) or in the LGU's local development plan, direct the government agency, or request the LGU to re-prioritize its programs and project, or delay the project until the budget required for the proposed project can be accommodated;

5. The NEDA Board shall communicate its decision under subsection (4) to the government agency within 30 days and shall report thereon in its Annual Report contemplated in Section 1.

6. The NEDA Board may, in writing, delegate its powers under this section to the ICC.

### **Section 5. Approving Authority**

1. A national government agency that has identified and prepared a project in the manner specified in Sec 4 shall:

- (a) be required to endorse through the head of the government agency, the project proposal and contract to the ICC. This endorsement shall serve as the first-pass approval for the project and draft contract. All government agencies are required to review the

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technical, legal, financial, economic and social implications of the project and approve the same prior to endorsement to the ICC.

(b) submit projects of major national importance with a contract value above an amount as may be prescribed, to the NEDA Board for approval; all other projects to the ICC for approval.

2. All local government PPP projects shall be approved following the provisions of the Local Government Code.

### **Section 6. Implementing, Monitoring, and Auditing Functions.**

1. A government agency or LGU that has secured approval for a project in the manner contemplated in Sec 5 shall be responsible for the implementation, management, and supervision of the project. Regular monitoring reports shall be submitted to the ICC for its information.

2. Regular auditing shall likewise be conducted following Commission on Audit (COA) guidelines. Reports may be requested from the respective government agency, LGU, or COA as deemed necessary.

### **Section 7. Competitive bidding procedures.**

1. Competitive bidding procedures shall apply to all projects for which private investment is solicited in terms of this Act.

2. Under exceptional cases, government agencies may resort to direct negotiations under such conditions prescribed in Section 53 of RA 9184. LGUs may resort to direct negotiations under conditions prescribed in the Local Government Code and/or RA 9184 as applicable. Such conditions shall include a requirement that the government agency or LGU must give public notice in the prescribed manner of:

- (a) the intention to enter into direct negotiations ;
- (b) the conclusion of negotiations to enter into a contract through direct negotiation; and
- (c) the salient terms of the contract to be concluded.

3. A government agency may only entertain an unsolicited proposal provided that such proposal is not contained in its prioritized projects in the MTPIP. In the case of LGUs, an unsolicited proposal may be entertained provided it does not appear in the local development plan of the LGU concerned.

The other conditions for considering an unsolicited proposal are as follows:

- (a) the government agency or LGU has notified in writing the approving authority within seven (7) working days of the receipt of the proposal;

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- (b) the head of the government agency or head of the LGU has conducted an assessment as contemplated in Section 4(2) and has certified in writing to the approving authority that it is capable of conducting all proceedings relating to the proposal;
  - (c) the head of the government agency or LGU certified in writing that the proposed project serves the public interest;
  - (d) the proposal does not entail the provision of any form of government guarantee, subsidy, or undertakings as may be prescribed;
  - (e) the proposal complies with such requirements for unsolicited proposals as may be prescribed; and
  - (f) the proponent has indicated its costs for developing the proposal in the prescribed manner.

4. Notwithstanding compliance by any government agency or LGU with the provisions of subsection (3), the ICC may direct a government agency or LGU not to proceed with its consideration of an unsolicited proposal until such time as the latter satisfies the approving authority that:

- (a) it has access to adequate resources to properly assess the proposal, to conduct the evaluation of comparative proposals, to conduct negotiations and to oversee implementation; and
- (b) the proposal meets such requirements related to the public interest as may be prescribed.

5. All unsolicited proposals shall be subject to comparative proposals, after approval by the approving authority, in the manner as may be prescribed.

6. A government agency or LGU during its negotiations and before issuing a request for comparative proposals, negotiate with the proponent that it be compensated for the cost of developing the proposal and to submit the proposal to competitive bidding procedures. The government agency or LGU shall introduce, as part of the bidding conditions, a requirement that the winning bidder (if not the original proponent) be reimbursed for its costs in developing the proposal or for such amount as the government agency or LGU and the proponent may agree beforehand in writing.

Non-compliance with the provisions of subsection (3) shall be a ground for declaring a contract null and void.

## **Section 8. Contracts and Public Disclosure**

1. Copies of all contracts concluded in terms of this Act shall be the responsibility of the government agency or LGU. The said government agency or LGU is required to forward a copy of the signed agreement to the ICC for records purposes.

2. The grant of access to the signed agreements by the public shall be the responsibility of the government agency or LGU.

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## **Section 9. Validity of contracts**

1. No party may, in proceedings before any court, allege the invalidity of any contract concluded under this Act on the grounds of non-compliance with the provisions of this Act or its IRR after a period of 90 days has elapsed from the date of publication of the approval of the government-procured project in the *Official Gazette*.

## ***Section 10. Contract Termination***

1. In the event that a project is revoked, cancelled or terminated by the Government through no fault of the project proponent or by mutual agreement, the project proponent shall be compensated by the government as provided for in the contractual agreement.

2. In cases where the government defaults on certain major obligations in the contract and such failure is not remediable or if remediable shall remain unremedied for an unreasonable length of time, the project proponent may, by prior notice to the concerned government agency or LGU, specifying the turn-over date, terminate the contract. The private proponent shall likewise be compensated by the Government according to the provisions of the contractual agreement.

## **Section 11. Investment promotion**

1. The status of the BOT Center as a unit attached to the Department of Trade and Industry (DTI) is hereby confirmed. The Center shall, henceforth, be known as the Public- Private Partnership Center (PPPC).

2. The main responsibilities of PPPC include:

(a) promote and market the government's private-sector investment program, including the formulation and implementation of a promotion and marketing plan, providing service as an information center for investors/developers, as well as for government agencies;

(b) participate in the technical working group (TWG) that may be established by the IRR Committee;

(c) perform business development and investment-related activities in support of the other functions and mandate of the DTI; and

(d) perform such other functions as may be prescribed under the IRR.

## **Section 12. Liability**

In accordance with Section 38, Chapter 9 of the Administrative Code, the head of the government agency shall not be held liable for any bona fide act or omission undertaken for the purposes of implementing this Act or its IRR unless there is a clear showing of bad faith, malice, or gross negligence.

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### **Section 13. Implementing Rules and Regulations**

1. The IRR issued in terms of Republic Act No. 6957 as amended by Republic Act No. 7718 remain in force until repealed in terms of this Act.

2. The IRR committee may, subject to the approval of the NEDA Board and after conducting public consultations and publication as required by law, issue the IRR to provide for the implementation of this Act in the most expeditious manner. The committee may, as needed, update such IRR from time to time.

3. Without limiting the generality of the foregoing, the IRR may provide for -

(a) contractual arrangements and repayment schemes that may be entered into under this Act;

(b) areas in which private investment may be solicited;

(c) institutional arrangements for bid management;

(d) manner of preparation and content of documents, including, clarifications and pre-bid conferences;

(e) qualification of proponents, contractors, bidders and facility operators;

(f) procedures for competitive bidding;

(g) procedures for direct negotiation;

(h) procedures for unsolicited proposals;

(i) contract negotiation and award;

(j) contract approval and implementation;

(k) investment incentives, government guarantees, support, and undertakings;

(l) contract management, coordination, monitoring, and auditing;

(m) the powers, functions and duties of concerned agencies;

(n) any other matter required for the expeditious implementation of the Act.

4. For the purposes of this section, “committee” means a committee appointed by the President comprising one representative from each of the following-

a. the Department of Public Works and Highways (DPWH);

b. the Department of Transport and Communications (DOTC);

c. the Department of Energy (DOE);

d. the Department of Trade and Industry (DTI);

e. the Department of Finance (DOF);

f. the Department of Interior and Local Government (DILG);

g. the National Economic and Development Authority (NEDA); and

h. the Department of Budget and Management (DBM); and

i. the Office of the President (OP).

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**Section 14. Repeal Clause**

All laws or parts of any law inconsistent with the provisions of this Act are hereby repealed or modified accordingly.

***Section 15. Separability Clause***

If any provision of this Act is held invalid, the other provisions not affected thereby shall continue in operation.

***Section 16. Effectivity Clause***

This Act shall take effect fifteen (15) days following its publication in the *Official Gazette* and in at least two (2) newspapers of general circulation.