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**Working Paper**

## A Review of the Components of the Medium-Term National Action Agenda on Productivity 2000-2004: Infrastructure

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A Review of the Components of the  
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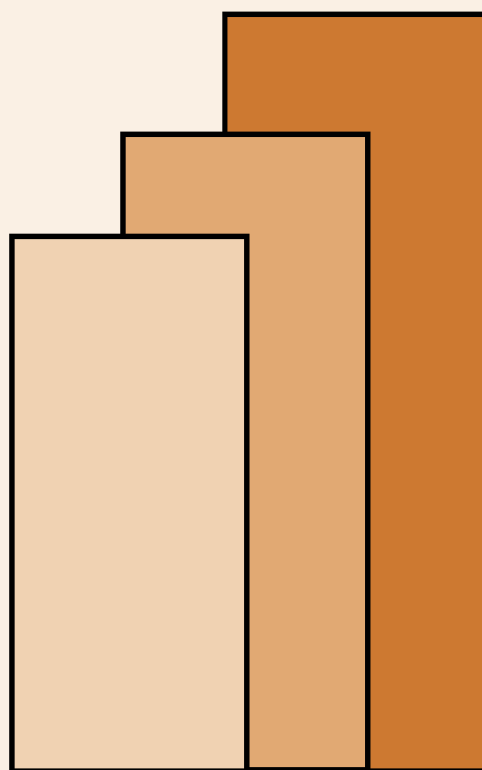
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**A Review of the Components of the  
Medium Term National Action Agenda on Productivity 2000-2004:  
INFRASTRUCTURE**

*Ramonette B. Serafica*

**ABSTRACT**

The availability of adequate, reliable and affordable infrastructure is critical to increasing the productivity of Philippine industries and households. Thus, the Medium-Term National Action Agenda for Productivity (MTNAAP) 2000-2004 seeks to contribute towards a) Increasing the provision of basic infrastructure support, especially in the countryside; b) Encouraging private sector participation within an efficient regulatory framework; and c) Strengthening LGUs capability in tapping private sector resources. In order to support the MTNAAP's objectives, it is suggested that the following steps be undertaken: a) Conduct a review of the investment policy in infrastructure b) Estimate relevant price and income elasticities of demand for infrastructure services, and c) Develop quality standards as well as cost and performance indicators for benchmarking.

# **A Review of the Components of the Medium-Term National Action Agenda on Productivity 2000-2004: INFRASTRUCTURE**

*Ramonette B. Serafica*<sup>1</sup>

## **INTRODUCTION**

The availability of adequate, reliable and affordable infrastructure is critical to increasing the productivity of Philippine industries and households. Thus, the Medium-Term National Action Agenda for Productivity (MTNAP) 2000-2004 seeks to contribute towards a) Increasing the provision of basic infrastructure support, especially in the countryside; b) Encouraging private sector participation within an efficient regulatory framework; and c) Strengthening LGUs capability in tapping private sector resources.

To be sure, efforts to improve the state of infrastructure are not new. As discussed in Serafica (1998) major policy initiatives were undertaken by the previous administration directly addressing the country's infrastructure problems. As a result of the policy reforms, significant headway has been attained consistent with the above-stated objectives. Examples of such achievements include the enactment of the Expanded Build-Operate-Transfer Law expanding opportunities for private sector participation, the liberalization of the telecommunications industry, the deregulation of the domestic transport industry, and the privatization of the Metropolitan Waterworks and Sewerage System (MWSS). Common, cross-cutting and critical issues which threaten to undermine the gains from the policy reforms were identified in the areas of competition policy, regulation, the infrastructure bureaucracy, financing, and rural infrastructure.

No doubt, the challenging task of meeting the country's infrastructure needs has been made more difficult by the Asian financial crisis, which greeted the new administration. Prospects of increased infrastructure investment dimmed as the fiscal capacity of the public sector weakened while the appetite of private investors diminished

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due to lower demand projections and reduced project profitability. Under such conditions, reforms to address investors' concerns (e.g., inadequate legal safeguards, poor tendering transparency, and weak regulatory policies) become even more urgent (see EAAU 1998).

As articulated in the Medium Term Philippine Development Plan (MTPDP) 1999-2004, the administration of President Estrada is committed to pursuing further industry reforms in order to encourage greater private sector participation in infrastructure development. At the same time, it promises to strengthen the supervisory capabilities of concerned government agencies to safeguard public interest and to uphold the integrity of project-related transactions. Public welfare, safety, and environmental quality will be protected even with increased reliance on market forces and fair market competition in the delivery of infrastructure services. However, the government will continue to act as the provider of last resort with respect to basic infrastructure especially in rural areas (e.g., farm-to-market and feeder roads, feeder ports, irrigation, rural water supply, and missionary electrification) in line with its pro-poor agenda. The following sections briefly describe the key issues in infrastructure, which the current administration faces.

## POWER

The Department of Energy reports that the electricity tariffs in the Philippines are among the highest in the Asian region. Moreover, the country suffers from a low level of electrification. These twin problems impose a huge cost on our industries and prevent the spread of economic activities in the countryside.

When the current administration took over, the percentage of barangays with electricity was placed at 73.6 %. Since then, an additional 1,332 barangays have been provided with electricity bringing the national level of electrification to 76.3% of barangays. By 2004, the goal is to increase this figure to 90% of barangays.

With respect to the high cost of electricity, several rate reduction schemes have been adopted such as:

- ERAP Scheme (The Economic Recovery Assistance Program) - discount rates are granted to qualified distressed industries or companies
- Dump Power Scheme - Discounted rate of 50% to distraught industrial customers in Mindanao
- Lower share of oil in total power generation to mitigate the effects of the continuing rise in oil prices.

Expected to bring permanent gains and long term benefits to the country is the passage of the “Electricity Industry Reform Act of 1999” which provides for the restructuring of the power sector. Certified as an urgent and priority administration measure, the proposed reform seeks to promote market competition and efficiency.

#### POWER INDUSTRY STRUCTURE

<u>SUB-SECTOR</u>	<u>CURRENT</u>	<u>PROPOSED</u>
	- Prior to EO 215 allowing private investors to participate in power generation, the National Power Corporation (NPC) had a monopoly on power generation and transmission	- NPC reorganization into seven generating companies and one transmission company (completed) and privatization (pending)
Generation	National Power Corporation Independent Power Producers	Deregulated and highly competitive
Transmission	National Power Corporation	National Transmission Company – a regulated common electricity carrier business that provides open and equal access to all users
Distribution	Investor-owned electric utilities Local government-owned utilities Electric cooperatives	Investor-owned electric utilities Local government-owned utilities Electric cooperatives

#### TELECOMMUNICATIONS

The Philippine telecommunications industry can be considered one of the most dynamic in the region with at least two local exchange operators per area and a handful of cellular operators competing to provide telecommunications access to individuals and households.

## TELECOMMUNICATIONS INDUSTRY STRUCTURE, 1998

TELECOM SERVICE	NO. OF OPERATORS
Local Exchange Carrier Service	76
Cellular Mobile Telephone Service	5
Paging Service	15
Public Trunk Repeater Service	10
International Gateway Facility	11
Satellite Service	3
International Record Carrier	5
Domestic Record Carrier	6
Very Small Aperture Terminal	4
Public Coastal Station	12
Radiotelephone	5
Value-Added Service (registered)	70

*Source : National Telecommunications Commission,  
1998 Annual Report, p. 13*

With the Basic Telephone Program of the previous administration, telephone density in the country increased from 1.17 in 1992 to 9.08 in 1998. However, only about 40 per cent of the installed lines are subscribed resulting in a subscribed teledensity of 3.44. Despite, the stated objective of making telephones available in rural areas, telephone penetration is highly skewed in favor of urban areas particularly Metro Manila.

## TELEPHONE DISTRIBUTION BY REGION

(as of December 31, 1998)

REGION	TELEDENSITY (SUBSCRIBED )	REGION	TELEDENSITY (SUBSCRIBED )
I	0.51	IX	0.82
II	0.31	X	1.38
III	1.16	XI	1.36
IV	3.38	XII	0.27
V	0.77	NCR	14.80
VI	1.94	CAR	2.51
VII	3.24	ARMM	0.39
VIII	0.59	NATIONWID E	3.44

*Source : National Telecommunications Commission, 1998 Annual Report, p. 16*

The regulatory environment has proved to be ill prepared to cope with the demands of competition leading to problems particularly with respect to interconnection. The lack of concrete guidelines on rate setting has also created a climate of uncertainty on the part of operators and anxiety on the part of users. Resolution of such complex issues is expected to worsen with the advent of convergence, itself requiring policy and regulatory guidelines.

## TRANSPORTATION

A “Philippine Transport Strategy Study” was commissioned by the previous administration to develop the transport agenda for the MTPDP 1999-2004. A summary of the major issues in each transport sub-sector and the corresponding recommendations based on strategic priorities are presented below:

### EXISTING TRANSPORT PROBLEMS

PROBLEM	ROADS	RAIL	MARITIME	AVIATION
Institutions ineffective	Widespread	Widespread	Widespread	Widespread
Capacity shortfall	Limited in extent Main problem is urban	Limited in extent Rolling stock	Limited in extent High berth occupancy	Limited in extent At a few airports
Maintenance poor	Widespread	Widespread	Not generally a major problem	Not generally a major problem
Service to passengers poor	Not generally a major problem Deregulation of buses/trucks is effective. Some congestion	Widespread Little service at all	Not generally a major problem Shipping deregulation quite effective	Not generally a major problem Airline deregulation proving effective
Problem in attracting private finance	Widespread Some success in Metro Manila	Widespread No success to date outside Metro Manila	Widespread Very limited success	Widespread Some limited success

Source: Halcrow Fox 1997, “Philippine Transport Strategy Study”, Vol. 1 p. 4 (Figure 2)

### THE STRATEGIC PRIORITIES

SECTOR	New infrastructure required?	Rehabilitation and upgrading of existing infrastructure?	Policy reform? (regulatory, pricing)	Institutional change?
ROADS	Low priority (Few locations)	High priority	Medium priority (Road Fund)	High priority (DPWH)
RAIL	No (Very limited)	Medium priority	High priority (Franchising of services)	High priority (PNR)
MARITIME	No (Very limited)	Medium priority	High priority (Tariffs)	High priority (PPA)
AVIATION	Low priority (Few locations)	Medium priority	High priority (Tariffs)	High priority (ATO)

Note: Non-urban

Source: Halcrow Fox 1997, “Philippine Transport Strategy Study”, Vol. 1 p. 10 (Figure 6)



## WATER

Being a natural resource, the central issue in the water sector concerns balancing supply with demand. The responsibilities related to water supply fall on several actors as identified in the following table:

Institutional Structure of the Water Sector

<p>The National Water Resources Board (NWRB)</p> <ul style="list-style-type: none"><li>- has overall responsibility for water resources management (i.e., the control, supervision, and regulation of the utilization, exploitation, development, and protection of the water resources)</li></ul>				
<b>Quality regulation</b>	Department of Health (DOH) – for drinking water Department of Environment and Natural Resources (DENR) – for sewerage discharges and industrial effluents			
<b>Economic regulation</b>	Local Water Utilities Administration (LWUA)	MWSS Regulatory Office	LGU/NWRB(?)	NWRB
<b>Service provision</b>	Water Districts	MWSS	LGUs	Private systems

Source of basic information: David, Cristina C. "MWSS Privatization: Implications on Efficiency, the Poor, and the Environment", paper presented at the Workshop on Private Sector Participation in Water Supply and Sanitation: Realising Social and Environmental Objectives, London, November 26-27, 1998.

As cited in MTNAAP 2000-2004, various studies that have been conducted on the sector point to the absence of an integrated water resources management system as a major source of inefficiency. Strengthening the capability of the NWRB is seen as critical for efficient planning, implementation and management of water supply.

## **MTNAAP ACTION PLAN FOR INFRASTRUCTURE SUPPORT**

As presented in the following tables, the MTNAAP has identified three general areas of concern, which will be addressed through various strategies:

<b><u>Area of Concern</u></b>			
1.0 Minimizing the cost and improving the quality of infrastructure and infrastructure services.			
<b><u>Sub-area</u></b>	<b><u>Sub-area</u></b>	<b><u>Sub-area</u></b>	<b><u>Sub-area</u></b>
1.1 High cost of doing business/ providing services	1.2. Inadequate infrastructure/ infrastructure services	1.3. Inefficient and ineffective Traffic Management System	1.4. Inadequate environmental quality management program
<b><u>Strategies</u></b>	<b><u>Strategies</u></b>	<b><u>Strategy</u></b>	<b><u>Strategy</u></b>
1.1.1. Strengthen the existing programs and operational mechanisms for infrastructure  1.1.2. Review existing regulations and policies regarding transport and telecommunication rates	1.2.1. Accelerate and develop alternative means of transport 1.2.2. Implement/track strategic infrastructure projects 1.2.3. Adopt E-governance and E-commerce as part of the mainstream economy 1.2.4. Utilize compost and organic fertilizer for crop productivity 1.2.5. Enhance trade opportunities and strengthen infrastructure support to areas with high growth potentials and to socially depressed areas/regions 1.2.6. Rationalize the existing mechanisms for water resources development 1.2.7. Address the low-level of irrigation development 1.2.8. Accelerate rural electrification and provide rural households access to electricity to generate more economic opportunities in these areas	1.3.1. Intensify traffic safety programs and urban transport management	1.4.1. Adopt an effective environmental quality management framework

<b><u>Area of Concern</u></b>
2.0. Improvement in BOT contracting and arbitration
<b><u>Strategies</u></b>
2.0.1 Review of existing BOT contracting and arbitration rules and standards 2.0.2 Institutionalize mechanisms for right-of-way acquisition and other issues/problems

<u>Area of Concern</u>
3.0. Building the capability of LGUs in tapping private sector participation in infrastructure
<u>Strategy</u>
3.0.1. Empower local government units in infrastructure management

Specific activities to be undertaken for each strategy are also listed. To monitor the impact of the MTNAAP, two sets of indicators were identified:

Productivity Indicators (from Chapter on “Infrastructure Support”)

- a. Increase in completion rate of identified major infrastructures
- b. Increase in the amount of generated energies from identified sources and in the provision of electricity in the countryside
- c. Increase in telephone density
- d. Increase in the completion rate of the development/rehabilitation of new/existing small/priority watersheds
- e. Percent increase in land area covered by major irrigation projects
- f. Percent increase in investments in infrastructure
- g. Percent reduction in electricity cost
- h. Increase in the number of kilometers of roads completed

Progress indicators, 1999-2004 (from Chapter on “Institutionalizing the Monitoring of Productivity in the Philippines”)

- a. Expenditures on infrastructure
- b. Electricity cost
- c. Telephone density
- d. Computers per capita
- e. Number of roads completed

## CRITIQUE OF THE INFRASTRUCTURE COMPONENT OF MTNAAP 2000-2004

A review of the MTNAAP 2000-2004 vis-à-vis the current needs of the sector indicate that the proposed action agenda is weak in the following aspects:

- *Ill-defined productivity and progress indicators*

It is not clear that the suggested productivity and progress indicators are the most appropriate for determining MTNAAP successes. Such indicators must flow directly from specific objectives, which in turn must be based on the assessed needs of the sector or of the country.

An example of the weak linkage between outcomes and needs is in using kilometers of roads as an indicator of productivity and progress. Based on the findings of Halcrow Fox, rehabilitation and upgrading of the road network should be a *higher* strategic priority than building new infrastructure. Another would be with respect to teledensity as a productivity indicator. Currently, there is a big gap between subscribed teledensity and installed teledensity. Increasing subscribed teledensity, which can be achieved by making access more affordable, should be the more important measure of success.

The danger in using wrong indicators should not be ignored. The strategic planning process is an iterative process. A misreading of successes and failures, which can be due to incorrectly identified indicators, will feedback to ill-conceived plans and strategies. Even an action agenda such as the MTNAAP must adhere to the same principles of a good strategic plan.

- *Lack of emphasis on quality indicators*

Increased availability of infrastructure does not necessarily translate to increased productivity especially if the quality of the service is poor or unreliable.

There is currently too much emphasis on availability indicators and not enough attention being given to quality indicators. For high technology infrastructure industries this is particularly critical. As an example, Kelly (1990) argues that “The ability to rely on a particular level of quality of service, even if it is not the highest theoretically available, is probably the most important requirement that a business user places on his telecommunications supplier.”

Moreover, the eventual deregulation of most infrastructure industries mean that quality indicators, which were previously hidden from the consuming public, will become critical factors on which purchase decisions will be based.

- *No explicit targeting of productivity and efficiency at the firm and industry level*

Although MTNAAP is concerned with increases in overall productivity via infrastructure support, it should also ensure that improvements in productivity and efficiency are achieved within the infrastructure sector itself. The main reason for this is that higher productivity and efficiency at the firm and industry levels will translate to “minimizing the cost and improving the quality of infrastructure”, which is the primary area of concern identified.

Labor productivity and network efficiency indicators should be identified per sector and sub-sector. Moreover, unit cost and performance benchmarking should be adopted to monitor progress in this area.

## **INTERVENTION THAT WILL ENABLE INDUSTRY TO IMPLEMENT BASIC QUALITY MANAGEMENT**

Benchmarking is a recognized tool of total quality management (TQM), which emphasizes the need for continuous improvements to increase competitiveness in the marketplace. Since benchmarking requires that firms measure their performance against the “best-in-class” performer from inside or outside the industry, the government can help firms by implementing a system by which industry best practice can be monitored. Such information must be gathered and deposited in a central location for easy and costless access by firms. Alternatively, a mechanism for disseminating the information can be instituted. To be sure, Philippine firms are already accustomed to this TQM tool. The proper role of the government in this case is to eliminate barriers to information needed for effective benchmarking.

## **SUGGESTIONS FOR FURTHER STUDIES**

The following proposed studies will be useful inputs in crafting more specific strategies for the MTNAAP:

- *Review of the investment policy in infrastructure*

As recognized by the Halcrow Fox study and in Serafica (1998), investing more money is not the key to solving infrastructure problems. There is a need to improve the investment policy in infrastructure to determine if scarce public funds are channeled where they can be most effective whether in terms of projects or type of spending (e.g., operations and maintenance vs. capex).

Jimenez (1994) identifies the measures needed to improve public investment policies, which include setting of priorities across and within sectors. Prioritization of course requires ranking which must be based on some

objective criteria. For the MTNAAP, a productivity-weighted index (in addition to the typical rate of return evaluation) will have to be developed and utilized.

Once strategic priorities are identified, such as those listed in the Philippine Transport Strategic Study, then these should be used as a basis for the action plan, to ensure that the performance indicators are linked to objectives that contribute directly to expressed needs and goals.

- *Estimates of price and income elasticities of demand for infrastructure services*

The Infrastructure Action Plan proposes to rationalize the rates for infrastructure services, which have been distorted as a result of a complex system of cross-subsidies. Estimates of price and income elasticities of demand for infrastructure services will help determine welfare effects of different pricing schemes and facilitate the transition to the “correct” set of prices.

- *Development of quality standards as well as cost and performance indicators for benchmarking*

As suggested in the previous section, it is important to improve the productivity and efficiency of each infrastructure sector and sub-sector. To this end, the development of quality standards as well cost and performance indicators will be required for benchmarking purposes within industries and across countries. Examples of simple unit performance measures as applied to the water sector can be found in Webb and Ehrhardt (1998).

## REFERENCES

- David, Cristina C. (1998) "MWSS Privatization: Implications on Efficiency, the Poor, and the Environment", paper presented at the Workshop on Private Sector Participation in Water Supply and Sanitation: Realising Social and Environmental Objectives, London, November 26-27, 1998.
- Department of Energy (Nov 1999) Accomplishment Report of the Energy Sector Republic of the Philippines
- East Asia Analytical Unit (EAAU) (1998) Asia's Infrastructure in the Crisis: Harnessing Private Enterprise Department of Foreign Affairs and Trade, Commonwealth of Australia
- Halcrow Fox (1997) Philippine Transport Strategy Study commissioned by the National Economic Development Authority, Republic of the Philippines
- Jimenez, Emmanuel (April 1994) "Human and Physical Infrastructure: Public Investment and Pricing Policies in Developing Countries," Policy Research Working Paper (No. 1281) The World Bank
- Kelly, Tim (1990) "Performance Indicators For Public Telecommunications Operators," Information Computer Communications Policy 22, OECD
- National Telecommunications Commission (1998) Annual Report Republic of the Philippines
- Serafica, Ramonette B. (May 1998) "Beyond 2000: An Assessment of Infrastructure Policies," PIDS Discussion Paper (Series No. 98-07)
- Webb, M. and David Ehrhardt (Dec 1998) "Improving Water Services through Competition" Public Policy for the Private Sector (Note No. 164) The World Bank.