

Rural Transport Training Materials

Module 4:

Rural Mobility

Rural Mobility

Session 4.1

Part 1

Presentation 4.1a



The Training Modules

Module 1. Policies and Strategies

Module 2. Planning, Design, Appraisal and Implementation

Module 3. Management and Financing

This Module

Module 4. Rural Mobility

Module 5. Social and Environmental Issues

Module 4. Rural Mobility

This session

Session 4.1 Rural Mobility: Overview of the Issues

Session 4.2 Promoting the use of intermediate means of transport – vehicle choice, potential barriers and criteria for success

Session 4.3 Agricultural marketing and access to transport services

Session 4.4 Matching demand with supply in rural transport

1. Introduction

Learning Objectives

This session enables participants to:

- ③ Examine the links between poverty and rural transport
- ③ Explore the key issues affecting rural mobility
- ③ Suggest strategies for addressing these issues to improve rural mobility
- ③ Explore strategies for creating an 'enabling environment' for rural transport
- ③ Describe the nature of Private Public Partnerships and their role in rural transport

Session Overview

- ③ Poverty and rural transport
- ③ Key issues affecting rural mobility
- ③ Strategies for improving rural mobility
- ③ Enabling Environment for Efficient Rural Transport
- ③ Public Private Partnerships (PPP)
- ③ A programme for bringing about change in rural transport services

2. Poverty and Rural Transport

⊙ Poor condition of *infrastructure*

- roads, tracks, bridges, foot paths
- ... limit access to farms, markets, schools, clinics

⊙ Poor transport *services*

- large-scale motorised (trucks, busses, pickups) and IMTs (animal drawn, bicycles, hand carts)
- ... are inadequate and too expensive

⊙ Reliance on walking and head loading

- inefficient and costly
- inhibits agriculture and rural development
- heavy burden on women

The transport sector may contribute to the alleviation of rural poverty by ...

- © Improving rural **mobility**
- © ... through facilitating the provision of **affordable** means of transport and transport services

Improving **mobility** can facilitate better...

③ Access to services

- education, health, finance, markets

③ Movement of produce to market

- increase income opportunities
- access broader range of markets

③ Access to urban & rural employment markets

③ Transfer of remittances from relations

③ Participation in political, social and community activities

Rural Mobility

the Key Issues

Issues of Rural Mobility



Group Activity

*What are the factors affecting
Rural Mobility?*

3. Key issues affecting rural mobility

The issues may be summarised into broad categories:

- ③ Wide range of stakeholders – with different needs
- ③ Lack of critical mass of users, operators and suppliers
- ③ Low population densities (scattered, remote) and low income levels – affects demand and supply
- ③ Patterns of adoption and use of transport services varies widely (motorised and IMTs)
- ③ Lack of lack of complimentary and competitive means of transport - to fulfil varied transport needs
- ③ High vehicle and transport costs

Wide range of stakeholders

- ◎ Main players are **users, operators** and **regulators**
- ◎ These stakeholders influence the provision, price, quantity and quality of transport services

Users

- ◎ Have different conditions, needs, preferences
- ◎ Gender differences
 - Differences in transport tasks and access to technologies
 - needs of women often neglected by transport programs
- ◎ Consider needs of disadvantaged groups
 - elderly, poor, disabled
- ◎ Consider needs of various occupation groups
 - e.g. producers of perishable fruit and other goods

Wide range of stakeholders

Operators

- ⊙ Public and private companies, and individuals
- ⊙ Companies operate medium-large vehicles
 - require significant investment and organisational support
- ⊙ Individuals operate minibuses, pickups and IMTs
- ⊙ Operators influence the transport sector through their associations, which affect
 - quality, quantity, price of motorised or non-motorised vehicles
- ⊙ If associations are economically and politically powerful – operate with little competition
 - rural transport becomes expensive and less attractive to users
 - e.g. cartels associated with market failure

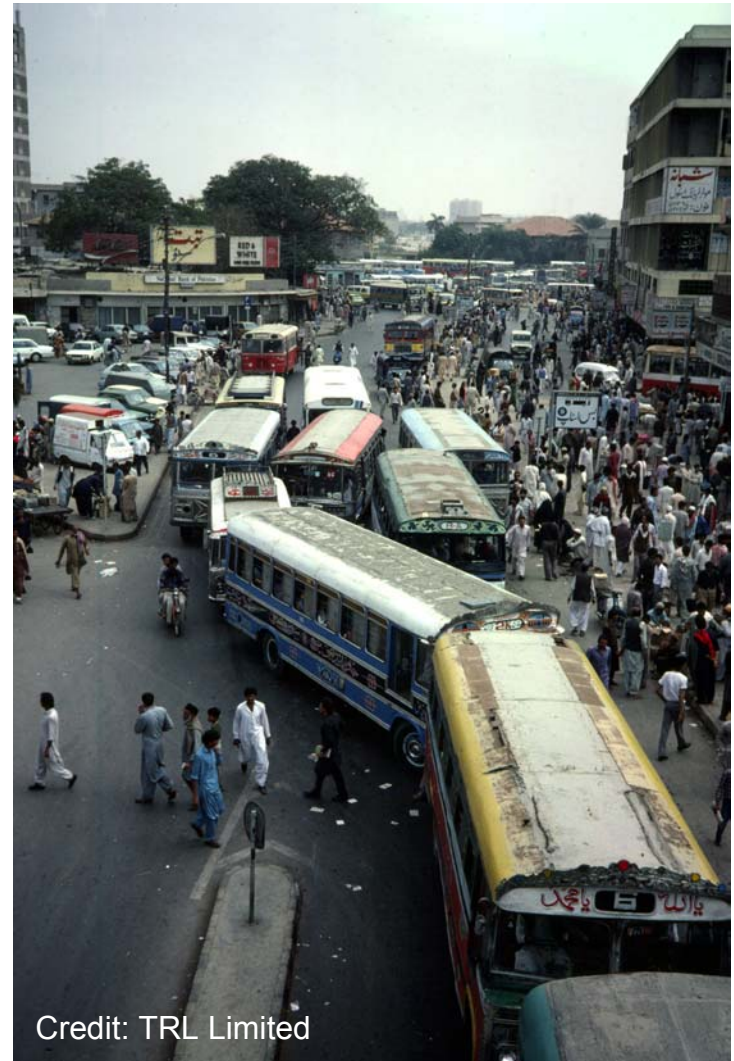
Market failure

- © High transport charges - uncompetitive environment sustains:
 - high vehicle and parts prices
 - high maintenance costs
 - low vehicle utilisation
- © **Transport Cartels** keep high cost operators in business
 - control the lorry parks by a **queuing system**
 - excess supply leads to *increased* tariffs!

Transport cartels

⊙ Rationing of demand at the truck parks leads to **excess** of **supply** and **increase** in transport tariffs

- in a purely competitive market - excess supply would *lower* tariffs



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Example from Nepal:

🌀 New roads in mountains

- demand for commercial portering fell - remaining transport routes had *more* porters looking for work

➤ portering **tariffs rose**

- to ensure remaining porters a living wage (each now had less work)

➤ porters refused to work for less

- but there was no alternative competition due to the way they queued for work

🌀 **Most developing countries do not have active policies against monopoly and cartels**

- direct price control = only weapon used by governments

Wide range of stakeholders

Regulators

- ◎ Tend to be weak
 - creates an unfavourable environment for transport services
- ◎ Traffic laws often inadequate for modern traffic
- ◎ Limited resources and human capacity make it difficult for regulators to
 - monitor user requirements
 - make the environment favourable for transport services
- ◎ Transport terminals typically owned by local government and poorly maintained
- ◎ Local government likely to control vehicle numbers and routes
 - but may not where transport operators are politically influential

Lack of a *critical mass* of users, operators and suppliers

- ③ Means of transport (motorised and non-motorised) require supporting infrastructure for their manufacture, supply and repair
- ③ Critical mass of users cannot develop without support services

Likewise! ...

- ③ Sustainable support services are unlikely to develop without a critical mass of users

Lack of a *critical mass* of users, operators and suppliers

What are the *critical mass* issues?

◎ Socio-cultural factors

- may constrain the use of certain modes of transport e.g. women riding bicycles
- once enough women start to use bicycles and they (and community) see the benefits, more women start riding bicycles until a critical mass of users is reached

◎ Population densities and low income levels (see ahead)

Low population densities and low income levels

☉ Affect transport supply and demand – 3 categories

1. Low transport density in low income areas (motorised & IMT)

- Vicious circle of insufficient transport, users, services
- Impedes development
- Remote rural areas of sub-Saharan Africa, Asia, Latin America

Low population densities and low income levels

2. Higher transport density in low-medium income areas

- Medium-high population density
- Irrigated agriculture, cash crops, efficient marketing, non-agricultural employment
- Transport services have achieved a *critical mass*
- High-income rural areas and periurban areas

3. Low-medium transport density in high income rural areas

- Transport infrastructure is good
- People use motorised transport regularly (work, school, social)
- Periurban areas world wide and rural areas in better-off countries of America, Asia, Australasia, and Europe

Patterns of adoption and use of transport services vary widely (motorised and IMTs)

- ③ ... due to social, economic, environmental factors, and idiosyncratic features
- ③ Some means of transport may be wide spread but vary greatly in concentration
 - bicycles, motorcycles, pickups, trucks
- ③ Others may be clustered in certain localities
 - donkey carts, power tillers

Patterns of adoption and use of transport services varies widely (motorised and IMTs)

- ◎ National/local clusters affected by
 - population density, culture, infrastructure, income, policies, topography, climate, crops, animals
- ◎ We need to understand the conditions that favour adoption
- ◎ Most means of transport spread as a result of small-scale private initiatives, rather than formal government campaigns

Lack of complimentary and competitive means of transport

- ◎ Many complementary transport services are available with complementary but overlapping
 - ranges, capacities, operating costs, payloads, speeds, durability, infrastructure requirements, aesthetic characteristics, foreign exchange requirements, supporting services
- ◎ A multimodal transport system can fulfil market needs
 - e.g. animal-drawn carts transport crops from field to roadside or local market
 - ... and trucks transport accumulated goods to major market centres
 - lack of a multimodal system hampers rural development

Lack of complimentary and competitive means of transport

- ◎ Transport services can be competitive *and* complementary
- ◎ For example:
 - remote rural areas with low agricultural production may have few multipurpose IMTs (animal drawn carts, pickups, bicycles)
 - a new means of transport has to compete in a small market – animal-drawn carts may take work away from porters, pickups may take hire loads away from animal-drawn carts

High vehicle costs

© Motorised transport generally more expensive in rural areas compared to urban areas

... due to

© Vehicle operating costs, low demand, uncompetitive operating environment

Vehicle Prices

- ◎ Large price differences for the same product in different national markets ...
 - exchange rates
 - tax differences
 - e.g. certain car models 60% higher price in the UK than in the cheapest European market
 - new (without tax) prices of imported trucks commonly 2 to 3 times the price in Africa compared with Asia
 - exclusive dealerships

Vehicle Prices

- ⊙ Need for more competition and to restrict the monopoly power of exclusive dealerships
 - bulk buying policies
 - by government, aid agencies, or larger commercial firms

Vehicle Maintenance Costs

- ◎ **Substantial differences between Africa & Asia:**
 - road surface roughness
 - driver care
 - driving speeds
 - routine maintenance (particularly changing engine oil frequently)
- ◎ **Training programmes - extremely cost effective**
 - a few simple messages on the issues

Promoting Rural Mobility

Promoting Rural Mobility



Group Activity

What strategies can be used to promote rural mobility?

Group 1: Financial considerations

Group 2: Regulatory Considerations

*Group 3: Complementary considerations –
Education & communication*

4. Promotion of Rural Mobility

Three major considerations:

A. Financial Considerations

B. Regulatory Considerations

C. Complementary Options

A. Financial Considerations

- ⊙ Operating incentives to encourage the provision of services in rural areas
 - lower tax and duties
 - reduces capital costs, increases number vehicles – but has little affect on their availability in rural areas
- ⊙ Credit and subsidies for transport vehicles
- ⊙ Address the reasons for low uptake of IMTs

Credit and subsidies for transport vehicles

- © Can speed the adoption of means of transport
 - but credit facilities are often poor in rural areas, especially for women
 - repayment conditions for seasonal agricultural credit are seldom appropriate for purchasing means of transport

Credit and subsidies for transport vehicles

- ③ Localised credit can be provided by targeted donor programs
- ③ ...but care should be taken when extending credit for certain types of transport to avoid –
 - distorting the market
 - failing to help those most in need
- ③ Subsidies can help launch new means of transport

Subsidising Rural Transport Services

Most transport subsidies not explicitly aimed at the rural poor

⊙ Hold down fuel prices and bus fares

- to protect (the richer) urban population from price inflation
- but rural transport is more informal, supplied by the private sector -
- ... have not received direct operating subsidies to the same extent as their urban counterparts

Subsidising Rural Transport Services

⊙ Subsidising services

- e.g. UK government - fuel subsidies for buses & bus grants for rural routes
- But! not always reach those who need it most
- major beneficiaries often richer people who travel most

⊙ Direct targeting

- travel passes and travel token schemes e.g. elderly in UK
- may be subject to abuse - token sold on to others

Remoter locations – services on social grounds

© License routes and require operators to “bid for the market”

© **Drawbacks:**

- once the bid is accepted & service in place - competition may be curtailed
- bidding “for the market” implies cross-subsidisation between routes
- need protection from competition on the profitable high demand routes - to guarantee the operator will run routes with low demand
 - in rural locations this may be difficult to enforce

Intermediate Means of Transport (IMTs)

⊙ Bicycle, rickshaw and motorcycle stations

- common in urban & rural areas of Asia
- shorter distances

⊙ Agricultural tractors, trailers, power tillers, and motorcycles with side cars

- heavier loads - long routes with lower density of demand

IMTs are explored in more detail in the Session 4.2

© IMTs - an essential aspect of rural mobility

- access to economic and social facilities
- collection role - enables goods to be amalgamated and larger vehicles to operate effectively
- establish a new dimension of competition
- vehicle types with different characteristics - require different fare structures

But!

© IMTs are sometimes politically unfavourable

- legislation may act against the successful use of IMT

Address the reasons for low uptake of IMTs

- ③ Low use of IMTs in rural areas is often linked to a vicious circle of low supply and low demand
- ③ Identify the limiting factors
 - shortages of capital
 - marketing systems
 - components and raw materials
 - manufacturing facilities and skills
- ③ In low population density areas supply problems are linked to weak purchasing power of users, **especially women**
- ③ Overcome this by providing
 - credit, income-generating opportunities, subsidies

B. Regulatory Considerations

- ◎ Effective transport services require planning and regulation especially for low-density areas and disadvantaged groups
- ◎ **But!** inadequate resources and staff, mean transport interventions rarely address
 - IMTs or use participatory processes or gender analysis
- ◎ Effective regulation can support an efficient transport system through
 - quantity control (to match demand and supply)
 - quality controls (safety for drivers, passengers, other road users)
 - regulation of IMTs (including animal welfare issues)

B. Regulatory Considerations

- ③ Communities can increase their bargaining power by establishing user groups to negotiate with operators, or lobby government
- ③ Transport operator associations often control the market
 - but they can also improve transport services e.g. lobby government to recognise IMTs, promote safety issues
- ③ NGOs and government may facilitate technical and business training for owners and operators of motorised and non-motorised vehicles

Service Availability and Route Licensing

Remoter locations – services on social grounds:

⊙ Timetable of services

- bus leaves the terminus before it is full - passengers able to board en-route

⊙ Subsidise operation

- common for high income countries

⊙ Government control/authorisation of fare & truck tariffs

- keep down prices ... but prevent operators from accepting lower fares levels.
- greater trip frequency - encourage expansion of the market (crop marketing, job seeking etc.)

Vehicle Utilisation and Surplus Capacity

- ③ **Vehicle utilisation** - increased by:
 1. More rigorous enforcement of vehicle inspections
 2. Increase number of truck and bus parks
 - more vehicles “available for hire”
 - reduce collusion on prices
 3. Buying out and scrapping the older vehicles
 - also helps remove unsafe and polluting vehicles

- ③ **But! buying out ...**
 - is a controversial measure
 - there is no direct way of knowing if the policy would be effective

C. Complementary Options

Education & communication

- ◎ Feeder roads should be connected up – not dead ends, to increase demand and encourage operators into the area
- ◎ Training for local experts in key issues – IMTs, participatory processes, gender analysis
- ◎ Public education campaigns to give a positive image of IMTs
- ◎ Priority should be on providing year-round vehicle access
 - quantity of access is more important than quality

C. Complementary Options

Education & communication

- ◎ Good communications to match up demand with supply through transport brokers
- ◎ Efficient transport systems promote efficient marketing systems, provided
 - markets are close to rural communities and IMTs used
 - rural people can sell directly to without the need for traders or wholesalers
 - the problem is that in low-density areas populations are dispersed
- ◎ Planning rural transport service should take into account location of urban bus and truck terminals

5. Enabling Environment for Efficient Rural Transport

🌀 What is required: -

- country or region studies to identify key constraints
- local discussions to provide feedback on which measures can be successfully implemented
 - ... and which might cause the most problems

🌀 Rural transport in developing countries is diffuse

Governments need to develop an environment in which a competitive and efficient rural transport service may flourish

Developing an enabling environment

③ Training for operators, drivers, mechanics - reduce

- maintenance costs
- risk of accidents

③ Credit

- new IMT
- replace old vehicles (high operating costs) with new vehicles

③ Success depends on

1. strong entrepreneurial culture
2. training in basic accounting skills
3. change in transport regulations
 - to allow the use of less conventional vehicle services (based on IMTs) e.g. single axle tractors

To overcome other constraints ...

🌀 Demand management should address:

- access to markets and market information
- establishment of transport brokering companies to match empty vehicles with loads
- modern communications to “order” transport services and transfer information
- network planning to maximise interconnectivity of routes
- ensure returns from limited budgets are maximised
 - through the use of spot improvements

6. Public Private Partnerships

The case for Public Private Partnerships (PPPs)

- © Potential efficiency of private operators
- © Need to maintain service frequency
- © Need to inhibit cartels

PPPs combine the **dynamism** of the *private* sector with *public* sector concerns of

- social responsibility
- environmental awareness
- local knowledge
- job creation

A “win – win” situation

- © To gain the maximum **co-operation** of transport operators:
 - a package of measures to be negotiated
 - encourage them to change their behaviour
 - and see the benefits

But, in the current environment – subsidies ...

- ③ ... unlikely to play a large universal role in a new PPP arrangement
- ③ ... should be considered as a way of providing transport to **remote** locations where
 - no regular transport service
 - service frequency is in weeks or months

7. A programme for bringing about change in rural transport

Ensuring maximum
co-operation between
transport operators
and other
stakeholders

Key Steps

1. Senior political leaders & government officials made aware of the issues + potential benefits
 - greater benefits from improving *rural transport services* than improving road maintenance standards
2. Political leaders “sign up” to the process
 - revamped form of the Rural Travel and Transport Program (RTTP) - part of the Sub-Saharan African Transport Program (SSATP)

3. External donors commit funds & “sign up” to the process
 - help implement the new policy and pay for the costs
4. Local ‘champions’ identified and briefed
 - politicians, representatives of user groups, senior civil servants
5. Set up budgetary arrangements
 - new governmental cell to plan & monitor changes
6. Pilot areas identified
 - test transport policy
7. Surveys
 - current rural transport patterns, fares, vehicle prices etc of pilot areas

8. Analyse survey data

- identify existing frequencies of passenger, vehicle and load movements for different routes
- Prepare typical revenue and cost profiles should for different vehicle types

9. Alternative solution plans for each pilot area e.g.

- new NMTs or IMTs?
- route licences to undertake new forms of operation
- driver and operator training
- subsidies for routes to the most remote communities
- buying out of capacity where cartels are sustained through oversupply of vehicles

10. Press and media publicity

11. Changes in transport legislation

12. Exhaustive discussions

- operators, politicians, local authorities, user groups, transport operators

13. Assistance/possibly finance

- to a new/existing vehicle importer to import cheaper vehicles and vehicle parts
- vehicle and use regulations preventing the supply of cheaper vehicles should be addressed

14. Modify area pilot plans

- to account for views of interested parties

15. Transport operators persuaded to give up their current restrictive practises

- accept lower fares, increase trip frequencies under new route licensing contracts - to get benefits:
 - lower new vehicle and parts prices
 - training on how to run & maintain vehicles more cheaply
 - a proportion of their capacity (of older, obsolete vehicles) will be bought out and scrapped
 - subsidies for operating on least traffic, most remote routes

16. Put all activities into sustainable rural livelihoods context

- examine existing household constraints, rural-urban linkages and cross-sectoral linkages