



THE CHOICE OF GOVERNANCE STRUCTURE IN PUBLIC TRANSPORT: A POLITICAL ECONOMY PERSPECTIVE

BINYAM REJA

The World Bank
Operations Evaluation Department
1818 H St. NW, Washington D.C. 20433, USA

ANTTI TALVITIE

The World Bank
Operations Evaluation Department
1818 H St. NW, Washington D.C. 20433, USA

Abstract

Two types of governance structure may be used to induce competition and entrepreneurship in public transport: competition *for* the market (competitive contracting) and competition *in* the market (mostly from informal transport). The paper argues that high transaction costs, regulatory uncertainty and myriad informal operators are likely to hinder the effectiveness of competitive contracting. The paper suggests improving informal private operations by establishing curb rights and strengthening route associations.

INTRODUCTION

In the Words of Gomez-Ibanez and Meyer (1993), the world is *Going Private* in the transport sector. After years of *dirigiste* policy, many countries are liberalizing their public transport sector to allow greater private sector participation in the operation and financing of services. Recent World Bank literature, notably *the World Development Report 1994* (which focused on infrastructure), and the *1996 Sustainable Transport: Priorities for Policy Reform*, brings the phenomena into focus and calls for greater private sector participation and competition in the provision of urban public transport services.

Public transport in many countries has undergone what Gomez-Ibanez and Meyer (1993) call the privatization-regulation cycle. The authors identify ten phases in which most public transport regulatory regimes undergo: starting with the *entrepreneurial* and decentralized provision of public transport, then moving on to *consolidation*, which prompts government *regulation* of fares and franchises, resulting in *declining profits* and the *withdrawal of capital and services*. This in turn prompts *public take over* of the sector and *public subsidies*, which subsequently leads to *declining efficiency*. After much *dilemma* and debate on subsidy cuts, fare increases and services, the government, Gomez-Ibanez and Meyer conclude, pursues *privatization* (Gomez-Ibanez and Meyer, 1993, p. 13).

For private sector participation to work, an appropriate institutional arrangement (a governance structure) is needed—one that delineates the roles of the private and public sectors while enhancing their cooperation. Experience from developing and transition countries, as well as from developed countries and current literature, point to two types of institutional arrangements for private sector participation: competition *for* the market and competition *in* the market. The paper assesses the political economy foundations of the two forms of governance structure for private sector participation in a developing country context. But first, we provide a brief review of the theoretical framework used in the paper below.

THEORETICAL FRAMEWORK

The analytical framework used in the paper is that of the New Institutional Economics (NIE) as developed, among others, by North (1990) and Williamson (1985); and Public Choice theory as developed, among others, by Buchanan and Tullock (1962), Niskanen (1971), McCubbins, Noll, Weingast (1987), and Levy and Spiller (1996). The two sets of theories are suited to analyze the choice of a governance structure in urban transport because they offer a systematic and comprehensive approach to the analysis of institutional choice and economic organizations. The NIE's focus on transaction costs and its more microanalytic approach to the study of economic organization is a useful instrument to identify the factors involved in choosing a particular form of governance structure over other alternatives.

Transaction Cost Economics: A Review

The NIE framework extends the methods of the neoclassical economics, but holds the view that institutions matter in economic activities, and that different types of economic activities call for different forms of institutional arrangements (Williamson, 1985). It focuses on organizational issues and seeks to explain how transaction costs and the structure of property rights affect economic

behavior, and how the various economic activities are aligned with different forms of governance structure to economize on transaction costs.

Ronald Coase in "The Nature of the Firm," (1937) was the first to identify the importance of transaction costs in the economic system, and gave a rationale for the emergence of non-market institutions. He argued that "[t]he main reason why it is profitable to establish a firm would seem that there is a cost of using the price mechanism" (p. 38). These costs of using the price mechanism are what has come to be known as "transactions costs". Arrow defines them as "the cost of running the economic system." Transaction costs are distinguished from production costs in that they refer to the "friction" created in economic exchanges across technologically separable production units (Williamson 1985, 18-19). North (1990, 27) gives a more precise definition of transaction costs as "the costs of measuring the valuable attributes of what is being exchanged and the costs of protecting rights and policing and enforcing agreements". Williamson (1985, 20-21) identifies two types of transaction costs: *ex ante* and *ex post* costs. The former deals with the costs of drafting, negotiating and safeguarding an agreement. The latter includes (1) the maladaptation costs incurred when transactions drift out of alignment with requirements, (2) the haggling costs of drafting incurred if bilateral efforts are made to correct *ex post* misalignment, (3) the costs associated with the governance structure (often not the courts) to which disputes are referred, and (4) the bonding costs of effecting secure commitments.

Coase's influential insight on the importance of transaction costs to economic organizations has been advanced and operationalized by many economist, most notably by Williamson (1985) in the context of governance structure, and by North (1990) in the context of economic history and growth. Williamson contends that transaction costs become important when economic agents make relationship-specific investments (i.e., investments in assets that are not easily redeployed to their next best use). Relationship-specific investments lock contracting parties into a bilateral relationship, and create appropriable specialized quasi-rents (Klein et. al, 1978). In the absence of any safeguard mechanism, the existence of appropriable quasi-rents leads to opportunistic behavior by one of the agents. Hence, bringing transactions into the firm mitigates opportunistic behavior; agent A is less likely to hold up agent B if A is an employee of B than if A is an independent contractor.

Transaction cost economics posits that in the presence of *bounded rationality, opportunism, and asset specificity* economic activities would be allocated into different forms of governance structures in order to economize on transaction costs. Williamson (1985, Ch. 3) identifies four different forms of governance structures within which transactions are organized: *market governance* (classical contracting), *trilateral governance* (neoclassical contracting), *bilateral governance* (relational contracting), and *unified governance* (vertical integration). According to Williamson, transactions are allocated to the governance structure which best minimizes the transaction costs. The allocations depend on the level of asset specificity, the frequency of the transactions and uncertainty associated with future outcomes.

Public Choice Theory of Bureaucracy

Transaction cost economics provides us with an *economic* explanation of the choice of a governance structure. Public Choice theory, however, teaches us that many decisions in the public sector are often dictated by *non-economic* considerations. As a result, transaction cost considerations may not fully account for the choice of governance structures in public transport. A better understanding is gained when political and institutional considerations are included in the analysis. Public choice theory studies non-economic decision-making using economic tools. The subject matter of public choice is vast, and includes such things as the theory of the state, voting rules, voter behavior, party politics, and the bureaucracy (See Mueller 1989 for an exhaustive literature review on topics covered

in public choice). In this study, we use the economic theory of bureaucracy to examine how political and institutional variables affect institutional choice in urban transport.

Positive Theory of Bureaucracy: A Summary of Niskanen's Model

The economic theory of bureaucracy has a relatively short history. William Niskanen (1971), building on Downs (1967) and Tullock (1965) develops a model of bureaucracy that uses standard economic tools and assumes purposive behavior by managers of bureaus. The managers of the bureaus (or, bureaucrats in general) are assumed to be self-interested rational individuals who maximize their utility subject to a constraint, in the same way consumers and firms maximize utility and profits, respectively. Niskanen's proposition that bureaucrats may maximize *their* own utility is a departure from the previously held notions that bureaucrats maximize a social objective function.

According to Niskanen (p. 38) the utility of a bureaucrat is a function of, among other things, income and perquisites. The latter includes prestige, power, and patronage. Both income and perquisites are postulated to be positive monotonic functions of the bureau's budget and output.

Niskanen (p. 15) defines bureaus as organizations that are partly financed by grants from a collective organization, and whose profits or losses are not appropriated by the employees or managers of the organization. The profit of the bureau could be thought of as the discretionary budget; that is, the difference between the maximum budget that could be obtained from a bureau's sponsor for the production of a given output, and the lowest cost for which the output could be produced. Since the managers do not have residual rights to the profits of the bureau, they opt to maximize the discretionary budget so as to enable them to maximize their utility. Niskanen contends that managers of the bureaus appropriate the "profits" indirectly in the form of increased income (such as higher salary grades) and perquisites (such as bigger offices). In short, Niskanen's model suggests that bureaucrats maximize their utility by expanding the discretionary budget.

Niskanen's contention that bureaucrats maximize the budget beyond what is necessary to produce a given output rests on certain institutional assumptions. First, bureaus are postulated to be *monopoly providers* of the output. Second, the sponsoring organization is a collective organization, which represents its constituents, and is assumed to be a monopsony buyer of the output of bureaus. Third, there is an *asymmetry of information* between the bureaus and the sponsoring organization.

The bureaus are believed to have accurate information about factor costs and the production process, while the sponsor can only acquire this information at a cost. On the other hand, the sponsor's demand function for the bureau's output is known to both the bureau and the sponsor. The existence of asymmetry of information provides the bureaus with an advantage in bargaining for its budget. Inasmuch as bureaus bargain with the sponsoring organization based on a total budget, the sponsoring organization will be constrained to buy the output of the monopoly bureau in one large package. Hence, the relationship between the sponsoring organization and its bureaus resembles that of a *bilateral monopoly* (Niskanen, p. 24). The sponsoring organization needs some services to be produced, and once the bureau is set up, is locked-in to providing a budget to a single bureau. Similarly, the bureau is dependent on the sponsor for its budget and may not have other resources.

THE INDUSTRIAL ORGANIZATION OF PUBLIC TRANSPORT IN DEVELOPING COUNTRIES

We combine transaction cost economics and public choice theory to study the choice of governance structure for the private provision of public transport. The private provision of public transport services could be organized under the following governance structures: (i) *bilateral governance* -- competition for the market, or (ii) *market governance* -- competition in the market. Based on this

delineation of governance structures, the question is then which governance structure is more suitable for private sector participation in developing countries' public transport sector. The remaining part of this section address this issue.

Competition for the Market: Bilateral Governance Structure

Under competition *for* the market, the regulatory authority or the parastatal transport agency delegates the operation of transport services—the franchise—to private providers but retains planning and policy decisions. Although it is only the winner of the contract that gets to provide the service (i.e., there is no competition *in* the market), competitive contracting allows the collective organization to get some of the benefits of competition as competing contenders offer the best market terms they can to win the contract (Demsetz 1968). Once the contract is awarded, the winner of the contract will be obliged to live up to the terms of the contract. Given that there are enough competing contenders and collusion among them is lacking, the outcome of the competitive bidding process could be similar to actual competition in the market (Demsetz 1968). Consequently, competitive contracting of public transport is regarded as a middle ground between complete privatization and monopoly provision of public transport services and politically amenable than complete privatization. Since the decision making process will be in the hands of the collective body, it is presumed that the arrangement minimizes the perceived “adverse” effects of complete privatization on some affected interests, while satisfying the needs of the private sector (Gwilliam and Scurfield 1997).

In general, franchise bidding has three features. First, the operations and planning of transit services are separated (i.e., the establishment of a bilateral governance structure). A government department plans for services and takes charge of drafting and monitoring the contract. In some cases, the government owns the assets, while operations remain in the hands of independent private entrepreneurs. This approach lessens labor union pressure and induces innovative services and the use of fewer capital-intensive vehicles.

Second, franchising allows the collective organization to provide subsidized contract services without setting up a public agency to carry out the operation. Complete privatization might leave some areas without service, as some markets may be too thin for private providers to recoup their investment.

Third, a sustainable transit system may need an *anchor* service, with established routes and schedules, as well as services in new markets (Klein, More and Reja 1997). *Anchor* service also provides the focal point for passenger congregation. But unlike informal transit, which is a low-cost, low-skill operation, formal scheduled operations require special managerial skills and organizational capacity, as well as access to credit for establishing routes and schedules and for running services in new markets (Fielding, 1987). Few private bus companies in developing countries, however, have the capacity or access to credit to establish such a system. In such cases, the government may intervene to establish the anchor service and delegate its operations to private operators.

Despite these seemingly attractive attributes, there are several factors that make competitive contracting a less suitable governance structure for organizing the private provision of public transport services in developing and transition countries. In particular, the existence of high transaction costs compounded by ineffectual government organizational capacity and government discretionary behavior, as well other political dimensions in the decision making process and undeveloped private sector makes competitive contracting a less attractive approach than it appears on the surface. In what follows, we discuss these factors in detail.

A precondition for successful public transport franchises is the government's capacity to establish a governance structure to economize on both *ex ante* and *ex post* transaction costs of drafting and enforcing the franchise agreement. In drafting the contract, the public authority in charge incurs substantial *ex ante* transactions costs to determine the: (i) level and quality of service to be provided (specify routes, schedules, operating hours, type of vehicles, conduct of crew); (ii) fares and level of subsidy, if any; (iii) monitoring and enforcement procedures; (iv) penalties for failure to perform; and (v) mechanism for dispute resolution.

After contract award, the authority incurs *ex post* transaction costs to (i) monitor and enforce the terms of the contract (e.g., ensure operators follow the published schedules, complete the routes, safety standards, etc.); (ii) adjust to changing circumstance, such as redesigning routes and schedules in response to new neighborhood developments and changing demand conditions; and (iii) address the concerns of the users and operators and resolve disputes. The extent to which the government is capable of adopting to changing circumstance without holding up the private sector determines whether the governance structure will be sustained.

Many governments establish transport agencies (or create a department within an existing government bureau) to undertake such responsibilities on their behalf. In effect, the government establishes the first level contract between itself and the transport agency. The government as a *principal* contracts with an *agent* (the transport agency) to implement the above responsibilities. But for the agency to be effective in overseeing the private operation, the contractual relationship between the government and transport agency would have to be an "arms-length" one, where the government provides only broad mandates and does not get involved in the day-to-day operations of the agency. This arrangement insulates the agency from political interference so that it evolves into an autonomous and impartial overseer of the private operation. This insulation also gives the private sector more confidence on the stability of the regulatory regime.

Transport agencies in developing countries are however constrained from carrying out their responsibilities for many reasons. Like other government institutions in developing countries, they lack adequate organizational capacity and financial and human resources to undertake the sophisticated responsibilities of drawing and enforcing contracts (Heggie and Vickers 1998, p. 19-22). Heggie and Vickers report that salaries in developing country transport agencies are 2-5 times less than in the private sector. Thus, transport agencies have hard time attracting and retaining qualified staff to work for them.

The main constraint that prevents transport agencies from effectively executing their responsibilities, however, stems from the contractual problems between the government and the transport agency. Contractual relationship between the government and the agency are often violated when the government wants to achieve ancillary goals other than simply contracting out bus operations. For example, to appease certain interest groups, the government may demand services in low density areas and require the agency to implement it. The agency then would have to redesign the routes and go into negotiations with the private provider to achieve this government objective. The private provider may refuse, but as a government entity, the transport agency may force it to comply. The government, therefore, indirectly interferes in the day to day operations of the agency and erodes its autonomy. When transport agencies are required to implement government ancillary objectives, they can no longer be impartial enforcers of the franchise agreement between the government and the private sector.

When governments are predisposed to discretionary policies and political patronage as is the case in many developing countries (Levy and Spiller 1996), having an arms-length relationship between the

government and the agency will be difficult to sustain. In fact, if the government is able to violate the autonomy of the agency, the arrangement may paradoxically increase the government's discretionary behavior, because the government will not be directly responsible for the consequences of its actions when interests are adversely affected (Fiorina 1985). According to Fiorina, governments delegate implementation of policies to agencies when they want to avoid direct accountability and "disguise for the consequences of the decisions" (p.187)

In sum, governments in developing countries are constrained from setting up a specialized governance structure to facilitate the provision of public transport service under a competitive contracting scheme when the government and transport agency behave opportunistically in their contractual relationship. If the government is predisposed to discretionary policies, "arms-length" agency relationship – the key input for the stability of the regulatory regime – will be difficult to sustain. The lack of "arms-length" relationship between the government and the agency, not only erodes the autonomy of the agency, but could also exacerbate the government's discretionary behavior.

The "Hold-up" Problem — Government's discretionary behavior and contractual problems between the government and the private sector

The second factor that lessens the appeal of competitive contracting scheme for the private provision of public transport services is the contractual problem between the government and the private sector. Regulatory uncertainties and government discretionary behavior in many developing countries prevent private interests from making relationship-specific investments (Barro 1993; Knack and Keefer 1995; Levy and Spiller 1995). In a cross-sectional study of 118 countries, Barro (1993, p.426) found that private sector investment was negatively affected by the stability of a regime. Using a similar methodology, Knack and Keefer (1995, 220-221) also arrive at the same result. These findings suggest that private providers will resist making investments that could not be easily redeployed to their second best use such as building depots, large fleet of intracity buses, and public transport-specific organizational capacities to support the franchise agreement. That is, the private providers' investment decisions will be affected by whether the government will hold them up (behave opportunistically) by reversing its policy after they have undertaken large scale relationship-specific investments. Government discretionary behaviors and its tendency to "hold-up" private interests *ex post* are manifested by frequent policy changes and disregard for long-term policy commitment in order to achieve short-term political objective (Kydland and Prescott 1977). When policies change frequently due to political pressures or because changes in ruling parties, they signal a lack of commitment on the part of the government to the governance structure and the existence of substantial political risks above the normal economic risks. The lack of regulatory commitment erodes the private sector's confidence in the scheme and causes them to develop a myopic view of their participation in the sector. Private provider will be forced to concentrate on maximizing short term-profit and refrain from making large-scale investments that has very little use outside of the transport sector.

Policies in urban transport are politicized and affect the core constituents of governments: the poor; the low-income owner/operators and their dependents; the "absentee owners"—many of whom are professionals (lawyers, doctors, and government employees) who seek to supplement their income; the franchise holders, and the bureaucracy dealing with urban transport. In choosing or sustaining a governance structure, the government has to weigh the impacts of its decisions on its constituents. Often the choice and sustainability of a governance structure will reflect the distribution of power among different coalitions. In many developing cities where the poor and informal transport operators abound, governments chose policy regimes that favor these group of people. For example, many governments insist on keeping low fares and giving preferential treatment to individual owner/operators—two key policy decisions that affect the viability of competitive contracting as a governance structure.

In sum, a government's commitment to a bilateral governance structure where a private provider provides services under a contract with the government is in doubt when the large poor population and informal operators influence the government's policymaking decision. Private providers under contract need an economically viable fare and protection from interloping by informal operators to make their operation viable. However, the large poor population in developing countries constrains governments from providing a fare table that would make the contract operation financially viable. This, of course, could be remedied by providing some kind of subsidy. But, when there are plenty of informal operators that are willing and able to provide services without subsidy, the subsidy to franchise holders will be difficult to justify.

Competition in the Market — Market Governance Structure

In the last section, we have seen how government discretionary behavior and the high transaction costs of contracting hinder a sustained private provision of public transport under a bilateral governance structure. We also observed that the private sector in developing countries is so fragmented and undeveloped that it would be difficult to organize a competitive contracting scheme. How could a developing country then organize a sustainable private provision of public transport services that is dependable and predictable? This section tackles this issue and examines the second option for the private provision of public transport services: market governance structure (competition *in* the market), where decentralized, informal operators provide market responsive services. The section begins by surveying the organization of informal operators, and afterwards proposes to enhance the market governance structure. It suggests to improve the incentive structure of informal operators to dampen the collective action dilemma inherent in informal operations, and to establish rules governing passenger pick up and letting at terminals and bus stops to minimize interloping. It is argued that the refinement of the market governance structure will dispense the need to organize private provision of public transport under a bilateral governance structure and avoid its associated shortcomings.

The Organization and Incentive Structure of Informal Operators

The operation of informal transport is organized under a market governance structure because informal operators do not have a contractual relationship with the government that obliges them to provide services according to a predetermined agreement. The individual, owner-operator determines the level and quality of services in response to market conditions. The archetypical informal public transport service in developing countries includes loosely-regulated, owner-operated vehicles that follow more or less fixed routes with some deviations as custom, traffic, and hour permit. They pick up passengers from bus stops as well as hails along the route (Takyi 1990, 170; Grava 1980, 279). Hence, informal operators have the flexibility to adopt to changing circumstances, and do not incur transaction costs in getting permits and in negotiating with the government to make changes to their services.

Informal services are therefore distinguished from services organized under a competitive contracting scheme in that they do not require a specialized governance structure to predetermine service level and quality. The need to establish a specialized transport agency to draft and enforce contract and to adapt to changing market conditions is avoided. Under informal operations, adaptations are done sequentially. In addition, informal operators face less "hold up" problems than franchise operators from the government because the asset specificity of their investment is low, often one vehicle. The vehicles used to provide informal public transport in developing countries range from one-person rickshaws or motorcycles to 25-passenger minibuses. They consist of microbuses and minibuses based on converted sedans, ex-troop vehicles and motor cycles with pedicabs (Roth 1987; Takyi 1990). Franchise holders, on the other hand, have large fleet of intracity buses, service depot, and transport-specific organizational capacity.

In addition to the low transaction costs, informal operators have certain market advantages that make them appealing to riders. Takyi (1990, 171) describes their appeal to riders:

“They charge relatively low fares and provide wide coverage across a city, often serving poor areas that get no other service. Their operations are flexible so they can add service at peak times and quickly cover new neighborhoods. Their small size and cheap labor enables them to profitably provide frequent service in smaller neighborhoods and along narrow streets, as well as work the main thoroughfares. With fewer passengers, they often make fewer stops and faster time. They can negotiate traffic more easily and deviate from fixed routes. Hence they are often faster and run more frequently, while charging a fare comparable to that of the scheduled services.”

Notwithstanding their advantages, informal operators also pose problems. They headrun on the scheduled services, taking riders from them. They linger at the curb to fill up passengers, disrupting traffic and taking ridership from the arriving vehicle. As service develops on heavy urban routes, curbside conflicts occur as the operators race to pick passenger. Although riders may well be served by informal transport services, an attempt to establish scheduled service will face problems of interloping. Therefore, if informal transport services display some market advantages in that riders prefer the headrunning informal service to the arriving scheduled service, the fate of the scheduled service will depend whether informal operators have free run of the streets. If curb rights are not established and enforced, interlopers will run just ahead of the scheduled buses, collecting the waiting passengers and leaving few for the buses. Scheduled bus service may cease to operate due to lack of passengers. Depending on the level of demand, if the scheduled service is dissolved, the market for transit could all together disappear (Klein et. al 1997).

The shortcomings of informal operations stem from mis-aligned incentives of operators and poorly defined property rights on terminals and bus stops. The incentive structure with which informal operators operate lends itself to a chaotic operation. The individual-owner operator seeks to maximize profit without any regard to his actions (interloping, racing to pick up passengers, etc.) on the rest of the operators and the system as a whole. In a well-functioning economy, Adam Smith teaches us that profit motives and private incentives are aligned with the public's interest. However, in public transport private incentives fail to be compatible with the public's interest because the sector operates in a deficient property rights framework (Klein, et.al 1997) and is subject to some network economies (Mohring 1974). This has led to the collective action dilemma where the profit motives of the individual operators are incongruent with the public's desire for rationalized public transport service, and thus need incentives and compulsion to make the operations smoother (Olson, 1965)

To align the incentives of the individual operator with the demands of the rest of the operators and the public at large, route associations have emerged in several countries (Roth 1987 and Cervero 1997). These are informal organizations created to bring order and regularity to service, by creating an extralegal system of norms and explicit rules. The route association becomes a regulatory body, somewhat like government, but more local and businesslike. The association lays down rules against interloping and deviating from schedules. And, as an incentive to members, the route association provides members with access to credit and group insurance, and protects routes from new interlopers; associations also lobby governments for market-based regulations of fares and services. In exchange, members abide by the rules governing the association and refrain from interloping on each other. This arrangement has helped in rationalizing services, and filling the regulatory void left by weak institutional framework.

However, because there is no system of property rights that is officially recognized and enforced, route associations use physical intimidation and strong-arm tactics to prevent new interlopers from

transgressing their routes. Roth (1987, 224-25) notes that "the methods used by route associations to protect their territory can become criminal, unlawful, perhaps even homicidal." Sigurd Grava (1980, 282) speaks of route enforcement by means "considerably beyond the law" by "district strongmen, ... local bosses, criminal gangs, powerful families, brotherhoods of operators or otherwise legal associations." As is common in black markets everywhere, outlaw entrepreneurs employ violence to maintain their property rights (Gambeta 1993). De Soto (1989, 102) tells of route associations in Lima appointing "dispatchers" to monitor compliance with rules, and bribing the police to accost and harass "pirates" who are trying to invade their route.

REFINING THE MARKET GOVERNANCE STRUCTURE — THE PROPERTY RIGHTS APPROACH

Many governments try to curb the operation of informal transport to establish a system they feel is more palatable. The better approach—one that brings order and draws on the full benefit of the competitive pressures introduced by the informal sector—is to integrate the informal operators into the formal sector. This can be done, first, by establishing curb rights to minimize interloping (as developed in Klein et. al 1997) and, second, by strengthening and involving route and bus operators' associations to overcome the collective action dilemma inherent in informal sector operations. This approach will align the individual operator's profit motives with the traveling public's interest for adequate scheduled service, and make up for the weak rule of law of many developing countries.

A fundamental issue in establishing a stable and competitive public transport service is the establishment and protection of curb rights (Klein et. al 1997). When curb rights are established and policed against interloping, private providers are not only more likely to invest in establishing routes and schedules, they are also more likely to invest in developing new markets because they have assurance of being able to appropriate their investment.

The government as the provider of roadways and curb spaces (and the lawmaker) will have to establish the property rights governing passenger pick up and drop off on curbs. Together with the holder of property rights, the government will police against interloping. The type of property rights selected, however, will not only depend on the level of the market, has to take into consideration whether the rule of law enforces a system of property rights. A typology of possible curb rights arrangement that depends on the level of demand and the extent of the rule of law is outlined below (see table 1).

If the market is thick and the rule of law generally upheld, formal operators could be given exclusive rights on curbs and informal operators allowed to pickup and discharge passengers at designated stops. *If the rule of law is weak*, interloping by informal operators will make exclusive curb rights irrelevant. But, informal operators will continue to ply the routes confident of finding passengers, and passengers will congregate, confident of finding service. As a result, the scheduled service (as the anchor) may not be essential for sustaining the transit market. However, problems of interloping, racing will persist.

In such situations, the route and bus operators associations will need to be strengthened to bring order to the transit service. Associations need to be legitimized and allowed to enforce their rules, such as imposing nominal fines on members that interlope or fail to adhere to schedules. They also need to setup incentive mechanisms for their members, such as providing credit and group insurance. The legitimization and incentive mechanisms of the associations will dampen the collective action dilemma inherent in the individual operators, and thus minimize socially wasteful operating practices. Route associations, however, have to be prevented from becoming price-gouging cartels, by ensuring open entry to the industry and fostering the development of transparent property rights for potential providers.

If demand is thin but the rule of law strong, formal operators can be given exclusive rights on curbs, but their curbs must be kept separate from those of informal service providers because demand may not be sufficient to sustain competition. Since the law is respected, interloping by informal operators will not pose a problem; consequently, the anchor service will be preserved and transit service sustained. But, if both demand and the rule of law are weak, interlopers may decimate the transit market by transgressing on the curb rights of formal operators. In such an environment, subsidizing fares to bring them below those charged by the informal sector will discourage interloping, thus helping to preserve the anchor service, hence the transit market. At the same time, the government will need to strengthen the rule of law to stimulate the transit market.

Market	Rule of law	
	Strong	Weak
Thick	The establishment of curb rights allows formal and informal providers to operate on the same route in a relative harmony.	Interloping by informal operators will dissolve scheduled service. But transit service is sustained by informal operators. Prominent role should be given to route and bus associations.
Thin	Exclusive curb rights need to be established for formal operators; informal operators should only be allowed to pick up at designated stops.	Informal operation will dissolve anchor service; consequently transit service may altogether disappear. Government needs to subsidize transit fares to make informal services less attractive to sustain the transit market.

Table 1 Curb rights in different market and rule of law conditions

CONCLUSION AND THE PROCESS OF CHANGE

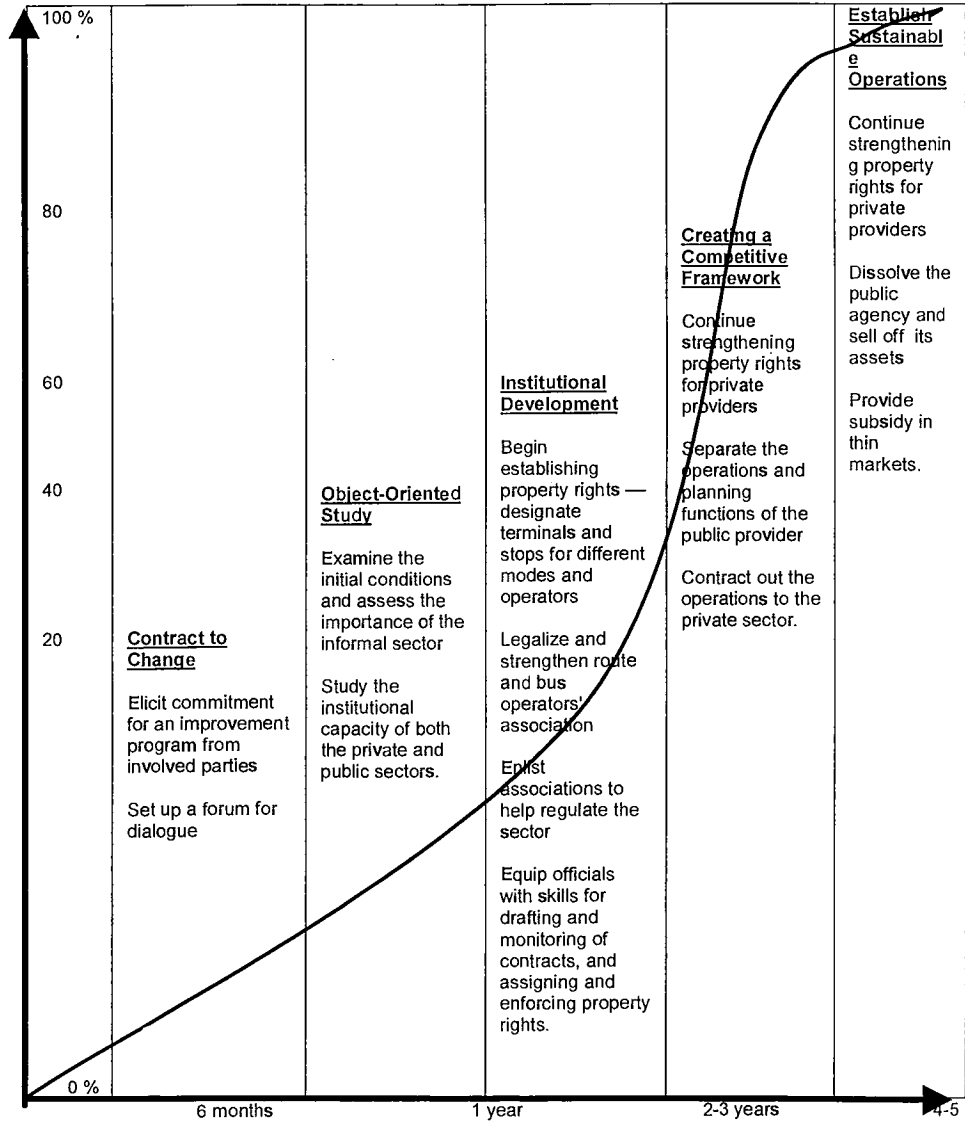
Providing adequate and efficient urban transport system not only requires investment in improving the road infrastructure and the vehicle stock, but also policy formulation that gives full consideration to the absorptive capacity and the rule of law of the specific country. Projects designed to bring improvement in traffic management and public transportation are particularly constrained by whether the country has the capacity and rule of law is strong enough to support such initiatives.

To strengthen the rule of law and bring beneficial policy changes in urban transport system, the government may create a forum in which all parties can participate to formulate policies and regulations. Such a forum—involving transit providers, route and bus operators' associations, members of user groups and drivers, policy makers, and other interest groups (e.g., the business community)—can safeguard against the government's tendency to over-regulate and to arbitrarily enforce transport rules and regulations; it increases the likelihood that the property rights and regulatory frameworks will be sustained.

Commitment to an improvement program begins with ownership and intellectual understanding of the change process. Building such commitment and understanding requires a well-sequenced process. Figure 1 shows how a typical participatory change process may evolve. The details of the change process, however, may vary from one place to another depending on the local conditions and

the peculiarities of the problem. But, in general the process begins with an understanding of the initial conditions, after which changes are introduced gradually, drawing on local professionals and residents for information in selecting and implementing interventions, observing effects and adjusting for undesirable and unforeseen consequences, and emphasizing continual person-to-person communication with relevant actors.

Figure 1 The process of change: contact function



years
 Y-axis = percentage of people participating in the process; X-axis = years in the process.

ENDNOTES

*The views and conclusions are those of the authors and should not be attributed to the World Bank or its affiliated organizations.

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