
The Case for and Against a Subsidized Future for the State Transport Undertakings: Some Assessments and Reflections

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ABSTRACT

The present paper offers a fresh look into the current practice of passenger transportation from multiple perspectives, both old and evolving. It asks whether we should extrapolate past practices into the future. It concludes that we must find a new balance between equity and economic considerations in the provision of public transportation rather than leaving market forces to prevail. It discusses a number of alternative state transport policies, with special attention given to the issues of the developing and third world.

INTRODUCTION

Debates on governance related issues in a liberalized, globalized, and privatized world order has for quite some time got stricken with the unfulfilled task of obtaining a consensus on the rules of the new game. In the case of public transportation, the prescription of increased marketization as a panacea is vehemently resisted, the most important reason probably being that over the years transportation has acquired the important attributes of a public good among most countries in the world (Srinivasa-Raghavan, 2001). Public policy has always accorded a major role for the state owned utilities in passenger transportation with private enterprises playing only an accompanying function. Public transportation has been subsidized for a social purpose; to provide mobility for those who cannot afford private travel, and for economic/environmental reasons; to achieve producer economies of scale, user economies of scale and to lower

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congestion and pollution (Ramella, 2001). This paper offers a re-look into the current practice of public transportation and brainstorms over whether the practices evolved for the past could be extrapolated further unmodified in any sustainable manner.

Most State transport undertakings (STUs) have been formed with the overarching objective of providing efficient, adequate, economical and properly coordinated services to the traveling public (Sections 3 and 18 of the Indian RTC Act, 1950). Viewed from the standpoint of such a broad objective, it is reasoned to be inappropriate to judge the performance of an STU purely on the basis of profits. Decisions regarding public transportation are to be political decisions taken in the interest of social welfare. Every political decision is supposed to be taken by the representatives of people in the genuine interest of the society. Hence, even if there occurs a decrease in revenue and profit or an increase in expenses and loss, the same is inconsequential as long as the benefits received by the wider society because of such political decisions offset it. Thus, argument goes, transport being a basic infrastructural facility which plays a pivotal role in the economic, social and cultural upliftment of a people, it may not be proper to apply the criterion of profits for the provision of this essential service. Nonetheless, this may seem to be anachronistic to some in the context of mounting losses being accumulated by a large number of STUs and the waves of the newfound ideology of government at best as only a facilitator. Should we continue to bail out the STUs from the consequences of their inefficient operations and management in the guise of social responsibility, or to provoke the development of an alternative evaluative criteria and policy decisions on the basis of the aforementioned broader objective is vigorously debated at various levels. What many critics ask at a pragmatic level is whether the losses being made by STUs are actually due to the fulfillment of their social objectives. There may be a correlation between the two, but the same ought not to be misconstrued as causality. These lines of thinking also made many analysts to study the cases of the losses made by STUs on a case-to-case basis and locate the real reasons behind each. It is not that generalized solutions are not forthcoming. For instance, Ramsey pricing (1927) as a philosophy and principle has received the endorsement of many regulators, competition authorities, and public policy makers for putting the entire gamut of affairs in perspective. But the problem with demand centric analyses like these is that demand patterns are more difficult to measure and hence authorities too tend to rely on intuitive and case by case solutions.

PROFIT MAXIMIZATION AS AN OBJECTIVE

Many studies have been conducted over subsidization and profiting in the public transport sector (See Gomez-Ibanez & Meyer, 1991 for a fairly extensive survey). Foster (2001) argues for the adoption of profit maximization in the whole of transport sector, especially in road and rail. Profit as a business objective is posited as having several practical advantages. They are as follows:

- Profit serves as a criterion for evaluating business performance. A business, which earns higher profits, is often considered as better performing than a business, which earns lower profits.
- Profit is often indicative of better resource utilization. Hence, profit can serve as a yardstick for resource allocation. It serves the public interest of optimum utilization of scarce resources.
- In commercial transport operations, profit can serve as a criterion for route selection and trip determination.
- Profit can help the organization to grow and expand activities to cater to the increased future demand by investing the internally generated funds.

In a seminal paper on funding passenger transport, Kulkarni (2000) emphasizes the need for complete liberalization and privatization. In his opinion, internal resources should be generated by allowing the operators to adjust their passenger fares in relation to input costs from time to time, by discarding subsidies and concessions to traveling public altogether and by introducing professional management in day-to-day administration. Low fares, far from commensurate with the costs involved in providing services, coupled with inefficiency, render the whole operation economically unviable. The expansion and development of transport should be need based and commercial and not to be on political considerations. This will remove wastes and losses of scarce resources and ensure efficient management, commercial outlook, and sound economic development of the country, the author believes. In a previous article, Kulkarni (1980) recognized the reasons for losses by STUs as remote village operations where there is no sufficient demand, concessions to students, special trips for festivals, accidents, natural calamities etc. He argues for the segregation of social costs from the costs of commercial operations. Analyzing costs and physical performance parameters alone, even without taking revenue into account, one can compare the efficiency of operation across different service

providers, he posits. The purpose of this and other exercises suggested in the text is to work out actual financial and operational efficiency to hold the management responsible for poor performance. Note that, he does not advocate the payment of subsidy by the government in any case. This position probably reflects one extreme in the discourses on public transportation going on in the context of the developing world.

In a study of the city operations of APSRTC Corporation (Andhra Pradesh, India), Reddy (1999) presents a case for providing subsidy to the tune of social costs. The study was limited to the losses generated out of city operations and student concessions. As per the study, the loss due to student concessions from 1991 to 95 is Rs.220.75 crores. If this were added back to the net loss the corporation would report a profit of Rs.143.53 crores and the return on investment would rise to 7.59% at the end of the period. The reasons for advocating subsidy are that it would help to reveal the true financial performance and would contribute to internal finances available for expansion. However, the study does not venture into the measurement of the cost-benefit situation resulting from lower fare, remote operations, and socially beneficial trips. But, another case study of APSRTC conducted by Prasad & Khan (1996) seems to be more promising as it identifies the operation of city services with negative margins, operation of obligatory services, concessional passes to various categories of commuters, provision for passenger amenities and operation of buses on bad road surfaces with additional cost of operation as the activities undertaken for social benefit. This, it is established using facts and figures, cannot be termed as wastage or ill utilization of funds. Also, they cite that during the period between 1989 and 1993 on an average 17.03 percent of the total annual capital investment has been spent on such commuter benefits.

Bagade (1997) sees in the fixation of bus fare in the case of state transport undertakings as more a political than an economic decision, more an art than a science. While this is so, at least some systematization could be incorporated in the process, he believes. Towards this, he illustrates with an example that the ideal fare should consider a combination of fare rate and load factor in such a way that it produces maximum revenue. Although Bagade's objective is to fix an economic fare, it is impossible to arrive at a fare that maximizes rather than optimizes revenue. Also, even if we consider profit as the best performance criterion, many points are to be kept in mind before judging the STUs based on this. For one, profit primarily depends on the revenues as determined by the fare structure. But the transport corporations are generally not granted the

freedom to fix the fares. For instance, Indian Road Transport Corporation Amendment Act 1982, Section 30, touches upon only this much in this regard: "After making provisions for payment of interest and dividend under section 28 and for depreciation reserve and other funds under section 29, a corporation may utilize such percentage of its net annual profits *as may be specified in this behalf by the state government* for the provision of amenities to the passengers using the road transport services, welfare of labor employed by the corporation and for such other purposes *as may be prescribed by the government.*" (Stresses added). Evidently, it is up to the respective governments to grant STUs the required autonomy, if at all the same is for good (Stigler, 1971). The STU normally implements the fare structure as determined by the state government in a passive manner.

When we look at the performance of the national public transport system, many STUs incur losses and their overall cost recovery index is only 80-85 per cent. Most STUs badly depend on government grants, borrowings from financial institutions or dedicated user charges for their survival (Dickey, 1983; Hanson, 1992). In the backdrop of this, privatization has been upheld as a desirable alternative for quality service at competitive price to the traveling public. It is true that the private operators are able to run the services at lower cost due to reduced personnel cost and lack of administrative and other overheads. However, opponents to privatization points out that another reason behind private players making profit is that they serve only profitable routes and caution that once the profit goes into private hands they are rarely available to cross subsidize the social operations. For example, according to Sarkar & Dutta (2000), state subsidization for transport operations has a number of extremely positive effects: subsidy benefits percolate to other sectors through derived benefits, transport being instrumental in the development of other sectors; subsidy corrects modal imbalance; it will encourage use of public transport resulting in accompanying benefits such as decongestion, less pollution etc. Yet another benefit is the social equity of providing comparable mobility to all. These and other reasons make them conclude that any hasty retreat of the government in the transport sector is going to be disastrous. The ground reality is that, particularly in the circumstances being encountered by the developing and underdeveloped world, a welfare-oriented government has still to remain the most important player in the transport sector for a longer period.

If profits are to be used as the blanket criterion for route selection and trip determination then even the state corporations will operate only

those routes and trips where there is sufficient demand to produce revenues more than the incremental costs. Still, in practice it has been found that most corporations operate odd hour trips and trips to remote villages where there is no sufficient demand to justify the operations. This has been pointed out as one of the reasons for the losses of STUs. Corporations too lament that most of these unprofitable operations are due to political pressures. Although in such cases the social costs can be fairly accurately determined, it is difficult to determine the social benefits since they involve intricate considerations. Hence, a cost benefit analysis may be difficult to implement. Therefore, the political process is still accommodated as a legitimate proxy for the social process.

Sikdar (1995) suggests a model to assign routes and subsidies based on productivity, output efficiency, service utilization, cost effectiveness, social service and staff utilization, but not putting the STUs a priori in any higher commanding stature than their private counterparts. But, he concedes that any unqualified claim of subsidy for all bus systems can lead to the problem of encouraging inefficiency (See also: Fazioli, Filippini, & Prioni, 1993). Funds are to be mobilized for sustainable transport development through proper pricing and through charge of user cost. Anyone, either an STU or a private firm, proposing a new service must submit a 'business case' which should identify the objectives of the proposal, define a base case against which any proposed scheme may be compared, screen alternative variants, and for a manageable number of them, project in detail the physical outcomes, the cost and the financial and social benefits. The case must use a social cost benefit analysis (SCBA) framework that identifies a comprehensive list of external effects, and account for impacts on the various parties, including non-users (Mills & Howe, 2000). This can become a basis for allocation of routes and subsidies among operators.

DEREGULATION AND SUBSIDIZATION WORKING TOGETHER

Armstrong-Wright (2000) sketches the practical effect of deregulation and privatization in the United Kingdom (outside London). Here the aim was to introduce market forces, improve supply, and, reduce or re-channel the heavy subsidies being paid for publicly owned services. Deregulation was introduced in 1986 in U. K. Following deregulation two types of bus services were introduced: commercial bus services and non-commercial bus services (Source: DETR, 2000). On commercial routes, private operators are allowed to operate on registration with the regional transport authority.

Any number of operators can ply a route. The operator decides the conditions of operation such as the fare charged, number of stops, type of the vehicle, etc. If the local authority specifies concessional fares on any route, the operator is provided a subsidy to the extent that he is neither better nor worse off. These non-commercial bus services are considered necessary by local authorities for social reasons. Operators are invited to submit competitive tenders for the amount of payment (subsidy) they require to operate these services. The local authority will specify the conditions of operation including the fare. Private sector or public sector operators may operate these services. The results of even such a conscientious deregulation were mixed. On the positive side, costs and subsidies came down over 50% over the years, subsidies were rationalized, and the supply of services increased by 26%. On the negative side, the fares have increased above inflation (up 23%) and the use of services decreased by 22%. Development of monopolistic tendencies has been observed as another ill effect of this deregulation. Powerful operators were able to squeeze out or buy out small operators by various means like severe price under cutting and swamping of competitor's routes. Consumers experienced difficulties like inadequate services in the suburbs due to crowding in more lucrative routes, lack of integrated ticketing, unreliability due to changes in routes and timetable, and lack of information on services (White, 1995).

In the light of the above depiction, it may be insightful to know that, subsequent to the deregulation and privatization of express and coach operations in the U. K. since 1980 and based on the experience of the National Express (a private sales and marketing company which had 95% of the coach and express operations) many recommended contracting out of operations to private agencies while STUs concentrate on transport planning, maintaining quality and sales and marketing (Rao & Chandrasekhar, 1997). The list of advantages from this, according to them, would include reduced capital, leaner manpower, lower militancy of unions, enhanced customer service, and lower costs. The rationale for the new role of STUs would be to cross subsidize the socially desirable trips from its revenues which the private operators may not provide since they are not economically viable. However, it would fetch more credibility if the promised outcomes could be empirically asserted through a suitable research design.

POLITICAL MEDIATION IN THE PRICING OF TRANSPORT SERVICES AND ITS IMPLICATIONS: AN ANALYSIS

The impact of a politically arrived lower price is twofold. The passengers who would otherwise have paid a higher price now pay a reduced price. This has the effect of reducing the revenue (a). The passengers who otherwise would not have traveled now travel paying the politically determined lower price. This has the effect of increasing the revenue (b). The difference between the two (a-b) is the net reduction in revenue and hence the reduction in profit. (This is based on a simplified assumption that additional operations of trips are not required to cater to the increased demand. If the cost increases due to additional operation of trips then the increase or decrease in profit will be the difference in incremental revenue and incremental cost.

The computation of social cost in the above case requires the calculation of the difference between a notional revenue at the optimum fare (the fare which maximizes revenue) and the actual revenue at the politically arrived lower fare. (This is, evidently, under the assumption that the costs are the same.) The calculation of notional revenue involves practical difficulties since it requires demand determination based on estimates. It may not be possible to accurately determine the demand under different pricing options. Also, the calculation of notional revenue may lead to another political process between the government and the STU if the social costs are to be reimbursed.

Although we have considered the social cost in the above situation it will be useful to consider the social benefit as well, especially because there may be only a very constricted region in the fare-structure curve where social benefits exceed the costs involved. Normally in terms of social cost benefit analysis the total consumer surplus that results due to the critical decision is considered as the benefit. However it may not be appropriate to treat the reduction in fare to the passengers who would otherwise have paid higher fare as the social benefit since they were willing and able to pay the higher fare. The true social benefit is only the reduction in fare to the passengers traveling additionally as a result of the politically determined fare.

If the reduction in the fare to the additional traveling public (benefit) is more than the reduction in revenue (cost), then the decision for a lower fare is justified from a social cost benefit point of view. This would happen

if the additional demand were very large in comparison to the original demand. (In this case simple shifts in load factor based on the assumption of constant costs and scale of operation will be violated. However, economies of scale may result.). A huge shift in demand is, however, unlikely to happen considering the fairly inelastic nature of transport demand especially of work related trips in urban areas (Oum, Waters, & Yong, 1992; Small & Gomez-Ibanez, 1999) in which case the benefits are likely to be less than the costs. In such a situation a profit driven fare may be admitted and then the government can subsidize the additional passengers directly to the extent of the difference between the politically determined and market-determined fares. It will be economic for the government since it pays to the extent of benefits, which is less than costs otherwise payable to the corporation. This seems theoretically sound, but calls for implementation mechanisms whose structures have to be built up from the scratches. Also, it is not so easy to practically identify these additional passengers.

SO, WHAT IS THE WAY OUT?

Continuing, profit not only depends on the revenue alone but also on the costs. Both the absolute values of input as well as the efficiency with which the resources are utilized determine cost per unit of operation. The absolute values of inputs are escalating at a very rapid rate over which STUs have very little or no control at all. But the corporations definitely have a control over the operational efficiencies which will reduce their per unit operational cost. The corporations should strive to improve efficiency parameters such as fleet utilization, vehicle utilization, staff ratio, kilometer per liter of diesel, tyre kilometer, cost of accidents and breakdowns etc. to reduce the cost per effective kilometer. The point here is that the losses of the STU in most instances may be attributed to its own inefficiencies. The losses due to lack of efficiency cannot be considered as social costs. The only way out is to set standards for costs and efficiency. Individual corporations should benchmark for the best results achieved in any performance parameter in the industry and a percentage of which (say 95%) should be treated as achievable efficiency. The essence of the argument is that subsidization should be only for the sufferings made by the corporation for the wider social benefit and not for own inefficiencies. In determining the achievable competence standards, the specific operating conditions of a particular corporation are to be taken into account. For example, a corporation having operations along predominantly hilly routes cannot achieve the diesel efficiency and vehicle

kilometers achieved by the best corporation operating in the suburban plane. The limited geographic spread of a corporation may lead to lower vehicle utilization. The load factor achieved by an urban transport corporation may not be achievable by a corporation having mainly rural operations. Also, it is not reasonable to expect a quick modernization of the existing fleet or switching to a more appropriate design. Thus, specific factors need to be given due consideration in setting the standards. What is required on the part of the state corporations is the institutionalization of the whole process thus ensuring comprehensibility, transparency, stability, cost-reflectivity, measurability and objectivity.

Operational efficiency is but one of the keys to success. Whether a corporation is going to remain profitable in the longer future is determined more by the strategic initiatives taken by the corporation. Outsourcing tyre retreading and holding the parties responsible for results was the main reason for superior tyre performance of Kadamba Transport Corporation (KTC) of the State of Goa in India. Similarly, introducing point-to-point nonstop minibus service without conductor at higher fare helped to reduce losses of KTC. In some cases outsourcing the entire operations to private operators may also help. Strategic initiatives can generally be in the form of introduction of innovative services, finding an optimum service mix, initiatives resulting in considerable cost advantage, adoption of emerging technology and the like. Again the best practices in the industry have to be benchmarked and adopted. The essence of the argument is that every possible action should be taken to enhance profits before losses are to be used as an excuse for demanding concessions and subsidies. In Goa, for instance, it has been observed that the private transport operators are able to provide discounts to regular passengers on account of their reduced costs of operations. It also helps to retain a set of loyal customers. In such situations, losses made by the STUs cannot be considered as emerging out of any social cause and should not be a pretext for harnessing public funds in any form in the name of redeeming.

Competitive operations have the potential to make the organizations more cost effective and efficient (Karlaftis & McCarthy, 1999). The quality of service will also considerably improve due to competition. The consumers will be benefited in the form of reduced price and better choice. The inefficient operators will be forced to exit. Where the state transport corporation operates services in those routes where private operators also are operating, competitive market dynamics take charge of the situations and State corporations generally end up in great losses. This is visible

from the following scenario: Rural State Transport Undertakings recovers 91% of their total cost, hill region State Transport Undertakings recovers 76% of their total cost and urban State Transport Undertakings could recover only 69% of their total cost. Evidently, urban public sector transport operators face the stiffest competition from their private sector counterparts. The reasons could be two: first, the quality of service of the state corporation may be low and hence it attracts lower public patronage compared to private operators. In this case the losses cannot be considered as social cost. Second, the quality of service may be comparable, but the private operators may be able to expand the capacity and operate at lower load factor due to reduced cost and increased efficiency. State transport corporation may run into losses at the lower load factor due to higher cost of provision of the service. This, however, does not preclude the simultaneous operations by private operators and the STU as a desirable alternative. As implied elsewhere in this article, it is in fact to be encouraged especially in the urban commercial routes, but invariably preceded by a total reengineering of the STU. In this regard, it may be noted that state transport undertakings have been oftentimes instrumental in intervening in markets to achieve maximum social welfare in the event of a market failure.

In a situation where subsidies for social operations are not provided by the government, the corporations can cross subsidize social operations out of the profits from their commercially viable urban operations. In case of cross subsidization of social operations from the profits of the commercial operations, the extent of social operations will be determined by the profits of commercial operations. The underlying philosophy is to view commercial operations as a means necessary to fulfill the larger social objective. The corporation can determine the extent of social operations by allowing for a reasonable return on the amount invested. A reasonable profit will allow the corporation to grow and expand its operations in future to cater to the increasing demand. This would allow to earn further returns and to serve social objectives better in future. However, the extent of social operations will depend on the amount of profits earned from commercial operations. In this way profits will become an important determinant of social operations. The ratio of social kilometers operated to commercial kilometers should be considered as one of the parameters for the performance evaluation of STUs.

An alternative available to the government is to invite private operators to operate social routes. The government can provide subsidy to the private operators to the tune of allowing them to have a reasonable

profit. This alternative, however, has certain practical difficulties. First of all, the government has to deal with a large number of operators on a route-to-route basis. The chances of corruption are also high. This involves huge administrative cost to monitor the cost and revenue of the operations on the part of the government. The difficulty can be overcome by providing a blanket subsidy, may be in the form of tax relief or so. But this would reward operators disproportionately. More over, routes, which badly need services on social considerations, may go un-operated due to the avaricious economic considerations of the private parties. The literature review done by Manikutty & Raghuram (1993) broadly attests to this. In Jamaica, according to them, the process of privatization was done by auctioning bundles of profitable and non-profitable routes (packages) to package holders. Package holders would sub-franchise them to vehicle owners. According to them, privatization in different countries did not result in the improvement of quality. Private operators were crowding in the profitable routes. The study incorporated privatization experiences from Jamaica, Sri Lanka, Thailand and India.

Yet another alternative is to nationalize all profitable routes for the state corporation with mechanism to ensure that quality, frequency, and reliability of services are to be maintained. This would provide enough profit to cross subsidize social operations. The remaining routes after nationalization should be open to the private operators. The private parties who are able to achieve better cost-effectiveness may operate some of these routes although these are not profitable to the STU. The real social operations are required on those routes where even private operators are not willing to go. Out of these routes the STU should pick up routes based on social criteria, as discussed earlier, to the extent how much spare funds are available for cross-subsidization and the available subsidy from the government and other sources permits. Allocation of subsidy to the transport sector of the social economy, however, is often determined by the government from the point of view of much larger political considerations, broadly based on the level and mix of social benefits to be provided to the public under different heads from the General Exchequer. Hence, the relative priority accorded to transport vis-à-vis other essential services at the macro level is the key here.

CONCLUDING REMARKS

Given that the problem of subsidization does not have a global answer transcending countries and cultures, a general guiding principle that may be taken into account is that sustainable development of transport should

be promoted to the extent possible through prices that are closer to the marginal social cost. This is a prickly problem that demands striking a delicate balance between efficiency and equity: emphasizing efficiency means excluding a large population with serious welfare implications for them, but maximizing social equity requires society to agree to distributive policies that can be undertaken only at the expense of growth. Distorted pricing, even if good intentional, conveys wrong or misleading information about resource scarcity and thereby provides inadequate incentives for the efficient use of resources and capital. It, however, needs to be ensured that there are no significant adverse externalities and distributional consequences and STUs have a unique interventional role to play here.

To participate in the political process of fare fixing and subsidization as legitimate stakeholders STUs should be regularly encouraged. The said political process may be more democratized via bottom-up decision-making; say, by inviting applications for operations of social routes and trips from the citizens living at the grassroots through people's representatives. Although the social benefit is difficult to be quantified in monetary terms it is sufficient if the routes and trips can be ranked in the order of priority by using social criteria. STUs should contribute to institute social criteria to select routes for operation from the received applications. The parameters, for example, may include distance to the nearest market, population of the area, distance to educational institutions, hospitals etc. with due weightings.

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