SECOND PILLAR:

Creating a Better Business Environment

Improving the investment environment in the Philippines does not only require establishing a sustainable fiscal position. It embodies a climate that makes business less costly and employs measures that improve productivity. Infrastructure plays a crucial role in minimizing costs for business. Public infrastructure spending of the country is less than 3 percent of GNP, one of the lowest in the region. The country's paved roads density is one of the lowest as well, while electricity rates are among the highest in the region. Productivity, which has much to do with technological innovations and the application of research and development, has also been insufficient. Lastly, the unpredictable regulatory regimes have been weak and bureaucratic, further hampering business initiatives.

A. Infrastructure Development

An efficient infrastructure system is a key factor in a country's economic development because it facilitates the movement of goods, services and people. By opening up new markets, infrastructure systems induce economic activity and are crucial inputs to enhance economic productivity.

In an archipelagic country such as the Philippines, infrastructure development is critical to growth given the wide disparity in incomes and growth rates in various regions across the country. There is positive evidence to link trends in regional economic performance to patterns of investments in transportation infrastructure. It is therefore imperative to interconnect geographic spaces to allow a system of shared growth across the country.

Given the limited amount of public resources, government must focus on prioritizing critical infrastructure undertakings in the countryside and identify those that can be better provided by the private sector. In particular, government can focus on measures which will bring down exorbitant transportation costs, particularly sea transport, and improve the flow of inter-regional trade. Ironically for an archipelagic country, there is a distinct lack of ports and players in the shipping industry. Given the current costs of shipping in the country, it is actually cheaper to source goods from other countries such as Thailand and Singapore, compared to transporting them from domestic ports such as Cagayan de Oro and

Davao.

Table 11 below provides the current international and domestic shipping rates in selected major ports.

Table 11. Selected International and Domestic Shipping Rates, Phils. (2004)

Route	Distance (Nautical	Cost (US$ per
Manila - Kaoshiong	547	0.55
Manila - Hong Kong	633	0.39
Manila - Singapore	1,308	0.27
Manila - Bangkok	1,485	0.40
Manila - Jakarta	1,308	0.41
Manila - Cebu	392	0.54
Manila - Cagayan de	504	0.61
Manila - Zamboanga	512	0.61
Manila - Gen. Santos	723	0.43
Manila - Davao	892	0.97

Source: Philippine Shippers Bureau; Domestic Shipping Association

Increasing investments in rural infrastructure is similarly important to increase productivity and promote social equity. It is estimated that more than two-thirds of families living below the poverty line are found in the rural sector and engaged in agriculture and other agri-related industries (Refer to Table 12). Improving the productive capacities of rural areas through the provision of critical infrastructure facilities such as farm-to-market roads, irrigation, and post-harvest facilities will go a long way towards encouraging development in the regions and improving the lives of millions of poor Filipinos living in the provinces.

Table 12. Magnitude of Poor Families

		Urban		Rural	
	Total Poor	Poor Fami	% of	Poor Fami	% of
198	4,230	1,19	2	3,03	7
199	4,781	1,84	3	2,93	6
199	4,531	1,52	3	3,00	6
199	4,511	1,20	2	3,30	7
200	5,140	1,49	2	3,64	7
200	4,339	1,12	2	3,21	7

Note: * old method
* * new method

Source: Templo, Philippine Development Context and Challenges, 2003

Direction for Reforms:

- Ensure *efficient* management *of public funds for rural infrastructure.* Rural infrastructure undertakings should be prioritized considering the significant contribution of agriculture to the economy and given that private investments have been minimal due to low returns and high risks. Bureaucratic coordination between the various agencies handling agriculture such as the DA, NIA, DENR, and DAR is necessary in order to maximize the limited resources available to the government. Likewise, the Department of Agriculture must be re-engineered to change the commodity-based organizational structure of DA and its attached agencies, and reorganized according to their basic functions. The decentralization must also be completed to allow for better coordination between the DA central office and the LGUs.

- Promote *transparency in project bidding and implementation.* The build-operate-transfer (BOT) mechanism must be made transparent so as to prevent unsolicited projects that are costly to the government because of attached guarantees.

B. Power Sector Development

The high cost of electricity (Refer to Table 13 below) in the Philippines has been discouraging foreign investors. This is due mainly to the expensive generation mix of the country's energy supply which relies heavily on coal and oil (See Figure 10). Changing this mix, however, requires huge capital investments that necessitate greater participation of private investors in the energy sector.

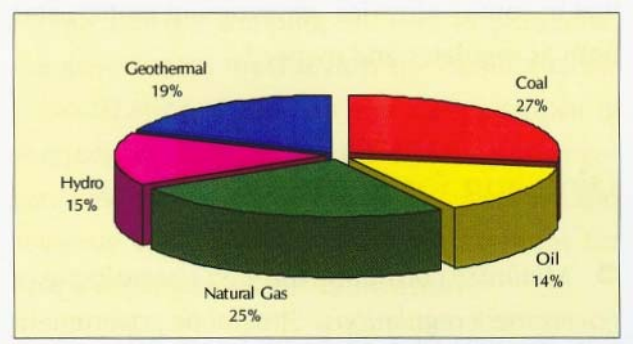
Table 13. Cost of electricity across selected Asian countries, (US cents/kWh)

Country	Reside	Commer	Indust
Japan	13.05	13.05	13.05
Singapor	11.70	7.82	7.42
Cambodi	10.86	16.24	16.24
Hong	10.48	12.48	14.07
Brunei	10.30	7.66	*7.66*
Philippin	9.12	9.33	8.09
South	8.29	8.29	8.29
Myanmar	7.73	7.73	7.73
Malaysia	6.42	5.90	4.41
Vietnam	4.57	6.19	2.44
China	4.50	7.40	6.30

Thailand	3.55	2.40	2.38
Indonesi	3.92	4.07	2.36
Laos	0.71	1.17	0.79

Source: Department of Energy

Figure 10. Philippines' Energy Generation Mix, 2003



Source: Department of Energy

Another important concern in the power sector is the imminent power crisis in Visayas and Mindanao (Table 14). The Visayas grid, including Leyte-Bohol, Cebu-Negros and Negros-Panay interconnection projects, requires P30 billion, while Mindanao requires about P55 billion in investments to prevent an impending power shortage in 2005[1]. Luzon still maintains excess capacity but will have to infuse an additional capacity of 150 megawatts (MW) or P357 billion in investments to prevent a power crisis by 2008. The government's current financial condition makes it very difficult for it to invest in expanding the country's generation and transmission infrastructure, thus making it imperative to encourage greater private sector participation in the power industry.

Table 14. Philippine Power Supply and Demand Forecast (MW)

Island Grids		200	200	201
Philippi	Supp	13,	13,	12,
	Dem	9,1	12,	17,
Luzon	Supp	10,	10,	9,6
	Dem	6,9	9,3	13,
Visayas	Supp	1,4	1,3	1,2
	Dem	1,0	1,4	2,0
Mindan	Supp	1,4	1,4	1,4
	Dem	1,1	1,4	1,8

Source: Department of Energy

Direction for Reforms:

- *Strengthen the regulatory framework of the energy sector*. This means giving the Energy Regulatory Commission (ERC) fiscal autonomy and independence to make its own decisions, and assurance of minimal intervention from other sectors of the government.

- *Rationalize generation rates*. The country's artificially low generation rates have also been seen as a deterrent to private investment in the power industry. The country's power rates should gradually be brought in line with the true cost of power and allow generation companies to realize a reasonable rate of return.

- *Develop new, renewable energy sources*. The country must begin exploring alternative sources of electricity such as biomass, solar, wind, hydro, geothermal and ocean energy or hybrids of such. The Senate can help DOE accelerate the process by passing the Renewable Energy Bill in the Senate.

- *Accelerate open access*. The Senate must re-evaluate and possibly revoke the requirement under the EPIRA regarding open access that is contingent on the 70 percent privatization of NPC generation capacity. If this is not possible, then the government must act swiftly to privatize the 32 remaining power plants in order to reach the 70 percent capacity requirement.

- *Re-examine vertical mergers and cross-ownership*. Cross-ownership could lead to uncompetitive practices to the detriment of the end consumers when distribution companies are allowed to buy electricity from allied generators and discriminate against rival generators.

C. Regulatory Concerns

An efficient regulatory environment is critical in attracting investments necessary to generate employment and encourage productivity. The Philippines is considered to have a restrictive regulatory regime for setting up businesses, hiring and firing workers, enforcing contracts and closing a business. A productive regulatory environment should allow the easy entry and exit of players in the market. In the Philippines, it takes an average of 40 days (it takes only 2 days in Australia) and 11 procedures to start a business[3]. With regard to the orderly exit of investors particularly on occasions of bankruptcy, the proceedings are deemed outdated and tedious, and these encumber them to recover their investments.

Another critical aspect of creating an efficient regulatory environment is the proper definition and protection of property rights. Businesses must also be protected from unfair trade practices that lead to market inefficiencies such as monopolies and/or oligopolies. This particular reform area has to be strengthened

particularly in the ports, airports, shipping and telecommunications industry. It does not help that in some industries, government participates both as regulator and owner .[4]

Direction for Reforms:

- *Minimize corruption through streamlining of government regulations.* Streamline government regulations to increase bureaucratic efficiency and minimize costs and corruption involved in setting up businesses.

- *Enact the Corporate Recovery Law.* The government must simplify corporate insolvency proceedings while providing different methods that suit the interest of investors. Thus, a Corporate Recovery Law must be passed.

- *Enact a comprehensive competition policy*. Establish a comprehensive competition policy that diffuses the control of a few players and encourages private investments particularly in capital-intensive industries. This policy should properly define monopolies and oligopolies and anti-competitive behavior, clarify penalties and sanctions and establish a regulatory body that can efficiently implement the competition policy. Considering the intricacies innate in developing a competition policy, government must start the process.

- *Liberalize further the public utilities sector*. There is a need to further liberalize the shipping, ports, air transportation and cargo service, and telecommunication services.

  1. For the shipping industry in particular, the government must review the existing crosssubsidization (between the cargo shipping services in favor of the third class passenger services) and the return on investment (ROI) and revenue deficiency method requirement for new shipping operators or investors.
  2. The mandate of PPA to operate and regulate ports must be delineated. Also, local governments must be given autonomy over the operations of their respective ports which can be achieved with the creation of autonomous port authorities (APAs). This would increase competition in port operations by allowing APAs to compete against each other.
  3. For air transportation, there is a need to assess the impact of granting "pocket open skies", particularly in Clark and Subic and how these have served to improve air traffic. Given the country's strategic location as a gateway to the Asian continent, regional development can be pursued by developing the country as a cargo hub. Air transport policies must also be assessed and designed towards improving the tourism industry.
  4. Finally, the country should maximize the potential of Voice-Over-Internet-

Protocol (VOIP) service. VOIP rights must not be made exclusive to telephone operators. Rather, they must also be extended to internet service providers (ISPs) in order to improve competition and effectively bring down communication costs. The National Telecommunications Commission must also be empowered to review interconnection charges to prevent overpricing by dominant players.

D. Technology Management

The Philippines' overall record in terms of science and technology has been poor. The Philippines performed quite poorly in terms of research and development expenditures, science and engineering manpower, patents and the Technology Achievement Index. The only technology indicator in which the country does excellently is in terms of high technology exports.

The Philippines does not invest enough in research and development activities. A country needs to spend a minimum of one percent of GDP per year on research and development in order to have a significant impact on the level of development (UNESCO). From 0.22 percent in 1992, the Philippines spent a measly 0.15 percent in 1996 as shown in Table 15.

Table 15. Research & Development Expenditures of Selected Countries

Country	R&D Expenditures as % of GDP
South Korea (1996)	2.82
Japan (1996)	2.80
USA (1997)	2.61
Australia (1996)	1.80
Singapore (1995)	1.13
New Zealand (1995)	1.04
Hong Kong (1996)	0.61
Malaysia (1996)	0.24
Philippines (1996)	0.15
Thailand (1996)	0.13
Indonesia (1994)	0.07

Source: UNESCO Statistical Yearbook 1999
Survey on National R&D Expenditures and Manpower

The Philippines also suffers from a huge deficiency in terms of science and technology manpower. In 2002, the country had only 160 scientists and engineers per million population engaged in research and development (See Table 16), a figure way below those of its neighbors.

Table 16. R&D Personnel of Selected Countries

(1988-2002)

Country	Scientists and engineers in R&D
Japan (2000)	5,095
USA (1997)	4,099
Singapore (1995)	4,140
Australia (1998)	3,353
South Korea (1999)	2,319
New Zealand (1997)	2,197
China (2000)	545
Viet Nam (1995)	274
Indonesia (1988)	182
pines k'-'$^{1}002_{1}$)	160
Malaysia (1998)	160
Thailand (1997)	74

Source: World Bank, World Development Indicators 2003

Mani's (2002) survey of US Patent and Trademark Office (USPTO) data indicates that the country has been lagging very far behind its neighbors in terms of patent applications. These data further reveal that most of these patents are secured by affiliates of transnational corporations in the country. In 2001, the Philippines only recorded seven patents granted by the USPTO compared to 24 by Thailand, 39 by Malaysia and 304 by Singapore.

As far as local patents are concerned, the Philippines has not been faring well either. The number of patents for inventions has been decreasing in recent years. In the 1 990s, the Philippines averaged 28.6 inventions per year while from 2000 to 2002 the country only had 10 new inventions a year. Furthermore, the majority of new patents are either for utility models or industrial designs.

Table 17. Technology Achievement Index of Selected Countries, 2000

Country	TAI	TAI
United States	0.733	2
Japan	0.698	4
South Korea	0.666	5
Singapore	0.585	10
Malaysia	0.396	30
Thailand	0.337	40
Philippines	0.300	44
China	0.299	45
Indonesia	0.211	60
India	0.201	63

Source: National Science and Technology Plan 2002-2020. DOST

The Philippines also performed quite poorly with regard to the Technology Achievement Index (TAI) scoring 0.300 and ranking 44th among 70 countries as shown in Table 17.

The TAI is a composite measure of various technological indicators which includes technology creation (measured through patents and royalty fees), diffusion of recent and old technology (in terms of per capita internet hosts, telephones and electricity consumption and high tech exports) and human skills (mean years of schooling and tertiary enrollment in science, mathematics and engineering).

Nevertheless, the Philippines continues to be a world leader in the export of high technology products. These exports, mostly computing and office equipment and electronics and telecommunications comprise 71 percent of the country's total exports. Among ASEAN countries, Singapore's 59 percent and Malaysia's 54 percent, are the closest competitors.

Direction for Reforms:

- *Prioritize the research agenda.* The government needs to review the allocation of the meager research budget. Key areas such as agriculture, fisheries, manufacturing and process engineering should definitely receive attention. Nascent sectors in which the country could have a competitive edge, such as information and communication technology, should also get a share of the research budget. Even within the identified priority areas, research and development expenditure should also be rationalized.

- *Provide a more attractive tax incentive scheme*. A straight forward tax incentive should be adopted in order to encourage private sector to commit more resources to R&D. Mani (2002) for example proposes the deduction of the firm's actual R&D expense from their taxable income.

- *Strengthen the governance and institutional framework of the science and technology system*. Government research agencies and institutions have to be synchronized and rationalized to make research more efficient. In agriculture, for example, the Bureau of Agricultural Research (BAR), Philippine Council for Agriculture, Forestry, Natural Resources, Research and Development (PCAARD), Philippine Council for Aquatic and Marine Research and Development (PCAMRD), and State Universities and Colleges (SUCs) have

overlapping functions and sometimes divergent research goals.

- *Improve science and technology education*. Increasing investment in science and technology education is the most crucial investment to spur and sustain long-term growth.

- *Manage technology transfer, utilization and commercialization*. There is a need to establish strong linkages between the research agencies and the end-users.

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[1] Half of the decline in tax effort in 1998 was mainly due to tax evasion.

[2] Report of the Department of Energy to the Joint Congressional Power Commission, October 2003.

[3] Peter Wallace, "Keep It Simple, Stupid!" Business World On-Line, July 29, 2004. This article was based on the World Bank study on business regulations entitled, "Doing Business in 2004: Understanding Regulations."

[4] Enrico Basilio, "Competition at the Manila Ports," The TAPS Project -PHILEXPORT / USAID/PIDS, August 16,2004. Manila, USAID.