

## THE PROVISION OF RURAL TRANSPORT SERVICES: AN AGENDA FOR REFORM

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### Objectives of the paper

#### Abstract

Currently many countries suffer from very poor service provision and high transport charges. Although most services are provided by the private sector vehicle utilisation is low, cartels are common and government regulation is weak. In this paper key problems are identified which might be solved through various forms of intervention.

The following key issues have been identified as the major constraints on the satisfactory development of rural transport services:

- Low density of demand for transport
- Poor quality infrastructure
- Poor diversity of vehicle types
- Uncompetitive transport markets
- Lack of understanding by government donors and other agencies of the potential benefits of increasing the efficiency with which transport services are provided.

#### Key issues

- Controlling transport cartels, reducing tariffs and increasing service frequency
- Reducing import prices of vehicles and parts
- Devising training programmes to indicate the advantages of slow and careful driving and the importance of routine maintenance
- Consider ways that surplus capacity of old vehicles may be removed from the market
- Promoting the use of Intermediate Means of Transport
- Devising methods to financially support a minimum of frequency of transport services that cannot be supported through other means
- Public Private Partnerships

## 1. INTRODUCTION

There is increasing evidence that rural transport services that are currently provided in many rural areas of developing countries – particularly in Africa -are unsatisfactory. Service frequency is usually very low and, often effectively non-existent for the local communities, even for areas that have relatively good road access. Although low incomes and the low density of demand are the main factors inhibiting the provision of better services there is much evidence of high transport charges, inefficiency and the operation of cartels. Given tight state budgets, the relative efficiency that the private operators are capable of, and the need to maintain service frequency and inhibit the worst characteristics of cartels a Public Private Partnership (PPP) project could represent a solution to the problem.

The key advantage to a PPP type arrangement is that it draws simultaneously on the core benefits of two previously separate entities. PPP arrangements uniquely combine the dynamism of the private sector combined with the social responsibility, environmental awareness, local knowledge, and job creation concerns of the public sector.

It is very difficult to see how isolation and poverty can be eliminated without a minimum level of transport services. Because of the inefficiencies and very high costs involved in headloading, if people have to rely on this -or other low productivity forms of transport- for moving produce any significant distance to market then agriculture development will be severely inhibited. Traditional agriculture only provides a part of the source of income and livelihood. Other sources include:

- a) the provision of informal services (eg food marketing, personal services) both to the local community and to others including and passing traffic
- b) urban and rural formal employment in transport, distribution, food processing, small scale manufacturing and the wide range of government agencies
- c) remittances from relations.

Many of these other income sources are very dependent upon transport.

In order to gain the maximum co-operation of transport operators it is proposed that a package of measures are discussed and negotiated in detail with the operators and the measures implemented at the same time. In this way the operators can see that by changing their behaviour they can be brought into a “win-win” situation.

### 1.1 Market Failure

It is important to recognise that the provision of transport services in many developing countries has been poor because of market failure. High transport charges occur because the uncompetitive environment sustains a combination of high vehicle and parts prices, low vehicle utilisation and high maintenance costs. The low vehicle utilisation is a function of many high cost operators being kept in business by the way that the transport cartels control the lorry parks with vehicles sometimes waiting in a queue for days or weeks at a time for a load.

With transport cartels operated through rationing of demand at the truck parks an excess of supply leads to an increase in transport tariffs. In a purely competitive market an excess of supply would lower tariffs. A clear example of how an excess of supply can raise transport charges, where supply is rationed through queuing, comes from Nepal. When new roads were introduced in mountainous areas the demand for commercial portering services fell as demand switched to motor vehicles. As a result the remaining transport routes, which were not subject to road competition, now had more porters than before looking for work. The consequence was that portering tariffs rose substantially to help ensure that the remaining porters continued to have a living wage because they each now had less work to do. The porters refused to work for less and there was no alternative competition because of the way they queued for work.

Most developing countries do not have active policies against monopoly and cartels. Direct price control is perhaps the main and often only weapon used by governments in this area.

## **1.2 Vehicle Utilisation and Surplus Capacity**

Vehicle utilisation could be increased by a combination of policies. The surplus vehicle stock encourages inefficiency through the sharing out of demand via the queuing system. Surplus capacity could be reduced by a policy of buying out and scrapping the older vehicles. A more rigorous enforcement of vehicle inspections could also help to remove the more unsafe and polluting vehicles. The number of truck and bus parks could be increased. This would automatically increase the number of vehicles “available for hire” and reduce collusion on prices.

Reducing surplus capacity by buying out older vehicles is obviously a controversial measure. There is an obvious problem in that, without scrapping, the purchased vehicles would return to the cartel operation as before. There is no direct way of knowing, a priori, whether the policy would be effective. It is put forward as a possible way of giving some short term inducement to remaining operators to co-operate with the project and help them increase their utilisation. The current demand may then be spread among fewer operators and overall costs could be reduced.

It has been recognised for some time that overmanning and surplus capacity can hinder efficiency. In recent years the World Bank has given some support to reduce overmanning in the public sector of many developing countries.

## **1.3 Service Availability and Route Licensing**

To increase service frequency and provide services to the remoter locations on social grounds the routes could be licensed and operators could be required to run services to a timetable. This would often mean leaving the bus terminus before the vehicle is full. If this happened there would be greater chance of passengers being able to board transport some way along the length of the route. As is mentioned above for many of the more remote rural routes there would be a need to subsidise or cross-subsidise the operation to provide a minimum service on social grounds. This is very common for high income countries.

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The government control (or authorisation) of fare and truck tariff levels can play some part in helping to keep down prices. However this does need to be treated carefully; posted fare levels have also been used as a way to collectively prevent operators from accepting lower fares levels.

Lower fares and tariffs and greater trip frequency would help to encourage an expansion of the market. If rural communities were more certain of a regular service then they would in time plan their affairs (in terms of crop marketing, job seeking etc) to take advantage of the new situation.

One solution for thin transport passenger markets is to licence a number of routes together and require operators to competitively “bid for the market”. Route frequencies, fare levels and the amount of any required subsidy would be made explicit in the bidding and negotiating process. Groups of existing operators could be encouraged to form companies to place bids. Bidding for routes is used in high income countries and may be appropriate for certain operations in the developing world.

One drawback of the approach is that once the bid is accepted and the service in place further competition may be curtailed. Furthermore bidding “for the market” implies an element of cross subsidisation between routes. In order to guarantee that the operator will run on the routes with low demand there may be a requirement for some protection from competition on the profitable high demand routes. In rural locations this may be difficult to enforce.

#### **1.4 Increasing the use of Intermediate Means of Transport**

One way of increasing the availability of transport and increasing competition in the market place would be to encourage and establish the use of new vehicle types. Bicycle, rickshaw and motorcycle stations are common in both urban and rural areas of many Asian countries for the shorter distance movements. Agricultural tractors and trailers, power tillers adapted for transport purposes or motorcycles with side cars could all be used to carry heavier loads on relatively long routes that have a lower density of demand. New forms of transport operating from different terminals could be very useful in establishing a new dimension of competition. Different vehicle types have different characteristics and would require different fare structures.

In developing a PPP project it would be important to recognise the contribution of IMT’s particularly for the shorter and lower demand routes. These vehicles are essential for rural communities to reach economic and social facilities. They are also an essential element to an efficient rural transport system because they perform the collection role that enables goods to be amalgamated and larger vehicles to operate effectively. However, some politicians and policy makers often view IMT’s in an unfavourable light and so legislation often acts against the successful use of these types of vehicles. A PPP project would have to recognise the contribution made by this more informal sector and seek to ensure that government legislation or commercial practise does not inhibit the use of IMT’s.

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## 1.5 Possible Methods of Subsidising Rural Transport Services

Within developing countries most transport subsidies have not been explicitly aimed at the rural poor. In some countries fuel prices and bus fares have been held down. These have largely been designed to protect (the richer) urban population from price inflation. Because rural transport is more informal, and is very largely supplied by the private sector, rural transport operators have not received direct operating subsidies to the same extent as their urban counterparts.

In high income countries a variety of transport subsidies have been employed. In the past the UK government has employed fuel subsidies for buses and bus grants (provided on rural travel distance basis) for rural routes. Specific route subsidies have been provided by the Local Authorities.

It has been argued that subsidising services does not always reach those people most in need of help with transport costs. The major beneficiaries are usually the richer sections of the population that travel most. Methods of directly targeting specific groups are travel passes and travel token schemes which can be adjusted to suit local conditions. For example travel passes can be issued to allow for free fare, half fare etc and like tokens they can be distributed according to specified criteria. Like all subsidised schemes tokens and passes may be subject to abuse. For example, the most likely abuse is that the token will be sold on to others and not be used for those it was intended. Even if this happens the original recipients will be major beneficiaries of the schemes.

Travel tokens and passes have long been used in the UK to aid the mobility of the elderly with schemes varying from county to county. Results of some schemes are reported in Balcombe, Astrop and Hill (1998).

In the current environment it is unlikely that subsidies will play a large universal role in a new PPP arrangement however they should be examined carefully particularly as a solution to providing transport to the most remote locations where there may be no regular transport service provided. Or where service frequency is measured in weeks or months.

## 1.6 Vehicle Prices

It has long been recognised that substantial price differences for the same product can persist for long periods in different national markets. However exchange rates and differences in taxation can disguise the differences to some extent. Differences in vehicle prices in different markets are not uniquely confined to Africa and Asia. Car prices in the UK have been higher than in the rest of Europe for over two decades. Recent press publicity has indicated that for certain models prices might be 60% higher in the UK than in the cheapest European market. Although there has been some reluctance to tackle this problem (perhaps because of the implications for manufacturing employment) there are recent indications that steps may now be taken to introduce more competition and restrict the monopoly power of exclusive dealerships.

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The evidence from a number of studies suggests that new (without tax) prices of imported trucks are commonly two to three times the price in Africa compared with Asia. By concerted bulk buying policies (by government, aid agencies, or larger commercial firms) the prices of new vehicles could be substantially reduced. Exclusive dealerships (dealing with relatively small numbers) also make the prices of spare parts very expensive (Rizet and Hine 1993).

### **1.7 Vehicle Maintenance Costs**

Very substantial differences have been found in vehicle maintenance costs between Africa and Asia. Although some of the differences may relate to differences in road surface roughness it appears that driver care, low driving speeds and attention to routine maintenance (particularly changing engine oil frequently) are of critical importance. Training programmes would be extremely cost effective if a few simple messages on the issues could be got across to owners and drivers.

### **1.8 An Enabling Environment for Efficient Rural Transport**

A range of measures have been identified that might assist with providing cheaper and more frequent rural transport services. In practice each location might require a different combination of measures. For each country or region studies will need to be carried out and the results analysed to identify where the key constraints reside. Local discussions will also be required in order to provide some feedback as to which measures can be successfully implemented and which might cause the most problems.

The nature of rural transport in developing countries is relatively diffuse and because of this more emphasis may have to be placed on the government taking measures to help bring about an environment in which a competitive and efficient rural transport service may flourish.

Training for operators, drivers and mechanics may be very worthwhile to help reduce maintenance costs and the risk of accidents. The oversupply of conventional vehicles in a number of locations has been identified and hence the need for new sources of credit to provide more vehicles may not be so important. However credit is more likely to be required if new types of vehicle services are to be introduced. New IMT services may require new credit facilities. Similarly if it can be demonstrated that there are strong cost reasons for replacing old vehicles which have high operating costs with new vehicles then again there may be a case for the provision of new credit facilities.

The success of these types of initiative will be dependent on a strong entrepreneurial culture which will actively seek new opportunities to maximise the use of assets. To foster this culture training may be required to teach basic accounting skills and to highlight the types of opportunity that might be available. This training should not be confined to vehicle operators but also to people providing vehicle repair facilities, importers of vehicles and spares and the rural industries which the vehicle service providers serve. Changes in transport regulations to allow the use of less conventional vehicle services (based on IMTs) such as single axle tractors could help to bring new services and a new dimension to competition.

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## 1.9 Other Constraints

The introduction of the types of measures highlighted above would need to be supported by a series of other activities tackling other constraints to improved rural transport services. For example a package of demand management which tackles access to markets and market information; the establishment of transport brokering companies to match empty vehicles with loads; the use of modern communications to “order” transport services and transfer information; and network planning measures to maximise the interconnectivity of routes and to ensure that returns from limited budgets are maximised through the use of spot improvements to maintain passability on as much of the network as possible. Many of these activities will require close co-operation with non-transport organisations.

## 2. A POSSIBLE PROGRAMME

In order to ensure the highest possible level of success in bringing about a major change in the provision of rural transport services it is essential to achieve the maximum degree of co-operation by transport operators and other interested parties. To achieve this it is suggested the following steps are taken:

1. Senior political leaders and government officials must be made aware of the issues and the very large potential benefits. It is important to remember that a significant improvement in rural transport services would have an effect on the economy of many times that of improvement in road maintenance standards.
2. Political leaders should then be asked to show a commitment to the changes by “signing up” to the process. This could be part of a revamped form of the Rural Travel and Transport Program (RTTP) which is part of the Sub-Saharan African Transport Program (SSATP).
3. External donors should be identified and asked to commit funds and also to “sign up” to the change process. Donor money should be made available to help implement the new policy and pay for the following costs: the administration, surveying and the planning of the pilot project, the training of operators and drivers, the buying out of surplus capacity, the initial financing costs of arranging the import of cheaper vehicles and parts, subsidies for remote transport services for an initial period of running the pilot project.
4. Local ‘champions’ of the change process must be identified and briefed. These might be politicians representing rural areas, representatives of user groups, senior civil servants etc.
5. Budgetary arrangements should be set up to pay for the administration costs and other costs of the programme. A new governmental cell should be set and officials selected to plan, and monitor changes.
6. Pilot areas should be identified in which the new rural transport policy can be tried out.
7. Surveys should be organised to collect data on the current rural transport patterns, fares, vehicle prices etc of regions initially identified to pilot the changes.
8. The survey data should be analysed to identify existing frequencies of passenger, vehicle and load movements for different routes. Typical revenue and cost profiles should be prepared for different vehicle types.

9. Alternative solution plans should be prepared for each pilot area. Possible solutions might involve the introduction of new competition via new transport operators and modes (e.g. new NMTs or IMTs) or the introduction of route licencing involving contracts to undertake new forms of operation. The plans may include driver and operator training, operating subsidies for routes to the most remote communities and the buying out of capacity where it is obvious that cartels are sustained through the gross oversupply of vehicles.
10. Press and media publicity must be organised to inform the public of what changes might take place.
11. Necessary changes in transport legislation must be organised and passed.
12. Exhaustive discussions must be held with operators, politicians, local authorities, user groups and transport operators.
13. Assistance and possibly finance should be made available to a new or an existing vehicle importer to establish contact to import cheaper vehicles and vehicle parts, (most probably) from Asian suppliers. Any vehicle and use regulations preventing the supply of cheaper vehicles should be identified, investigated and dealt with.
14. The area pilot plans should be modified to take account of the views of interested parties.
15. Transport operators should be persuaded that if they give up their current restrictive practises, accept lower fares and increase their trip frequencies under new route licencing contracts then they will get the following benefits:
  - a) lower new vehicle and parts prices
  - b) training on how to run and maintain their vehicles more cheaply
  - c) a proportion of their capacity (of older and obsolete vehicles) will be bought out and scrapped.
  - d) subsidies for operating of the least traffic and most remote routes.
16. The above activities should be put into the context of sustainable rural livelihoods through the examination of existing household constraints, rural-urban linkages and cross-sectoral linkages.

### 3. CONCLUSION

The paper has shown that the current reliance on the private sector to provide transport services to particularly the most remote rural communities is clearly not working. The poorest sections of rural communities remain isolated with little or no access to motorised or non-motorised modes of transport. For the most remote communities where the viability of purely commercial services is limited there is a need for some form of public involvement to ensure that a basic minimum of service frequency is provided. There also needs to be a greater degree of political commitment to influence policy, encourage the use of IMT's and to discourage some of the anti-competitive practises employed by the transport associations and unions.

A combination of the public and private sector providing a range of transport services to rural communities will impact on rural poverty in a variety of ways. An increase in the service frequency of transport services will reduce rural isolation and increase the effective range of rural peoples income earning opportunities. A reduction in transport charges brought about by increases in efficiency will enable rural people to make more trips and will reduce the impact of transport charges on farm gate prices. Currently the cost of conventional motorised services represents a very large

proportion of a poor households income. An increase in availability on IMT's will also make poor households more secure in their ability to undertake village level transport tasks and certain longer distance travel to, for example, local markets.

The key to the success of the type of action programme set out in Section 2 will be political support, a multi-sectoral approach and the involvement of all relevant stakeholders. A Public Private Partnership will have the advantage of being able to formalise these relationships and hence fully target the most disadvantaged groups whilst also increasing the viability of rural operators businesses.

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