



2006 2nd QUARTER ECONOMIC REPORT: INFRASTRUCTURE SPENDING AND PHILIPPINE DEVELOPMENT

Sustaining its robust growth in the previous quarters, the domestic economy expanded by 5.5 percent in the second quarter of 2006. The first quarter gross domestic product (GDP) was revised upwards, from 5.5 percent to 5.7 percent, bringing the first semestral growth to 5.6 percent. Not only does this make the government's 5.5 percent-6.1 percent full year forecast look much more achievable, it also makes the Philippines' growth more comparable to other Asian economies.

Table 1. Gross Domestic Product Growth Rates of Asian Nations, 2006

Country	GDP		
	Q1	Q2	Average
China	10.3	11.3	10.8
Singapore	10.6	8.1	9.4
Hong Kong	8.2	5.2	6.7
South Korea	6.1	5.3	5.7
Philippines	5.7	5.5	5.6
Malaysia	5.3	5.9	5.6
Thailand	6	4.9	5.5
Indonesia	4.6	5.2	4.9
Taiwan	4.9	4.6	4.8

Source: *The Economist*

The second quarter growth was mainly characterized by the strong performance of agriculture, better manufacturing, healthy finance and real estate, surging OFW remittances, and the remarkable turnaround of exports.

Table 2. GDP and GDP Growth Rates By Industry and Expenditure Share (At Constant Prices)

	Q2		First Half	
	2005	2006	2005	2006
Gross national product	5.8	6.6	5.3	6.5
Gross domestic product	5.4	5.5	4.8	5.6
Net factor income from abroad	9.4	18.3	11.0	16.8
By Industry				
Agriculture & fishery and Forestry	2.1	6.7	0.7	5.2
<i>Agriculture & fishery</i>	2.2	6.7	5.1	8.0
<i>Forestry</i>	-10.6	10.0	-33.0	22.4
Industry	5.8	4.5	4.7	5.1
<i>Mining & quarrying</i>	13.6	3.5	4.8	2.7
<i>Manufacturing</i>	5.8	6.5	5.4	6.4
<i>Construction</i>	4.5	-3.8	2.3	-0.4
<i>Electricity, gas & water</i>	3.2	3.4	2.7	4.0
Service	6.4	5.7	6.7	6.1
<i>Transportation, comm. & storage</i>	7.0	4.1	8.7	5.4
<i>Trade</i>	5.9	5.2	5.8	5.2
<i>Finance</i>	11.7	10.0	12.1	12.2
<i>Ownership of dwellings & real estate</i>	3.9	5.8	5.3	4.7
<i>Private services</i>	6.8	6.0	5.8	6.5
<i>Government services</i>	2.7	4.4	3.2	3.8
By Expenditure Share				
Personal consumption	4.8	5.2	4.9	5.4
Government consumption	12.4	0.4	7.5	3.9
Capital formation	-4.1	-5.8	-6.6	-3.8
<i>Fixed capital</i>	-2.5	-5.4	-5.3	-2.7
<i>Construction</i>	2.1	-5.2	-0.1	-2.1
<i>Public</i>	-1.6	2.1	-6.0	6.2
<i>Private</i>	4.9	-10.5	3.9	-7.1
<i>Durable equipment</i>	-7.6	-6.2	-10.2	-3.3
<i>Breeding stock & orchard dev't</i>	2.5	-1.7	1.1	-1.5
Exports	1.6	22.3	1.5	17.5
<i>Merchandise exports</i>	1.9	21.8	2.5	16.8
<i>Non-factor services</i>	0.2	25.2	-3.6	21.9
Imports	2.6	4.0	0.3	2.5
<i>Merchandise imports</i>	2.0	4.3	-0.5	2.4
<i>Non-factor services</i>	15.9	-2.2	17.0	4.2

Source: National Statistical Coordination Board

Revitalized agriculture. Agriculture bounced back in the second quarter of 2006, surging to 6.7 percent this year from 2.1 percent in the same period in 2005. Palay and corn production increased by 10.3 percent and 49.2 percent, respectively, as a result of better irrigation, favorable weather, continued technical assistance from the government and the availability of improved variety. During the quarter, palay production yield reached 3.9 tons per hectare. The year 2006 was also favorable for corn growers as corn production yields increased to an average of 2.6 tons per hectare.

**Table 3. Palay and Corn Yield
2005 and 2006 (yield/hectare, in tons)**

Item	Jan-Mar		Apr-Jun		Jan-Jun	
	2006	2005	2006	2005	2006	2005
Palay						
Average	3.5	3.4	3.9	3.8	3.7	3.6
Irrigated	4.0	3.9	4.2	4.1	4.1	4.0
Rainfed	2.4	2.3	2.6	2.4	2.5	2.3
Corn						
Average	2.6	2.3	2.5	2.1	2.6	2.2
White	1.6	1.4	1.8	1.5	1.7	1.4
Yellow	3.6	3.2	3.4	3.0	3.5	3.2

Source: Bureau of Agricultural Statistics

Better manufacturing. Among the subsectors of industry, only manufacturing fared better in the second quarter of 2006. Manufacturing growth increased to 6.5 percent from 5.8 percent in 2005, the highest since the fourth quarter of 2004. Food manufactures, which comprise 40.6 percent of the subsector's gross value added expanded by 7.6 percent. Also notable was the growth in products of petroleum and coal (22 percent) which has been steadily picking up, likewise those of leather and leather products (178 percent), textile manufactures (20 percent) and basic metals (33percent).

**Table 4. Manufacturing Growth Rates
Second Quarter 2005 and 2006 (in percent)**

	Q2 2005	Q2 2006
Leaders		
Leather & leather products	-39.10	177.90
Basic metal industries	4.90	33.40
Publishing & printing	-2.10	25.60
Products of petroleum & coal	32.80	22.20
Textile manufactures	11.50	20.50
Laggards		
Wood & cork products	-41.40	-35.40
Tobacco manufactures	4.00	-27.50
Transport equipment	37.30	-26.90
Non-metallic mineral products	-9.60	-18.50
Rubber products	5.40	-18.20

Source: National Statistical Coordination Board

Industry's overall performance was adversely affected by a weak construction subsector, both public and private. Private construction suffered a contraction of 10.5 percent from the 4.9-percent growth in the second quarter of 2005. Similarly, government construction grew by a mere 2.1 percent in the second quarter, a significant deceleration from its 14.0-percent growth in the first quarter of this year. It is, however, an improvement from the 1.6-percent decline posted in the second quarter of last year.

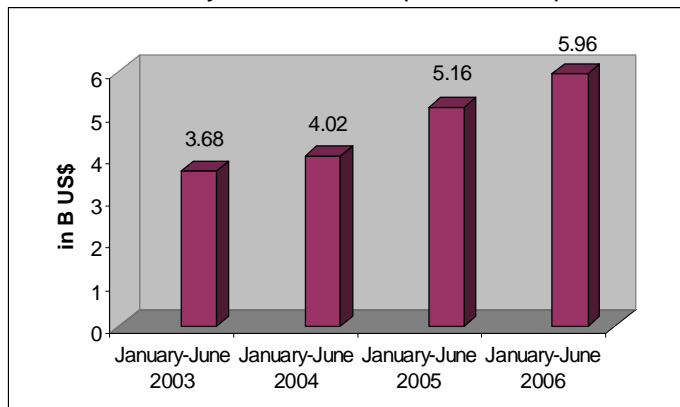
Healthy finance and real estate. The services sector was still a major source of growth, contributing 2.8 percentage points to GDP in the second quarter of 2006 but its subsectors grew at a slower rate. Transportation, communication and storage, in particular, slipped to a 4.1-percent growth in the second quarter of this year from 7.0 percent last year, a result of the escalating oil prices. Stiff competition among mobile service providers and the already saturated market slowed down the communication sector from 15.9 percent in the second quarter of 2005 to 8.4 percent in the second quarter of 2006.

The increases in finance and real estate, however, compensated for the decline in the other subsectors. Finance registered a healthy growth of 10 percent owing to the remarkable growth of the non-banks subsector. Non-banks, which include financial services from investment companies, security dealers, brokers and pawnshops, grew vigorously at 104 percent in the second quarter of this year, from 1.4 percent last year. This was primarily attributed to the strong performance of the stock market and credit card companies. The Philippine stock index increased from 1,793.7 points in the first half of 2005 to 2,201.6 points this year, which translates to a 22.7 percent growth from last year. Credit card companies, meanwhile, cashed in on the increasing number of higher paying jobs, particularly in call centers and other business process outsourcing (BPO) companies.

Ownership of dwellings and real estate, likewise, accelerated to 5.8 percent from 3.9 percent in the previous year. The growth was spurred by the increased sales from residential projects, strong demand for business offices from the BPO sector as well as higher rental and leasing operations from newly opened malls.

Surging OFW remittances. OFW remittances from January to June 2006, grew by 15.4 percent over the same period last year. This, in turn, drove up private consumption to 5.2 percent from 4.8 percent in the same period last year. The presence of high disposable income from OFW remittances was evident in the high consumption of food, transportation and household operations.

Figure 1. OFW Remittances
January-June 2003-2006 (in billion US\$)



Source: *Bangko Sentral ng Pilipinas*

OFW remittances also accounted for the remarkable growth of the net factor income from abroad (NFIA). NFIA grew 18.3 percent in the second quarter of 2006 or almost double that of last year's 9.4 percent. This resulted in a higher gross national product (GNP) of 6.6 percent in the second quarter.

Remarkable turnaround of exports. Exports recovered, from 1.6 percent in the second quarter of last year to 22.3 percent this year. In particular, merchandise exports grew by 21.8 percent, bringing its first semester average growth to 16.8 percent, or twice the targeted 8 percent growth for the year. The second quarter growth was led by increased exports of finished electrical machinery at 31.2 percent; semiconductors and electronic microcircuits, 16 percent; garments, 23.8 percent; gold from copper

Table 5. Top 5 Merchandise Exports
Second Quarter, 2006 (in percent)

Contributor to growth	Q2 2006 (at constant prices)	Contribution to export growth
Finished elect'l machinery	31.20	3.25
Semicon & electronics	16.00	2.51
Garments	23.80	1.97
Gold from copper ores	416.60	1.43
Bars, rods of copper	30.00	0.55

Source: *National Statistical Coordination Board*

ores, 416.6 percent; bars and rods of copper, 30 percent.

The demand for semiconductors and electronic microcircuits in the second quarter was driven by the rising global demand for mobile phones, digital cameras, digital music players and laptop computers. Meanwhile, the growth of gold from copper ores soared to 416.6 percent as the prices of gold in the international market remained high.

It should be noted that despite the slowdown of the US economy, exports to the US grew by 17.9 percent to US\$2 billion in the second quarter of 2006.

Exports of non-factor services likewise expanded by 25.2 percent, from a marginal 0.2 percent same period last year. This is largely attributed to IT-enabled services like contact centers, medical transcription and software development.

Given the strong exports, total imports expanded by 4.0 percent from last year's expansion of only 2.6 percent. There was healthy growth of merchandise imports such as electrical machinery (19.3 percent), textile yarns (15.9 percent), and artificial resins and plastics (13.4 percent). Mineral fuel imports, on the other hand, fell by 7 percent, an effect of rising oil prices in the global market.

Prospects for the rest of the year

The 5.5-percent GDP growth in the second quarter indicates that the full year growth projection of 5.5 percent to 6.1 percent is likely to be reached. However, there are challenges to contend with.

For one, the havoc wreaked by typhoon *Milenyo* is expected to have a negative impact on growth. Whether it will be minimal or substantial is yet to be known though. As of October 4, the National Disaster Coordinating Council estimates the damaged properties at P2.93 billion, with the farm sector suffering the most. Agricultural losses are pegged at P1.84 billion while infrastructure damages are at P970 million. Earlier, it was projected that with the end of La Niña, agriculture will help pull up the second half growth.

Table 6. Estimated Damage to Properties of Typhoon Milenyo as of October 4, 2006

Total Damage Properties	2,927,463,602
Agriculture	1,838,694,871
Infrastructure:	970,032,280
School Buildings	118,736,450

Source: National Disaster Coordinating Council

Apart from the damage to properties, the typhoon also downed power and telephone lines causing the financial markets to temporarily shut down, telecommunication services to be interrupted and most commercial establishments to close shop. On the positive side though, the power outage caused hotels in the metro to be fully booked, while the increased government spending to repair the damages is expected to be a factor in the second half growth.

On the international front, the volatility in the world price of oil remains to be a threat. Dubai crude is currently priced at US\$54.92 per barrel,¹ 2.3 percent lower from last month's US\$68.56/bbl. Yet despite the recent decline, oil prices are expected to remain unstable as the precarious geopolitical situation in the Middle East and the tight demand-supply situation continue to propel the volatility of oil prices.

The moderation in the growth of the US market is also an imminent threat. The US economy grew slowly in the second quarter at 2.6 percent after expanding 5.6 percent in the first quarter.² This was brought about by the lukewarm housing market, rising energy prices and higher interest rates that affected consumer spending. The US economy is expected to grow by only 3.4 percent for the whole of 2006, and even slower at 2.9 percent in 2007 (World Economic Outlook, IMF September 2006). If this sluggish trend will continue, it will have an adverse impact on the Philippine economy as the US remains to be one of its largest trading partners.

There is also a recurrent concern that the US Federal Reserve may resume increasing interest rates. The US Federal Reserve is, at present, holding

¹ September 25, 2006 price

² US Bureau of Economic Analysis, <https://bea.gov/bea/newsrel/gdpnewsrelease.htm>

the US key interest rate at 5.25 percent, but it warned that rates could go up again if inflation carried on.

Balancing these threats are some favorable developments in the global environment such as the current upturn of the European Union's economy and the economic recovery of Japan.

On top of these, seasonal factors in the 3rd and 4th quarters add to the optimism that better growth is in the offing. For instance, the second half ushers in the Christmas season where OFW remittances normally pour in by the buckets. The high remittance inflows normally result in a stronger peso, which in turn, lower the cost of imported inputs used in export goods such as semiconductors and electronics. More stable input prices are expected to buoy up manufacturing activities. Higher demand for consumables like food, beverage, textile, footwear and other household basics is also expected to rise during the holiday season.

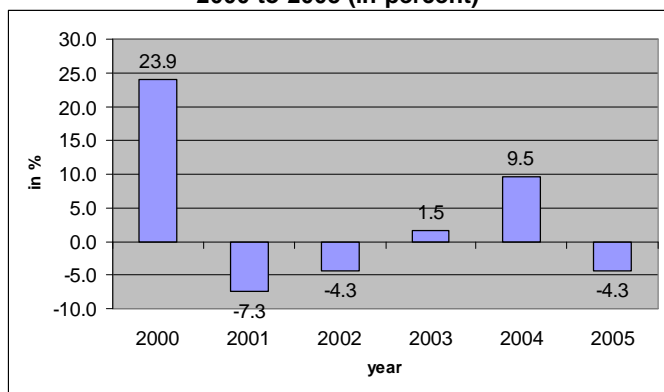
In addition, firms usually replenish their inventories in the third quarter, implying an increase in the demand for exports, particularly electronics. The Semiconductor and Electronics Industries in the Philippines, Inc. forecasts at least 10 percent growth in electronics for 2006.

The growth in the next two quarters will be further boosted as the fiscal position of government continues to improve. The January to August 2006 deficit only reached P34.2 billion, lower than the targeted deficit for the period. If revenues continue to increase, government can spend more on infrastructure and social services.

This better fiscal position likewise will allow the government to address the remaining bottlenecks which hinder the country from achieving higher growth. Foremost of these is the decline in capital formation. Capital formation has shrunk from 23.9 percent in 2000 to -4.3 percent in 2005, a major aspect of which is the poor state of infrastructure in the country. Government infrastructure spending as a percentage of GDP has substantially declined from 3.54 percent in 2000 to 2.22 percent in 2005.

Compared to other ASEAN countries, the Philippines' infrastructure spending is substantially lower.

Figure 2. Gross Capital Formation 2000 to 2005 (in percent)



Source: National Statistical Coordination Board

INFRASTRUCTURE SPENDING AND PHILIPPINE DEVELOPMENT

The link between investments in infrastructure and economic growth is well established in the literature. Various studies reveal that there is a positive correlation between infrastructure, economic growth and, ultimately, poverty reduction. In the Philippines, the World Bank estimates an 85 percent correlation between GDP growth and infrastructure expenditures. Further, it has been identified that “safe, reliable and cost effective infrastructure is an important contributor to raising living standards, thereby improving the quality of life.” In a report of the Organisation for Economic Cooperation and Development (OECD) in 2001, it was similarly noted that public investments in transport, communication and infrastructure enhance private sector innovation and productivity.

Impact of Infrastructure in Development

Infrastructure and Economic Development

The role infrastructure plays in economic development cannot be understated. According to studies, investment in infrastructure does not necessarily ensure growth but it nevertheless contributes to the realization of the economic

potentials of the country. In particular, infrastructure affects a country's economic development in the following ways:

- Good infrastructure improves a country's growth prospects by strengthening its investment climate thereby making it attractive to foreign investors (World Bank 2005);
- Infrastructure lowers cost of production and significantly increases industrial productivity (Erquiaga 2006, World Bank 2005, Sridhar and Sridhar 2004); and
- Infrastructure, in particular, information communication technology, helps people access prices, markets and job opportunities (Sridhar and Sridhar 2004).

Notably, the presence of good infrastructure assists the activities of major economic sectors. For instance, Erquiaga (2006) cited the importance of infrastructure facilities in the sectors of tourism and agriculture. The absence or lack of transportation (roads and bridges), water (quality water and sanitation) and energy facilities may result in a paralysis of activities in these industries.

Infrastructure and Poverty Reduction

Infrastructure likewise plays a role in poverty alleviation as higher economic growth leads to poverty reduction. According to the World Bank (2005), the following economic growth indicators and their subsequent poverty reduction effects may be realized through infrastructure spending: (a) increases in average income means people have more money to spend; (b) increased employment; and (c) greater public revenues allowing government to spend more on social services, such as health and education.

In an ADB study done by Chatterjee et al. (2004), investments in infrastructure facilities were proven to have significant impacts on poverty reduction in several countries in the Asia and the Pacific region. Citing two infrastructure subsectors, roads and energy, the study found that they have positive effects in reducing income and non-income poverty.

In terms of transportation, the following were found to be the main effects to reduce income poverty:

- Access to roads reduced prices under conditions of competitive transport services provision;
- Mobility was increased;
- The poor were able to find better paying work; and
- Better transportation allowed production and marketing of higher-value cash crops and supply of cheaper agricultural inputs.

With regard to the impact of power infrastructure, the ADB study found the following:

- Rural electrification helped stimulate the rural economy and increased opportunities for off-farm employment of the poor;
- Use of television led to improved information on crops and contributed to improved farm productivity;
- Lighting allowed longer work hours and higher productivity.

As for the impact on non-income poverty, it should be noted that the provision of roads in these countries “reduced travel time and provided better access to basic education and health services.” The provision of electric power, meanwhile, resulted in (a) longer time for studies and years of schooling; (b) increased safety and security; and (c) better medical services in the rural areas.

Status of Philippine Infrastructure

The quantity and quality of Philippine infrastructure have generally failed to keep pace with the growing demands of the population. Results of the World Competitiveness Rankings would indicate that the state of Philippine infrastructure has been slipping in recent years. In 2002, the Philippines ranked 47th out of 61 countries and territories in terms of infrastructure. In 2006, its ranking fell to the 56th place.

The gravity of the situation can be further grasped when the Philippines’ ranking is compared with the infrastructure ranking of other countries in Asia. Except for Indonesia which placed last in terms of infrastructure, the Philippines fared worse compared with the rest of its neighbors. In 2006, Malaysia was ranked 31st and Thailand 48th.

Table 7. Selected Asian Countries’ Infrastructure Rank
World Competitiveness Report 2004-2006

Country	2004	2005	2006
China	41	42	37
Indonesia	60	60	61
Korea	27	23	24
Malaysia	30	34	31
Philippines	59	55	56
Taiwan	20	18	20
Thailand	50	47	48

Source: World Competitiveness Yearbook, various years

While the country performed quite well with regard to technological infrastructure, owing to its high percentage of high-tech exports, investment in telecoms and mobile telephone costs, it ranked very low in terms of all other infrastructure subcategories. It even ranked last among the 61 countries in basic infrastructure which includes the country’s roads, air and water transport systems, as well as the energy infrastructure.

Table 8. Philippines’ Ranking in Infrastructure
Subcategories, 2006

Subcategories	Rank
Basic Infrastructure	61
Technological Infrastructure	37
Scientific Infrastructure	58
Health and environment	53
Education	57

Source: World Competitiveness Yearbook, 2006

Power. In terms of access to electricity, the Philippines performs quite adequately. By the end of 2002, 89.1 percent of the population had access to electricity, less than that of Malaysia and Thailand but comparably better than that of Indonesia and Vietnam. In terms of barangay electrification, the Philippines has also been experiencing steady growth, improving from 83.04 percent in 2000 to 93.7 percent by the end of 2005 (see Figure 3). However, the problem lies in the quality of service.

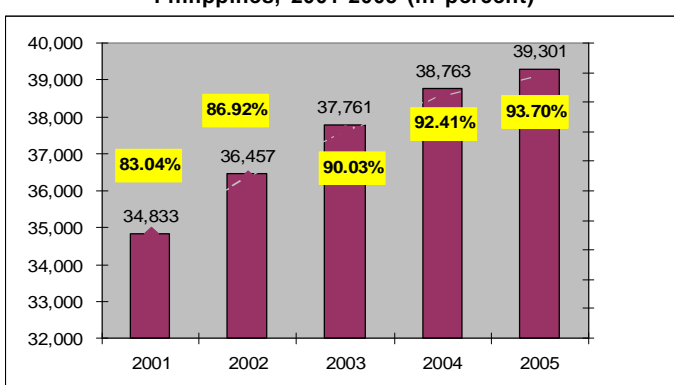
On a scale of 1-7, with seven being the highest, the Philippines scored only 3.7 for quality of service. Transmission and distribution losses in the country were also among the worst in the region. At 16.3 percent in 2002, it is even less efficient than Vietnam and Indonesia. This national average also masks the wide diversity between the losses of distribution utilities in major metropolitan areas (e.g. Meralco and Davao Light and Power) and those of electric cooperatives.

Table 9. Status of Power Infrastructure Selected Countries, Various Years

	Electrification Rate, (%) ^a		Quality of Electric Supply, 2003/2004 (scale 1-7) ^b	Transmission and Distribution Losses, 2002 (%) ^c
	2000	2002		
Korea	100	100	6.1	5.99
Singapore	100	100	6.7	8.52
China	98.6	99	4.2	7.12
Malaysia	96.9	97.1	5.9	5.55
Mongolia	90	90	nd	nd
Thailand	82.1	91.1	5.3	7.26
Philippines	87.4	89.1	3.7	16.33
Viet Nam	75.8	79.6	3.4	14
Indonesia	53.4	52.5	3.6	16.16

Sources: a. International Energy Agency. *World Energy Outlook 2004*;
 b. World Economic Forum. *Global Competitiveness Report 2003-2004*;
 c. World Bank. *World Development Indicators 2006*;

Figure 3. Barangay Electrification Status Philippines, 2001-2005 (in percent)



Source: National Electrification Administration

Telecommunications. Access to fixed telephone lines is also quite low in the Philippines although this is mitigated by the substantially higher level of access to mobile telephones. Fixed line access is among the lowest in the region, with only 4.1 lines per 100 people at the end of 2003. This had dropped to 4 percent at the end of 2005. Despite the

country's being tagged as the text capital of the world, its density of mobile subscribers, which had grown substantially from 27.8 percent at the end of 2003 to 41.3 percent at the end of 2005, is considered by the World Bank to be just average for the region.

Table 10. Status of Telecoms Infrastructure Selected Countries, 2003

Country	Mainlines per 100 people, 2003	Mobile subscribers per 100 people, 2003
Korea	53.83	70.09
Singapore	45.03	85.25
China	20.90	21.48
Malaysia	18.16	44.20
Mongolia	5.62	12.98
Thailand	10.49	39.42
Philippines	4.12	27.80
Viet Nam	5.41	3.37
Sri Lanka	4.90	7.27
Indonesia	3.94	8.74
India	4.63	2.47

Source: *Philippines - Meeting Infrastructure Challenges*, World Bank 2006

Table 11. Philippines' Teledensity 2000-2005 (in percent)

Year	Fixed Line Subscribers	Mobile
2000	4.0	8.5
2001	3.8	15.6
2002	4.2	19.4
2003	4.1	27.8
2004	4.2	39.8
2005	4.0	41.3

Source: *Philippine Statistical Yearbook 2005*

Water and sanitation. Access to improved water sources³ in the country is relatively high at 85 percent of the population in 2002. But it has shown signs of slipping, down from 87 percent coverage in 1990. This could indicate that the infrastructure coverage has not kept up with the population growth. Furthermore, the national average also does not reflect the disparity in access across regions with

³ Improved drinking water sources, as defined by UNICEF and the WHO, are: household connection, public standpipe, borehole, protected dug well, protected spring, or rainwater collection. Unimproved drinking water sources include: unprotected well, unprotected spring, rivers or ponds, vendor-provided water, bottled water and tanker truck water.

ARMM having only 29 percent access compared to 97 percent for Central Luzon. Access to improved sanitation facilities,⁴ which was at 73 percent in 2002, is relatively better than other Asian countries’.

Table 12. Access to Drinking Water and Sanitation Selected Countries, 1990 and 2002 (in percent)

Country	Year	Access to Improved drinking water			Access to Improved sanitation		
		Total	Urban	Rural	Total	Urban	Rural
China	1990	70	100	59	23	64	7
	2002	77	92	68	44	69	29
Indonesia	1990	71	92	62	46	66	38
	2002	78	89	69	52	71	38
Philippines	1990	87	93	82	54	63	46
	2002	85	90	77	73	81	61
Malaysia	1990	n/d	96	n/d	96	94	98
	2002	95	96	94	n/d	n/d	98
Vietnam	1990	72	93	67	22	46	16
	2002	73	93	67	41	84	26

Source: Philippines- Meeting Infrastructure Challenges, World Bank 2005

Roads. The Philippines compares favorably in terms of road density, at 2.5 kilometers/1000 people in 2001, with its regional neighbors. The national data though fail to indicate the large regional variations in road density in the country. Metro Manila ranks lowest in terms of kilometers per population with 0.5 km. per 1000 people while CAR ranks highest with 6.4 km. per 1000 people. The quality of the road network, measured in terms of

Table 13. Road Network and Paved Roads Selected Countries, 2001 and 2002

Country	Total road network, 2001 (km./1000 people)	Paved roads per land area, 2002 (km./sq.km.)
Korea	1.8	0.55
Singapore	0.8	4.67
China	1.4	nd
Malaysia	2.9	0.15
Mongolia	20.1	<.010
Thailand	3.1	0.11
Philippines	2.5	0.06
Viet Nam	1.2	nd
Sri Lanka	nd	nd
Indonesia	1.7	0.12
India	3.2	nd

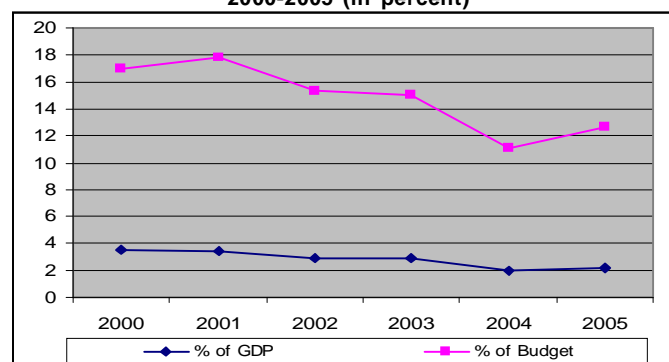
Source: Philippines- Meeting Infrastructure Challenges, World Bank 2005

⁴ Improved sanitation facilities, based on the UNICEF and WHO definition, are as follows: connection to a public sewer, connection to a septic system, pour-flush latrine, simple pit latrine and ventilated improved pit latrine. Unimproved sanitation facilities include the following: public or shared latrine, open pit latrine or bucket latrine.

the length of paved roads per sq.km. is quite low however at 0.06 km./sq.km. in 2002.

Public spending for infrastructure. The poor state of the country’s infrastructure can be partly blamed on the low expenditures in this area. Public infrastructure expenditure declined from 3.5 percent in 2000 to 2.2 percent in 2005. The World Bank estimates that countries such as the Philippines need to spend a minimum of 5 percent of GDP on infrastructure to meet their needs over the next 10 years.

Figure 4. Public Spending for Infrastructure 2000-2005 (in percent)



Source: Congressional Planning and Budget Department

The NG and state-owned enterprises (SOEs) are largely responsible for providing transportation and other infrastructure like housing and solid waste (see Table 14). The private sector has been an important partner of the government in providing telecommunications and energy infrastructure. However, private sector participation has declined in recent years particularly in the power sector.

Government’s Thrust in Increasing Infrastructure Spending

President Gloria Macapagal Arroyo’s (PGMA’s) 2006 State of the Nation Address (SONA) provided a detailed list of current and future infrastructure investment projects to enhance the competitiveness of the country’s four natural “super regions” namely North Luzon Agribusiness Quadrangle, Metro Luzon Urban Beltway, Central Philippines, and Mindanao (see Table 15). In addition to the four “super regions”, a Cyber Corridor, traversing Baguio City to Zamboanga, would focus on information and communications technology (ICT)-related

**Table 14. Infrastructure Finance in the Philippines
By Source of Funding, 1998-2003 (As Percent of GDP)**

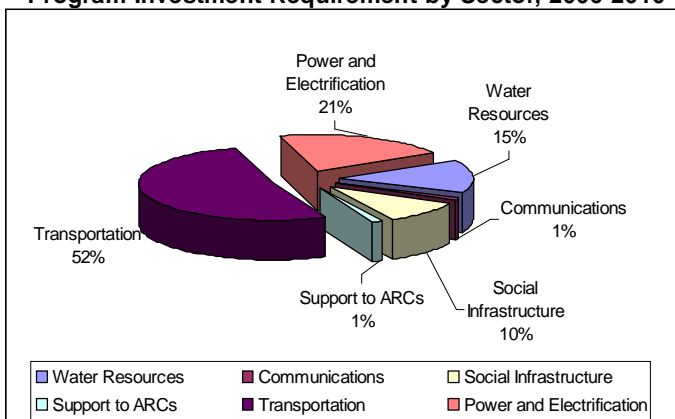
	NG		LGU		SOE		Private		Philippines	
	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003
Infrastructure	1.2	1.0	0.2	0.3	1.3	1.1	2.9	1.2	5.6	3.6
Transportation	1.0	0.6	0.2	0.2	0.2	0.3	0.0	0.1	1.4	1.2
Power	0.0	0.0	0.0	0.0	0.9	0.6	1.9	0.5	2.8	1.1
Telecommunications	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.6	1.1	0.6
Water and Sanitation	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1
Others	0.1	0.4	0.0	0.1	0.1	0.1	-	-	0.2	0.6

Source: Asian Development Bank (2004)

investment such as business process outsourcing. These infrastructure investment projects are estimated to cost P372 billion (*BusinessWorld* September 9, 2006) and is part of the Comprehensive and Integrated Infrastructure Program (CIIP).

The CIIP has identified priority infrastructure projects in the Philippines which are estimated to reach P1.7 trillion⁵ for the period 2006-2010. More than half, or around P889.2 billion, would go to transportation-related projects and P361.1 billion would fund power and electrification programs. The rest of the investments would be channeled to projects related to water resources, social infrastructure, support to agrarian reform communities (ARCs), and communications. Twenty percent or P337.4 billion worth of these infrastructure projects has already been started with the rest still in the pipeline.

Figure 5. Comprehensive and Integrated Infrastructure Program Investment Requirement by Sector, 2006-2010

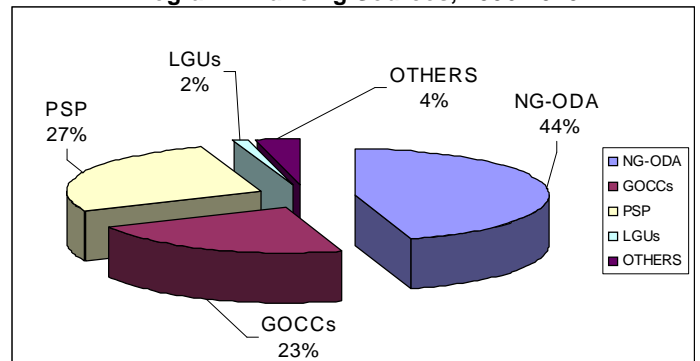


Source: National Economic Development Authority, 2006

Forty-four percent or around P775.3 billion of the total infrastructure spending would come from

the national government (NG) and P848.6 billion will be sourced from the private sector and government-owned and controlled corporations (GOCCs). Local government units (LGUs), through the financing schemes offered by Land Bank of the Philippines and Development Bank of the Philippines, would shoulder 2 percent of the total infrastructure spending.

Figure 6. Comprehensive and Integrated Infrastructure Program Financing Sources, 2006-2010



Source: National Economic Development Authority, 2006

Given that about P935 billion of the infrastructure investment program will be sourced outside the national budget, the government proposes to adopt a project financing and assistance scheme as follows:

- Seeking official development assistance through World Bank, ADB, JBIC, China Eximbank; and
- Raising funds from the National Savings Pool through issuance of bonds to Government Social Insurance System, Social Security System, Home Development Mutual Fund, Development Bank of the Philippines, Land Bank of the Philippines, private banks, equity market and the bond market.

⁵ Based on the presentation of NEDA at the Congressional Planning and Budget Department Workshop on August 18, 2006

Both schemes will lend funds to the Philippine Infrastructure Corporation of the National Development Company to spearhead the proposed infrastructure program. The Department of Finance through the Philippine Export-Import Agency will guarantee these loans worth \$3.5 billion. The Department of Finance has granted earlier this year sovereign guaranty to the proposed NDC's P20 billion bond flotation (*The Philippine Star* 2006).

For project non-financing support, government agencies such as the Public Estates Authority, the Department of Public Works and Highways, Department of Environment and Natural Resources, Department of Agriculture, Department of Agrarian Reform and the private sector are expected to provide assistance in the areas of land identification and provision and land development, road construction and technical and social services.

Composition of Infrastructure Projects

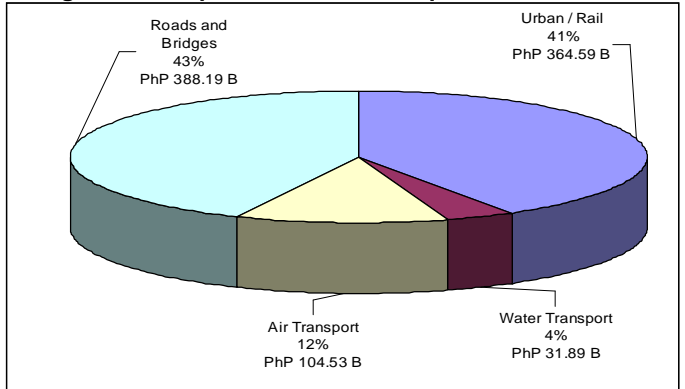
Another major factor to consider in the course of implementing an infrastructure program is the choice of infrastructure. While it has been established that infrastructure favorably impacts on economic growth and consequently reduce poverty, there are projects that can directly benefit the poor. Spending on rural infrastructure directly reduces poverty by providing opportunities for livelihood, enhancing productivity of assets of the poor and increasing their incomes (ADB).

Many studies have identified which infrastructure project directly impact on the poor. These are summarized in a study of the ADB, JBIC and WB, "Connecting East Asia: a New Framework for Infrastructure," as shown in Table 15.

The study reveals that roads, particularly rural roads, have high impact on poverty reduction. The infrastructure program of the government will spend an estimated PhP889.2 billion on transport infrastructure and 43 percent of this will go to roads and bridges. If the government wants to have greater impact on poverty reduction, then it should spend more on roads and bridges in the rural areas. The decision to spend 41 percent on urban/rail project

will directly improve the welfare of the poor. With regard to spending on water resources, it should consider spending more on irrigation to improve farmer income and water supply which will improve health outcomes.

Figure 7. Comprehensive and Integrated Infrastructure Program, Transport Investment Requirement, 2006-2010



Source: National Economic Development Authority, 2006

The infrastructure program of the government seems to be in the right track in terms of improving the welfare of the poor. Nonetheless, the details of these projects, where they are located, who will directly benefit and what type of project will be undertaken, need to be monitored to balance its impact on the economy as a whole and its direct impact on poverty reduction.

Issues and Challenges for Infrastructure Development

PGMA's infrastructure-led development strategy comes after the implementation of new tax measures that increased government revenues and averted what could have been a fiscal crisis. These tax reforms and improved efficiency of revenue-generating agencies are expected to result in a balanced budget by 2008, allowing for more room for infrastructure and social services spending. For the year 2007, budget for infrastructure will amount to P83.8 billion.

Financing of Infrastructure Projects

A huge part of the infrastructure program is intended to be funded from the increase in revenues. An estimated one to two percent of GDP in additional revenues annually will be needed to

Table 15. Potential Positive Impacts of Infrastructure Services on the Poor

Sector	Direct impact on the poor	Indirect impact on the poor
Electricity	<ul style="list-style-type: none"> • Mainly for lighting, TV, radio at low levels of income • Heating, cooking, appliances for self-employment at higher levels of income 	<ul style="list-style-type: none"> • Reduced energy costs for enterprises encouraging employment creation across wide range of activities • Improved health and other services (refrigeration, lighting, and so on) • Improved ICT access
Piped Gas	<ul style="list-style-type: none"> • Limited impact at low-income levels • Heating, cooking at higher levels of income 	<ul style="list-style-type: none"> • Reduced energy costs for enterprises encouraging employment creation (limited range of activities)
Roads	<ul style="list-style-type: none"> • Access to employment and markets • Access to services (health, education) 	<ul style="list-style-type: none"> • Reduced transport costs and improved market access for enterprises and service providers, lowering the costs of serving remote communities
Railways	<ul style="list-style-type: none"> • Limited 	<ul style="list-style-type: none"> • Reduced costs and improved market access for enterprises
Urban Mass Transit	<ul style="list-style-type: none"> • Access to employment opportunities 	<ul style="list-style-type: none"> • Employment creation from more efficient labor markets
Ports	<ul style="list-style-type: none"> • Limited 	<ul style="list-style-type: none"> • Reduced transport costs for enterprises encouraging employment creation (for example, bulk commodities like agriculture)
Airports	<ul style="list-style-type: none"> • Limited 	<ul style="list-style-type: none"> • Reduced transport costs for enterprises encouraging employment creation (high-value, low-bulk commodities and services)
Information and Communication Technology	<ul style="list-style-type: none"> • Better communication access aiding migration, information on opportunities, access to knowledge, and potential engagement in wider communities 	<ul style="list-style-type: none"> • Employment creation through improved knowledge of markets, reduced management supervision costs, access to wider knowledge base
Water Supply	<ul style="list-style-type: none"> • Improved health outcomes; time savings; lower costs 	<ul style="list-style-type: none"> • Limited
Sanitation	<ul style="list-style-type: none"> • Improved health outcomes 	<ul style="list-style-type: none"> • Improved health outcomes (for example, reduce pollution by non-poor households and others)

Source: Jones 2004a.

finance the P775.3 billion NG requirement for the next five years. Revenues as a percent of GDP are projected to rise to 16.3 percent in 2006 and 16.7 percent in 2007 from 15.1 percent in 2005. As of first semester of this year, the Philippines' revenue effort has risen to 16.3 percent of GDP, indicating that the country is on track in achieving its revenue target. Further, the proposed financing strategy will utilize off budget financing. There is a need for greater transparency in these projects and closer monitoring of loan guarantees to avoid government

ending up with huge contingent liabilities in the future. Government policy should include cost recovery in the delivery of infrastructure services and allowing competition where applicable, to avoid the fiscal risks that huge infrastructure projects may pose. These policies should also improve the efficiency of the projects.

The Build-Operate-Transfer Law, the centerpiece program for public-private partnership in infrastructure development, needs to be reviewed

to win back their participation in infrastructure development. Several unclear provisions of the BOT Law include the roles of implementing agencies, costs related to transfer of ownership of BOT facilities; and handling of residual claims (World Bank 2005). Other related issues to BOT Law that need to be addressed are the level of direct government guarantees and prohibition on contract revisions after it was granted.

Implementation of Infrastructure Projects

Another major challenge that has to be faced is improving the implementation of the infrastructure projects. Implementation of infrastructure in the Philippines has long been hampered by problems of inefficiency, corruption and patronage. A study by Azfar et al. 2002, estimated that 20 to 40 percent of public works resources are misused. It is also noted that in certain procurement and infrastructure projects, regional directors are said to get a 10 percent commission while officers of the Department of Budget and Management (DBM), which controls the flow of funds, get 15 percent. Hence, the issue of reducing corruption in infrastructure delivery has to be addressed.

The use of benchmarking as a practical tool for improving performance in the implementation of infrastructure projects should be considered. Benchmark indicators are derived by learning from best practices and understanding the processes by which they are achieved. Examining benchmark figures, for instance in terms of infrastructure costs,

could be used to evaluate the appropriate level of government spending for particular projects. In the absence of a database of cost benchmarks for infrastructure projects, it is worthwhile to look at private sector practices for similar projects as these are generally considered to be more efficient and less prone to corruption. For instance, experiences of the Filipino-Chinese Chamber of Commerce in school building construction projects indicate a benchmark of P200,000 per classroom. Examination of Department of Education (DepEd) budgets, on the other hand, indicates that it costs the government on the average P436,734 per classroom- more than double the benchmark level.

Transparency and accountability systems should be strengthened in the implementation of infrastructure projects. There are a number of things that should be ensured:

1. The application of the Procurement Act of 2003, which provides standards for competitive bidding and greater transparency in the process and strengthens the accountability system of the process, should be ensured.
2. There should be stronger oversight over the implementation of the projects from the Commission on Audit and Congress.
3. The stakeholders and the community must increase their participation in the planning and monitoring of projects, and be allowed to access information on the projects.

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This paper was prepared by the Economic Section under the supervision of its section head and SEPO Director General.

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