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April 1989

General Operational Review

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Pricing and User Charging in the Transport Sector:
A Review of FY88 Transport Project Operations

General Operational Review

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The Bank has repeatedly urged its developing member countries to adopt appropriate pricing policies. To assist in this process it has issued several reports on port pricing, railway costing, and road user charges and taxation. To see how effective this advice has been, INU has undertaken a detailed review of the advice offered on pricing and cost recovery in all transport projects approved during FY88. One of the most significant findings of the review was that pricing and cost recovery policies were not treated as essential issues in about half these projects. In both port and railway projects, the emphasis was on financial cost-recovery and on agreements to ensure tariffs kept pace with inflation. Port projects, on the other hand, did show concern for improving the utilization of port facilities through better pricing policies. Although several railway projects emphasized improved costing, few promoted the concept of marginal cost pricing to enable the railways to seek new areas of profitable business. The advice offered was more varied in the highway sector. Discussions on road financing tended to focus on whether allocations for maintenance were sufficient to maintain the road network to a reasonable standard, while those on user charges focussed on whether trucks were paying for the damage they did to the road network; however the two topics -- financing and user charges -- were rarely linked. Two important issues were hardly ever discussed in relation to FY88 projects. One was that the structure of road user taxes is often unnecessarily complicated, administratively inefficient and, for some taxes, low yielding and generally unrelated to encouraging economically efficient use of the road system. The second issue relates to highway tax evasion and revenue leakage, both of which are problems in some countries. The main observations on transport pricing emerging from the review are: (i) few projects treat pricing issues adequately and those that do focus on "getting revenues to cover costs" and setting "prices-to-reflect these costs" (costs often being undefined); (ii) there was little discussion on the alternative objectives transport pricing might serve; (iii) there was no methodological consistency and the methodology used was generally not stated clearly; (iv) projects rarely dealt with fiscal concerns, or administration of transport taxes and user charges; (v) little attempt was made to look at pricing across modes; and (vi) pricing and subsidy mechanisms to meet urban transport objectives were not considered. The main recommendations of the review are: (i) current advice on transport pricing should be consolidated into a paper which focuses on the practical problems of implementation; (ii) PPR should be ready to provide more guidance and support to the regions on methodological issues and questions of implementation; and (iii) economists should direct more attention to the multiple and sometimes conflicting objectives of pricing policies and, in the case of roads, assess the fiscal aspects of pricing as well as the administrative and economic aspects of recommended pricing regimes.
PRICING AND USER CHARGING IN THE TRANSPORT SECTOR
A review of FY88 Transport Project Operations

I. INTRODUCTION AND BACKGROUND

The Bank's first major enquiry into pricing within the transport sector - The Economics of Road User Charges, was published 20 years ago. It was one of a number of Bank reports on pricing which led eventually to Operational Manual Statement (No. 2.25) in 1977. This OMS sets out the broad philosophical and methodological basis for the Bank's policy position on "Cost Recovery Policies for Public Sector Projects." Substantial amounts of Bank projects in the port, railway and road subsectors since 1977 have included studies and technical assistance to improve costing, pricing and user charge systems. Efforts have also been made by some countries independently using their own or other aid funding.

In addition to direct project funding, large amounts of Bank staff time (and substantial amounts of Bank research money) have been devoted to improving transport costing and pricing. Two sets of activities have been involved: (i) time spent on preparing terms of reference for Bank studies into transport pricing and costing matters; and (ii) on selecting and supervising consultants as well as evaluating their reports, whether financed under projects or by the Bank's research or operating departments. The other large use of Bank staff time has gone into preparing, discussing and disseminating guidelines; to meetings of various kinds and to in-house staff training on these topics. Given the size of the efforts made in the Bank, transport staff specialists are usually aware of the thrust of the main theoretical arguments and of the practical problems encountered. They may be less sure of what to do in practice, in part, because Bank policy has not been unambiguously clear.

Despite the significant investments in Bank and borrower staff time and money, two impressions remain. One is that application of the Bank's research findings, of its policy statements and of its internal guidelines about transport pricing, user-charging and cost recovery remains a contentious and time-consuming aspect of transport lending and sector work. The other is that there are few examples of substantial and sustained improvements in transport pricing or user-charging systems in Bank borrowing countries.

1/ A.A. Walters, The Economics of Road User Charges, World Bank Occasional Paper No. 15. Johns Hopkins Press, 1968. The earliest identified Bank report on the topic was "Some Aspects of the Fiscal Burden on Road Transport" Report No. EC-57, 1957. This 30-year old report raises many points about the importance of public revenue needs being stressed in current Bank discussions. Its view on highway user charging, however, were traditional and not oriented towards promoting economic efficiency.
Borrowers seem, in practice, to select those parts of the Bank's advice which make sense to them at the time rather than implementing a total package of recommendations that involve major restructuring. Thus, introducing improved costing systems in ports and railways has been easier than reforming their tariff/price policies and structures. Moreover, progress in pricing initially made on the basis of these improved costing techniques and of highway taxation studies often turns out to be short-lived, or need constant reinforcement through repeater Bank lending operations in the mode. Many borrowing countries raised port and rail tariffs as well as road and airport user charges in the early 1980s. These moves, however, were usually responses to the worldwide inflation of energy and other transport input prices rather than logical, progressive steps in a strategy for pricing designed to correct distortions in the allocative and productive efficiency of resources within the transport sector. Elements of this search for efficiency can be discerned in some instances, however, and especially where domestic prices for transport fuel were brought more into line with border prices for the products.

Political resistance to transport price/taxation increases is common everywhere. This is not a sufficient explanation, however, for the generally slow progress in implementing sound cost-reflecting transport pricing and user charge systems in many Bank borrowing countries. Slow progress is often not due to limited knowledge about what needs to be done and why. In fact, Bank and borrower officials may have agreed at the time of project negotiations about appropriate steps to be taken. In some cases, it became clear soon afterwards that the Bank and borrower's negotiation teams had been insufficiently sensitive to the political constraints on speed of change thought political, desirable and feasible. More fundamentally, as a Bank staff commentator has observed, there has been a "failure of governments to create conditions in which there is a professional interest and incentive among management and employees in the public services to apply that knowledge." Thus, policy level and senior management officials have often given way in the face of key actors in the transport policy formulation, approval and implementation processes who perceive change as adversely affecting their interest. In countries other than those with command types of economies experience demonstrates that major changes in transport policy and pricing usually require substantial political, institutional and bureaucratic effort to build coalitions of support for the approval and subsequent implementation of change. Policy reform of the type involving transport pricing and user charges also requires strong administrative skills, organizational ability and managerial capacity that are in short supply in many borrower countries. Experience also suggests that

2/ In FY88 the Bank financed 37 transport lending operations in 28 countries. In 12 of the countries the new project was the 10th or more transport financing operation in the country concerned. In six cases (India, Korea, Thailand, Mexico, Brazil and Yugoslavia) the FY88 project was the 20th or more transport lending operation in the country.

If changes in transport price systems and levels are to be accepted and long-lasting they need to be accompanied by visible improvements in road conditions or quality of public transport services, for example. "The main point is that an efficiently functioning price system, in the public and private sector [of transport] relies greatly on the capacity, accountability and integrity of the institutions that manage it."4

The need to recover from the severe economic shocks many Bank borrowing countries suffered in the 1980s makes continuation of past policies and slow rates of progress unaffordable options. Thus, with Bank and other international assistance many countries are seeking to re-adjust or reform their macroeconomic and sectoral policies so that (i) their balance of payments/debt servicing positions will be improved; (ii) public and private domestic savings will be increased since these are now more valuable with the increased costs of foreign borrowing; (iii) expenditure switching will be encouraged by changing the prices of traded goods relative to non-traded goods, including transport; and (iv) resource use efficiency and enterprise productivity will be improved.

Better pricing in the transport sector is clearly only a part of this wider economic reform and fiscal adjustment process. Nevertheless, the sector's large role as a generator and consumer of public revenues makes it a potentially important point of focus in the process. On the revenue side, for example, the Bank has recently estimated that for 25 developing countries some 10-15% of total government revenues were derived from the use and ownership of road vehicles.5 This share is even higher in the low income countries. On the current account expenditure side, subsidies or transfers paid to meet the operating deficits and debt servicing of national railways, airlines and other transport companies are often the largest single sector item in the governments' budget deficit.

The transport sector is also a large consumer of investment resources. On average, it absorbs 10-20% of total annual public sector investments - again with larger shares in the least developed countries. Other estimates show total transportation and related distribution expenditures (excluding urban transport) can account for around 20% of the GDP of developing countries. There is a potentially large volume of resources, therefore, that could be re-allocated or used more efficiently as a consequence of applying better cost-reflecting transport price and highway user taxation systems. Such changes would have the added advantage of maintaining, at least, or even increasing, the levels of public revenue now being generated by the transport sector and, thereby, benefit worthy social programs in other sectors, without compromising the efficiency objective within transport.


5/ Interim Guidelines on Road User Taxation, Transportation Note No. 4. November 1986, Transportation Department, p. 8 and Table 1.
It is against such a background that the Bank's transport lending and advisory work must respond. This review is a first step in a re-examination of ways to improve the quality and effectiveness of Bank advice about transport pricing and highway user taxation. It begins by looking at the advice about transport sector pricing now being offered through current lending operations. There is, of course, an ongoing dialogue about the topic in the transport sector work for most countries and which may not be reflected in the documentation relating to a particular lending operation.

II. SCOPE OF THIS REVIEW

In early 1986 - and within the framework of OMS 2.25 - the Bank undertook a review of experience with public sector pricing policies by examining 149 staff appraisal reports (SARs) presented to the Board during FYs 84 and 85. That review reached two main conclusions. First, in some sectors (including roads) the Bank's approach seemed fairly effective in combining economic efficiency criteria with distributional and/or financial objectives. In other sectors (including ports and railways), however, the dominant emphasis was on financial criteria, with little attempt to incorporate the economic efficiency objective into tariff (price) policies and practices. This present review of FY88 transport operations, as discussed below, confirms the concentration on financial matters in revenue earning projects (including toll roads), but it is more skeptical about the degree of progress in road user charging. Secondly, strikingly little attention was given in the FY88 transport operations to the fiscal dimensions of pricing and user charging at a time when budgetary resources are scarce for most borrowers. Fiscal objectives are implicitly recognized, however, in the FY88 operations by covenants relating, for example, to the specific contributions governments are to make to Road Maintenance Funds or to subsidy payments to be made under a 'Contract Plan.' The reasons for such covenants were rarely put into a broader context or fiscal budgetary situation. This is surprising, given the increased attention to public expenditure reviews in Bank economic work.

The 1986 report suggested there might be two reasons explaining the poor focus on the link between broader national objectives and sectoral pricing policies. One is that better pricing in a single sector or project context - no matter how important these appear to be - does not have enough fiscal impact to be important. The other is that for some country economists in the Bank sectoral pricing is a 'micro' issue.

Since the 1986 review ranged over 13 sectors of lending activity its treatment of any single sector was necessarily brief, though it

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5/ It is interesting to note that a number of SARs examined in the present review state the main project risk relates to the timely and sufficient availability of project counterpart funds and/or maintenance resources required from annual budgets. Connection between this possibility and the discussion, if any, on user charging in the SAR was rarely made.
did examine 37 transport projects (22 for highways; 8 for ports; and 7 for railways) in over 20 countries, a number of which reappear in the present review. To bring the picture on transport pricing which emerged from the 1986 review into closer focus INUTD decided to examine in more detail the whole FY88 transport lending program, including two urban transport projects. In FY88 the Board approved 38 transport projects (23 primarily for highways/roads; 6 for railways; 4 for ports; 2 urban and 3 covering investments in two or more modes); Annex 2 lists the countries involved and the loan amount. The FY88 approvals were sufficient in number and variety to offer a potentially wide set of experiences against which to test and expand upon the PPRs 1986 conclusions.

The present review, therefore, was initiated with the purpose of answering such questions as:

* What was the nature of the advice on transport pricing/user charges being offered in SARs?
* Did the advice recognize and give any priority to the possible multiple objectives a public sector pricing system might serve, e.g., fiscal revenue maximization; allocative efficiency and resource mobilization; minimization of administrative costs in revenue collection or cost recovery instruments; inflation management; etc?
* Was the methodology underlying the advice clear and acceptable? And, if so, was its source identifiable - Bank guidelines, consultant studies, sector work review or others?
* Was there consistency across countries, Bank regional departments and/or transport modes in the advice being offered or in covenants or other agreements negotiated?
* Did projects deal satisfactorily with such issues as:
  (i) definitions of marginal cost?
  (ii) the role of congestion costs and whether they could be charged for?
  (iii) were ad-valorem taxes used or considered as a way to maintain revenues in real terms in inflationary circumstances?
  (iv) was consideration given to demand responsiveness to changes in pricing systems and levels in centrally planned economies (CPEs)?
* Was consideration given in urban transport projects to explicit pricing mechanisms (e.g., parking charges) or to surrogate traffic demand restraint measures (e.g., property taxes, transport management techniques, etc.)?

Questions of toll financing and highway revenue earmarking were not explicitly indicated in the TOR, but it was agreed these would be discussed if they appeared as interesting aspects of FY88 lending. Similarly, fuel pricing was not identified as a separate topic for review, but was to be touched on wherever relevant.

III. APPROACH

A simple exploratory approach was adopted in carrying out the review. First, the project SARs - and, where no SAR was prepared or
presented to the Board - President's Reports - were examined to see how transport pricing/ user-charges/road taxation were treated. Secondly, various internal Bank guidelines, sector reports, related transport sector memoranda and similar documents were sampled. Finally, discussions were held with selected project staff associated with some of the SARs reviewed.

In undertaking the review a number of analytical groupings were possible, e.g.:

- **By Region and Lending Total**
  - Project No's a/ Amount
    - Asia: 18 (47) 1,665 (59)
    - Africa: 11 (29) 629 (22)
    - EMENA: 5 (13) 327 (12)
    - LAC: 4 (11) 211 (7)
  - Total: 38 (100) 2,832 (100)

  a/ Includes 2 supplementals.

- **By Mode**
  - (main financing focus)
  - Project No's a/ Amount
    - Highways: 22 (61) 1,481 (52)
    - Railways: 6 (16) 809 (29)
    - Ports: 4 (11) 254 (9)
    - Urban: 2 (5) 180 (6)
    - Sector (2 or more modes): 3 (8) 108 (4)
  - Total: 38 (100) 2,832 (100)

  a/ Includes 2 supplementals.

- **By Broad Lending Category**
  - Project No's a/ Lending Amounts
    - Specific Investment Projects: 27 (71) 2,222 (78)
    - Sectoral, sub-sectoral and multimodal operations: 7 (18) 522 (18)
    - Technical Assistance only: 3 (5) 48 (2)
    - Emergency Reconstruction: 2 (5) 40 (1)
  - Total: 38 (100) 2,832 (100)

  a/ Includes 2 supplementals.

Other groupings might have been possible for the comparative analysis of special cases, e.g., Sub-Saharan Africa where 10 or nearly 50% of all FY88 highway lending operations were located; or China with 5 projects totalling US$559 million and some 21% of the total FY88 Bank lending for transport; or revenue earning enterprises such as ports, tollroads and railways as compared with government budget financed roads; or the countries which, over time, have had more than a chosen number, say 10, of Bank financed transport operations (see Annex 1).
Given the wide range of elements and countries within the various possible groups, the modal basis was selected as the most appropriate approach. This reflects the reality that Bank financing and staff activities are primarily oriented that way in lending and sector work discussions with borrowers. It also makes the separation of revenue earning ports and railways projects clear—there was only one toll-road project in FY88 (Korea-Kyonggi). The modal approach is also a convenient way to contrast experience with Bank policy and advice towards pricing and cost-recovery since these are expressed most frequently in modal terms through internal guidelines, presentations to external conferences, official publications, or in daily dealings with borrowers.

The rest of this paper falls into two main parts. The first summarizes what is said in the FY88 SARs about cost recovery and/or user charging. Each modal section has a brief preamble that outlines current views about pricing/cost recovery in the particular mode and, to the extent it is clear, the Bank's policy regarding pricing and user charging within the mode. Examples are drawn from particular SARs of important points which illustrate themes or issues. A summary assessment is made at the end of the different modal sections. The second part of the paper seeks to draw broader conclusions with a view to suggesting ways the Bank may improve the basis for giving advice in the sector.

IV. THE MODAL REVIEWS

A. Highways (Roads) Sector

1. Background/Theory

Transport by road is now the predominant means of freight and passenger movement nearly everywhere. The main exception is China where railway transport remains unusually important but even here road transport has grown rapidly in the 1980s. The world-wide increase of road over rail and water transport has been made possible by major expansions and improvements in road networks and the simple technology and low entry costs of road transport. Vehicles can be run by small, closely managed profitable firms. The rapid development of bus and truck transport, however, has had serious financing/fiscal implications for highway maintenance funding and the need for growing investment in road renewals and system improvements.

Under the heading "Lessons Learnt," OED observes in its 12th Annual Review of Project Performance Results, that highway project "appraisal analyses have for a long time now identified road maintenance as a major concern in many countries; several causes are cited, among which the inadequacy of budgetary provision is the most persistent." This theme is repeated in many of the FY88 highway project SARs, with some 60% of them containing covenants or other assurances relating to maintenance expenditure targets and to increases in maintenance allocation. OED emphasized that this steady concern in SARs "suggests that the problems surrounding maintenance funding have not been truly learned" and to ask:

"Have borrowers adequately understood the message that maintenance is the most effective means of keeping up with mobility?"

"If maintenance is obviously worthwhile, why is money not made available for it?"

"Does the phrase 'lack of political will' adequately describe why money is not provided?"

"Does the ready availability of (external) funds to rebuild ill-maintained roads... sway the decision on maintenance funding?"

OED does not attempt to answer its own questions which are at the heart of an endless debate within the Bank and borrower countries about highway cost-recovery, road user charging and taxation. The problem often persists even when, as part of project agreements, governments increase maintenance allocations or introduce new funding arrangements to ensure more regular flows of maintenance funds. For example, the FY88 Togo SAR brings out that budget allocations for road maintenance were substantially increased under SAL II but actual expenditures failed to reach one-half of the budgeted amounts. The shortfall was caused by delays in spending authorization; by persistently cumbersome bureaucratic procedures for procurement and paying suppliers; and by the unexpected large use of maintenance funds to pave the streets of the capital. Thus, even where - as in this case - total annual road expenditures are greatly in excess of total annual road expenditures, the maintenance job may not be done well.

In some projects, attempts are made to bypass the problem of budgetary allocations by establishing Road Funds that have simplified disbursement procedures. Under a covenant to an earlier (6th) Highway Project, the Madagascar government oil company was to deposit the proceeds of fuel taxes into a special fund. This did not happen and budget disbursements for maintenance continued slowly. The FY88 (7th) highway project has a condition that fuel taxes will be supplied directly to a Road Fund established under a recent governmental decree; it remains to be seen if this variant will resolve the problem.

The maintenance financing and cost recovery problem is compounded by the need to invest also in physical expansion and improvement of

8/ The issue, in fact, goes back a long way. "When the carriages which pass over a highway or bridge... pay toll in proportion to their weight, they pay for the maintenance of those public works exactly in proportion to the wear and tear which they occasion to them. It seems scarcely possible to invest a more equitable way of maintaining such works.... When the toll upon carriages of luxury... is made somewhat higher in proportion to their weights than upon carriages of necessary use, such as carts, wagons, etc., the indolence and vanity of the rich is made to contribute in a very easy manner to the relief of the poor by rendering cheaper the transportation of heavy goods to all the different parts of the country.... [But] the tolls for the maintenance of a high road cannot with any safety be made the property of private persons... [rather they] should be put under the management of commissioners or trustees...." A. Smith, Wealth of Nations, Book V, Chapter I, Part III (1776).
highway systems at a time when funds for all purposes are scarce. Thus, discussions over road financing and user charging tend to be dominated by two broad lines of thought. One theme relates to how to raise enough money from highway taxes to build and maintain the road network which is said to be "needed" in the public interest. This approach attracts support from politicians interested in constituency benefits; from road planners and engineers who - understandably - want to see their plans and project studies realized; and from road construction and transportation oriented interest groups looking to profit and employment. This tendency is best illustrated by the construction of the U.S. 41,000 mile U.S. Interstate Highway System (originally 'Defense Highways'). Local variations of it are found in many developing countries, especially in those with growing modern economic sectors (including vehicle manufacturing) e.g., Mexico, Brazil, Korea, Yugoslavia and India, among others. This 'needs' approach is also bound up with traditional views about the role of taxation, public finance and the idea that uncongested roads have 'public-goods' characteristics. Changes in these views take place only where there are clear, perceived political and economic pressures to do so. The other theme is that of economists and has two refrains. The first is that roads should be built if the discounted expected net benefits are positive. The second is that once a road is built it should be treated as a 'private-good.' That is, users should be charged a price equal to the marginal social cost of their using it. If the road has so little traffic that the speed of each vehicle is not affected by any other vehicle using the road then marginal cost is simply the wear and tear caused by vehicle use. Maintenance costs which do not vary with use (e.g., signs, grass-cutting, etc.) are not part of the marginal cost. In the excess capacity case the marginal cost of the road is below the average cost of maintaining it and the original investment cost will not be recovered by pricing road users directly for the marginal costs. The initial investment has, of course, already been paid for by taxpayers generally in terms of the opportunities foregone by the labor and other real resources used in its construction. Where, by contrast, congestion exists the social marginal costs of road use exceed average costs and it is appropriate to charge a toll or user charge to restrain or ration demand. This will ensure both efficient use of road capacity and maximum revenues for the highway authority. A typical road network usually consists of many underutilized, financially deficit segments and a smaller number of congested, surplus yielding segments. A well structured system of road user taxes could in these circumstances not only be self-financing but also economically efficient, with different vehicle groups and types paying their relevant marginal costs.

This conceptual correct position is familiar to Bank transport staff and to many officials in borrowing countries. However, its logic - and, sometimes, the way it has been presented - is hard to accept by

9/ For example, it has been reported that to encourage the production and sale of a small, 800 cc "people's car" the Korean government is considering exempting the vehicle "from excise and road taxes that now add 25% to 50% to the price of ordinary vehicles." Business Week, September 12, 1988.
politicians and their advisers who have to explain to the public how such a pricing system will be practical and transparently equitable in the claimed uniqueness of their country. Resistance to marginal cost pricing in the roads sector is not simply resistance to change. The logic of pricing for different times and class of use and for service quality differences are well understood and often practiced in other economic activities in borrower countries, including in aviation or railway transport. The Bank has to explore more deeply why in specific country cases the message, even where accepted, is not acted on or done so at such a slow pace. This will require much deeper understanding both by country and project officials in the Bank about the country's fiscal traditions and current objectives as well as the internal constraints at work.

2. Bank Policy and Practice

The Bank's current position on road user charging or highway cost recovery has its origins in the early 1960s when lending for road development began to exceed that of railway lending. This led to growing discussion in the Bank about "unfair competition" and whether road users were "paying for roads." A body of well-defined principles that could guide staff in the analysis of the situation in particular countries seemed to be missing.\footnote{In reality it was not. Much of what has become 'received wisdom' was set out in the early writings of A.A. Walters and in the EEC document 'Options in Transport Tariff Policy' (1965). This was a report of a group led by Professor Maurice Allais, recipient of the 1988 Nobel Prize in Economics for his work on markets and prices.}

One consequence of the intense internal Bank debate of that time was a research study that became known as the "Economics of Road User Charges." Completed in early 1967 and published in late 1968, the report was "a substantial intellectual contribution to the subject and to transport economics generally" (Preface p. ii). Many in the Bank felt, however, that the theory set out in the study should be confronted with the practical problems of the real world. This led to the 'Central America Road User Charges Study' (CARUCS) which sketched in some detail an 'ideal' structure and level of charging for roads in that region.\footnote{A. Churchill, World Bank Occasional Paper No. 15, 1972, but prepared in late 1967/early 1968.}

The scheme proposed by CARUCS rested on the basic principle that economic efficiency in the transport sector required that the price of road use should equal the cost of real resources used up when a journey is made, i.e., variable road maintenance costs plus congestion costs, where this was relevant. While admitting its figures were orders of magnitude, the CARUCS felt that they were "of sufficient accuracy to indicate the direction of change" (p. 151). It stressed that since "the proposed system of fuel taxes and urban license duties represent a considerable change from the existing structure of road taxes... and because of the uncertainty of some of the estimates... the process of
adjustment should be a gradual one. The rate at which changes are introduced and how they are introduced is, of course" they said, "a matter of political judgement... [and] in each case changes would have to be related to the revenue needs of the government and thus to its fiscal situation in each year" (p. 157-158).

The CARUCS authors also recognized that "should it be considered politically expedient to raise even more revenues from the road using public, this could be done. The costs of doing so would, however, have to be carefully investigated... [e.g.] to maintain the existing level of fuel taxes in rural areas... may increase the difficulties of making a system of congestion charges acceptable to the taxpayer" (p. 161). They thought better ways "of taxing simply for the sake of raising government revenues (as opposed to charging road users for the cost of road services) would be by the use of either sumptuary taxes on vehicle purchases or, better still, applying a surcharge to the urban congestion license duty proposed" (p. 161). Other ways included taxation of the benefits resulting from road improvement in the form of property betterment taxes and taxes on exports from particular areas where road improvement is taking place since the supply curve of the products is often inelastic.

The CARUCS authors were prudently cautious about the speed and direction of recommended changes - a point that many critics tended to ignore. "Regardless of the implementation process," they stressed, "care should always be taken to insure that the specified fiscal goals are taken into account and that the changes in the tax burden do not induce available taxpayer hostility or political difficulties" (pp. 166-67) (Emphasis added here). The importance of the CARUCS case study was the clarity of its approach and the logical presentation of the steps needed to improve the structure of road taxation in a real world situation. As a model for other countries, however, it was not followed. Yet, in a broad sense, it still reflects the fundamental position of the Bank. But, it has never been formally stated as a policy for highways in an official statement.

The basic philosophy and principles of the cost recovery argument as they apply to all sectors were finally set out in Bank OMS 2.25 'Cost Recovery Policies for Public Sector Projects: General Aspects' (March 1977). Since then the road user charging themes have been repeated in many speeches by senior Bank transport staff to outside groups (e.g., 'The World Bank and Transport Pricing,' C.R. Willoughby to EDI, September 1978). They have also been expressed in many Bank documents of which the more recent are:

- Road Funds from Earmarked Sources: Interim Guidelines. Transportation Note No. 1, November 1985.
- Interim Guidelines on Road User Taxation. Transportation Note No. 4, November 1986.
• Workshop on Pricing and Taxing Transport in Developing Countries (December 15/16, 1986): Summary of points raised.

Despite all the internal discussion and Bank intellectual effort involved, road user taxation continues in fairly traditional, non-economic efficiency seeking ways. This is, in part, may be because national agencies locally responsible for policy formulation and Bank officials have not been able to give good answers about the likely political, economic, social costs and benefits of transport pricing changes and how to compensate for unwanted effects. Thus, as has been noted in a Bank study, where the "domestic policy process cannot provide political leaders with this service, there is likely to be greater skepticism towards economic policy prescriptions preferred by external agencies... [accordingly, it is] important to encourage domestic political accountability for policy decisions over the longer run and for improving the credibility of economic advice to countries' political leadership..."12

A critical element in building up this local capability is to step up training to increase the numbers and quality of transport specialists.

FY88 highway SARs show mixed results. There are examples of improvement through the patience, skill and commitment of project staff; of procrastination so that project processing would not be compromised; and of the ignoring of the question, presumably because both the Bank and borrower thought it was either not relevant or of priority.

3. FY88 Bank Operations: Findings

In FY88 the Bank financed 36 transport lending operations, with two being supplementary credits to previous highways projects. In addition, there were two urban transport projects which were essentially road improvement projects. Some 27 of the projects primarily financed highway investment. Of this total two were for flood rehabilitation (Bangladesh and Nepal) for which no SARs were prepared and the President's Reports on the two projects make no reference to user charging or highway taxation. Two of the 27 were rural road development projects (Bangladesh and Indonesia). In both cases there is no discussion about cost recovery in the project documents: a striking omission given the potential significance of marginal cost pricing for uncongested rural roads. More surprising, however, is that neither of the two urban transport development projects (Indonesia-Djakarta and Korea-Taegu city) explore pricing the congested road conditions described in the SARs. Nor do

they discuss parking fees or surrogate price and user charges. One project (Malawi Northern Corridor) has a mix of road and other investments which are largely confined to facilitating the movement of that country's exports/imports through neighboring Tanzania. Road user taxes were increased as part of the FY84 SAL for Malawi, but the impact of this is not discussed in the latest SAR. In summary, seven of the 27 highway oriented projects—totalling nearly US$500 million of lending or one-third of the years total lending for highways—had no discussion about cost recovery/road user charging/transport fuel prices.

The 27 highway oriented projects were examined to answer such questions as:

(i) Do total Annual Highway Revenues exceed Total Highways Expenditures?
   Answer: 12 SARs say 'yes'; 3 say 'no'; and 12 are either unclear or do not discuss the question.

(ii) Do heavy trucks seem to cover the costs they cause?
   Answer: 9 SARs say 'no'; 2 say 'yes'; (but see below); and 16 either ignore the question or give unclear responses.

(iii) Are highway maintenance allocations in the country adequate? If not, was some action or agreement indicated in the SARs about improving maintenance funding?
   Answer: In 12 cases it was clearly stated that funding was too low and needed to (would) be increased; 15 reports, however, did not raise the issue.

(iv) Was a Road User Charges Study—completed in the recent past or done as part of the current project preparation—being used to provide some direction to cost recovery in the sector?
   Answer: 9 cases 'yes' and in 18 not mentioned.

(v) Were fuel prices in the market equal to or greater than border prices (opportunity costs) or was fuel pricing discussed?
   Answer: The topic commented on in 7 cases only, with the answer being 'yes.'

Obviously, conditions differ in the various borrowing countries and the Bank's influence—either through long, past lending associations or more recent SAL and related dialogue—will vary from case-to-case. The managers of different project groups in the Bank also have different judgements as to the timing and relevance of lending conditions relating

13/ The Taegu (Korea) project brings out the interesting point of forced savings whereby new vehicle purchasers have to buy 6-year, 6% balloon payment bonds the proceeds of which go back into road improvement in the city. The SARs for this and the Indonesia (Djakarta Metropolitan Area) urban transport project contain a detailed analysis of the local authority financial situation. This total view is in marked contrast to the lack of similar discussions in highway projects, particularly those relating to highway sector lending.
to action on highway user charge structures and levels. The following random snapshots form a montage made up of the various responses:

**Yugoslavia:**
- the only SAR to state a major risk to the project is "inadequate and/or infrequent adjustments in road user charges leading to local fund shortages."
- the only project to present a 'Sources and Application of Funds' approach to the financing of the project.
- the only SAR to clearly bring out that efficient use of the transport network through better pricing is an issue of importance for national transport policy.
- it is also the only SAR which indicates a country considering a formal statement on road user charging policy.
- provision is made in the project for regular adjustments in user charges (especially fuel) in line with inflation.

**Nigeria:**
- the previously heavy subsidy of road fuel prices has now been eliminated by the government's own actions and, as part of the project, a Plan of Action is to be presented to the Bank on how "to recover at least recurrent [highway] costs from road users...": recurrent costs being undefined.

**Thailand:**
- road user charges for passenger cars, buses and light trucks are said in the SAR to "cover their marginal costs", but heavy trucks do not - "for the latter the ratio of road user charges to marginal cost is estimated at only about 0.5-0.7." Marginal cost is not defined.
- no action is proposed on user charges as part of this project since "the Government is considering appropriate corrective measures." ["Consideration" is a way of delaying action?]
- for a Highway Sector Project - and the 21st Bank-financed transport project in the country (8 being highway projects) - the discussion on user charging is minimal as compared with these for highway sector lending operations other countries in FY88. The topic has been touched on in SALs, but the experience is not discussed in the project SAR.

**Mexico:**
- one of the few cases where it is said total revenues "are insufficient to cover total construction and maintenance needs" (expenditures?).
- the only SAR to define 'marginal cost': in this case, "all rehabilitation costs and 70% of periodic maintenance costs." Marginal cost is, in effect, being defined as the sum of variable road maintenance cost (the 70%) and the investment needed to offset the fall in road service quality level that
would occur through congestion if investment in expanding capacity was not made. This is a surrogate for the capitalized value of congestion charges. At negotiations, government agreed that road user taxes on trucks should equal the marginal costs they cause to the federal road network.

- the only country in the FY88 sample where fuel taxes are excluded from road user revenue totals. No reasons are given for this unusual situation, but relate to the particular pricing policy of the national oil company and the way it pays taxes directly to government on its total turnover.

Fiji:

- the SAR was prepared by the ADB and is the only one to indicate concern about whether the highway revenue collection system is efficient. Many projects suggest the structure of revenues is probably inappropriate and should be improved - hence the Road User Charges Studies - but the concern expressed in this SAR hints at something else (revenue leakage?).

Belize:

- total highway revenues exceed total expenditures - as in many other projects - but in this case the funds allocated to maintenance are said to be seriously below "technically and economically acceptable levels" - an unclear phrase not used in other reports.

- the only SAR to say the surplus of highway use generated revenues exceeds 'road related debt service obligations.' The Korean toll road project (Kyonggi Regional Transport) makes the same point but in the different context of being a revenue earning authority.

Korea:

- nearly 42% of the local counterpart funds needed for the six-lane Taegu urban transport project are to come from forced savings on residents who register vehicles in the city - the 6-year, 6% interest balloon payment bond referred to earlier.

- the Kyonggi Regional transport project (in reality, a toll road project) discusses toll policy and practice in some detail. The important point is that a two part tariff operates in the shape of a fixed entrance ramp fee and a per km travelled fee. By law the toll level cannot exceed the "benefits" to users - how this is measured is not indicated in the SAR nor is it indicated what are the proportions of 'benefits' left with users or taken by government.

Zimbabwe:

- total road user revenues substantially exceed total annual expenditures on highways thereby, it is said, "indicating road user charges adequately cover the variable [undefined] economic cost caused by road traffic, as they should, and also cover the fixed investment cost for roads." No indication is given in the SAR as to whether this judgement applies to heavy vehicles.
- fuel pump prices are said to exceed "prevailing import parity prices" - the only SAR to use this term - while diesel prices are too low to encourage the economically efficient use of fuel. According to the SAR, heavy demand for road vehicle diesel engines is suppressed by strong government controls over imports. If 'prices were right,' however, this administrative control would presumably not be needed. Diesel pricing policy is under discussion between the Bank and borrower but not considered a point for conditionality in this project.

Tunisia:

- "there are indications that heavy vehicles may be taxed too low" (SAR). The topic is glided over, however, by saying it is being discussed in a Bank research study, but the SAR does not bring out that this study related specifically to Tunisia. The study concluded "it appears that, apart from utilities (pick-ups), most diesel vehicles are charged at least as much as their road use costs... [though] whilst the level of taxes [in the study year 1982] was about right, it is less clear that the structure was ideal." (D. Newbery et al. 'Design of Road User Charges and Taxes for Tunisia,' Bank Discussion Paper, No. 26, p. 24).
- the SAR statement that "conclusive data will be discussed under the Bank's sector work" suggests the project staff have judged that the timing was wrong to do anything in this, the Bank's 6th, highway financing operation in the country.

Togo:

- the SAR concludes heavy vehicles "are not covering the road use costs attributable to them", but is said to be a lesser problem than that of increasing road maintenance allocations.
- the only project to raise a problem of growing importance for Africa as inter-regional trade activities increase i.e., heavy, foreign owned vehicles transiting a country but not buying fuel within it and, as a result, not paying towards road use. A study of this point from Togo's vantage is included in the project. The issue of transit traffic is important for Yugoslavia and many other countries. It would be useful to examine how this difficult and controversial subject is dealt with in a selected number of countries since many traffic transit countries would be interested in knowing more about experiences and practices.

Madagascar

- the problem here is that the proceeds of fuel tax revenues are supposed to be paid into a Road Fund - a condition of the 6th Project - but were not. A variation of this lending condition is part of the latest project.
- agreement was reached during negotiations that fuel prices will be raised in a timely way to maintain revenues and highway maintenance allocations in real terms.
Guinea: - the absence of discussion in the SAR seems unusual since a consultant "study of road taxes" was done as late as November 1987 and establishment of a Road Fund is a condition of the Credit effectiveness.

Ghana: - the only project in which Credit disbursements are to be withheld if advance payments into a Road Fund are delayed (for more than one month).

Chad: - a situation where the whole national administrative system of tax collection has to be rebuilt and where road user charging is a non-priority issue until the broader fiscal picture becomes clearer as a result of a national tax study now being made.

Laos: - no discussion in the SAR, other than for a brief description of tax rates with no evaluation of them or the system. A reflection of the weak administrative situation in the country?

China: - an interesting and unusual point is that in the two Provinces concerned highway planning is on a balanced budget basis with road investment balanced against earmarked revenues deriving from a "road maintenance fee." In Shaanxi, this fee amounts to 14.5% of the total revenue earnings of public trucks and Y104 per month per ton of payload for 'social trucks' (i.e., parastatal vehicles?). The logic of this is unclear as also where fuel taxing comes into the user charging scene. No evaluation of the present system is given in the SAR, but according to regional staff road user charging is being discussed under Bank transport sector work in China and as part of the broader price reform in the country.

Ivory Coast: - this operation involves supplementary financing to the Bank's second Highway Sector Loan (1985). The SAR for the original project notes that "total user charges were sufficient (in 1982) to cover the short run marginal costs [undefined] of road use, but heavy vehicles are making a largely insufficient contribution [i.e., not paying] to the variable road costs attributable to them." (SAR p. 9). To clarify this and other related points it was agreed during the original project negotiations to undertake a road user charges study, but the consequences are not discussed in the supplementary financing documents.

Cyprus: - yet another case where total revenues exceed annual outlays and trucks do not pay for the wear and tear they cause. Under the preceeding project, government agreed to present a scheme of restructured road user charges to the Bank by March 1988. This has been delayed.
- an important part of the problem is that diesel is not taxed in Cyprus. Project staff suggest that this has probably not distorted the choice of engines for new large trucks and buses since it is almost impossible now to obtain gasoline powered vehicles from West European manufacturers. The issue is tied up with strong vested local interests.

Yemen: - the SAR not only contains the most extensive discussion of cost recovery in the FY88 collection but is the only SAR to bring out the important point that road damage is not caused simply by the largest vehicles but very much by overloaded two axle trucks. A study under an earlier (3rd) highway project recommended a structure of taxes/license fees differentiated by number of axles which, the SAR states, IDA "strongly endorses." Accordingly, under this new project it was agreed that the large increase in license fees for the owners of two axle trucks would be phased-in after [and importantly] discussion with all interested parties whose comments would be reviewed by government and sent to IDA. It was the only project which recognized price increases affect people who may want to express their views and whose support might be vital in successfully bring about change.

4. Summary

The preceding extracts suggest that for FY88 there are no strong, clearly discernible themes or consistencies in practice among the Bank's regions. It is also evident that the thrust of internal Bank guidelines or quick methodology and research efforts are not generally being reflected in operations, at least as far as project loans/credit documents are concerned. How far Bank policy along the lines expressed in OMS 2.25 is discussed in transport sector work would require more enquiry. The purpose of this report is not to assess performance of the Bank's different regions or project staffs but it does seem some pay more attention to the topic than others. This may simply reflect different day-to-day managerial concerns and judgments in the regions.

B. Railways

1. Background/Theory

Railways that the Bank finances may be specialized, single product carriers but usually they are multi-product, highly integrated general carriers that serve large numbers of users and carry wide ranges of commodities, each of which has different directional and routing characteristics, time of movement and journey speed needs as well as equipment requirements. The existence of 'joint' and 'common' costs in the production of such mixed railway output makes direct allocation of cost responsibility for particular movements or segments of railway business difficult but not impossible, although it does add to costing complexity. Actual marginal costs for particular traffics and services
depend on the extent and timing of track and equipment capacity utilization. These, in turn, are influenced by the prices railways charge and the demand elasticity response to them. Cost data alone are insufficient for the determination of railway prices.\(^{14}\)

Demand for railway transport, like that for all transport, is a derived demand and influenced by factors such as (i) the availability of alternative transport means; (ii) the elasticity of demand in the final market for the product of which transport is an input; (iii) the share of transport costs in the market price of the product, and so on. For these and other reasons - including monopoly control, income distribution and social equity considerations - railway pricing has been traditionally concerned with the value and market demand of products transported.

The complexity of rail traffic operations - and in an increasingly competitive transport world the need to take into account demand elasticities - has led to much discussion about the lower and upper bounds to rail prices. The minimum rule dictum is easily subscribed to by any railway manager seeking to run on a commercial basis: do not carry any traffic at a price below its avoidable cost, i.e., those costs which would not be incurred during the relevant time decision period if the traffic was not carried or if the service was withdrawn.\(^{15}\) This is sometimes called the relevant incremental or marginal cost. Confusion can be caused in rail costing exercises by assigning expenditure outlays to 'short' or 'long' run time period categories and then attempting to make pricing decisions fit these. The length of the run (short or long) in a time sense is not the decision issue. What has to be asked is what cost consequences flow from a decision involving choice among options, e.g., to be in or out of this or that aspect of railway business or service over a specified time period? This basic question is being asked increasingly as part of the wider use of corporate and contract planning in railways that the Bank is associated with.

Once the analysis has been completed at the rail business planning stage, and decisions taken to discard activities that fail to meet their avoidable costs, the question then is how to raise the total revenue needed to meet the uncovered joint costs. This involves examining demand elasticities to see what different markets or services served by

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14/ Too often in railway discussions, including those in FY88 SARs, the focus is on costs determining prices, i.e., "cost-reflecting tariffs." In practice, it is often the reverse, i.e., "railway costs reflect railway prices." The prices a railway sets determine the volumes and mix of its freight and passenger traffic and, as a result, the structure and level of costs it incurs. This is often recognized but then forgotten.

15/ "Thus, [for example] for locomotives associated with a particular traffic, cost is given by the most valuable of three options: sale to other railways second-hand; use on one's own system for other traffic...; and scrapping." M.E. Beesley and P.B. Kettle, Improving Railway Financial Performance, Gower Press, United Kingdom, 1985, p. 17.
the railway can bear - or, more accurately, cannot bear - without the railway losing the traffic. This is the so-called inverse elasticity rule and so long as the total revenues needed are raised - given financial viability is a decision objective - the relative contributions of different groups of traffic to total revenue is not important from the railway's viewpoint. Governments, however, may have other views but there is now ground for meaningful discussion with the railway's management as to alternative pricing strategies. In principle, there is no theoretical difference in the starting point of pricing required for railways to ensure economic efficiency from that in other transport modes, i.e., charge variable marginal costs on uncongested sections and for underutilized equipment and, where there are excess demands on system elements a congestion charge.

2. **Bank Policy and Practice**

There is no formal statement of Bank policy on railway pricing that goes beyond the general position set out in OMS 2.25. Nor, somewhat surprisingly is there any Bank publication or literature on the subject comparable to those on road user charges and port pricing. The Bank's lending objectives have always focussed on bringing railways to the stage where they are financially self-supporting and earn positive rates of return. Financial viability has been consistently advocated by the Bank as the primary objective in terms of the importance of sound internal administration, operational efficiency and investment decisions rather than for broader economic efficiency aspects in the mode or transport sector. These two aims are not incompatible but are rarely considered together in SARs. In practice, the Bank devotes more analytical attention to "cost-finding" so that railway borrower prices "reflect" costs rather than to the more dynamic investigation of the consequences on the railway of market oriented pricing. Fortunately, the need to apply the broad principles of marginal cost and demand elasticity analysis sketched in the preceding section is beginning to be stressed in recent Bank writings and speeches.16

The Bank has made two small, useful contributions to the large and, in some cases, highly sophisticated literature on rail costing.17 It has also financed rail costing studies in a number of borrowing countries. While these studies are country specific they do not seem to have been examined to assess whether there are any general lessons about the process and effects of their implementation. Nor is it clear to what extent and in which ways borrowing railways have made use of the Bank's sponsored reports on rail costing. The Bank's experience with rail costing studies and tariff conditionality (including in SALs - e.g., seven instances during FYs 83-86) might be worth examining.

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16/ See, for example, 'Pricing and Costing Incentives for Better Railway Management,' L. Thompson, First Transport Sector Symposium, Baltimore, 1987.

3. FY88 Bank Operations: Findings

Six railway lending operations took place in FY88:

<table>
<thead>
<tr>
<th>Country</th>
<th>US$m</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>143.0</td>
<td>Second Rail Project</td>
</tr>
<tr>
<td>China</td>
<td>200.0</td>
<td>Fourth Rail Project</td>
</tr>
<tr>
<td>India</td>
<td>390.0</td>
<td>17th Rail Project</td>
</tr>
<tr>
<td>Indonesia</td>
<td>28.0</td>
<td>Tech. Asst. Project</td>
</tr>
<tr>
<td>Sudan</td>
<td>35.0</td>
<td>Emergency Project</td>
</tr>
<tr>
<td>Thailand</td>
<td>13.0</td>
<td>Sixth Rail Project</td>
</tr>
</tbody>
</table>

Total 809.0

These six accounted for only 16% of the total transport operations but nearly 30% of total FY88 transport lending. The Indonesia project is primarily aimed at technical assistance (T.A.) and training, though over half the project expenditures are for mechanical equipment said to be essential to the success of the T.A. and training effort. Both this Indonesian and the Thailand operation are for modest amounts which, it would seem, are intended to allow the Bank to continue dialogue after past breakdowns in discussions between the railway, the Bank and the two countries. The Sudan project is an emergency loan to prevent the collapse of Sub-Saharan Africa’s largest rail network and once one of the best run railways in the continent.

- Algeria

This railway had an operating deficit of US$210 million equivalent in 1985. Because of this serious financial situation the government is giving high priority to restructuring the railway’s finances and to a 'Contract Plan' which relates to these and actions on pricing, compensation, depreciation provision, etc. To this end, tariff increases are provided for in an Action Plan, with financial targets included as covenants in the loan agreement.

The SAR states "budgetary control, traffic costing and cost analysis in general are practiced at present in a very crude and diffused way, devoid of any critical analysis and test" (para. 2.29) and "available data indicate rates and fares are unrelated to costs and the occasional tariff increases effected in the last seven years have not matched increasing costs" (para. 2.39). Part of the problem is a poor accounting system. Under the Bank financed First Railway Project, provision was made for a study, but it was not completed. This is provided for once more in the current operation in the expectation that the new, serious attitude being shown by government to the critical financial position of the railway will bring progress.

The 'Financial Evaluation' chapter of the SAR is full of details about the financial restructuring program, including agreements for tariff increases, selected subsidies and compensation payments for uneconomic lines. All of it is consistent with standard Bank policy positions.
As part of the project, consultants are to develop a tariff structure which the SAR suggests will allow for the following "optimal objectives:"

(a) recover the fully distributed costs of services rendered without cross-subsidization;
(b) earn a return on all railway investments; and
(c) provide cash resources to cover debt service.

Of these, (a) encounters the old problem of pricing mentioned earlier about how to recover joint costs, with 'fully distributed costs' being a slogan rather than practical business practice for rail pricing. It also suggests some confusion about the significance of 'cross-subsidization.' The reasons underlying other aspects of the consultants enquiry are not explained in the SAR, e.g., "alternative tariff proposals will also be made to prevent dampening demand... [and] the possible advantages of modulating rates and fares with distance, thus introducing a taper discount system" (SAR p. 123) will be considered. Why objectives (a), (b) and (c) are optimal in the economic efficiency sense is not discussed. In principle, all three can be part of the one broad objective served by a sound pricing system geared to analysis of those parts of the railway's activities that should be its basic business.

- China

The discussion of tariffs and passenger fares (rail prices) in the SAR for this, a $600 million total cost project, is superficial. Rail freight rates were unchanged for 16 years before 1983 when they were raised to discourage the large amount of short-haul traffic which was clogging the rail system. This pricing action was in line with a recommendation of the Bank's first economic and sector mission to China in 1980. Freight rates were raised again in 1985 but, according to the SAR, "the effect... on transport patterns was not obvious" (para. 2.20). This suggests inelastic demands for rail traffic at the prices being charged. Increased passenger fares had only a marginal impact on traffic volumes, again suggesting revenues could be easily increased if desired. However, the question of raising rail prices seems not be of priority from either the Bank's or government's viewpoints since the "average revenue (after business tax)... per traffic unit... is 63% above operating cost." The SAR notes that the railway "is beginning to show an interest in the profitability of individual routes and services. Thus, the Bank supported costing system developed under two earlier projects and [now] being tested in three sub-administrations of the railway will be a step in the examination of service/ route profitability and possible pricing responses."

- India

This is a major lending operation - a $390 million loan as part of a project totalling $1.2 billion - but the discussion of tariffs and
fares is minimal. In part, this may be because it is the 17th Bank financed lending operation for the Indian railways and the subject has been discussed regularly in earlier projects and on-going sector work. It may also partly reflect the fact that an exhaustive (5 volumes) official 'Report of the Rail Tariff Enquiry Committee', published in 1980, has been the subject of regular discussions by the Government, railway and the Bank.

The FY88 project includes a covenant that tariffs are to be maintained in real terms at their FY88 level through 1995 so that the railway can "meet annually out of internally generated resources, all operating expenses and dividend payment on the capital-at-charge" (para. 4.11). This covenant was first provided for in the 1982 project, but not fully complied with.

Given the wide regional and personal differences in income within India, there is no discussion about rail pricing strategy in terms of objectives (economic, financial or social). It also seems surprising that in the railway's 1985-2000 Corporate Plan there is reference - at this late stage of the railway's history - that an objective of this Plan is to "adopt a cost-based tariff structure and regularly review tariffs to offset increase in cost of inputs" (SAR p. 46).

- Indonesia

This small lending operation is an effort to reopen a dialogue on possible future Bank assistance to the railway. Since the First Railway Project in 1974 Bank assistance has been confined to specific railway components needed in direct support of other investments being financed by the Bank (e.g., Bukit Assam Coal Development Project, 1982). The railway's revenues now cover only 60% of operating costs and, according to the Technical Annex to the President's Report (para. 5), since "tariffs for both passengers (65% of revenues) and freight (35%) are competitive with road transport, the scope for tariff increases is close to nil" (para. 5). This leads to a proposal in the SAR that the railway should seek new areas of profitable business and be given freedom to adjust tariffs to market conditions. As part of the recommended tariff flexibility, the SAR suggests freight charges should be "on the basis of actual weight of goods loaded, instead of on the basis of nominal wagon capacity" (para. 9). This is too restrictive a view of tariff making and one which, it is hoped, will be clarified by the technical assistance on traffic costing provided for in the project.18

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18/ "Tariff makers... have been reluctant to use mathematical marginal cost rate structures which would reflect economic considerations and... bring logic out of the present chaos. Such mathematical formulae might reflect cubic space as well as weight of the shipment; ...terminal factors by size and congestion... distance of haul... annual volume... seasonally and regularity of shipment, etc." H.O. Whitten, 'Updating Freight Pricing and Costing,' Distribution Worldwide, November 1970, p. 40.
Interestingly, "the principal risk involved in the project is said to be "that the technical assistance and training efforts would not meet with much success ...[and] that PJKA staff may not prove adequate to the tasks under the project in some areas" (President's Report, p. 3). This, together with other statements to the effect that the emphasis of the project is on operating efficiency improvements and improvement of the railway's finances is a longer term goal, suggests pricing (tariff and fare) reform is not considered by the Bank and borrower of priority at this stage.

**Thailand**

This, the 6th railway project, is another holding operation. Processing of a 6th project was shelved in 1983 because the government and the Bank could not agree that a substantial tariff increase was needed to improve the railway's finances. The objectives of the current project are stated to be expressly limited: "to ascertain the willingness and ability of SRT to institute difficult but needed changes and the seriousness of the Government's commitment to help improve the railway's efficiency. At a second stage, a larger loan for SRT... may be considered depending on the outcome of the first stage and the Government/SRT's commitment to further cost cutting measures and tariff reforms..." (President's Report, para. 6). Pricing actions agreed at loan negotiations are tariff increases in line with inflation and "an action plan to review SRT's entire tariff structure by December 1988" (para. 8). It is clear, therefore, that while the railway's strategy and tactics of tariffs and fares policy are still unformulated the current lending operation gives an opportunity for the Bank to continue providing advice.

**Sudan**

This is the Bank's 5th railway lending operation in the Sudan. The first three were made over two decades ago. The SAR indicates the fourth project (1977), cannot be considered successful. Provision of locomotives and rolling stock indirectly through projects in Bank financed agricultural marketing sector has not prevented Africa's largest rail network (4,800 km) from falling into a serious physical operating condition - only 37 locomotives out of a fleet of 136 heavy main line locos were operative, including 10 new locos acquired from USAID as recently as three years ago.

The railway's financial position is as precarious as its physical state. Lack of profitability, however, is probably more a function of operational inefficiencies than delayed tariff increases. The current project provides for the railway to be given tariff flexibility to cover cost increases due to inflation. The financial projections assume no real term increases in rail tariffs through 1991, however.

Traffic costing is said to still be under-developed despite a study in the Fourth Project which proposed a system whereby the railway could assess its variable and other costs. The follow-up necessary to ensure that the system proposed was understood by the railway's staff...
and applied in the setting of rates and marketing strategies did not happen for various reasons. An attempt is to be made in the context of the current project to reactivate the system and convert it from a computer based one to a hand operated process.

The critical physical survival situation facing the railway suggests that project staff judged a major effort on pricing was not timely. In a sense, this operation seems to be conceived as a last chance effort to ensure the survival of what 30 years ago, one of Africa's best run railways.

4. Summary

All the current railway SARs recognize the importance of tariff increases as the key to financial viability in the face of inflation. In three cases adjustments to maintain tariff levels in real terms were made project conditions. In the Indonesian case, it seems the Bank refrained from such a step primarily to keep open the future chance of a more substantial lending approach to address the railway's problem. In the China railway project the subject is avoided since it is part of the larger, more controversial effort and debate on pricing reform taking place in China where, unlike most other railway borrowers, the railway is profitable. But clearly none of the major economic efficiency or other pricing objectives and questions posed at the outset of this report were expressly considered in the SARs. This is not to suggest, however, they have been ignored in the wider macro-economic and sectoral dialogues between the countries and the Bank.

C. Ports

1. Background/Theory

For two reasons discussion of port pricing can be briefer than that of road user charging and railway pricing and not because it is of lesser importance or interests. One is that there are always fewer projects each year in ports than in other transport modes, the other is that the Bank has done a much better job in articulating and publicizing its thinking and experience with port tariffs than it has for railways. In addition, organizations such as UNCTAD and international port associations have made serious literature contributions to the theoretical and practical aspects of port pricing.

When setting new port tariffs or revising existing ones port managers - like those in railways, airports or toll roads - are guided by objectives which they themselves may generate or may be imposed on them by governments. These objectives may relate to any or all of the following: (i) financial viability; (ii) operational performance; (iii) contributing to national or regional economic development; (iv) keeping the bulk of the benefits accruing to foreign owned ships from port investments within the country. In approaching these different objectives three types of pricing strategies are possible - demand based pricing; cost-based pricing; or pricing for market share where there are competing ports in the same or neighboring country. Discussion of these
objectives and the application of the possible pricing strategies has been clearer and more widely considered than rail pricing because of the work of the Bank, UNCTAD and others on the topic.

The common element in all three pricing strategies is analysis of costs to the port of providing the many separate services required by ships and cargo. The problem, however, is that traditional accounting systems used in many ports were not designed for tariff making purposes. They are essentially backward looking financial control systems and not future decision oriented management tools. A consequence of this weakness has been much Bank attention to financing improvement of financial management information systems, including costing techniques. It is not that information needed for a desirable port pricing system consisting of a two or multi-part tariff is missing, but that since it is not readily accessible it must be obtained by repeated special studies. This problem of data availability to buttress whatever pricing strategy chosen is one, among other reasons, why marginal cost pricing (including congestion charging) is spreading slowly in ports everywhere, including those being financed by the Bank.

The national and regional income distributional aspects of pricing are more immediately evident in ports than in road or rail transport for two reasons: first, ports are often monopolies or quasi-monopolies and are easily able, therefore, to set prices above marginal costs at levels which are demand elasticity related; secondly, many port’s users are likely to be foreign owned and organized shipping cartels (conferences). In practice, differential pricing to redistribute port costs among national and foreign ships is common, but not discussed in port project SARs.

2. Bank Policy and Practice

port tariff experience as well as the use of a computer based program for the quick assessment of the effect of changes in port charges on port revenues.

What is striking, however, is that despite the sound theoretical and practical discussion of efficient port pricing, the subject is rarely addressed directly in the SARs; a point noted also by the PPR's 1986 review of public sector pricing policies in the Bank. Most SARs do not specify the concept of "cost" on which tariffs are (are to be) based or "reflect." The question of pricing port services frequently gets swept into the financial analysis and put in terms that tariffs should be set at levels which generate revenues sufficient to maintain the port as a financially viable enterprise. To this extent, the objective is consistent with part of OMS 2.25 but not its concern with economic efficiency objectives.

No Bank financed port has approached investment planning and pricing on a marginal cost of services analysis basis. A few developing country ports, however, are moving in that direction. Thus, it is not unusual to find port storage facilities being priced at rates which recognize the scarcity of space, congestion and the alternative costs of storage outside the port - i.e., recognizing demand elasticity and opportunity costs. Singapore Port Authority's pricing of containers follows marginal cost pricing principles, though not calling it by that name.

The Bank is practical enough to avoid trying to recast wholesale the tariff structures of the port in its finances. In some cases, the main need may be to introduce administratively simple procedures for the regular revision of tariffs to produce a predictable pricing system rather than unpredictable specific prices. In other cases, the problem may be underuse of container facilities and, hence, a need to encourage the greater use by marginal cost pricing. In a few cases, the port may be fully congested where a differential pricing system would restrain demand and postpone capital expansion but this is often difficult to introduce before the congestion reaches critical levels.

3. FY88 Bank Operations: Findings

Four port projects were approved in FY88:

<table>
<thead>
<tr>
<th>Port Project</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>China-Dalien Port</td>
<td>$96.0 million</td>
</tr>
<tr>
<td>China-Huangpu Port</td>
<td>$88.0 million</td>
</tr>
<tr>
<td>Mexico-Port Rehabilitation</td>
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</tr>
<tr>
<td>Brazil-Technical Assistance</td>
<td>$20.0 million</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$254.0 million</strong></td>
</tr>
</tbody>
</table>

Of these, an SAR was not produced for the Brazil loan which primarily covers technical assistance by consultants for a variety of institution...

building activities. These include improvements in the port tariff structures which, the President's Report notes, "are antiquated, not related to current cost or market conditions ...[and, with other weak information systems] ultimately hamper the competitiveness of Brazilian exports and jeopardize efforts to increase the country's foreign exchange earnings" (p. 1). The aim is to develop a cost-based/market oriented tariff structure and set tariffs at levels which would assist progress towards the objective of financial self-sufficiency and improve the tariff review and modification system. Other than these comments, there is no further discussion in the President's Report.

- China

The SARs for Dalien and Huangpu port projects each contain four identically worded paragraphs on 'Tariffs.' From these it can be seen that the tariff structure in both (all China ports?) "reflects all the distortions inherent in the prices of the different factor inputs" (para. 2.14) that flow from the country's national economic philosophy and its pricing practices. Foreign ships pay higher harbor dues and charges than local ships partly on a 'what the market can bear and income redistribution basis', but without any considerations of economic efficiency in utilization. Congestion is an overriding problem in most of China's ports, according to the SARs, but there are no pricing attempts to restrain or re-order demand for port services. Paradoxically, the lower charge on local vessels compounds the congestion problem since these vessels are not faced with signals that would encourage them to better use port facilities. Local vessels are the principal users at Dalien (75%) and Huangpu (75%) and are said to receive most of the project benefits. Better pricing could recapture some of these to the advantage of the ports' finances.

Both SARs state that "one of the conditions precedent to rational tariff action is the adoption of an accurate and uniform system of costing at the ports. At the present time none such exists, but the Bank has begun discussions with MOC on developing such a system, possibly with Bank funding" (para. 2.17). On this ground, no tariff action is proposed as part of the current projects.

An important difference between ports in China and those in most other Bank countries is not only their large number (15 major deep water ports) but also that traffic is administratively allocated to them. They are not free to compete or to develop their own tariffs. The SAR suggests this makes sense since Chinese ports are profitable and further movement towards a commercial basis is not likely until capacity has been increased and alternative organizational models of port administration have been evaluated by the Chinese government - efforts in which the Bank is assisting. The TOR for Master Plans to be produced under the Dalien and Huangpu ports projects make brief mention about "analysis of tariff components with an impact on operational aspects (e.g., free storage time, incentives for the utilization of cargo)." This offers a project for better port pricing to increase economic efficiency.
It is still uncertain what impact the Bank will have on port pricing in China - as well as on road user charging and railway pricing. Progress in pricing will depend on domestic political decisions more than the quality and correctness of Bank advice. Nevertheless, and despite the well-known obstacles to general price reform in China, the path the Bank has taken about stressing the economic efficiency basis of transport pricing and costing improvement in the country is, in the final analysis, the only viable one open.

- Mexico

This is the 20th transport lending operation to Mexico - roads (10); railways (5); ports (3) and air (1). It also is a good example of the problems of relating Bank advice on pricing to the institutional framework in the borrowing country.

There is no central, fully integrated system of port administration in Mexico. Planning and control is split among many government departments, agencies and port operating companies (ESPs) some of which are owned jointly by government, port trade unions and port users. In some cases, the SAR notes that proliferation of concerned interests in port development and operations results in some case in fights for domination over a particular function.

Port installations and infrastructure remains national property in Mexico but these are operated by the ESP's which are in effect, non-fee paying concessionaires. Port dues are uniform throughout Mexican ports and collected by the ESPs which channels them to an agency of the Federal Government which, in turn, then transfers 42% of the ships dues to the Treasury and the balance back to the ESPs for them to pay for the maintenance of landside port installations. Thus, an increase in ship dues does not return fully to the ports as current revenue. There is an automatic linkage of these dues, however, to changes in the dollar exchange rate thereby protecting at least part of the port revenues from decreasing with the creeping devaluation of the peso" (para. 2.30).

Tariffs for stevedoring and cargo handling services are paid to the ESPs to cover their costs of providing the services. The tariffs have to be approved by the federal government, however, but delays have resulted in some ESPs making operational losses. Tariff adjustments are usually "across-the-board," irrespective of cargo handling costs or other variables that might influence prices at particular ports. The governmental objective has clearly to ensure total revenues cover total cash costs in the ESPs rather than economic efficiency in the use of ports.

The complex port tariff system in Mexico is expected to be replaced by a simpler uniform tariff structure that is reported to be in the process of being implemented. The SAR indicates, however, that since "no systematic analysis has been made on a port-by-port basis to determine whether the level of existing tariffs is adequate, part of the project will be to ensure a detailed analysis [is made] of operational costs in the relevant ports and relevant adjustments [are made] where required as of 1988" as part of the agreed Action Plan" (para. 2.33).
4. Summary

The sample of port projects in FY88 is small and somewhat unrepresentative. Only one SAR (Mexico) has any serious discussion about port pricing. But in Mexico, as in China, pricing for port economic efficiency or other objectives (excluding financial viability) is not considered. This omission may seem striking since the regional economic development implications of port investment and improvement are important in both countries. Nor, equally surprisingly, does efficiency seem to be of explicit concern in the actual tariffs used. The complexity of the port sector’s organizational scene in the two countries is indicative of the long, difficult ‘educational’ and support building efforts that will be needed to make a significant move to efficient port pricing, as understood by the Bank.

V. CONCLUSIONS

The review of FY88 transport project operations confirms the Bank’s practical interest as an investment banker and development institution in cost recovery/transport pricing/user charging. In the case of revenue earning transport enterprises the strongest emphasis is on achieving good financial performance in the usual banker’s expectations of earning operating surpluses, servicing debt and contributing to investment renewal and expansion needs. Using prices to promote efficient resource allocation and utilization within and between these revenue earning transport modes is sometimes recognized, but is clearly a secondary matter as far as project financing is concerned.

It is easier to see and measure progress towards the financial viability objective. By contrast, it is not easy to show whether Bank advice and interventions about transport sector pricing have actually improved resource allocation and utilization efficiency. Even more difficult is to speculate what might have happened in the absence of Bank financing and project conditionality. For example, would the crisis in particular railways have come more quickly and, thereby forced earlier positive responses? The very poor financial conditions of three railways in the FY88 transport lending program (Indonesia, Sudan and Thailand) are, for example, now seriously concentrating minds at senior levels of the governments concerned. Prospects of both financial and physical breakdowns of these railways have become major stimuli for the government to face the tariff problems of their railways. Experience is not encouraging, however. Railways often show financial and operational improvements soon after Bank financing. But these are often short-term, with early departures taking place from agreed performance targets, including improvements expected in the pricing of rail services. In ports, the situation is somewhat the opposite. Tariff levels often become satisfactory in the overall sense of generating good cash flows. But, usually little improvement is achieved in terms of structural change, other than some welcome simplification in tariff structures and increases in storage charges. It is not unusual, therefore, to find complaints in railway and port project completion reports and OED reports about the slow progress in implementing anticipated ‘cost-based/cost-reflecting’ tariffs, as do SARs. The situation persists despite
much sound Bank advice and financing help for consultant technical assistance.

Review of the FY88 highway project operations confirms a view expressed in the Bank a decade ago: "as far as road pricing is concerned, it is questionable whether the Bank's direct advice has had marked effect beyond a few cases, ... [except] where petroleum has been markedly under priced... Efforts to agree upon specific amounts that should be allocated each year to network maintenance seem to have helped channel funds for this purpose [allocation, however, is not commitment or disbursement], but this has generally been a matter of plowing higher proportions of existing levels of road user revenue back into the network rather than one of raising road user charges" to achieve financial, efficiency, distributional or other objectives.

There is little doubt that the Bank's continuing concern about pricing and user charging issues; its capacity to discuss them; and its financial assistance for studies into the subject have increased awareness of the problem by borrower officials and their consultants. In some cases, studies may have helped to limit the influence of strong economic or political interest groups who sought favorable tax changes or reduction in subsidies. Many port borrowers have become financially viable, although from the economic efficiency viewpoint most port tariff structures have not become what the Bank would have wished. Railway deficits, by contrast, have not been eliminated in most cases. But they have frequently been contained or reduced. On the basis of FY88 evidence it appears that in most borrower countries road users as a group provide more revenues than annual outlays on road construction and maintenance. But this is more a product of budgetary opportunities than transport sector efficiency.

Inter-modal traffic allocation studies suggest service quality and reliability features are more important than relative price differences in attracting traffic to particular transport modes. Similarly, case studies of the impact of roads in regional development give more emphasis to the inadequacy of actions to help producers respond to the new opportunities resulting from lower transport costs than to the fact that marginal costs are not charged for uncongested rural road use, as theory would indicate. On the other hand, pricing roads in urban areas by area licensing or toll schemes - especially when accompanied by other changes such as deregulation of entry to the bus/taxi business - can clearly have a significant impact on congestion to the benefit of large numbers of pedestrians, cyclists and low income public transport users. Urban areas also have the greatest potential for raising revenue from transport and distributional problems are of high political priority. Cars as taxable wealth status symbols are concentrated in urban areas. For these reasons, the Bank may wish to give more attention to the financing and user charging aspects of transport in urban areas.

The first internal guidelines for "User Charges for Highway Financing" were produced in the Bank during early 1966, some 22 years ago. They never received official status and, in a sense, were superseded by the study on the Economics of Road User Charges. Bank policy at that time towards revenue-earning transport entities (railways, ports and toll-roads) had the same financial emphasis as today. The reasons given for issuing the 1966 guidelines were those of today also - efficient investment allocation of resources; rationing of congested transport road space and transport facilities; efficient investment location decisions; and efficient distribution of traffic between and among the mode. 'Efficiency' was not clearly defined, however, in economic terms. The 1966 guidelines also stressed another issue of great concern in the Bank today - but one that was not new - i.e., "if transport costs are not covered by users, they must be paid for either by other customers or by taxpayers.... [Shifting] the costs to taxpayers can interfere seriously with the availability of public savings for other important uses; may adversely affect the distribution of income and seems entirely unfair. Since public savings are a particularly serious bottleneck in most developing countries ... the failure [to impose adequate charges on transport users] together with an inability to increase taxes sufficiently, has had the result that subsidies to transport have been a major cause of inflation" (1966 Guidelines, p.4).

Thus, as part of the wide-ranging cost recovery debates within the Bank during the late 1960s/early 1970s the issue of subsidies dominated much of the transport user charging discussion and the Bank's attitude to transport subsidies became clear. Essentially, it involved answering the following difficult questions:

* What are the objectives of the transport subsidy?
* Are these objectives legitimate and what are their priorities?
* What are the real effects of the transport subsidy in terms of costs and benefits, both direct and indirect?
* Who are really the beneficiaries and who really pays the costs?
* Do the effects approximate the objectives? Do they compromise other objectives?
* Are there alternative ways of achieving the objectives, and how do these compare with the transport subsidy in question in terms of costs and benefits?
* Will the transport subsidy be desirable for a limited period of time and, if so, how can it be ended at minimum cost?

"In summary, the Bank's experience with subsidies in the transport field in developing countries is that they are usually unplanned - historically accidental or due to default - and without rationale in terms of legitimate national goals. Theoretically, transport subsidies could have an important promotional and corrective role to play. But in practice they don't, because no one does his homework. And the politi-
cal and administrative strength is not there to employ the tool judiciously and flexibly."23

None of the above questions are asked in the FY88 SARs, with evidence of Bank staff assisting in the development of answers. It may be objected that SARs are not the place for such discussions which, more properly, are part of the sector work dialogue. But this implies that greater efforts are necessary to assist project staff to work out answers to these questions in specific country cases. Addressing subsidies may be an 'entry-by-the back door' approach to improving cost recovery and prove more effective than continued exhortation about getting prices to reflect costs.

In a similar way, it may be useful for the Bank to encourage borrowers to think in terms of an announced highway budget constraint rather than the projecting of highway revenue needs to meet road development plans that are not likely to be funded from either local or foreign sources. In some countries this alternative of having to plan and maintain roads with an assured, realistic level of total funds and if necessary by lowering of road standards, may lead to greater use of self-help and more local community financial participation.24 Thus, it may well be better to organize road programs in some countries (and especially some in Africa) around a realistic core system or network of roads that can be maintained, rehabilitated and financed from a known, realistic amount of road user revenues. Foreign funds could then be earmarked for special road developments such as urban expressways which can be tolled (as in Korea); or corridor-type projects which focus on economic and regional integration, international trade and the like; and for specific institutional building activities. This approach has the added potential of stimulating the local construction industry and engineering work forces. It would divert the Bank from the trap of regularly advocating increased road user charges into the more practical position of providing highway facilities which are clearly seen by users to be better and for which it is reasonable to expect them to pay.


24/ An interesting example of such local cooperation is in Arusha, Tanzania, where a 6 km bitumen surfaced road runs past factories and other establishments up to a management training institute. The road was not maintained for many years and fell into a bad, pot-holed and, at times, flooded state. In a joint effort with the local administration the various enterprises contributed sufficient funds to have the road resurfaced by a foreign contractor who happened to be working nearby on a bilateral aid road construction project. From the users viewpoint they paid local currency but gained substantial foreign exchange savings through reduced vehicle operating costs.
INUTD has the preparation of a wider policy paper on transport pricing under consideration. As currently envisaged this paper would be a brief document setting out the principles, constraints, Bank policies and suggested strategies needed to meet fiscal objectives, without sacrificing efficiency in the use of transport infrastructure and equipment. Such a paper is likely to be seen by Bank Board members and high level officials in developing countries. They and others would be justified in asking 'why is it that the transport pricing (and, in particular, the road user charges) systems followed in developed countries vary widely among themselves and differ significantly from those that would emerge from following Bank advice about efficiency pricing? Explaining why some of these differences exist (and the positive changes taking place in some cases) may help some Bank borrowers by bringing out that the basis for their transport pricing/user charging practices are, in many cases, holdovers from colonial times and from the depression years of the 1930s. As such, they serve little economic efficiency purpose today.

In the Bank discussions of road user charging, rail and port pricing tend to take place as separate exercises in most project lending operations, though in practical sector work and SAL financing they may be considered as one aspect of a wider approach. More significantly, there appears a tendency to make railway and, to a lesser extent, port tariff actions a lending covenant or project agreement whereas conditionality about road user charging is less frequent. There is also great reluctance to include pricing actions in a transport mode other than that being immediately financed. Among the reasons offered for this are that it would delay project financing, or be too complicated by involving other agencies, or would be difficult and more costly to supervise, etc. It might well be maintained, however, that the key issue is appropriate pricing for efficiency in the sector as a whole. Road user charges policy action, therefore, could properly be a condition of railway lending and vice-versa. Examples of this exist in past Bank operations, but it is worth considering whether under the prevailing fiscal resource constraint problem, they might be used more frequently now, even though it may be burdensome for project staff and borrower agencies. In practical terms, discussions about rail and road pricing cannot be kept separate politically as well as economically in countries with severe railway operating deficits. The work recently done by INUTD and the Africa Region on the Tanzania transport financing and fiscal scene is an important example of bringing discussion of the two modes together in one report.

25/ The Report of the ECMT 71st Round Table (1985) on Transport Economics, International Road Haulage: Taxation Systems, for example, brings out the wide range practiced in member countries of the European Conference of Ministers of Transport (ECMT). The view of an earlier review of transport pricing was that 'the merits of an economic transport policy should be judged primarily on its results in minimizing costs, secondly on the application of investment criteria, and only thirdly on the implementation of the rules about optimum prices payable by users. Options in Transport Tariff Policy (Allais Report), EEC, Brussels, 1965.
In summary, and reverting to the questions posed as the initial basis for this review, it may be said:

- very little transport pricing advice is given in SARs and, where it is, it is primarily in terms of "get revenues to cover costs" or "prices-to-reflect these costs;"
- little sense of priority ordering was evident of the various objectives transport pricing systems can serve;
- the methodological basis for whatever advice was given was often unclear or unstated;
- there was no consistency across Regional boundaries in the Bank or the modes. It is possible that some managers are more interested in the economics of transport pricing than others, with this being reflected in SARs for which they are responsible. All Regions use pricing studies as the way to improve advice or to finesse or ease project processing problems;
- SARs rarely define marginal cost (the main exception was Mexico Highways) or deal with congestion costs, ad-valorem taxes, tax evasion, revenue leakages and so on;
- transport pricing in China - a major transport borrower - was lightly passed over for country specific reasons. A separate note on the work being done by the Asia region's transport project staff might be useful and of interest to Bank staff engaged in transport sector work generally;
- of the two urban transport projects, one ignores congestion pricing, parking fees or other actions as pricing surrogates entirely and the other, heavily concerned with transport systems management measures (TSM) to ease traffic flows but ignores pricing;
- toll financing is mentioned in a few SARs other than the one specific toll facility project - the Korea Kyonggi Regional Transport Project. Given the pressure to mobilize public revenues the topic of toll financing is likely to become of increasing importance in the Bank's work. More information should be made available, therefore, to the Bank's transport project staff about actual experiences and practices. This could form one part of the broader effort being made by INUTD to translate its "guidelines" into "do-it-yourself" kits; as has been done in the "Quick Methodology for Road User Charges".

The generally limited discussion of user charging reflected by the FY SARs can be interpreted in a number of ways. One is that the question has largely been solved and, therefore, need not be raised - an unlikely position. Another is that the issue is not seen as important by both the Bank and borrower staffs and, again, can be largely ignored - another unlikely position. A third - and probably more realistic assessment for the generally slow progress in implementing more efficient user charge and cost recovery systems in the transport sector lies in the quality of the dialogue between the Bank and borrowers.
The need is being recognized in the Bank to better appreciate and understand the political and administrative processes, dimensions and constraints on transport policy reform efforts in specific country contexts. A recent Bank publication has noted that, "judicious choice and timing of policy recommendations and institution interventions can take account of the political life cycle of governments, the institutional alliances and differences always present within governments and the political interests to which different decision makers respond." 26

Reforming transport pricing structures and levels in cases such as China, Hungary and other socialist economies is part of a larger process aimed at making market forces more dominant in their economies. The topic of transport pricing, however, is likely to be only a small part of the intense immediate political concerns and the longer run political philosophy debate about economic restructuring. In other cases, cost recovery may not be thought of in so fundamental terms. In both cases, however, experience suggests that "successful intervention [in the shape of putting prescriptions into effect via specific policy delivery systems] needs to combine persistence with a degree of opportunism. That is, persistence in drawing attention to the problem and putting forward possible solutions. And opportunism in building whatever coordination mechanisms present themselves, even if flawed and partial." 27 This is a continuing challenge facing those in the Bank who are involved in improving user charging and cost recovery in borrower countries and recognize the reality of possible severe fiscal shortages anticipated in OMS 2.25.


27/ Ibid, p. viii. OED's 'Project Performance Results for 1986' notes that an important factor in the success of Bank lending to Thailand was that "the same Bank technical staff was assigned to the roads sector... for more than a decade." p. 104.
<table>
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<th>Trucks Cover Their Costs</th>
<th>Maintenance Allocations Too Low</th>
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# ANNEX 1

Bank/IDA Transport Operations by Country of FY88 Lending
Cumulative Totals through FY88

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<td>Nigeria</td>
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<td>1</td>
<td>11</td>
</tr>
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<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Sudan</td>
<td>4</td>
<td>5</td>
<td>(in rail)</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Thailand</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>21</td>
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<td>Togo</td>
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<td>-</td>
<td>-</td>
<td>1</td>
<td>6</td>
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<td>Tunisia</td>
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<td>3</td>
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<td>Yemen A.R.</td>
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<td>Yugoslavia</td>
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<td>Zimbabwe</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

\(^1\) Includes Aviation and Transport Sector (i.e., multiple mode) projects, but excludes transport components in agricultural and rural development projects and primarily urban development projects that may have provided some transport financing.
### ANNEX 2

**FY88 - Transport Lending**  
*(By mode, country and project loan/credit amount)*

1. **Railways**
   - Algeria: 143.0
   - China: 200.0
   - India: 390.0
   - Indonesia: 28.0
   - Sudan: 35.0
   - Thailand: 13.0
   - **Total**: 809.0

2. **Ports**
   - Brazil: 20.0
   - China (Dalian): 96.0
   - China (Huangpu): 88.0
   - Mexico: 50.0
   - **Total**: 254.0

3. **Urban Transport**
   - Indonesia: 150.0
   - Korea (Taegu): 30.0
   - **Total**: 180.4

4. **Multi-mode**
   - Cyprus: 35.0
   - Ghana: 60.0
   - Malawi: 13.4
   - **Total**: 108.4

5. **Highways**
   (i) **Specific Projects**
   - Belize: 5.6
   - Chad: 47.0
   - China: 50.0
   - China: 125.0
   - Fiji: 23.4
   - Guinea: 55.0
   - Korea: 116.0
   - Lao: 14.1
   - Madagascar: 40.0
   - Mexico: 135.0
   - Rwanda: 10.0
   - Togo: 40.0
   - Tunisia: 63.0
   - Yemen: 18.0
   - Zimbabwe: 32.7
   - **Total**: 774.8

(ii) **Rural Roads**
   - Bangladesh: 62.3
   - Indonesia: 190.0
   - **Total**: 252.3

(iii) **Highway Sector**
   - Ivory Coast: 45.5
   - Nigeria: 250.0
   - Thailand: 50.0
   - Yugoslavia: 68.0
   - **Total**: 413.5

(iv) **Flood Rehabilitation**
   - Bangladesh: 25.0
   - Nepal: 15.5
   - **Total**: 40.5
   - **Grand Total**: 1,481.1
   - **Grand Total**: 2,832.5

---

1/ Construction/rehabilitation/maintenance projects and Korea Regional which is entirely for road development.

2/ I.e., projects comprising a mix of road and other transport investments.
ANNEX 3

FY88 - Transport Lending<sup>1</sup>

A. By Modal Amounts and Number of Projects.

<table>
<thead>
<tr>
<th>Modal Type</th>
<th>Total Lending ($m)</th>
<th>Projects (No.)</th>
<th>Projects (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highways</td>
<td>1,365 (50)</td>
<td>22</td>
<td>59</td>
</tr>
<tr>
<td>Railways</td>
<td>809 (30)</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Ports</td>
<td>258 (9)</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Urban</td>
<td>180 (7)</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Multi-mode</td>
<td>108 (4)</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,720</strong> (100)</td>
<td><strong>37</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

B. By Regional Amounts and Number of Projects.

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Lending ($m)</th>
<th>Projects (No.)</th>
<th>Projects (%)</th>
</tr>
</thead>
<tbody>
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<td>17</td>
<td>46</td>
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<tr>
<td>Africa</td>
<td>629 (23)</td>
<td>11</td>
<td>30</td>
</tr>
<tr>
<td>Emena</td>
<td>327 (12)</td>
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<td>14</td>
</tr>
<tr>
<td>LAC</td>
<td>215 (8)</td>
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<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,720</strong> (100)</td>
<td><strong>37</strong></td>
<td><strong>100</strong>      (rounded)</td>
</tr>
</tbody>
</table>

<sup>1</sup> As of 5/31/88.