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~~LOCAL~~ PUBLIC ENTERPRISES IN DEVELOPING COUNTRIES:
ISSUES AND PRACTICES

by

Benjamin Diokno

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ABSTRACT

Local governments in less developed countries (LDCs) are generally faced with the problem of inadequate fiscal resources, with much more severity than their counterparts in the more developed countries. Since the demand for local public services are more likely to increase rather than decrease in the years ahead, this problem of inadequate fiscal resources and the difficulties of raising public sector resources through taxation, suggests the need to develop other means of mobilizing resources for public purposes. One such alternative is the use of local public enterprises.

This paper addresses some of the issues related to the potential use of local public enterprises for public sector resource mobilization and draws together the available fragmentary evidences on the actual use of local public enterprises in some LDC local governments.

From the standpoint of revenue mobilization, it is argued that the tenable range for public enterprise activity should include activities which meet the following criteria: (a) the goods or services provided are marketable in the sense that exclusion is possible and goods are rival; (b) there should be some possibility of relating price to the costs of supply; (c) a substantial cost recovery should be possible in all cases and full cost recovery in the case of purely commercial ventures; and (d) separate management and accounts should be possible.

Urban governments in developing countries are engaged in enterprise activities, not only in the traditional areas like water supply, electric power, public transport, and markets and slaughterhouses, but also in purely commercial ventures. While in general the performance of these enterprises are poor, some, particularly those engaged in commercial undertakings, appear to be recovering their full costs; in fact, some have the potential to make a net contribution to the local fisc.

LOCAL PUBLIC ENTERPRISES IN DEVELOPING COUNTRIES:
ISSUES AND PRACTICES*

by Benjamin Diokno**

I. INTRODUCTION

✓ Local governments in less developed countries (LDCs) are generally faced with the problem of inadequate fiscal resources, with much more severity than their counterparts in the more developed countries. ✓ There are a number of reasons for this state of affairs. ✓ In a country where there is widespread rural poverty and where the rural economy is predominantly agricultural, the tax bases are understandably quite limited. ✓ In addition, since the Central Governments of developing countries have, in many cases, preempted the major tax instruments, then local governments can only make claim on a minor portion of the already limited tax bases available to LDC governments. ✓ Furthermore, tax administration in developing countries is generally lacking because of the shortage of skilled administrators and manpower, and this shortcoming is more serious for LDC local governments.

✓ Since the demand for local public services are more likely to increase rather than decrease in the years ahead, this

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**Assistant Professor and Director for Public Affairs, School of Economics, University of the Philippines.

problem of inadequate fiscal resources and the difficulties of raising resources through taxation, suggests the need to develop other means of mobilizing resources for public purposes. One such alternative is the use of local public enterprises.

The purpose of this paper is twofold: (a) to clarify the issues related to the potential use of local public enterprises for public sector resource mobilization; and (b) to draw together some of the fragmentary evidences we were able to assemble on the actual use of local public enterprises in some LDC local governments.

Organizationally, the next section addresses the issue of the tenable range of local public enterprises in developing countries, with revenue mobilization as the explicit objective. The next section, Section III, discusses the state of the practice of public enterprises in some LDC local governments, with particular emphasis on the assignment of responsibility, financial performance, pricing policy, and disposition of surplus. Section IV concludes the paper.

II. LOCAL PUBLIC ENTERPRISES: CRITERIA FOR USE

This Section addresses two questions: First, what are the motives for the use of public enterprises, regardless of the level of sponsoring government? Second, and the more important question for the purpose of this study: How does one go about identifying the tenable range of public enterprise activity for local governments in developing countries?

Motives for the Use of Public Enterprises

✓ The reasons for the use of public enterprises are many:^{1/} employment generation, savings mobilization, revenue generation, government operation due to capital lumpiness, risk and monopoly, internalizing externalities, efficient utilization of resources, promote primary exports, reduce income inequality, offset multi-nationals, provide public service, enhance national prestige, implement government policy, decolonization, and so forth.

✓ Focusing on the economic motives, the stated reasons for using public enterprises could be appropriately grouped into those based on (i) allocative efficiency, (ii) equity considerations, and (iii) public sector revenue raising.

^{1/} A more extensive list of motives for the creation of public enterprises are given in Gillis [1981], Jones [1975], and Choksi [1979].

Allocative Efficiency

✓ The allocative efficiency rationale for public enterprises flow from the justification for state intervention on the basis of "market failure".^{1/} The general methodology is to identify conditions where state intervention may lead to Pareto improvements.

✓ The starting point is the hypothetical situation of a perfectly competitive market economy, and one which is Pareto optimal (i.e. for a given income distribution it is not possible to make one person better off without making someone else worse off), and then consider the violations of some of the efficiency conditions.

✓ Consider the violations of the following efficiency conditions: (i) convexity of the consumption set; (ii) convexity of the aggregate production set; (iii) existence of a full set of markets for all commodities; (iv) attainment of full equilibrium i.e. all resources are fully utilized; and (v) perfect information.^{2/}

The convexity assumptions of the consumption and production sets are violated by consumption and production externalities. State

^{1/} A comprehensive treatment of the concept of market failure is provided in a number of places, including Bator [1957; 1958], Coase [1960], Arrow [1970], and Burkhead and Miner [1971].

^{2/} The last three conditions arise from the premise that the state of the economy is a competitive equilibrium. Condition (iii) implies a well-functioning market for all commodities, including futures market and markets for risk-bearing. Intuitively, (iv) means that the feasible set of Pareto optimal states should be points on (rather than within) the production possibility frontier.

action is called for in the form of either a Pigovian tax-subsidy mechanism or some form of regulatory control to force economic agents to internalize the external benefits or costs.

✓ The convexity assumption of the aggregate--or economy-wide--production set is violated by increasing returns to scale. ✓ For some industries, increasing returns to scale are sufficiently large to lead to a noncompetitive market condition. ✓ The potential existence of monopoly, or at least, heavy concentration of market power in a few firms may justify some form of government intervention--e.g. direct government operation (as in France and the United Kingdom) or regulation (as in the United States).

✓ In real life, the existence of a full set of markets--for all commodities for all relevant dates in the future and all risks--is not satisfied. ✓ This problem is especially severe for LDCs and is manifested in a number of ways: fragmented state of the capital market,^{1/} absence of competitive futures market, imperfections of investor's foresight due to the long life of capital equipment, and so forth.

✓ The fundamental welfare theorems require that full equilibrium should have been attained i.e. all resources are fully utilized.

^{1/} An excellent discussion of the "extraordinary distortions" commonly found in the domestic capital markets of developing countries is given in McKinnon [1973].

Yet, it is not uncommon to observe underutilization of resources in any given economy--whether developed or developing, capitalist or socialist. Labor underemployment in most of the developing world is well documented. Similarly, capital underutilization has been shown to be quite common in many developing countries.^{1/} The observed underutilization of resources, for reasons as diverse as the absence of universal markets, imperfect information, and 'errors' in government policies, provide justification for government action. It is firmly imbedded in conventional wisdom that the state has a role in minimizing unemployment and increasing capital utilization.

The results of the competitive analysis are invalid if information is imperfect and prohibitively costly to acquire. The existence of a market equilibrium assumes that all economic agents have perfect information of the price system and for producers to have perfect information on the available technology. For example, if private provision is based on purely private costs, even under an economic environment where private and social costs diverge, then the result may be either underinvestment or overinvestment in the relevant productive sector, depending on the nature of the divergence.

^{1/} For a list of recent studies on the level of capital utilization in many developing countries, and a comprehensive review of the literature on the subject, see Winston [1976].

✓ Given in Table 1 is a list of illustrative real world cases of public enterprises, the stated motives for their use, and the corresponding violations of assumptions necessary for a Pareto-optimal allocation. ✓ For example, the provision of water supply, sewerage and telephone system could all be argued on the stated motive of internalizing externalities. Unless the externalities are internalized, private provision of the goods may result in production levels that are less than socially optimal. Translated in terms of violations of efficiency conditions, it could be argued that the public enterprise is justified on grounds that the consumption set convexity assumption has been violated.

✓ Capital intensive industries such as mining, oil exploration, and heavy equipment are usually justified in terms of control of commanding heights argument i.e. that certain industries of the economy ought to be under government control due to their strategic position and the forward and backward "linkages" they generate. Yet, to the extent that capital is "lumpy", the same set of industries can be justified in terms of violation of the efficiency condition that the production set be convex.

✓ The government takeover of existing "sick" industries or "sinking sand" enterprises are sometimes justified on the basis of preventing business failure, specifically preventing unemployment and plant idleness if the ailing enterprise is to shut down. Still,

Table 1

ILLUSTRATIVE PUBLIC ENTERPRISE CASES, STATED MOTIVES FOR INTERVENTIONS, AND VIOLATIONS OF EFFICIENCY CONDITIONS

Public Enterprise Cases	Stated Motives ^{a/}	Assumptions Violated	Violations
Water Supply Sewerage Telephone systems	Internalize externalities	Convex consumption Set	Consumption Externality
Cigarette manufacturing Liquor, distillery	Offset externalities		
Public utilities such as electric power supply, telecommunications	Control monopolies	Convex Production Set	Increasing returns to scale
Capital intensive industries such as mining, oil exploration, and heavy equipment	Control commanding heights Provide entrepreneurial support/substitution		Capital Indivi- sibility
Mining and oil exploration	Provide entrepreneurial support/substitution	Existence of full set of markets	Absence of market due to risk and uncertainty
Small-scale labor intensive enterprises (e.g. iron work, slaughterhouse)	Increase employment Raise output Train skilled managers and technicians	Full employment of resources	Labor unemployment
'Sick' industries	Utilize resource efficiently Prevent business failure Promote primary exports		Excess Capacity

(Table 1 Continued)

Public Enterprise Cases	Stated Motives	Assumptions Violated	Violations
Pioneering industries such as steel, hydroelectric/ aluminum smelting, fertilizer	Provide entrepreneurial support/substitution	Perfect information	Imperfect information Divergence between private and social costs and benefits

^{a/} See Choksi [1979], Table 2.1, p. 8 and Jones [1975], Table 9-1, p. 145.

the same set of firms can be taken over and operated as state-operated enterprises on the basis of the violation of the implied efficiency condition that all resources are fully employed. Excess capacity in certain industries imply that the economy is operating within its production possibility frontier.

Equity Goals

✓ Even if the economy were perfectly competitive, and no efficiency conditions are violated, the resulting Pareto optimal allocation that emerges may not be what society wants. ✓ There will be a different Pareto optimal allocation depending on the initial resource distribution. For a given social welfare function, the 'first-best' Pareto optimum can be achieved only if the government can suitably redistribute the initial endowments using neutral (i.e. distortion free) fiscal devices.

✓ In practice, many public enterprises are specified to fulfill some equity objectives as a matter of public policy. Goods and services are provided at subsidized prices to allow certain groups of people greater consumption than would be possible if they had to pay the full costs of supply. Examples of public enterprises of this nature abound: public transport, public housing, hospital and medical care, and higher education. Consistent with equity goals is the observed nationalization of private firms in countries such as

Pakistan, Chile and Peru to reduce the concentration of economic power in the hands of a small number of families. Additionally, the use of public enterprises to correct racial imbalances in entrepreneurship, as in the case of Malaysia,^{1/} is consistent with the equity rationale for the use of public enterprises.

Public Sector Revenue Raising

Resource mobilization has been widely acclaimed as one of the rationales for the use of public enterprises. Surpluses from public enterprise operation can be used to cross-subsidize the expenditures of other public enterprises, finance the expenditures of agencies supplying public services such as health, education, police and fire protection, or fund government infrastructure projects.

For our purpose, we define resource mobilization as generating a financial surplus for public purposes. The surplus of the enterprise may be viewed as a 100 percent profits tax. Considering the extreme difficulties of raising revenues because of low levels of per capita income, limited tax bases, and weaknesses in tax administration, public enterprises provide an alternative option for raising public resources. Of course, resource mobilization can also be defined in terms of the public enterprise's net contributions to the

^{1/}For the Malaysian experience on using public enterprises for redistribution purposes, see Mallon [1980].

local fisc. The issue is whether the sponsoring local government is able to raise more revenues using public enterprises in relation to alternative means of raising revenues. Consider the following example. Assume that the local governments can raise \$200,000 by using the public enterprise form i.e. by operating the enterprises directly. If, production through the private sector is feasible, and the amount of \$250,000 can be raised either through municipal business tax or profits tax, then the operation of a public enterprise is not making any net contribution to the treasury. Of course, the implicit assumption in this example is that the total profits generated is larger if operated privately than publicly, not a totally unrealistic assumption given the generally held view that public enterprises are relatively inefficient compared to their private counterparts.

This second interpretation of the term resource mobilization while theoretically appealing is difficult to evaluate empirically. There are at least two estimation problems involved: (a) the difference in the size of profits under alternative arrangement, and (b) the difference in the administrative costs of running the enterprise and the alternative means of raising revenues. In addition, there is the real problem that alternative ways of raising revenues may be severely limited. For instance, it is highly unlikely that profits taxation would be one of the tax handles available to local governments.

Multiple Objectives: Conflicts and Orderings

Quite often, a public enterprise may have multiple objectives, and the set of objectives may not always be consistent. Consider the following case. The sponsoring government may require the enterprise to generate revenues for public purposes but at the same time it is constrained to charge for the services at less than full cost recovery level, either for allocative efficiency as in the case of decreasing cost industry or for distributional objective. Examples of enterprises where prices may be set at less than cost recovery level for redistributional reasons are public housing, public transport, and water supply to rural villages. While the objective of keeping prices low may be justified on both allocative efficiency and equity grounds, the pursuit of this objective, however, may conflict with the objective of public sector resource mobilization.

The ideal situation is where there exists a well specified, consistent preference orderings for any set of objectives. This, of course, is far from the present practices in developing countries where these objectives are unlikely to be internally consistent i.e. if the objectives are articulated at all. In this study we assume that the major objective of the local government in undertaking a commercial venture is revenue generation; in the case of public enterprises designed to provide a public service, what may be termed as service-oriented enterprises, we assume that the objective is to provide a given level of output at substantial cost recovery levels.

There are no doubt other objectives--employment generation, price stability, income redistribution, etc.--but this kind of formulation gives one an approximation of the economic costs of attaining such social objectives.

The Appropriate Use of Local Public Enterprises

We address next the question of how one may go about identifying the tenable range of public enterprise activity for local governments in developing countries. In the process, the concept of local public enterprise is defined in a framework that can be used for intercountry comparison, recognizing that while it may not be universally applicable the definition would at least hold for most developing countries.

Although not the major focus of this study, the definitional framework is important since the term local public enterprise may mean different things to different people. It has been used synonymously with self-financing services, user cost-related or benefit-tax related services, or even all government entities that supply goods and services to the general public.

We seek to narrow the concept of local public enterprises on the basis of the following five criteria:

- (1) Nature of the good. That the enterprise produces or distributes goods which are marketable in the sense that exclusion is feasible and the goods are rival in consumption. The use or consumption of the good may or

may not involve limited consumption externality.

- (2) Price-costs correspondence. That the revenues of the enterprise, and the price charged for its use or the consumption of its products, bear some relation to the costs of supply.
- (3) Cost recovery. There must be a reasonable degree of cost recovery for the enterprise serving some social purposes, and potential for full cost recovery for enterprises involved in purely commercial ventures.
- (4) Separate management and accounts. That it must be feasible to maintain separate management and accounts.
- (5) Local government control. That the sponsoring local government exercises control over the enterprise through ownership or in terms of its ability to control the broad policies followed by the enterprise, including the power to appoint and remove top management.

The first criterion implies two types of public enterprises:

(a) those engaged in the production and marketing, or both, of private goods and services; and (b) those engaged in the production or marketing, or both, of private goods with limited consumption externality. We refer to the former as commercial enterprises, the latter as service-oriented enterprises.

Nature of the Good

The range of activities of public enterprises is limited to the production of private goods, with or without limited consumption externality. We may define the goods which are rival of those goods for which the scarcity constraint has an additive form. If there are n consumers in the economy, if the amount of good x available is x_0 , and the consumption of commodity x by consumer i may be

represented by a nonnegative number x_{ℓ}^i , the scarcity constraint will be written:^{1/}

$$\sum_{i=1}^n x_{\ell}^i = x_{\ell} \quad (1.0)$$

or

$$\sum_{i=1}^n x_{\ell}^i \leq x_{\ell} \quad (1.1)$$

In contrast, if goods are non-rival, the scarcity constraint corresponding to any public good y (indexed $k: 1 \dots k \dots K$) will be represented by

$$y_k^i = y_k \quad (2.1)$$

or

$$y_k^i \leq y_k \quad (2.2)$$

These are polar cases. If the concern is limited to the undertaking of commercial ventures for revenue raising purposes, only the public production and supply of purely rival goods (Equations (1.0) and (1.1)) may be of interest to the theory of local public enterprises. If, on the other hand, public service provision is also a concern, the public production of goods which are rival but with limited externality as, for example, refuse collection and solid waste disposal, electricity, parking facilities, transportation terminals like airports, piers, and

^{1/}The inequality formulation assumes no "free disposal".

truck depots, and public markets, would also fall within the tenable range of public enterprise activity.

The second concept is exclusion. Exclusion is defined here in terms of technical possibilities to exclude non-contributors. It is used therefore in a slightly different sense from Musgrave's definition. He defined exclusion principle to mean that an individual "is excluded from the enjoyment of a particular commodity or service unless he is willing to pay the stipulated price" (Musgrave [1959], p. 9). We view exclusion as the technological impossibility to exclude, or if possible at all, it can be done at prohibitive resource costs. The classic case of a good which is technologically impossible to exclude is national defense. In this case, because of the technological impossibility to exclude, there is no incentive for consumers to reveal their true preferences. This is the so-called 'Free-Rider Problem': as the number of consumers increase, it is in each consumer's interest to misrepresent their demand for public goods, to act as 'free rider'. As a result, the market mechanism for public goods breaks down.^{1/}

^{1/} Groves and Ledyard [1977] recently proposed a decentralized general equilibrium model in which private goods are allocated through competitive markets and public goods according to government allocation and taxing rules that depend on messages communicated to the government by consumers regarding their preferences. The 'Free Rider Problem' is supposed to be solved in the following sense: "even though consumers are completely free to misrepresent their demands for public goods, the tax and allocation rules ... are structured in such a way that it is in each consumer's self-interest to reveal his true demand." (p. 783).

On the basis of the concepts of rivalness and exclusion, we define the following concepts: national public good, local public good with jurisdictional spillover, local public good, private good with limited consumption externality, and private good.

National public good

This type of good is non-excludable and nonrival to all consumers/ participants in the nation. The classic example of this is national defense.

Local public good with jurisdictional spillover

This good is what Pauly [1970] described as "purely public both within and between communities." Goods of this nature are numerous: malaria eradication program, roads and bridges, telecommunications, flood control, etc. More precisely, for a local public good k , let N_m be the subset of population N residing in jurisdiction m , and let C_{N_m} be the complement of the set N_m , i.e. the members of N which do not belong to N_m . The good must satisfy two requirements: (i) the good provided for residents for jurisdiction m should be a good public to that subset, and (ii) the provision of the good for members of the subset N_m affect the utility of individuals outside of jurisdiction m , although the spillover is not nationwide.

As an example, consider the malaria eradication program. Assume that community m is engaged in the eradication of mosquitoes in a

swamp that lies on the border of Community m and several nearby communities. The program will affect the utility of members of Community m , but the spillover will also benefit members of nearby communities, though the spillover is not nationwide.

Local public good

This is a good which Pauly [1970] described as "purely public within communities but purely private between communities." The difference between this and the local public good with jurisdictional spillover is that the publicness of the latter spills over to adjoining communities. The local public good must satisfy two requirements: (a) the good provided to consumers of jurisdiction m should be a good public to that subset (N_m), and (b) the consumption of the good by consumers in jurisdiction m does not alter the utility levels of consumers of the nation not belonging to that subset.

In this case, an increase in the supply of local public goods in jurisdiction m will increase the utility of consumers belonging to that jurisdiction, but will not alter the utility of consumers of the remainder of the nation. Examples are park and conservation, police protection, fire fighting and fire prevention. It is assumed, of course, that the enjoyment or consumption of these goods is contingent on the consumer's residency in the community providing the service.

Private good with consumption externality

This good is rival in the sense of Equation (1.0) or (1.1). Rivalness distinguishes this good and the purely private consumption

good from the previous three cases. In addition, the provision of the private good to members of the subset of population N , say A , alters the utility of some members of the nation, both those belonging to the subset A and some other members of the population. An example of a private good with external benefit is education; an example of a good with external harm is a ticket to a congested toll road.

Private good

The purely private consumption good case is straightforward. The provision of the good to consumers of jurisdiction m will not alter the utility of other consumers, regardless of their place of residence or jurisdictional affiliation. Examples of this kind of good are numerous: food, clothing, housing, fuel, etc.

This kind of formulation which brings directly the degree of consumption externality of the good allows us to address the issue of assignment of responsibility. However, before turning attention to such issue, let us consider some examples of the above cases. The examples are given in Table 2. In the upper panel, exclusion is technologically impossible, or at least prohibitively costly. The three goods--national public, local public with jurisdictional spillover and local public--are arranged in the order of decreasing difficulty to exclude. The goods are also arranged from top (national) to bottom (private good) according to the decreasing degree of consumption externality.

Table 2

TYPES OF PRIVATE COMMODITIES AND PUBLIC GOODS

Nature of Good	Examples
<u>Exclusion not feasible:</u>	
National Public Good	National defense Conduct of foreign affairs Administration of monetary policy
Local Public with Externality	Lighthouse Regional Planning Interstate highway system Malaria eradication program
Local Public Good	Park and conservation Police protection Fire fighting and prevention Planning and zoning Highways and streets
<u>Exclusion feasible:</u>	
Private good with Externality	Solid waste collection and disposal Irrigation Electricity Telephone systems Water supply Hospital and medical care facilities Educational programs Libraries Airport landing fields and terminals
Private Good	Food Clothing Housing Fuel

For the purpose of defining the tenable range of public enterprise activity, regardless of the assignment of responsibility or level of sponsoring government, we rule out from the entire list of activity traditionally provided by the public sector those goods and services which are technologically impossible to exclude. Alternatively, we limited the range of possible public enterprise activity to the production of goods which are marketable (i.e. exclusion is feasible and consumption is rival), with or without consumption externality. As noted earlier, this distinction roughly corresponds to the difference between an enterprise designed to serve an important social purpose and a strictly commercial venture.

Regretfully, the issue of public vs. private provision on the basis of nature of the good is far from resolved. For example, the generally held view that because exclusion of a good is prohibitively costly and infeasible, and therefore truthful revelation of preference is not possible, that good should then be provided through the budgetary process has not gone unchallenged. Proponents of club theory may argue that, assuming zero transactions costs, some of these goods can be provided by clubs^{1/}--either privately owned or by a cooperative membership (unions, vigilante organizations, trade associations, country clubs, etc.), private firms (profit or non-profit organizations), or

^{1/} The seminal piece is written by Buchanan [1965] although the ideas of 'club theory' can be traced to the works of Pigou [1920] and Knight [1924]. For a recent survey of the theoretical contribution of the literature on 'club theory', see Sandler and Tschirhart [1980].

even those publicly controlled by the government (e.g. public employees organizations). There are therefore within the range of economic activities within the scheme given in Table 2 activities which can be provided through public enterprises or through private clubs: public parks vs. country clubs, police protection vs. protection through private security agencies. In general, these activities would fall between the local public good case and the case of private good with limited consumption externality.

As we have shown earlier, private goods (with or without externality) can be undertaken in public enterprise form, though they are generally deemed to be in the domain of the private sector. Consider first the case of private good with limited externality. The presence of externality suggests some divergence between social and private costs and benefits. If the externality is not internalized, or otherwise a market for the externality does not emerge,^{1/} then there is no clear-cut justification for private provision. In cases where social benefits exceed private benefits, private provision may result in underproduction or underinvestment. In the case of private consumption good, provision using the public enterprise form may be justified if there are imperfections in either the factor or product markets, or for other reasons mentioned earlier.

^{1/} The latter argument for the creation of a market for externalities is due to Arrow [1970].

While the nature of the good allowed us to limit from the range of public sector activities those which can be provided using the public enterprise form, the list of possible areas for public enterprise endeavors is still quite long. The list includes virtually any private goods and services. The nature of the good is a necessary but not a sufficient condition for defining areas for public enterprise activity. We now consider the next criterion.

Price-Costs Correspondence

Another criterion necessary for an activity to be considered a public enterprise activity is that the revenues of the enterprise, and the price charged for its use or the consumption of its products, bear some relation to the cost of supply. This in effect eliminates public goods and those goods which while marketable, are nonetheless not marketed. Examples of the latter are services which are, at least as practiced in some local governments of developing countries, provided free of charge: elementary education and basic medical care.

The implication of this criterion is that it is extremely difficult to generalize that a particular activity--e.g., operation of high schools, maintenance of public cemetery, water supply, etc.--is a public enterprise. The reason is the probable wide diversity in the pricing practices among local governments even within the same country. For example, if the provision of high school education is marketed in one local government, say in community A, but provided free

of charge in community B, then the operation of high schools is an enterprise activity for A but not for B. This means that the actual and tenable range of public enterprise activity may diverge from one jurisdiction to another, even within the same country. The divergence will depend among others on local preferences and social goals of local authorities.

Cost Recovery

The types of productive entities that can be admitted into the public enterprise category can be further limited by taking account of the cost recovery potential of the enterprise. Consider the following formulation: (a) Goods and services are marketed i.e. exclusion is practiced and current sales revenue fully cover current costs, (b) exclusion is practiced and current sales revenues fully cover current costs plus costs of capital, and (c) exclusion is practiced and current sales revenues fully cover all costs including implicit and explicit subsidies.

The first formulation narrows down the tenable range to those enterprise activities which are current cost recovering. The second formulation limits the range of public enterprise activity to those which are able to cover full costs given some explicit (e.g., capital subsidy) and implicit (e.g., preferential loan rates and tax abatements) subsidies. The third formulation is the most restrictive: the enterprise is expected to function as a private firm and cover all costs including tax abatements and concessionary loan subsidy, if any.

A reasonable amount of cost recovery appears to be an appropriate limiting criterion. For purely commercial ventures, the degree of cost recovery is straightforward--public firms should be expected to cover all costs, including all types of implicit (tax abatements, preferential loan rates) and explicit (e.g. capital subsidy) subsidies. Hence, the third formulation appears appropriate for commercial ventures. For enterprises with assigned social objectives, it is extremely difficult to put a fixed figure on the degree of cost recovery because the nature of the enterprise are so diverse and the objectives are not only numerous but are, in addition, poorly articulated. Some enterprises, for example, are expected to provide services to the rural poor or to provide bus service to students and elderly at reduced rates. In such cases, unless the enterprises providing the services are reimbursed by the sponsoring government for the services provided, full-cost recovery may not be a reasonable requirement. Partial cost recovery is, of course, preferred by most local governments to the alternative of providing the services free of charge. While recognizing the inherent difficulty of stating the level of cost recovery, for purposes of limiting the range of public enterprise activity some reasonable degree of cost recovery seems appropriate.

Possibility for Separate
Management and Accounts

The operation of a local government enterprise requires the possibility of separate management. As an entity charged with activities that markedly depart from regular public sector activities--for example, pricing policies, production management, personnel management, market forecasting, etc.--such undertakings frequently require specialized, relatively expensive employees and services. This is an argument for separate management from the general public administration. Moreover, without some degree of administrative autonomy, it will not be possible to hold the enterprise management accountable for the enterprise's financial performance and efficiency of operations.

The management of the enterprise can be effectively monitored only if there are separate accounts. The separate accounts prerequisite for a local public enterprise activity may be thought of in terms of the accounting view of the purpose of enterprise accounts in a system of government accounts. In the tradition of generally accepted accounting principles, enterprise funds in the public sector are used to:

account for operations (a) that are financed and operated in a manner similar to private business enterprises--when the intent of the governing body is that the cost (expenses, including depreciation) of providing goods and services to the general public on an accounting basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of

revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.^{1/}

In this regard the accounting criteria are quite broad and thus provide little guidance as to the type and nature of activities which constitute the public enterprise sector. The accounting view however contributes one necessary condition for the use of a public enterprise: there must be a possibility for a separate income and balance sheet for the activity.

This criterion is not totally unrelated to the criteria relating to the ability to price according to the cost of supply and the potential for cost recovery. In effect, it is a sine qua non to the effective application of the two previous criteria. The cost of supply is determinate only if maintaining a separate set of accounts is financially feasible. For example, the operation of a water supply system, electric power plant, and hospital might lend themselves to separate management and accounts. Such is not the case, however, for the administration of courts and the construction and upkeep of public parks which are highly complementary with other local government activities such as police and fire and public works to make it efficient to separate their accounts. In addition, when input costs are so entangled with other local government purchases, maintaining

^{1/} Municipal Finance Officers Association of the U.S. and Canada [1980], p. 59.

separate accounts are unfeasible. In practice, this makes pricing according to costs of supply extremely difficult.

The question of cost recovery is linked to the feasibility of maintaining separate accounts. The extent of cost recovery becomes intractable unless operating costs and capital costs are estimable. From the foregoing discussion, the range of enterprise activity is further limited to those where maintaining a separate management and account is feasible.

Assignment of Responsibility

The first four criteria constitute the definition of a public enterprise, independent of the level of the sponsoring government. Under what conditions should the public enterprise be a local rather than a national or regional government responsibility? Rather than address this question, we address the question: Under what conditions should it not be local responsibility? While local governments can undertake virtually any activities that are traditionally provided by the private sector, two factors would tend to limit their involvement in large-scale, capital-intensive projects, namely: (a) size of the market or service area and (b) availability of financial resources.

From the standpoint of cost recovery, the issue of market size is central. The likelihood for cost recovery depends on the size of the market area, a factor that is especially relevant if the enterprise

operation is characterized by increasing returns to scale technology. For commercial ventures i.e. the provision of private goods (without externality), any local government may undertake the activity as long as the market size is large enough for the enterprise to be financially worthwhile. By the nature of the good, the use or consumption of the good goes beyond the jurisdictional boundaries. Since there may be only a very weak association between the size of the jurisdiction and the volume of economic activity, it is therefore difficult to preclude a priori smaller local governments from undertaking large-scale, capital-intensive commercial projects.

Of course, in the production of private goods with limited externality, the important consideration in the assignment issue is the extent of jurisdictional spillover. The most common approach to the spatial externality problem in the theory of optimal provision of goods in a system of local governments is by assigning responsibilities in such a way that the externalities from the provision of goods are internalized i.e. exhausted within the relevant benefit area. Hence, "services which are nationwide in their benefit incidence (such as national defense) should be provided for nationally, services with local benefits (e.g., streetlights) should be provided for by local units, still others (such as highways) should be provided on a regional basis" (Musgrave and Musgrave [1980], p. 515).

To what extent is this conventional wisdom on the theory of decentralization useful in the optimal assignment of public enterprise

activity? The implication is that to internalize the relevant externality, if the greatest portion of the benefits of a service accrue to the population within the boundaries of a local jurisdiction, then the assignment of responsibility to the local government is a possibility. As the jurisdictional spillover increases, a higher level government agency (municipal corporation, regional board, national commission) has greater potential for internalizing spillovers, hence the more tenable is the argument that the enterprise be assigned to a higher level government. Another alternative of course, is joint ventureship among a number of small local governments.

The other factor that would likely limit the involvement of many local governments in large-scale, capital-intensive ventures is the availability of financial resources. Capital lumpiness and the general inability of smaller local governments to mobilize the necessary resources to finance such projects would tend to suggest that only relatively larger local governments would be able to engage in highly capital intensive projects.

However, to the extent that external funding is available, this financial constraint becomes less binding. On the other possibility that the project is self-financing and that external loans are available but dependent on an initial local government contribution (equity capital), there is then the question of whether the local government could provide its share of capital necessary to mount such capital projects. If access to external funding is contingent on an

initial contribution i.e. their taxing capacity, large capital projects are probably not a realistic option for smaller local governments. A related issue is whether local governments can be expected to have access to the managerial expertise necessary to operate large projects. These are considerations that need to be verified on an individual case basis, but in general are drawbacks to the ability of relatively smaller local governments to undertake large-scale, capital-intensive projects.

III. LOCAL PUBLIC ENTERPRISES: PRACTICES IN SOME DEVELOPING COUNTRIES

There appears to be no comparative information of any kind on the operation of local public enterprises in the developing world. The traditional sources of data for any international comparison of fiscal performance--the United Nations's Statistical Yearbook and the International Monetary Fund's Government Finance Statistics Yearbook--do not provide any hint on the extent and practices of local government public enterprises. The United Nations's Yearbook provide information on receipts and expenditures of central governments. On the other hand, while the IMF's publication has rich information on the types of non-financial, national government operated enterprises, it provides virtually no information on the extent of local government involvement in public enterprise activity. Even the information on local government finance is quite limited: for example, of the 96 countries covered in the 1977 IMF Government Finance Yearbook, only 39 have information on receipts and expenditures of local governments. None, of course, have information on the operation of local public enterprises.

Even if such information for some less developing countries were available, a drawback in any intercountry comparison is the usual problem of data comparability. Apart from the well recognized problem arising from the wide diversity in government budgeting and accounting practices, comparability is not enhanced at all by the

absence of a consistent definition of the term local public enterprises. As we argued in Section II, the term should be more restrictive than the broader definition of any public services financed through user or benefit charges. It should, however, include commercial ventures undertaken by some local governments. Take a specific case. In some countries, levies are used by local governments to finance an enterprise operation as, for example, the use of water tax to finance water supply in Ahmedabad (India).^{1/} By the definition adopted in Section II, this mode of organizing the economic activity will not satisfy the price-cost correspondence criterion since the water tax or user charge is only remotely related to water consumption.

Given this lack of international comparative data on public enterprise operation at the local level, we have relied on the case studies conducted primarily by the World Bank under the supervision of Roy Bahl and Johannes Linn. The data are imperfect for the purpose of this study in two important respects: (a) the term local public enterprises is used in a slightly different sense i.e. self-financed services (any local government activity where revenues are raised from user and benefit charges), and (b) in some cases, the researcher's financial evaluation of a given enterprise cannot be directly verified from the data given in the study, hence in such

^{1/}The information on how local water supply is financed is given in Bahl [1975].

cases, one can only take the researcher's conclusion whether one enterprise is truly current cost recoverable on faith. Nevertheless, the case studies provide a wealth of information on the experiences of a cross-section of local enterprises sponsored by various LDC governments.

Relative Importance of Local Public Enterprises

Evidences from fiscal studies of some countries indicate that local governments in less developing countries have engaged in public enterprise activities, both in the traditional (public utilities, markets and slaughterhouses, etc.) and the nontraditional fields. While we have no direct evidence on the financial contribution of public enterprises to the local treasury, its relative contribution to the local fisc can be inferred from data given in Linn [1981]. While the data are imperfect and should therefore be interpreted with caution,^{1/} they provide, however, some orders of magnitude on the importance of self-financing services--whether they are a major activity of local governments and whether they involve substantial amount of resources.

^{1/} Consider the following caveats. First, our definition of local public enterprises may not directly correspond to the definition of "self-financing services." The latter term is defined loosely by Linn [1981, p. 260] as "revenues raised from user and benefit charges". Second, the figures are from urban local governments and may or may not be representative of the relative importance of revenues from "self-financing services" for smaller local governments. Third, the figures are based on a variety of studies, conducted by different researchers, and were undertaken for different years. Therefore, in a very strict sense, the figures are not comparable.

✓ Based on observations from 25 cities, revenues from self-financing services, on average, account for about one-fifth of local public expenditures (Table 3). But more importantly, as a percentage of local spending, self-financing services surpassed local taxes in at least eight cities: Francistown (Botswana), Kitwe (Zambia), Cali, Cartagena, and Bogota in Colombia, Ahmedabad and Bombay in India, and Seoul (Korea). This information suggests that revenues from self-financing services may be more important than local taxes in some local governments, and that this phenomenon may be independent of geographical affiliation.

These figures are based on actual revenues from self-financing services. The potential revenues are likely to be higher in each country or city if user charges are not imposed on all potentially self-financing services and if tariff rates are changed rather infrequently. To the extent that this view is correct, then the relative importance of self-financing services could be greater than what the figures in Table 3 indicate. On the other hand, while these data indicate the contribution of these services to the financing of local governments, the level of user charges does not indicate whether the "user charge" undertakings are operating in surplus or deficit.

Table 3

LOCAL TAXES AND SELF-FINANCING SERVICES AS A
PERCENTAGE OF LOCAL PUBLIC EXPENDITURES:
SELECTED LDC CITIES

City	Year	Local Taxes	Self-financing Services	Sources
Francistown (Botswana)	1972	46.8	56.1	World Bank Estimates
Tunis (Tunisia)	1972	36.8	7.1	Prud'Homme [1975]
Kitwe (Zambia)	1975	35.0	53.1	World Bank Estimates
Lumbumbashi (Zaire)	1972	72.8	-	World Bank Estimates
Lusaka (Zambia)	1972	39.3	36.9	World Bank Estimates
Mbuji-Mayi (Zaire)	1971	66.5	-	World Bank Estimates
Bukuru (Zaire)	1971	67.4	-	World Bank Estimates
Kinshasa (Zaire)	1971	25.4	-	World Bank Estimates
Mexico City (Mexico)	1968	70.9	5.2	Fried [1972]
La Paz (Bolivia)	1975	61.9	3.6	World Bank Estimates
Valencia (Venezuela)	1968	44.8	13.4	Cannon et al. [1973]
Rio de Janeiro (Brazil) ^{a/}	1967	74.5	7.2	Richardson [1973]
Cali (Colombia)	1974	15.6	57.5	World Bank Estimates
Cartagena (Colombia)	1972	23.3	43.3	Linn [1975]
Bogota (Colombia)	1972	13.7	48.5	World Bank Estimates
Kingston (Jamaica)	1971/2	23.9	2.7	Bougeon-Maassen and Linn [1975]
Ahmedabad (India)	1970/1	38.6	41.8	Bahl [1975]
Bombay (India)	1971/2	37.9	38.7	Bougeon-Maassen [1976]
Karachi (Pakistan)	1974/5	67.6	2.2	Kee [1975]
Seoul (Korea)	1971	30.3	36.3	Bahl and Wasylenko [1976]
Jakarta (Indonesia)	1972/3	40.6	15.2	Linn et al. [1976]
Calcutta Corp. (India)	1974/5	64.4	-	World Bank Estimates
Manila (Philippines) ^{b/}	1970	55.0	10.0	Bahl et al. [1976]
Madras (India)	1975/6	54.5	3.7	World Bank Estimates
Teheran (Iran)	1974	42.8	-	Smith (n.d.)
Median		42.8	7.2	
Mean		(46.0)	(19.3)	

^{a/} Due to exclusion of autonomous agencies the contribution of self-financing service revenues and that all locally raised revenues are probably understated, while local taxes is overstated.

^{b/} Total revenues are used instead of total expenditures.

SOURCE: Linn [1981], Table 9.3, pp. 258-259.

Assignment of Responsibility in
Some Developing Countries

We earlier argued that in the assignment of responsibility, i.e., what enterprise activity should not be local, the two important considerations are the extent of jurisdictional spillover and the potential for cost recovery. The greater the degree of jurisdictional spillover, the more tenable is the position that either several local governments should consolidate or the responsibility for the enterprise should be assigned to higher level governments (municipal corporation, regional board, national authority). On the second consideration, the potential for cost recovery is reduced if the relevant market area, relative to a given local government unit, is too limited for even the smallest, feasible scale of plant. In the case of purely commercial ventures, local governments may undertake virtually any projects traditionally provided through the private sector in market-oriented economies. However, the size of the market and the availability of financing may limit the involvement of smaller governments in large, capital-intensive undertakings.

✓ On the basis of limited information derived from the World Bank case studies of some cities in developing countries (Table 4), the following remarks, though at best suggestive, seem appropriate. ✓ First, the national government, in our small sample, is primarily responsible for the operation of electricity and telephone systems, enterprise activities which can be characterized as large-scale, capital-

Table 4

ORGANIZATIONAL FORM AND RESPONSIBILITY FOR SERVICE PROVISION BY
LEVEL OF GOVERNMENT, SELECTED LDC CITIES

City	F u n c t i o n							Sources
	Water	Electricity	Telephones	Housing	Public Transport	Markets	Slaughter-houses	
Ahmedabad (India)	LG: P	-	-	-	L (AMTC): P ^{1/}	-	-	L: P ^{2/}
Bombay (India)	LG: P ^{3/} SG: M ^{4/}	L (BEST): P CG: M	CG: P	LG: P CG: P	L (BEST): P CG: P ^{5/}	LG: P	LG: P	Bahl [1975] Bougeon-Maassen [1976]
Seoul (Korea)	LG (Water Bureau): P	-	-	LG: P ^{6/} CG: P ^{7/}	LG: P ^{8/} CG: P ^{9/}	-	-	-
Jakarta (Indonesia)	L (PAM): P ^{10/} LG: S ^{11/} CG: S ^{12/}	CG: S CG (PLN): P	LG: S CG: P	LG: P ^{13/} CG: S ^{14/}	L (BRI): S CG: S ^{15/}	L (Market Corp): P	L (Slaughter Corp): P ^{16/}	L (Kuparda): P ^{17/} L (Lina et al.): P ^{18/} [1976]
Manila (Philippines)	CG (ANSR): P ^{19/}	CH (MFC): P ^{20/}	CG: P	LG: S CG: P ^{21/}	LG: S CG: S	LG: P	LG: P	Bahl et al. [1976]
Tunis (Tunisia)	CG (SONEDE): P ^{22/} LG: P ^{23/}	CG (S'EG): P ^{24/} LG: P ^{25/}	CG: P	CG (SNT): P ^{26/} LG: S S'ECT: P ^{27/}	P CG (SNT and S'ECT): P ^{28/} LG: M	LG: P	LG: P	Frad'homme [1975]
Kingston (Jamaica)	CG (Water Commis-sion): P ^{29/}	CG: S	CG: S	CG: P LG: M	-	LG: P CG: S ^{30/}	LG: P CG: S ^{31/}	Bougeon-Maassen and Linn [1975]
Pogota (Colombia)	L (EAB): P ^{32/} CG (Tariff Board): P	L (EEN): P ^{33/} CG (Tariff Board): P	L (ETS): P ^{34/} CG: P ^{35/}	LG: S CG: P ^{36/}	LG: S	L (EDIS): P ^{37/}	L (EDIS): P ^{38/}	Lina [1976]
Medell (Colombia)	L (ENCALI): P ^{39/} CG (Tariff Board): P	L (ENCALI): P CG (Tariff Board): P	L (ENCALI): P CG (Tariff Board): P	L (ENCALI): P CG (ICV): P	LG: M	L (ENSIRVA): P	L (ENSIRVA): P	Bird [1967]
	CG (CVC): P ^{40/}	CG (CVC and CHIDRAL): S	CG (TELECOM): S	CG (TELECOM): S				

LEADER	Organizational form:	Local autonomous agency	Responsibility for service provision:	Primary expenditure responsibility
LG	Local Government	LG	S	S - Secondary expenditure responsibility
SG	State Government	SG	M	M - Negligible responsibility
CG	Central Government	CG	F	F - Direct financial support
			R	R - Regulatory authority

NOTE: Other entities in parentheses are autonomous agencies controlled primarily by the indicated level of government.

Footnotes to Table 4

1/ Ahmedabad Municipal Transport Company.

2/ Municipal Dairy.

3/ State Irrigation and Power Department.

4/ Bombay Electric Supply and Transport Undertaking.

5/ Central government agencies involved: Indian Railways, Ministry of Communications, and Indian Posts and Telegraphs Department.

6/ Seoul City Housing Agency builds middle and low income housing.

7/ Ministry of Home Affairs and Ministry of Construction.

8/ The city owns and operates a bus company.

9/ Railways are a Central Government function (Ministry of Rail Transit).

10/ Jakarta Water Supply Company (PAM).

11/ Some capital expenditures on water distribution works are included in the DKI (Jakarta) Development Budget.

12/ Ministry of Public Works and Power undertake the construction work for supply sources, intakes, treatment plants and a major portion of the distribution system.

13/ Housing for civil servants and armed forces personnel.

14/ Metropolitan Bus Company (BBN). Secondary because of large private sector participation in these areas of transport.

15/ Central government sets the bus fares.

16/ Animal Husbandry Office.

17/ Kuperda, the semi-autonomous organization in charge of DKI (Jakarta) owned enterprises under the supervision of Directorate V, reports directly to the Governor and is responsible for planning for the public enterprise sector. For a list of 18 local public enterprises under the supervision of Kuperda, see Table 60 in Linn et al. [1976, p. 236].

18/ Metropolitan Waterworks and Sewerage System.

19/ National Power Corporation. Distribution and transmission undertaken by regulated industry, the Manila Electric Company (MERALCO).

20/ Among the Central Government agencies involved in low-cost housing and slum clearance are: the Army Corps of Engineers, Department of Public Works, People's Homesite and Housing Corporation, Presidential Assistant for Housing and Resettlement Agency, and the National Housing Corporation.

21/ Societe Nationale d'Exploitation et de Distribution des Eaux.

22/ Municipalities act as intermediaries to facilitate installation of piped water connections for private homes.

23/ Societe Tunisienne de l'Electricite et du Gaz.

24/ Local government participation is limited to the donation (or sale of very low cost) of land for the installation of transformers.

25/ Societe Nationale des Transports (SNT) and Societe Nationale des Chemins de Fer Tunisiens (SNCFT).

26/ Societe Nationale Immobiliere de Tunisie, a national company, and subject to the administrative control of the Ministry of Infrastructure, operates both as a developer and builder.

27/ The board (of the Water Commission) reports directly to the Minister of Public Utilities.

28/ Capital expenditures are financed from central government.

29/ A municipal bus terminal has to be financed in part from general revenues.

30/ Bogota Water Supply and Sewerage Company.

31/ Empresa de Energia Electrica de Bogota.

32/ Empresa de Telefonos de Bogota. ETB has exclusive responsibility for local telephone service in Bogota.

33/ The Ministry of Communication has a veto power on all technical aspects of ETB operations and planning.

34/ The national telephone company, TELECOM, is responsible for handling the long distance calls.

35/ Empresa Distrital de Servicios Publicos. Its functions include refuse collection and street cleaning, and the administration of the municipal slaughterhouse, markets and cemeteries.

36/ Cauca Valley Corporation, a national development corporation for the area including Cali.

37/ National Housing Institute.

intensive, and of the increasing-returns-to-scale variety. The assignment of responsibility for water supply, an undertaking which seemingly satisfies the above characterization, is not clear-cut. Water supply is the primary responsibility of the local government in the cities of Ahmedabad, Bombay and Korea; by autonomous local agencies in the cities of Jakarta, Cali, and Bogota; and, by semi-autonomous Central government agency in the cities of Manila, Tunis, and Jamaica.

Second, given the diversity of our observations, it is surprising to find one common strand: water and electric utilities are generally provided through semi-autonomous agencies, either local or Central. There are exceptions, of course, like the water supply in Ahmedabad and Bombay. Yet, there appears to be some deliberate attempt on the part of various governments to have these services provided outside of the regular bureaucracy. In Jakarta (Indonesia), some 17 local public enterprises involved in purely commercial ventures are run autonomously, subject only to the supervision of Kuperda.^{1/}

Third, based on the practices to date, there seems to be unanimous agreement in the practice of the governments or the cities included in the study that the provision of markets and slaughter-

^{1/}Linn et al. [1976].

houses is a local government concern. In general, however, they are subject to some national regulations.^{1/}

Fourth, although examples are limited, local governments have been shown to engage in nontraditional enterprises. That is, some have sponsored enterprises which are engaged in the production of goods and services which are in direct competition with private firms. In Jakarta (Indonesia), 17 local public enterprises are alternatively engaged in the production and sale of ice, paint, furniture, beer, can, aluminum, cigarettes, stationary, and iron works, and the operation of service stations and restaurants.^{2/} The City of Ahmedabad operates a municipal dairy while as shown in our recent study of Philippine local public enterprises, the Provincial Government of Bulacan operates a restaurant, a handicraft store, and a Convention Center.^{3/} These are enterprises which can be characterized as small- or medium-scale.

The Central government of some developing countries have been shown to engage in large-scale, highly capital intensive enterprises.

^{1/}The operation of markets and slaughterhouses in the Philippines follows the same pattern. See, for example, the National Tax Research Center [1977] and the case study of public markets in Bahl et al. [1981], Chapter VII.

^{2/}Linn et al. [1976].

^{3/}The Bulacan commercial enterprises are discussed in more details in Bahl et al. [1981], Chapter VIII.

Examples are mining, car manufacturing, shipbuilding, airlines; petrochemicals, oil refineries, manufacturing of textile, cement, fertilizer, paper products, etc.^{1/} This demonstrates that the range of public enterprise activity is large and varied. The results of the case studies of some LDC cities suggests that the type of enterprise activities undertaken by the local government is quite limited. Some local governments as, for example, Jakarta (Indonesia) have been shown to engage in purely commercial ventures. Yet, since the data are for the governments of relatively larger cities, it would be expected that this limited range of public enterprises at the local level would be even narrower for smaller governments.

Financial Performance of Local Public
Enterprises: Some LDC Experience

What can be said about the revenue raising performance of local public enterprises in developing countries? Financial performance can be expected to be widely diverse even within a given country.^{2/} This,

^{1/} For a more exhaustive list of state-operated enterprises in developing countries, see Choksi [1979], Gillis [1981], Jones ([1975], [1979]), and Tze [1978]. Probably the most comprehensive list is given in the International Monetary Fund's Government Finance Statistics Yearbook.

^{2/} Even within the same public enterprise sector in a given country, the financial performance of public enterprises can be very dissimilar; see, for example, the case study of financial performance of public markets in the Philippines, (Bahl et al. [1981], Chapter VII). Even the financial performance of enterprises undertaken by the same local government can be widely diverse; some Philippine cases are given in Bahl et al., Chapter VIII.

and given the paucity of observations, makes the task of generalizing very difficult. Nonetheless, we would attempt to suggest some hypotheses based on fragmentary evidences coming from the World Bank case studies and our own direct experience in the Philippines.

Based on a small sample for which the relevant information is available (see Table 5), the traditional local public enterprises do not appear to be full cost recoverable, and are therefore not making a positive contribution to the local fisc. The exceptions are few as, for example, electricity in Bombay and water and transport in Jakarta. For those enterprises which generate surplus on current account, the surplus are not in general sufficient to finance capital cost (e.g. Korea's water supply, Bogota's water supply, electric utility and slaughterhouse). Surprisingly, while Jakarta's traditional enterprises--water, public transport and slaughterhouses--are covering their full costs, they do not appear to be making any contribution to the DKI (Jakarta) general revenues (Table 5).

From the fragmentary evidences available, the commercial enterprises undertaken by the DKI (Jakarta) government through Kuperda have been making contribution to the local fisc. While they operate outside of the city budget and are expected to be self-financing, they are however expected to contribute a set amount to the DKI budget and the Governor's Tactical Fund.^{1/}

^{1/} See Linn [1976], pp. 237-264.

Table 5

FINANCIAL PERFORMANCE OF SELECTED LOCAL PUBLIC ENTERPRISES:
SELECTED LDC CITIES

City	Water	Electricity	Public Transport	Markets	Slaughterhouse	Sources
Ahmedabad (India)	Financial performance: Reliance on general fund revenues other than the designated water tax and on borrowing has increased.		Financial performance: ^{1/} User charges are not sufficient to cover op- erating costs and debt service, and subsidy from the City government is required.	-	-	Bahl [1976]
Bombay (India)	During 8 of 12 years under study it generated a deficit on current account.	Surpluses on the operating and current accounts were conti- nuously generated during the period 1960 to 1973. Surpluses are used in part to cover deficits incurred in BEST's transport branch. ^{2/}	Bus operations have generally run substan- tial deficits. Deficits are largely financed by internal transfers from the electricity account.	-	-	Bougeon- Maarsen [1976]
Seoul (Korea)	Has consistently generated surplus on current account and has financed both debt repayment and a portion of capital expenditures. Balance of capital spending is paid from City's general budget.	-	Deficits are financed by transfers from the City's general budget.	-	-	Bahl and Wasylenko [1976]

(Continuation of Table 5)

City	Water	Electricity	Public Transport	Markets	Slaughterhouse	Sources
Jakarta (Indonesia)	Surplus on current account is sufficient to finance capital outlays.	-	P.P.D. receives no subsidies from D.K.I nor has it contributed to DKI revenues. ^{3/}	No data on costs and revenues.	The increasing surpluses on current account have facilitated the rapid growth in capital expenditures.	Linn [1976]
Tunis (Tunisia)	Appears to be cost-recoverable. If needed, the state would provide subsidy. ^{4/}	"The company's accounts are in the black" (p. 34). It is not clear whether it is full cost recovering or current cost recovering.	For the first time in 1973 has covered current costs.	-	-	Prud'Homme [1975]
Kingston (Jamaica)	The financial surpluses on current account were sufficient to offset deficits in the sewerage account. ^{5/}	-	-	From 1962/63 to 1971/72, it has incurred deficits on current account nearly every year. ^{6/}	From 1962/63 to 1971/72, it has incurred deficits on current account nearly every year. ^{7/}	Bougeon-Maassen and Linn [1975]
Bogota (Colombia)	In general, EMB was not able to cover its recurrent costs from recurrent revenues. ^{8/}	For all years, EMB has surplus on current accounts, and deficits on capital accounts. ^{9/}	-	Surplus on current accounts for all years where data are available. ^{10/}	Surplus on current accounts in 1965, 1966 and 1970; deficits in 1969, 1971 and 1972. No data available for other years. ^{11/}	Linn [1976]

Footnotes to Table 5

1/ For the Ahmedabad Municipal Transport Company.

2/ The Bombay Electric Supply and Transportation (BEST) Undertaking provides all internal road transport services within the municipal limits of Greater Bombay.

3/ DKI (Jakarta) has provided some financing assistance, but the terms of financing have provided for repayment with interest.

4/ "If the need arose, the State would provide a subsidy to cover any deficit SONEDE might incur, although this is not the case at present." Prud'Homme [1975, p. 33].

5/ Except for two years: 1967/68 and 1968/69.

6/ Exception was 1964/65.

7/ Exceptions: 1962/63, 1964/65, and 1966/67.

8/ Only in four out of the twelve years did the current account produce a surplus--each was a year in which a tariff change took place, or a year immediately following a tariff change.

9/ This implies that EEEB has used its surpluses on current account to finance part of its capital expenditures.

10/ Results should be interpreted with caution since revenue figures are estimated rather than actual.

11/ According to the statutes (Mayoral Decree 1393 of December 1971) the enterprise is to follow a separate fund accounting system. Thus far, this has not been applied consistently.

Determinants of Financial Performance:
A Glimpse of Reality

✓ What explains this seemingly poor performance of local public enterprises in some local governments in developing countries? Again, what follows are suggestive rather than conclusive statements on the determinants of financial performance of some LDC local public enterprises. The unevenness of the treatment of some of the plausible determinants and the obvious omission of others is reflective of the dearth of information on the subject.

✓ Commercial vs. Service-Oriented Enterprises

✓ Based on limited observations, mainly from the Indonesian case study, one can hypothesize that a commercial enterprise is likely to do better in terms of revenue mobilization than a service-oriented enterprise because, among other things, its goal is almost always better defined and more closely related to financial performance. ✓ On the other hand, where there is ambiguity at the level of the sponsoring government as to the primary objective of the enterprise, whether to provide a service at subsidized rates or sell a service at full cost recovery level, then cost recovery is generally not attained.

Disposition of Surplus and Financing of Deficits

The experience of the urban government considered in Table 5 indicates that the finances of local public enterprises which are not recovering full costs are, in general, closely linked with the budget of the sponsoring government. In this small sample, deficits are as a rule financed through government transfer. These observations do not contradict the suggested hypothesis that the mechanism for deficit financing and disposition of surplus may affect performance indirectly through its effect on managerial behavior. As earlier argued, to the extent that the deficits are routinely financed by the sponsoring local government (regardless of the source of deficits) then there is less pressure on the enterprise manager to behave in a manner consistent with cost recovery.

Pricing Policy: How Important Is it?

To what extent can the existing pricing policy explain the performance of a local public enterprise? Before we address this question, let us briefly survey the current pricing practices in some selected enterprises operating in some LDC cities.

The limited information available suggest that the pricing practices of local public enterprises in developing countries is quite diverse. For example, in the provision of water services, there exists a wide range of tariff structures: water tax based on property

value as in Ahmedabad; full cost recovering, multi-part tariff as in Seoul and Jakarta; countrywide uniform pricing but differentiated according to users as in Tunis; or a combination of multipart tariff with progressive user charges for income redistributive reasons as in Bogota. If there is any regularity at all in these pricing practices, it is that they all depart from marginal cost pricing (Table 6).

In some countries, public enterprise pricing policies are explicitly stated. In Jakarta, for example, the basic pricing policy is designed so that the enterprise can generate profits for transfer to the DKI (Jakarta) budget revenues and the Governor's Tactical Fund. In Colombian cities, the explicit pricing policy are based on long-run average cost recovery and on the objective of income redistribution. In addition, for electricity, some form of peak-load pricing is applied for efficiency considerations.

As a rule, prices or user charges in developing countries may depart from marginal cost, especially during periods of inflation. This is so since pricing decisions are often subject to review by higher authorities. It is not so much the bureaucratic delay generally associated with multi-level decision making process. Rather it is that during periods of rising prices, the national government often vetoes the request of local authorities for raising prices or user charges. Upward revisions in tariffs or fees, it is argued, contributes to the inflationary spiral. In a small sample of cities, the pricing

Table 6

PRICING CHARACTERISTICS OF SELECTED LOCAL PUBLIC ENTERPRISES,
SELECTED LDC CITIES

City	Functions					Sources
	Water	Electricity	Public Transport	Markets	Slaughterhouse	
Ahmedabad (India)	Financing is from general revenues and borrowing. User charge not based on consumption. The designated water tax (25 percent property tax) has been a declining share of total expenditures.	-	Features: Differentiated according to distance and users, concessional rates offered to students, children, and the handicapped. Rate Change: Fare structure has not changed in several years.	-	-	Bahl [1975]
Bombay (India)	EMC Policy: To generate enough revenues to finance current expenditures Features: Multipart tariff. (A once-only connection charge assessed according to size and length of connection, an annual meter rental, and a charge for water supplied.	Features: tariff and differentiated by users-- residential, commercial and industrial	-	-	-	Bougeon-Maassen [1976]

City	Water	Electricity	Public Transport	Markets	Slaughterhouse	Sources
Seoul (Korea)	<p>Authority: R (Proposed by the Water Bureau and approved by the Mayor, and the Prime Minister).</p> <p>Policy: Full cost recovery</p> <p>Features: Differentiated according to users-- residential, industrial and commercial--level of use.</p> <p>Rate Change: Three over the past decade</p>	-	<p>Authority: R (Prime Minister's Office gives guidelines for fare increases)</p> <p>Policy: Current cost recovery</p> <p>Features: Differentiated according to seated vs. standing passengers</p> <p>Rate Change: Every two to three years</p>	-	-	Bahl and Wasylenko [1976]
Jakarta (Indonesia)	<p>Authority: A/R (Governor must approve rate changes)</p> <p>Policy: Full cost recovery</p> <p>Features: Multipart tariff</p> <p>Rate Change: Annually since 1966</p>	-	<p>Policy: Full cost recovery</p> <p>Rate Change: Four times during the period 1967 to 1973</p>	<p>Authority: R (Governor approves rates set by the Municipal Council)</p> <p>Policy: Full cost recovery with predetermined contributions to DKI (Jakarta) general revenues.</p> <p>Features: Two-part tariff (installation fee and daily rental fee)</p> <p>Rate Change: Infrequent</p>	<p>Features: Fee based on type of service and type of animal slaughtered</p>	Linn, et al. [1976]

City	Water	Electricity	Public Transport	Markets	Slaughterhouse	Sources
Tunis (Tunisia)	<p>Authority: A/R (The Secretary of State for the Plan and the National Economy approves the setting of maximum tariffs governing user rates and charges)</p> <p>Features: Differ-entiated according to users--domestic, public, and industrial; uniform pricing for the whole country.</p> <p>Rate Change: Has been adjusted only once in the past decade.</p>	<p>Authority: A/R (to be approved by the Ministry of the Economy and of the Plan and the Ministry of Finance)</p> <p>Features: Based on installed power, total consumption and distribution over the consumption period, uniform throughout the country, and rates decrease as consumption increases.</p> <p>Rate Change: Has been unchanged since 1958</p>	<p>Authority: A/R (subject to the approval of the Ministry of Transport and the Ministry of Finance)</p> <p>Features: Differ-entiated (based on type of ticket, length of trip, and type of passenger)</p> <p>Rate Change: Has been increased only twice--1967 and 1969--over the last 20 years</p>		<p>Authority: LG (A local tax is levied on animal slaughter)</p> <p>Feature: Local tax is based on weight of the animal, and vary according to type of abattoir (covered vs. open-air)</p>	Prod'homme [1975]
Kingston (Jamaica)	<p>Policy: Net cost-recoverable, current costs were financed predominantly by grants and general revenues</p> <p>Features: two-part tariff; income redistributive (water is distributed free of charge to rural and low income areas)</p> <p>Rate Change: Rates have not been changed since 1969</p>			<p>Authority: CG (required by law)</p> <p>Feature: Cost Reimbursement. In 1962, Central Government reduced fees paid by vendors. The CG then refunds the equivalent of the unearned revenue to KSAC in the form of a grant.</p> <p>Rate Change: Rates have not been changed since 1962</p>	<p>Authority: CG (required by law)</p> <p>Feature: fees are levied on a per-head basis, depending on type of animal slaughtered.</p> <p>Rate Change: Rates have not been changed since 1961</p>	Bougeon-Maassen and Linn [1975]

City	Water	Electricity	Public Transport	Markets	Slaughterhouse	Sources
Bogota (Colombia)	<p>Authority: A/R (National Tariff Board)</p> <p>Policy: Public utility tariffs are based on the principle of meeting long-run average cost and on the objective of income redistribution</p> <p>Features: Multi-part tariff (use-related monthly service charges, and once-for-all capital contribution), and income redistributive (progressive user charges).</p> <p>Rate Change: Rates were increased in 1961, 1965, 1968, 1970, 1973 and 1974)</p>	<p>Authority: A/R (National Tariff Board)</p> <p>Policy: Based on long-run cost pricing, some redistributive criteria, and some efficiency considerations</p> <p>Features: Superimposed to the full cost recovery criterion are some redistributive criteria (progressive rates for residential users, and differential rates for residential users vs. commercial users) and some efficiency considerations (peak load pricing)</p> <p>Rate Change: Every other year</p>	-	<p>Authority: Autonomously set by the Board of Directors of EDIS, but the Mayor has veto power.</p> <p>Policy: long-run AC pricing</p>	<p>Authority: EDIS Board of Directors, but the Mayor has veto power</p> <p>Policy: long-run AC pricing</p> <p>Feature: Charges levied for each animal</p> <p>Rate Change: Fees have doubled between 1961 and 1973 but have not been adjusted during the last six years</p>	Linn [1976]

LEGEND: Pricing Authority

LG - Freely set by local government.

R - Set by local government but subject to review by Central Government (or appropriate Central Government ministry).

OG - Centralised imposed via tax laws, executive orders, etc.

A - Autonomously set by public enterprise.

Footnotes to Table 6

^{1/} Municipal Bus Company (Perusahaan Pengangkutan Daerah (PPD)).

^{2/} However infrequent, the substantial increase in rental rates that occurred in 1971 was greater than the 91 percent increase in Jakarta's cost of living index between 1968 and 1973.

^{3/} To the extent that cost of provision is higher on the average in Tunisia as a whole than in Tunis, then residents in Tunis partially subsidize water consumption of non-Tunis residents.

^{4/} Prud'Homme [1975, pp. 101-102] estimated that consumers in Tunis practically subsidized consumers in the rest of Tunisia--specifically those in the Central and South regions--by approximately 370,000 dinars in 1973.

^{5/} A 30 percent increase for the Tunis to La Marga line and buses went into effect on January 1, 1974.

^{6/} Grant is equivalent to one-third of the revenues actually collected by Kingston and Saint Andrew Corporation (KSAC).

^{7/} Long-run average costs include a net return which allows continued expansion of capacity and services.

^{8/} Empresa Distrital de Servicios Publicos (Public Services Enterprises).

decisions of local public enterprises are generally subject to the review by higher authorities and in some cases, the rate structure is imposed by national legislation.

In general, local public enterprise which have restructured or revised tariff rates frequently have been able to recover at their current costs (Tables 5 and 6). Such is the case for Seoul's Water Bureau, Jakarta's water supply and public transport enterprises, and Bogota's electric power system. However, there are enterprises which have infrequently revised their tariff rates and yet have been recovering their current costs. Examples include Tunis's SONEDE and SNT and Kingston's water supply system. Of course, there are cases where infrequent changes in tariff rates is associated with poor financial performance as, for example, Ahmedabad's public transport and Kingston's markets and slaughterhouses.

The above observations suggest that frequent changes in tariff structure or at least the ability to change rates often is neither a necessary nor sufficient condition for the enterprise's ability to generate surplus suggesting that the volume of enterprise activity may be a more important factor in the success of the enterprise. Unfortunately, we have no way of evaluating the level of activity of each of the different enterprises.

IV. CONCLUDING REMARKS

Public enterprises, independent of the level of the sponsoring government, are undertaken in both developed and developing countries for a variety of motives. It is argued that most of the economic motives can be appropriately classified into those based on: (a) allocative efficiency, (b) equity considerations, and (c) public sector revenue raising. Focusing on the objective of raising revenues for public purposes, we defined the tenable range of public enterprise activity for developing countries. A productive economic activity can be suitably provided using the local public enterprise form if:

(a) the goods or services provided are marketable in the sense that exclusion is possible and goods are rival; (b) that the revenues of the enterprise, and the price charged for its use or the consumption of its products bear some relation to the costs of supply; (c) that a reasonable degree of cost recovery is possible for enterprises serving some social purposes and for full cost recovery for enterprises involved in purely commercial ventures; and (d) that it must be feasible to maintain separate management and accounts.

Using this set of limiting criteria, it is then deemed inappropriate for local governments to use the public enterprise form in the provision of any good or service with considerable degree of publicness--national good, local public good with jurisdictional spillover, and local public good. While local governments may undertake virtually

any activities that are traditionally provided by the private sector, the size of the market and their general inability to raise financial resources may preclude most local governments, the smaller ones especially, from undertaking large-scale, capital-intensive projects.

Urban governments in developing countries have been shown to engage in enterprise activities, not only in the traditional areas like water supply, electric power, public transport, and markets and slaughterhouses, but also in purely commercial ventures (e.g., the operation of hotels, restaurants, stores, service stations, and manufacturing of furnitures, paints, beer, aluminum and ironworks). While in general the performance of these enterprises are poor, some, particularly those engaged in commercial undertakings, appear to be recovering their costs. In fact, other enterprises do have the potential to make a net contribution to the local fisc as, for example, the electric power undertaking in Bombay and the traditional (water and slaughterhouse) and purely commercial enterprises undertaken by the City Government of Jakarta. Whether this possibility for revenue generation is open to a majority of local governments in the developing world cannot be ascertained on the basis of limited data.

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