

## **Partnerships to improve access and quality of public transport**



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## **Guidelines**

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2003



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Sohail, M., Mitlin, D. and Maunder, D.A.C. (2003)  
*Partnerships to improve access and quality of public transport - Guidelines*

A reference copy of this publication is also available online from:  
<http://www.lboro.ac.uk/wedc/>

ISBN Paperback 1 84380 035 7

This document is an output from a project funded by the UK  
Department for International Development (DFID)  
for the benefit of low-income countries.  
The views expressed are not necessarily those of DFID.

Designed and produced at WEDC  
by Glenda McMahon, Sue Plummer, and Rod Shaw

## **About the series**

Led by Dr. M.Sohail, WEDC is undertaking evidence-based research on the issues of partnerships, involving different kinds of organizations in different sectoral and thematic contexts. More information can be found on the web pages for WEDC projects and publications. This document is part of a series discussing issues of partnership in the context of public transport. The series also includes case studies undertaken in Karachi and Faisalabad in Pakistan, Colombo in Sri Lanka and Dar es Salaam, Tanzania.

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## **Acknowledgements**

The authors gratefully acknowledge the many different people who have willingly contributed their knowledge, opinions and their time to the development of this work

In particular, DFID for commissioning this work; TRL Limited, UK; the International Institute for Environment and Development (IIED) and the local collaborators: the Urban Resources Centre, Karachi; Mr Chularathna of Sevanathe Urban Resource Centre, Colombo; Mr. Attaullah Khan, Faisalabad; Dr. Kombe, University of Dar es Salaam and members of staff of Loughborough University, UK. Thanks also to Dr Miles for acting as external reviewer.

Special thanks to the many passengers of the case study locations who have contributed to the research and provided their perspectives on the issues. We feel greatly indebted to them.

## Preface

The focus of the research in Phase 1 (R7455) was Karachi, Pakistan, which is a city of between 10 and 13 million in the South of Pakistan. It is a city with a diversity of economic activities and a wide mix of different social groups including a substantive migrant community, drawn primarily from India and other areas of Pakistan. Phase 1 has been completed and a review, situation analysis, and policy conclusion can be found in the book *Urban public transport and sustainable livelihoods for the poor: A case study: Karachi, Pakistan* (Sohail, 2000).

This project (7786) is the second phase of the earlier project funded by the Department for International Development (DFID) Infrastructure and Urban Development Department. The UK-based project team includes: WEDC, Loughborough University; TRL Limited, UK; the International Institute for Environment and Development (IIED). The local collaborators include: the Urban Resources Centre, Karachi; Sevanathe Colombo; Mr. Attaullah Khan, Faisalabad; and Dr. Kombe, Dar es Salaam. The project is managed by Dr. M.Sohail, WEDC, Loughborough University, UK.

These guidelines are based on a collection of case studies undertaken in Faisalabad, Colombo and Dar es Salaam under this project for the Department for International Development (DFID)-funded knowledge and research project 'Partnerships to Improve Access and Quality of Public Transport for the Urban Poor'. Case studies were carried out in Pakistan, Sri Lanka and Tanzania. Detailed country reports of these case studies are available from the DFID Transport-Links website:

<[www.transport-links.org/transport\\_links/projects/kar\\_themes.asp](http://www.transport-links.org/transport_links/projects/kar_themes.asp)>

as well as from the WEDC link :

<[www.lboro.ac.uk/wedc/](http://www.lboro.ac.uk/wedc/)>

This project was closely co-ordinated and associated with another KaR project which is led by TRL (Activity patterns, transport, and policies for the urban poor-R-7789) and which looks at linkages between transport and other social sector interventions such as health in Sri Lanka, Zimbabwe, and Ghana. In addition , the project also had close links with another KaR project entitled, "Sustainable livelihoods mobility and access needs(SLAM-R-7784)".



## **Glossary and exchange rates**

Tonga	Horse cart
Katchi Abadi	Informal settlements
Three wheelers	Motorised rickshaws ( modified scooter )
Dala dala	Minibus
1 Pound sterling	approximately 97 Pakistani rupees
1 Pound sterling	approximately 163 Sri Lankan rupees
1 Pound sterling	approximately 1751 Tanzanian shillings

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## **Summary**

The poor in developing countries rely on public transport to sustain their livelihoods. But public transport services, whether provided by the public or the private sector often fail to meet basic needs, or to assist them to improve their economic status.

The guidelines for improvement of public transport offered in this report are presented within the Sustainable Livelihood Approach (SLA) framework adopted by the Department for International Development (DFID). The report, based on case studies in Colombo, Sri Lanka, Faisalabad, Pakistan, and Dar es Salaam, Tanzania, examines the impact of inter- and intra- linkages between the provision of public transport and the ability of the poor to sustain and improve their livelihoods, and suggests options for improvement to both policy-makers and to public transport operators.

Public sector services, usually provided through the operation of large capacity buses, have been perceived to perform poorly, so private sector initiatives have increased, mostly through the use of mini-buses or shared taxis. Meagre access to public transport routes, scant or poorly maintained infrastructure, lack of scheduling, the cost of fares, reckless driving and rudeness from drivers and conductors all contribute to the notion of public transport as an inadequate and inefficient service. Regulatory control is either minimal or non-existent.

In one district of Dar es Salaam, Tanzania, where 80% of workers use buses to travel to work, 20% of household income is spent on transport costs. In Faisalabad, Pakistan, household expenditure on public transport is estimated to be between 4-8%. Children and physically impaired people are often left behind by drivers because they pay only half fare or impede the boarding and alighting process.

However, travellers often consider fares to be fair, even if barely affordable. Travellers perceive the provision of bus routes closer to home, better bus stops and well laid out termini, safe footways, clean buses, regular timetables and courteous staff as factors which would greatly enhance their quality of travel.

Operators/owners should ensure that bus drivers and conductors are properly trained and have better security of employment. Pressures to meet a minimum daily revenue payable to the owner, before a wage is earned, usually encourage drivers to race to find a maximum number of fares, to allow only full fare paying

passengers to board and to work excessive hours which can lead to safety concerns. Buses also need to be clean and well maintained for the comfort and safety of all the passengers.

Policy-makers should ensure that regulation minimizes the risk of failure in public transport initiatives and protects the interests of the poor. At the same time, it needs to be unobtrusive, so that private sector operators have sufficient incentive to improve their services while still generating a profit.

Priorities for intervention as suggested by all stakeholders involved in the public transport sector include: provision and improvements of feeder roads reasonably close to low-income residential areas, provision of safe and secure bus stops and improvements to pedestrian routes, which also make them safe for bicycles. In a number of countries a significant number of households own at least one bicycle, but do not use them for travel because roads and drivers are perceived as dangerous.

A land use and employment strategy is another alternative. Land nearer the centre of cities, suitable for settlement by the urban poor could reduce the need to travel to obtain essential needs. Employment opportunities could also be encouraged within low-income settlements.

A policy framework needs a comprehensive, holistic approach, which takes account of the many factors that impinge on the public transport sector and its impact on the ability of the poor to improve their livelihoods. Too often, responsibility for different aspects of regulatory control falls between different ministries and organizations.

During the course of the study, the investigators held forums in each city to bring together the users, operators and regulators of public transport to establish the possibility of creating partnerships between such groups. Clearly, these meetings were the first ever opportunity that had been provided for the groups to participate and co-operate with each other to improve access to and quality of public transport services.

It is suggested that establishing partnerships between stakeholders to tackle and improve the public transport system would offer considerable potential, but much depends on whether there is sufficient trust, transparency, professionalism and capacity to carry the initiative forward. Stakeholder collaboration could be achieved by the formation of owners' associations for operators to co-operate on



raising standards; users' associations in which users could formulate a voice to both operators and regulators; and stakeholder forums through which all could exchange views and experiences.

Users, operators and regulators should recognize that they all have a vested interest in ensuring that the provision and quality of public transport service remains on the policy agenda, or else it will be difficult to ensure adequate funding in the future to meet the growing demands.



# Section 1

## **Introduction**

### **1.1 What this report is about**

Access to affordable transport is critical for the urban poor, as it offers a way out of economic, social and physical isolation. This report looks at issues of price, affordability, access and quality in relation to the provision of public transport services in two Asian cities and one African city. Public transport is the provision of transport that is consumed collectively (whether provided by the state or private sector) and a fare is paid by passengers. Primarily, modes include trains, buses and minibuses but also include taxis, trams and trolleys, metros and paratransit modes such as rickshaws, cycles and motor cycle taxis.

There is a widespread perception that urban transport policy initiatives in the developing world are influenced principally by the demands of the car-owning affluent whose travel needs are entirely different from those of the urban poor, who generally travel on foot or by public transport. Whether this perception is right or wrong, most observers would agree that securing an effective public transport service is important. Traditionally governments have frequently sought to provide this through a monopoly public sector supplier, which they can control and which may or may not have operational and financial objectives as key performance criteria. Unfortunately many of these suppliers have performed poorly, have been subject to undue political influence, and have shown themselves unwilling or unable to react appropriately to changing customer demand.

As a result, governments in both industrialized and developing countries have increasingly turned to the private sector for the provision of public transport services in cities and urban centres throughout the world. Wherever private operators predominate in a city or network under conditions of unfettered competition, the general outcome is a large number of individual operators whose main aim is (not surprisingly) to maximize profits. Consequently, there

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has been a growth in the provision of minibus or shared taxi services. The small- or mid-type capacity vehicle that the private sector prefers, and can afford to invest in, differs appreciably from the larger conventional buses that are generally favoured by the public sector. Vehicles are owned and operated as a business with profitability as the key objective, rather than a service being provided irrespective of passenger demand or the need to generate a sustainable financial return.

The drive for profitability can be achieved by increasing efficiency and cutting costs, but may also lead to unfavourable behaviour that can adversely affect passenger safety and comfort and damage the urban environment. In a totally unregulated environment, driver behaviour is often dangerous as vehicles ‘race’ each other to stops along the route to either pick up passengers or complete their trip to pick up more passengers for the return journey. Vehicles may be worked hard with little preventative maintenance, so breakdowns en route become a frequent occurrence. Operators (drivers and conductors) often ‘hire’ the vehicle on a daily payment basis, having to guarantee the owner an agreed sum. The result is that the vehicle is worked as long as possible to maximize earnings for the operators, with scant regard for the longer-term reputation of the service provider. To this extent, bus operation is a ‘fail-dangerous’ rather than a ‘fail-safe’ industry, and the primary role of regulation is to minimize the risk of failure without reverting to the inefficiencies of monopoly provision.

Regulation is also needed to protect the interests of the poor. Low-income communities are frequently located on the outskirts of cities with poor and narrow road access. These roads are more accessible to minibus type operations than to large conventional buses. However, owners and operators generally prefer to keep to the major road network to safeguard their vehicles. So the urban poor often have to face long walks along or on poorly maintained pavements and poorly illuminated streets to reach any type of service. Dark alleys were reported as places where women were frequently harassed. A long journey in a vehicle often in cramped conditions will follow, before another journey on foot to reach their destinations. Thus, journey times can be excessive.

Roads themselves can be dangerous. Road space is shared by a plethora of motorized and non-motorized vehicles; these include horse drawn *tongas*, cycle and auto rickshaws and mini- and conventional-sized buses. Pedestrians are frequently forced onto the roads, as pavements are used by vendors to sell their wares. Besides putting pedestrians at risk of injury, road capacity is thus further constrained, reducing speeds and exacerbating congestion. The poorest segment

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of society travel predominately on foot as they do not have any affordable alternative. As wealth creation increases at the personal level, reliance on public transport becomes feasible. Access to a wide variety of road- and rail-based public transport offers an expansion of horizons and opportunities for the poor community, who can sustain their own and their families' needs by reaching more peri-urban areas to carry out livelihood activities.

This report aims to examine recent experience of public transport relating to access and quality in Colombo and Faisalabad (Asia) and Dar es Salaam (Africa), with a view to drawing out some general lessons in order to secure optimum benefits for the urban poor. Appendix 3 summarizes country reports for the cities of Colombo, Dar es Salaam and Faisalabad. Table 1.1 below provides 2.basic statistics on population and rates of urban growth in the three cities.

**Table 1.1. Statistics on city size and national rate of urban growth<sup>1</sup>**

	City population (est. 2000)	Rate of urban growth 1990-5	Rate of urban growth 1996-2000
Colombo	690,000*	1.74	2.29
Dar es Salaam	2,347,000	8.33	6.31
Faisalabad	2,232,000	4.14	4.31

1. Estimate for 1999

2. Source: United Nations (2001) World Urbanization Prospects: the 1999 Revision. United Nations (Population Division): New York.

### **1.2 Why the work was undertaken**

Urban public transport is a key link to access other services and livelihood assets. In the context of the project, public transport services are defined as services comprising formal and informal modes (vehicles) where a fare is paid by a passenger. It is suggested that a better understanding of inter- and intra-linkages of public transport and its impact on other services is required to improve the sustainable livelihoods of the poor. Relationships between agencies, in some cases partnerships, both informal and formal, have responded to provide access for the poor to public transport.

There is a lack of understanding about how such partnerships function to deliver public transport services and what can be done to support such partnerships to improve accessibility and quality of public transport. This project contributes by

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focusing on issues at both the policy and operational levels in relation to accessibility and quality of public transport services. This research helps to fill the knowledge gap by identifying the key stakeholders, understanding roles and responsibilities, and analysing the working mechanisms used to deliver public transport services. The research will support the poor by identifying and developing livelihood strategies under existing processes, structures, and constraints. This widens the scope and applicability of the earlier research (see Sohail, M. (ed.) 2000). The present study tries to address the key question of how to improve the access to and quality of public transport for the urban poor. In this respect the following issues were explored in the three cities of Asia and Africa that comprised the study.

- How can access [and mobility] and quality of urban public transport services provision be improved for the urban poor?
- How can existing partnerships be strengthened and new ones created in respect of public transport provision?
- How could the project integrate the views of users, operators, and regulators and how should priorities be established at policy and operational levels.
- How could the project understand, quantify, and prioritise the urban poor's need for safe, affordable, effective, and efficient public transport services to ensure reasonable access to work, education, health, and leisure when other factors such as water, food, housing, and health are all equally or more important factors of SL (sustainable livelihoods)? In other words, how can the inter-linkages of urban public transport partnerships, through improved access and quality, affect the livelihoods of the poor and hence the quality of life.
- How, in the context of the Sustainable Livelihoods Approach (SLA-see Chapter 2) can the influence of partnerships, among the key stakeholders, on the “structure and processes” that mitigate the risks of the urban poor within the “vulnerability context” be traced?

### **1.2.1 Purpose of the study**

To improve the sustainable livelihoods of the poor through improved access to and quality of urban public transport by developing guidelines for use by policymakers and operators in urban transport.

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### **1.3 Structure of the report**

Section 1 introduces the question of how to promote affordable public transport for the urban poor, in the context of the established trend for governments to turn to the private sector for the provision of public transport services.

Sections 2 and 3 talk about the role of public transport to achieve sustainable livelihoods and the key issues faced by the urban poor. Section 4 discusses the methodology and scope of the project.

Section 5 draws conclusions on various aspects of governance, including regulation and control, infrastructure and stakeholder consultation. In general, cost and customer pressures for increased frequency and flexibility have led operators to rely upon a large number of small vehicles, while public sector firms continue to prefer to run large buses less frequently in search of presumed economies of scale. The challenge is therefore to find a way to regulate and control this multiplicity of small businesses in such a way as to retain the cost minimization pressures of the profit-seeking private sector without sacrificing safety, health or quality of service.

Section 6 discusses social issues affecting the poor, covering location, the general significance of transport services for livelihoods, the quality of travel, livelihoods directly stemming from transport activities, and the role of social and civil society organizations related to transport.

Section 7 reviews the lessons learnt from a poverty perspective, successively dealing with availability of public transport, affordability, realistic fare levels, quality and safety, the role of regulation, and the needs of pedestrians and cyclists.

Section 8 talks about the types of partnerships that exist, or could potentially exist, in the transport sector and how these might be given support and encouragement to help address the access and mobility problems faced by the urban poor.

Section 9 suggests priorities for intervention in the areas of infrastructure investment, land use and employment strategy, regulation and stakeholder collaboration.

Appendix 1 discusses the key issues in respect of the partnerships to improve access and quality of public transport.

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Appendix 2 provides an overview of methodological considerations for the project .

Appendix 3 summarizes the findings of field studies implemented in Colombo, Dar es Salaam and Faisalabad in order to gain a better understanding of these issues, as part of the DFID-sponsored '*Partnerships to improve access to and quality of urban public transport for the urban poor*' project.

### **1.4 Who should read this report**

We have written this report with a wide readership in mind, including:

- readers with a general professional interest in public transport, in procurement and in governance;
- International donor agencies;
- national and local policymakers who are developing strategies for public transport provision/ networks in urban areas;
- readers interested in sustainable livelihoods and social approaches to development;
- operators of urban public transport services, both private and public; and
- various civil societies involved in service delivery in an urban context.

### **1.5 Where to find out more**

There is a detailed report on each of the case studies, which includes:

- a full discussion of the processes leading to partnerships ;
- descriptions and analysis of perceptions, issues, roles and responsibilities;
- summaries of the interviews with poor consumers and other stakeholders; and
- sources of further information for the cases.

These detailed reports are available on the project website at:

<[www.transport-links.org/transport\\_links/projects/kar\\_themes.asp](http://www.transport-links.org/transport_links/projects/kar_themes.asp)>

as well as from WEDC link : <[www.lboro.ac.uk/wedc/projects.ptup](http://www.lboro.ac.uk/wedc/projects.ptup)>.

Please refer to the case study reports for further details.



## GUIDELINES

For discussions on this issue please join the e-mail list on the topic, which can be accessed through the project webpage referred above. If you would like to have a hard copy of the case study reports, please contact Dr. M.Sohail on [M.Sohail@lboro.ac.uk](mailto:M.Sohail@lboro.ac.uk).



## Section 2

### **Setting transport within the Sustainable Livelihoods Approach**

The Sustainable Livelihoods Approach (SLA) is currently being used by DFID as a framework to understand the dimensions of poverty and potential interventions for poverty reduction. (In this context ‘livelihood’ refers to the command an individual, family, or other social group has over an income or resources that can be used to satisfy its needs. These resources may include information, cultural knowledge, social networks, and legal rights as well as tools and other physical resources. Sustainability is considered to have environmental, social, economic, and institutional aspects.)

Securing sustainable livelihoods depends on a number of cross-sectoral interventions, such as employment generation, health care and education facilities, access to adequate services, and reducing vulnerability with respect to accommodation/ land tenure, etc. These components of a sustainable livelihood depend on the possession of various livelihood assets (human, social, natural, physical, and financial capital) to achieve livelihood strategies, which are determined by transforming structures (government/ private sector/ service provider/ NGOs) and processes (law, policies, culture, institutions). These strategies are used, depending on the stock of assets, to achieve livelihood outcomes (such as increased well-being and reduced vulnerability) (Ashley and Carney, 1999).

This research project uses the Sustainable Livelihoods framework and the approach to the research has been informed by that framework. Within the framework, transport can be best viewed as an asset. Access to transport influences the package of assets that is available to communities and the individuals within them. At the same time, access to transport is in turn influenced by those assets. Table 2.1 highlights the links between livelihoods and transport.

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**Table 2.1. Livelihoods and transport: a summary**

Assets	Influence on the transport sector	Anticipated influence of transport services
Financial	Availability of credit and investment finance for transport related investments (informal and formal sector). Ability to afford transport services.	Access to work, employment and income generation opportunities. Access to social networks needed for financial services and income generation.
Human	Quality of staff undertaking services and regulatory duties.	Access to education and health services. Extent of stress, injury, mortality from travelling.
Natural	Terrain and climatic conditions will influence costs of transport provision and maintaining networks and services.	Quality of local neighbourhood environment—extent of noise and pollution.
Physical	Road and rail network is critical to quality of formal and informal transport services. Facilities for pedestrians.	Allows access and mobility to most areas of urban centres and rail to national locations.
Social	Organizations to bring together transport services e.g. bus transporters. Citizen pressure on providers—is transport a political issue?	Ease with which city-based networks can meet to negotiate with local authorities. Ease of maintaining social networks to strengthen social capital. Access to social networks needed for financial services and income generation.

As highlighted in Table 2.1, transport affects the livelihood opportunities of the poor in many ways. What the table does not indicate is the relative importance of these different areas. The present study suggests that the major influences are as outlined below.

### 2.1 Positive influences

- **Access to work, income generation, and employment opportunities.** Urban households may participate in a multitude of activities including small-scale trading and service provision, work in factories, casual labour and domestic work. In the context of structural adjustment and liberalization policies there has been a reduction in the proportion of the population employed in waged employment in the formal sector. The subsequent proliferation of in-

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formal sector work in trade and services has meant a restructuring of livelihoods and a diversification to reduce the risk of loss of income from one source. In addition there has been increasing labour force participation of women and children. The mobility of the urban poor can be seen to play a role in the diversification of livelihoods; the access to production inputs, building up stores of saleable assets, social support networks related to work, market information, credit, and training and employment.

- **Access to education and health services.** Well-planned and low-cost transport services can greatly reduce the constraints of accessing education and health services. This is of direct assistance to households in securing and improving their livelihoods. Reductions in social service expenditures may have increased the distances that residents have to travel. Many low-income settlements, especially those on the periphery of cities are very poorly served.
- **Access to social relationships.** The SLAM study (R-7784) highlighted the role of transport in linking rural and urban communities. Especially cultural and family links (such as traditional ceremonies) between such communities.

### 2.2 Negative influences

- **Cost of transport services.** The cost of transport is a major burden and often takes up a substantive proportion of household budgets. The study in Karachi reported that 51 per cent of households were spending at least 10 per cent of their income on low-cost transport services. These figures show the difficulties faced by low-income households seeking to improve their livelihoods. In addition to these direct costs, there are the indirect costs incurred through transport use, particularly the time taken to travel using low-cost options.
- **Reduction in the quality of the local environment.** In some low-income settlements, transport services can reduce the quality of the local environment with noise and air pollution causing possible long-term ill health and chronic illness within the localities.
- **Accidents/fatalities due to traffic accidents involving public transport.** Increasing motorisation inevitably leads to increasing numbers of fatalities and injuries on the road network and where public transport vehicles are involved this can generate substantial casualties per accident.
- **Congestion on busy streets in urban areas.** This can have a negative effect on the local environment especially where large numbers of buses are operated/parked for loading and off loading etc.



## Section 3

### **Key public transport issues affecting the urban poor**

The fundamental goal of any transportation system is to move people and goods to where they need to go, safely, quickly, and affordably. A **transport system** consists of **infrastructure** and **modes** and improving efficiency of the entire system depends on both. Transport infrastructure includes paths, roads, bridges, stations, highways, waterways, ports, aviation, and railway facilities. Modes refer to trucks, pick-ups, buses, cars, minibuses, motorbikes, bicycles and trains, planes, and ships etc. Public transport is characterized by a variety of vehicles and services offered. Most, road-based provide either a bus-like service with a fixed fare and route or a taxi-like service where the fare and route is negotiated.

Traditionally, investment in transport has been promoted to increase economic efficiency and economic growth. Transport can be seen as central to economic growth, increasing the physical access of urban residents to resources (supplies, services, facilities and income-generating opportunities) and markets and affecting food security, the marketing of goods, and the affordability of health and education. An effective transport system can expand trade and economies of scale, lower costs and prices, and increase government capacity for income redistribution. It is assumed to benefit the poor through the ‘trickle down’ effect in the economy, i.e. by lowering costs and increasing opportunities. However, these transport policies (and their narrow focus on macroeconomic growth as a means of alleviating poverty) may have harmed the poor through the displacement of Non-Motorized Transport (NMT), the increase in pedestrian fatalities, the relocation of labour-intensive manufacturing, and increasing air pollution. Few urban transport policies and interventions have focused on the poor, and thus the effects and impact of transport interventions on the poor have broadly been unaccounted for.

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The importance of a systematic approach to poverty issues has been recognized by governments and the designs of projects have changed to centre around poverty reduction. The rationale of investing in transport for the urban poor is to alleviate poverty and raise the living standards of these communities. Within the Sustainable Livelihoods Approach (SLA) transport infrastructure can be termed 'physical capital'. Mobility depends on the availability, affordability, and efficiency of the system and the extent to which an individual is able to make use of these options to move themselves and their goods around. Attempts to improve the access and quality of public transport to the urban poor usually target those problems experienced and identified by the poor and may include:

- increasing transport modes;
- upgrading infrastructure such as street lighting, roads and pavements;
- using employment-intensive community-based methods;
- reducing accidents; and
- understanding the consequences both for the people concerned and for broader processes of urban change.

Employment and hence income generation is the prime factor in increasing the quality of an individual's life. Spatial location and the transport system influence the opportunities to find employment and maximize sales for those employed in trading and hawking. Donors and governments use labour-intensive transport construction and maintenance methods to generate employment and supplementary income. Project components that contribute to poverty reduction do so by improving access to jobs and public transport, reducing travel time and costs, and improving the safety and comfort of public transport, thereby reducing accidents and providing pedestrian facilities and Non-Motorized Transport services such as rickshaws and bicycles, etc. Transport is often a complementary input for effectively delivering poverty-targeted interventions such as health care, and for illustrating the need for cross-sectoral interventions (see R-7789). Sustainability of these efforts could be improved by taking a cross-sectoral and holistic approach to cost-recovery policies, capacity building within the sector, and improved financial management and control.

A few important distinctions need to be addressed, such as the difference between:

- accessibility or mobility. Accessibility refers to the ease or potential with which people can travel and move goods to destinations and opportunities.



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Mobility suggests the ability to move people and goods around. Accessibility takes account of location/spatial differentiation and mobility determinants. Mobility is simply a measure of the agency with which people choose to move themselves or their goods around. This involves two components. The first of these depends on the performance of the transport system, which is affected by where the person is, the time of day and the direction in which they wish to travel. The second component depends on the characteristics of the individual such as whether s/he has a bicycle or car available, can afford taxi, bus, or rail fares, is able to walk or use public transport, or has knowledge of the options available;

- urban poor within or outside low-income settlements;
- formal sector and informal sector workers;
- employment and employment-seeking activities;
- productive work in the maintenance of livelihoods;
- concentration of poor in settlements and their diffused presence throughout cities;
- public sector transport and the informal privatisation of transport;
- direct employment of urban poor in the transport systems and the indirect maintenance of livelihoods through increasing access to the transport system;
- men and women;
- motorized and non-motorized transport;
- between and within the 'urban poor.' The urban poor are a highly differentiated group. Will improvements to public transport merely increase the difference between the poor and the not so poor? How poverty is conceptualised will determine the proposed transport solutions; and
- policies that are anti-poverty, i.e. designed to raise incomes or consumption and those that are anti-vulnerability, which reduce the chances of a risk having a serious effect.
- consideration should also be given to poverty other than income poverty.

The urban poor make up the majority of inhabitants of cities and tend to live on the peripheries of cities in overcrowded, unhealthy, and marginal environments. Although these informal settlements may also be becoming increasingly widespread, the poor may also be dispersed throughout the cities, and these pockets of poverty may be missed by a narrow focus on settlements. Amongst

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urban poor households there are a growing number of female-headed households and children involved in informal/ productive work. The informal sector uses transport in trading, hawking, and employment seeking; these activities do not necessarily follow 'commuter peaks' and this requires a more flexible transport service. The poor are not car users and as they rarely make a high number of daily trips they are typically isolated from plans and policies regarding transport.

The access and mobility of the poor is constrained by:

- city planning;
- socio-economic characteristics, for example income;
- the existence of well maintained transport facilities, for example bus stops; and
- services available.

It is important to establish whether the relatively lower number of journeys made by the poorest is because they are unable to support additional trips (lack of time/ money to use transport) or because their lifestyles necessitate only a few trips, i.e. well-planned settlements with markets, schools, health clinics, and employment opportunities close to home.

The majority of the trips made by the urban poor tend to use some form of public transport or non-motorized transport (such as cycling or walking). Journey distance and income level affect the modal choice of transport, for example short trips may be made on foot or by bicycle (if the initial investment in a bicycle can be made), while longer trips use the bus. The poor are dependent on public transport for their access and mobility, amenities, and livelihoods; they also bear the burden of its inadequacies. Transport is both a cause and an effect of poverty. Low-income families are obliged to spend proportionately more of their disposable income on transport in order to make essential journeys.

High transport costs, as high as 30 per cent of monthly income, reduce access to other basic needs and reduce the returns of economic activity. Thus, the level and quality of transport services are often lower for those in low-income areas, where commuters are heavily dependent on public transport for their mobility needs. People have little option but to endure a deteriorating service. Low levels of capital investment in urban transport systems results in the reduced capacity of vehicles and roads. The current problems associated with transport are a result of spatial inequalities in the provision of public transport (between middle- and

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lower-class areas) and the failure to provide services in an integrated way with planned/ unplanned urban expansion. The challenges of increasing urbanization demand an increase in the provision of urban infrastructure and services, employment generation, investments in health and education, provision of safety nets for the poor, and improvements in the capacity and finances of local government. The level of public transport services provided for low-income communities may be subject to:

- unacceptable travel conditions;
- fewer bus routes;
- fewer buses per capita;
- longer bus journey times as a result of less frequent, unreliable and slower services;
- greater bus waiting times; and
- high expenditure on travel with respect to income.

The result reinforces patterns of unequal development in cities and the geographic, social, and economic isolation and thus the social exclusion of its poorest residents. The re-orientation of investment, identification, and planning to people rather than technologies, suggests that accessibility and spatial variations are of key importance to:

- improve low-income settlements;
- improve transport infrastructure; and
- improve the mobility of the urban poor.

Organizational designs to cope with the transport situation may range from simple commercialisation to full privatisation. Local government often have insufficient financial resources, management capacity, or accountability mechanisms. Private investment might be feasible where low capital investment and low operating costs are called for. There has also been a move away from public ownership to arrangements whereby local government may authorize a private firm/s to manage and operate a city's public transport system. Such partnerships between the public and private sector are increasingly being pursued to meet the objectives of improving access and quality for the urban poor in towns and cities throughout the world. The private sector, both formal and informal, has much to offer in terms of finances, project design and implementation. In some circumstances, they can help to provide transport

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services more efficiently than public utilities. One can argue that in spite of a lack of quality, access has been improved by the intervention of the private sector, but the study has revealed some of the problems that can arise with private provision when public regulation of it is ineffectual.

The public sector may continue to make significant amounts of public money available for transport infrastructure as a reflection of the wider economic benefits infrastructure improvements can generate.

Other interventions that may improve the access to and quality of public transport may be:

- targeted and well defined subsidies;
- restructuring, i.e. deregulation;
- transport infrastructure investment; and
- land use and town planning.

More information is needed to inform policy about the impact of these interventions and urban planning on the poor, within efforts to improve the quality and access to public transport. There is a need to analyse:

- transport patterns: (trip rates and purposes, distances, the role of public transport for social and recreational purposes, and the correlation between fares, transport expenditures, and household income);
- travel needs and problems: service availability, affordability, quality of services etc.;
- livelihood opportunities: how do the poor respond to the changing conditions of livelihood and how does the transport market adjust?;
- who are the urban poor?: the heterogeneity of low-income groups, participatory poverty analysis, poverty impact indicators to measure poverty reduction, travel time, and costs. Are only blue-collar workers targeted, or those who are under-represented in employment/ unemployment statistics?;
- level of services in communities: do other interventions, such as health and schools, precipitate the generation of new travel routes?; and
- activities of the urban poor: livelihood activities, productive, personal investment activities, i.e. health care/ education, investment in social networks, and leisure activities.

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If development is about social, economic, political, and environmental changes, the interrelation between these processes and spatial mobility has to be a critical area for better understanding and for more useful interventions. Public transport investments have social, financial, economic, and environmental dimensions. A transport system that aimed to improve the access and quality of public transport for the urban poor would be based on:

- social equality;
- ecological imperatives;
- health and safety considerations;
- public participation in its design; and
- and the intent to improve the quality of life of its users.

For these goals to be sustainable they must meet the needs of the present without compromising the ability of future generations to meet their own needs.



## Section 4

### **Methods and scope of enquiry**

#### **4.1 Key considerations**

Various issues were further explored in the study, such as pedestrian access to services, fares, reliability of services, how new routes/ services are planned, and how the local community views are included in defining transport services. Some generic and thematic issues, which have been found to be important in the creation of a pro-poor public transport system, were also explored. Table 4.1 provides a list of the issues and how they will be explored in the context of this project. A description of the key issues is provided in Appendix 1.

#### **4.2 Issues of social exclusion and human rights**

Through the participatory and qualitative nature of research design, the issues of social exclusions were not only identified but the following information was also provided:

- nature of social exclusion and its dimensions, for example, systematic or non-systematic, gender, age, etc.
- degree of acceptability—how society reacts to it
- ways forward—any emerging visions

It must be emphasized that such issues are very complex and this project only provides basic contributions by identifying and clarifying such issues in the context of urban transport.

#### **4.3 Research methodology**

The predominant ‘how and why’ nature of this research led to a case study approach. It was understood at the outset that case studies would not generate statistically representative generalizations but would contribute in the logical explanation of events on the basis of both quantitative and qualitative data (for

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**Table 4.1. Key issues and likely information sources**

Key issues	Nature of information	Focus of research
Informal settlements	Primary and secondary	Overview and households
Gender	Primary	Households
Special needs	Primary	Case studies
Road accidents	Primary and secondary	Overview and specific to case studies
Environmental aspects	Secondary	Overview
Motorization	Primary and secondary	Overview and specific to public transport
Non-Motorized vehicles	Primary and secondary	Overview and households
Pedestrians	Primary	Households
Institutional reform	Primary and secondary	Overview and specific examples
Income generation and enterprise development	Primary	Overview, examples and households, operators, regulators (reciprocity/ corruption)
Land-use control	Secondary	Overview
Bus services	Primary and secondary	Overview, operators, regulators and households
Consensus building mechanisms	Primary	Overview and households

example, Hakim and Yin). The study locations, Faisalabad (Pakistan), Colombo (Sri Lanka) and Dar es Salaam (Tanzania) provided a variability of situation, which is a more rigorous approach to testing the viability or extension of the findings observed in a single case study (Karachi under R7455). All the locations represent urban areas with a significant number of poor people. Different levels of private operators, different levels of use of motorized transport, and different cultural contexts enabled the authors to collect very rich data.

The local environment/ sector differs between countries, although Colombo and Karachi may have some similarities because they are close geographically. The differences included availability of different modes of urban transport services and differences in the proportion of people that have access to public transport



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services. In Dar es Salaam, which really only has minibuses and taxis, the poorest make use of minibuses but a high proportion of them are only able to afford to walk for most of their travel needs. It is important to understand the reasons why this is so, and how they can gain access to public transport services and how the quality of public transport can be improved through partnerships. The emphasis on access or quality may differ from case to case. In terms of pedestrians and their access to public transport, both waiting times and the existence of affordable routes are significant. There is a need to improve pedestrian facilities such as pavements, etc. as well as passenger access to public transport services. Generally most passengers have to walk either to or from bus stops or terminals and this was included under 'access' to public transport vehicles.

The research methodology included case studies using interviews and a series of focus group discussions at settlements and city level followed by an international workshop. The study also contributed to an understanding of some of the issues of vulnerability and of the roles of key public and private organizations. It also addressed the key issue of the contribution of partnerships in public transport to sustainable livelihoods for the urban poor.

The research used the methodology developed and tested in Phase 1 (R7455). Necessary adjustments and refinements were made according to the specific requirements of the study locations. Both quantitative and qualitative approaches were used to extract perspectives from users, operators, and regulators. The techniques included content analysis including that of a travel diary, literature reviews, historical analysis, case studies, focus group discussions, forums, and workshops. The attendees included users, including men, women, children, elderly and disabled members of the community, and operators and regulators.

### **4.3.1 Major components of the case studies**

Each case study comprised a country paper developed by the project team in the respective countries; each included the following sections:

1. Analysis of policies and strategies that govern public transport in the city, including a historical perspective.
2. Situational analysis of current issues. Identification of the key issues and formal and informal partnerships to improve the access and quality of public transport.
3. Issues and accommodation for an improved transport system in the future.

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### **4.3.2 Major activities carried out**

The following activities were undertaken.

1. Selection of sample communities using criteria developed.
2. Development of route maps, if not already available, and identification of the key routes the poor travel for their livelihoods.
3. Profiling of users, private bus owners' associations, regulators, and transport workers.
4. Collection of secondary data and information, particularly that relating to transport policies, strategies, and regulatory measures.
5. Adaptation of the research methodology developed in Phase 1 of the project to the new study locations.
6. Use of city forums/ focus group discussions with users, providers/ operators, and regulators.
7. Development of interview formats for focus group meetings and for interviews with key actors from the users, operators, and the regulators in the light of the checklist (which was developed itself in the light of the reviews, meetings, and Phase 1). Interviews with key actors such as:
  - community leaders of low-income settlements;
  - leaders of passenger societies;
  - advisory members of the traffic and transport committee of the municipality;
  - transport commission officials;
  - members of professional organizations and interest groups
  - Traffic Police
  - members of municipal councils; and
  - senior citizens groups.
8. Compilation of data and data analysis.
9. Preparation of the draft research report.
10. The addition of a focus group on income and employment issues, and one on local environmental hazards.

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11. Group-based discussions with users, regulators, and operators. Identification of common issues that appear to be (at least in part) capable of some improvement. Arrangement of further meetings with the relevant parties to address these areas using the research findings as a common starting point. During the course of these meetings, the development and refinement of the report occurred.
12. At the end of this process, national meetings and an international workshop were held to disseminate information and receive feedback. The dissemination process also included electronic media such as the creation of a project webpage, linking it to the DFID transport link page, e-mail shots and mailing lists. The dissemination was also supplemented by publication in local languages and representation at International conferences.
13. Modification of the research report incorporating the workshop findings.
14. Preparation of a draft final research document

### **4.3.3 Key perspectives**

The key perspectives were sought in the context of the sustainable livelihood approach from:

1. users, particularly low-income households;
2. providers and operators of the services, such as bus companies, drivers' associations, owners' associations, etc.; and
3. regulatory agencies (primarily the transport ministry concerned and other government agencies and the private bus companies); also from the municipal traffic departments, city traffic police who regulate the traffic, and licensing authorities.

### **4.3.4 Issues discussed during the interviews**

The following is only an indication of checklists used by survey staff:

1. Users from selected settlements
  - personal data
  - livelihood assets
  - travelling time
  - environment—waiting places, interior of vehicles
  - health and safety

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- modes and options
  - finances
  - corruption issues
  - suggestions/ ideas
2. Operators
    - personal data
    - finances
    - major operational problems / issues
    - O&M
    - corruption issues
    - suggestions/ ideas
  3. Relationship between transport and livelihood patterns of the urban poor
  4. Citizens' initiatives to improve their access to transport

Roughly 300 interviews with key informants were conducted; 15 forums, three city level workshops and one international workshop were also held. Several sources of secondary data, including unpublished reports, were also reviewed during the course of this study. Some specific issues regarding the research design are given in Appendix 2.

### **4.3.5 Mode of transport**

- motorized: trains, buses, minibuses, coaches, lorries, three-wheelers, taxis, and motorcycles
- non-motorized : bicycles and carts, and pedestrian travel related to public transport.

## **4.4 Research partners and capacity building**

The local research partners in collaboration with the UK-based team conducted the fieldwork, which they presented as case studies. The local research partners include academics, professionals, and NGOs. Sevanathe (Urban Resources Centre) from Colombo, a town planner with a team from Faisalabad, and an educational institute (University Colleges for Land and Architecture) from Dar es Salaam were the key local partners in the study locations. Expertise was drawn from the Urban Resources Centre of Karachi. In addition, through the local

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partners, a network/ advisory group of key stakeholders was involved in the research.

In addition to undertaking this study, the need to strengthen the ability of our local institutions/ partners to undertake similar work/ research in future was recognized from the beginning. The capacities of the UK-based team to undertake such studies and to understand issues of such a complex nature were also enhanced. The local researchers were provided with opportunities to develop their capacities by interaction with each country team. Through the local research teams, a wider network of key decision-makers and sector specialists in each study location was involved in the research. This improved not only the research methodology and approach, but also the dissemination of the final output and the final developments of the sector. The authors are confident the partners that have worked on this project are fully able to undertake similar tasks in the future, hence, contributing to the sustained improvement of public transport in their respective countries.

### **4.4.1 Links with other key contemporary studies**

Dr M. Sohail, project manager of this study (R-7786) participated in the TRL-led research project ‘Activity patterns, transport and policies for the urban poor (R-7789) and Dr D. Maunder of TRL (R-7784) has contributed to all three projects. There have been several meetings in which partners from both projects contributed and discussed areas of mutual collaboration. The key areas identified were the fieldwork and dissemination. The projects kept each other fully informed about their review and methodological developments. The fieldwork and dissemination process were built on one another’s capacities. Furthermore, Sri Lanka and Zimbabwe are common study locations for projects, which improved synergies when fieldwork was planned and implemented, and allowed cross-fertilization of ideas in terms of data collection and analysis. The baseline information was shared and the channels for information dissemination included some common networks.

Table 4.2 shows key differences and synergies between related DFID research studies.

### **4.4.2 Informing multi-lateral initiatives**

The project team kept a close watch on the processes of development strategies in agencies such as the World Bank, Asian Development Bank, African Development Bank, and the European Union. They also kept such agencies informed about the progress of this research project.

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**Table 4.2. Key differences and synergies between related DFID research studies<sup>1</sup>**

Project	Key differences	Key synergies
R-7789	Looking outwards from the urban transport sector at the impact of transport policy on the effectiveness of other service sectors (health and education) and the employment market. Seeking to answer the question 'how can transport be developed in order to support the objectives of these other sectors?'	Emphasis on vulnerability context in which urban poor undertake livelihood activities. What exacerbates their vulnerability and how is this affected by the provision of transport? Emphasis on sustainable livelihoods approach as a framework for analysis.
R-7784	Addressing sustainable livelihood issues and rural-urban linkages, hence urban and rural dimensions to transport need. Holistic approach to transport needs and constraints in relation to livelihood outcomes.	Looking at all types of transport provision including public transport, motorized transport and NMVs. Investigating travel patterns, motivations for travel and decision-making processes involved in travel choice. Assessing the effectiveness of the sustainable livelihoods approach to transport access and mobility.
R-7786	A more inward facing study that addresses the problems of urban public transport efficiency and effectiveness. Addressing public transport provision and its feeder modes. Specific activities to identify ways of incorporating urban poor in the public transport planning process	Addressing mainly urban transport issues. Emphasis on both operational and policy levels in relation to accessibility of public transport.

1. Source: Adapted from TRL inception report on R-7789

## Section 5

### **Governance issues**

The three case studies yield a variety of experience, but the common factor is that public transport services are now largely provided by the private sector, after previously being a public sector monopoly with additional private informal services. In general, cost and customer pressures for increased frequency and flexibility have led operators to rely upon a large number of small vehicles, while public sector firms continue to prefer to run large buses less frequently in search of presumed economies of scale. The challenge is therefore to find a way to regulate and control this multiplicity of small businesses in such a way as to retain the cost minimization pressures of the profit-seeking private sector without sacrificing safety, health, or quality of service.

#### **5.1 Regulation and control**

The minibus or shared taxi is a most common mode of public transport . These vehicles tend to be owned in small fleets; so ownership is widespread and consequently difficult to regulate and control. Frequently over the last decade or so devolution has occurred, with the central government implementing policies at the national level and city or municipal authorities attempting to regulate and control public transport at the local level (with varying degrees of success). While cities have expanded, the public transport fleet has generally not kept pace with this growth and at peak times vehicles tend to be overcrowded (sometimes dangerously so). Operators prefer busy routes so as to maximize earnings, and this is a factor that contributes to congestion on such routes. Other areas and routes tend to be neglected, resulting in uneven service provision. It may be necessary to consider incentives such as well-designed, simple, transitional and targeted subsidies in order to encourage operators to serve the poorer areas. The criteria for subsidies should be carefully defined, since it is important to be sure that better value is obtained by subsidizing bus services than by providing direct assistance to the urban poor. In addition, should services that operate in poor areas in general be subsidized, so that all passengers benefit, or should specific

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categories of passengers be targeted so that, for example, those on low-incomes, the disabled, school children, and the elderly benefit?

Regulation can be applied in three ways—over quality, quantity and price. Quality control in the bus industry mainly concerns the construction, maintenance and operation of vehicles. It is justified by the difficulty faced by consumers in assessing whether the vehicle they are boarding is safe, and the advantage in applying common minimum standards. However, if standards are specified in excessive detail, it is possible that useful innovations will be stifled and operations will become steadily less efficient and economical. Quantity control, by limiting the number of vehicles that may operate on a particular route, can bring about a more efficient use of resources and combat congestion. However, such control can also be anti-competitive and, by offering preference to a limited number of operators, it offers potential advantages to those with undue or improper influence. Price control can be useful in avoiding excessive tariffs, particularly where quantity control limits competition. However, ‘fair’ tariffs are difficult to set, and there is again a danger of corruption if the regulator enjoys excessive powers. Thus regulation should be applied only to meet well-considered and generally agreed objectives. Outcomes in the industry can also be influenced by the structure, which is in part influenced by the government. Hence, routes can be given to a single operator, or to several operators.

In all three cities the case study authors concluded that there was ‘poor co-ordination of the public transport sector’, and considerable difficulties in controlling the private operators in terms of routes and timetables. To some extent, this is inevitable in a market in which route profitability is highly variable, and entry is often loosely regulated forcing existing operators to be competitive in order to avoid losing market share to newcomers. However, there is a need for sufficient order to offer a reliable and predictable service to passengers. The case study authors report that, even if a vehicle has been assigned a route to operate, it is extremely difficult to ensure that the vehicle only operates on that route unless some form of operators’ association enforces the rule on behalf of its members.

Regulation is also necessary to ensure that owners:

- are of good personal repute;
- possess adequate managerial and technical skills;
- have sufficient financial resources;



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- have facilities for proper vehicle maintenance; and
- do not demand excessive working hours from their employees.

Besides the problems of regulation and control of public transport services, there are also constraints on planning and co-ordinating services in the three cities. In Sri Lanka, the former Ceylon Transport Board has been restructured to function as eleven separate Regional Transport Companies (RTCs), sharing the assets and responsibilities of the regional bus companies amongst its employees and the state. The public sector bus transport service operates far below private sector efficiency and service levels, so the private sector now takes 66 per cent of all passenger kilometres in the city. In order to simplify regulation, control and planning, in the year 2000 the central government encouraged the formation of private companies with a minimum requirement of 50 vehicles to be operated within a specific area. By the end of that year there were ten such companies (or co-operatives) registered and operational. This will not by itself solve the complex problems of public transport provision in the capital, but it should enable better planning of the network to occur between the private and public sectors. It may also generate pressure to improve transport infrastructure. The Central Bank of Sri Lanka in its 2000 Annual Report stated that:

*“the private bus operators, though they provide a greater part of the service, are still faced with a number of problems which need to be resolved if they are to improve the standards of their services. Non-availability of bus stations and parking spaces, a lack of co-ordination between the private and public sector for the allocation of routes and time schedules, poor road conditions, untrained crews and revenue leakage are the main problems.”*

In Faisalabad, an interesting scheme has been operational since 1994 to try to overcome the limitations of public sector operations and to capitalize on the potential of the private sector. The government encouraged the establishment of a non-governmental organization entitled the Faisalabad Urban Transport Society (FUTS) to manage and run urban transport services using the private transport operators, while at the same time being supported by government administrative facilities and management. The FUTS operates as a co-operative providing transport services and maintaining transport facilities within the city limits, and facilitates the replacement of old obsolete vehicles with newer more environmentally friendly models. It operates on 14 routes and has over 1,000 vehicles operational daily (mainly small minibuses). Being a social welfare agency, it has social obligations to its members and has a social outlook in respect of its transport operations. For instance, it ensures routes are not ‘cut’ by its drivers (a frequent temptation for private operators), by establishing check-

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points along the routes operated. The FUTS model has proved successful both from a regulatory and a planning perspective, as both city transport administrators and passengers benefit from a more regular and reliable service. However, more recently the operation has been less successful. Nonetheless, the FUTS has shown that there are interventions into the urban public transport sector that can be introduced to benefit passengers.

Following are some examples of perspective coming from women, children and elderly passengers who participated in the focus groups and/or who were interviewed during case studies.

### **Box 5.1.**

#### **Voices of women on regulatory aspects of public transport**

'Passengers do not know where to complain when they face a problem while travelling on a bus.'

'There is no passenger association or any other known civil society organization where passengers can make a complaint.'

'We do not have faith in the police either because we believe the police take bribes from the bus crews and do not listen to passengers.'

### **Box 5.2.**

#### **Voices of children on regulatory aspects of public transport**

'We are harassed by other passengers in the bus (physical harassment).' They feel there is no place to make complaints and hence feel compelled to tolerate the harassment and keep quiet.

'We are not aware of our rights as passengers of public transport.'

School buses are only available for some recognized schools in the city. The children of poor settlements who attend less prominent schools do not have a school bus service. Therefore, they have to use ordinary passenger buses, which is difficult, but there is no alternative.

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### **Box 5.3.** **Voices of children on conductors' and drivers' behaviour**

'Some bus conductors and drivers wear dirty clothes. They appear to be very dirty people. When a conductor wears dirty clothes and passes by, our clothes also get dirty. We would prefer them to wear clean clothes, preferably a uniform.'

'Sometime conductors do not like us occupying a seat. They ask us to travel standing.'

'The conductors often do not like us carrying our school bags. They shout at us to keep the bag outside the bus.'

'They never help us to get inside the buses.'

'When we (girls) give money to conductors they keep pressing our fingers. When we complain about such incidences, they usually scold us on some other issue.'

'When bus drivers speed and race one another, and when they suddenly apply the brakes, we get thrown about since we cannot hold the handrail because it is too high.'

'The private bus conductors always cheat us. They do not return our change to us.'

'Bus drivers sometimes fail to stop the bus at the bus stop; instead they take us further from the bus stop, which is inconvenient to us.'

### **Box 5.4.** **Voices about lack of accountability**

'Some traffic police stop the bus and demand things that are not routine. Others will start inspecting the vehicle when they know that passengers are waiting in the bus. Others demand to see the driving licence and once you give it to them they confiscate it until you give them something. If you resist they will ask you to drive the vehicle to the "Central" [i.e. meaning to the traffic police headquarters.]'

## 5.2 Infrastructure

Public transport infrastructure facilities are inadequate in all three cities. During peak hours public transport vehicles are not provided with any priority over other motorized vehicles. Thus, minibuses frequently line up with other traffic seeking to enter or leave the city. Public transport vehicle productivity and efficiency could be substantially improved if simple, relatively low-cost traffic management measures were introduced, such as lane priority, priority at traffic signals, bus-only corridors, and lay-bys to service passengers. In reality, however, such measures need to be enforceable. Good driver behaviour and discipline are essential if these measures are to provide benefits for public transport vehicles. Along the routes weatherproof bus stands/ stops are needed, and at bus stations or terminals waiting bays should be provided for vehicles along with comfortable facilities for passengers. Where services are operated to a schedule, timetables should be provided to inform passengers of the service frequency.

## 5.3 Stakeholder consultation

It was argued in the report under R-7789, that ‘stakeholder consultation is now critically important in any analysis of transport intervention’. This is the mechanism through which the planning and development process should become informed of the opinions, problems, wishes and issues of the community (as users) and the operators (as suppliers) of transport. It also enables inclusiveness to be developed, giving a voice to the poor, disabled, women and other disadvantaged groups. Clearly, the regulators/ administrators of public transport also have an important role in the consultative process. Besides direct problems with services, such a forum could discuss other transport needs and requirements such as pedestrian facilities for both the able-bodied and disabled, the maintenance of pavements and roads, and traffic management measures to segregate motorized and non-motorized traffic.

However at the present time there does not appear to be such a channel of communication in any of the cities studied. In Colombo, Sevanatha reports:

*‘... there is a lack of appropriate outlets for making complaints and enquiries about public transport services. Passengers are unable to channel their complaints to the right authorities for the necessary actions to be taken, and operators and regulators are unable to get information on passenger needs and demands. Thus services and facilities provided are based on operators’ whims’.*

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### **Box 5.5.** **Voices of the elderly on travel experiences**

'We do not go out of the home except for an essential purpose because now the roads are too dangerous for us to walk. Even if we go out, we have to seek the help of our children or someone. We walk along the pavements very carefully because we are scared of the reckless drivers, three-wheelers, potholes and uneven surfaces.'

'Most of the time we use the yellow coloured pedestrian crossings to cross to the other side of the road, but even on the pedestrian crossings, drivers, motorcyclists and three-wheeler drivers do not slow down their vehicles.'

'Most of the roads are too narrow for the vehicles and sometimes vehicles run over the pavements when they overtake another vehicle.'

'Hawkers encroach upon pavements, and the boutiques and shops have extended their businesses onto the pavements.'

'Cars, vans and three-wheelers park on the pavement and so we have to walk on the road, which is really dangerous.'

'I travel about by my wheelchair. I am very careful and keep to my side of the road, but private bus drivers blow the horn to push me aside.'

'We can't stand and wait for a long time for a bus, so we need a place to sit. But there are no proper bus shelters. The available bus shelters are not properly maintained. Nor do they have roofs and seats.'

'Bus shelters are often occupied by beggars and drug addicts, and are made dirty.'

'Bus shelters do not provide any traveller information.'

'They seem not to be maintained by anyone.'

**Box 5.6.**  
**Voices of women on travel experiences**

'Pedestrian travel is a real problem for us because the three-wheeler drivers and young boys make offensive jokes. Sometimes they purposely turn their vehicles towards us to get our attention.'

'We used to walk on the right hand side of the road and cross the road only at pedestrian crossing. However, motorists do not care about us, even when we use the yellow crossings.'

'Normally we have to wait at the pedestrian crossing for five to ten minutes until the road is clear to cross over to the other side.'

'Most of the three-wheelers are parked on the pavement or by the side of the pavements blocking the way for pedestrians.'

'Some three-wheeler drivers make filthy jokes and we have to avoid them.'

'Most of the pavements are encroached upon by businessmen, vendors and parked vehicles. Therefore, we cannot use the pavements. We cannot walk with our children either, because the pavements are too narrow and crowded.'

'It is dangerous for women to walk at night along the inner access roads to the settlement. Thieves snatch our bags and jewellery. They also harass young girls. Sometimes men attempt to rape girls.'

'Thieves normally break the streetlights to make the road dark at night.'

'During the rainy season, it is difficult to use the access roads in our settlement. Roads become water logged and full of muddy holes.'

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### **Box 5.7. Voices of children on travel experiences**

'When we get onto the bus, especially in the morning, adults do not care about us. They push us aside and rush to the buses. There is no organized queue at the bus stop for people to get onto the buses.'

'School children do not like to throw wastepaper and wrappings on the road or at the bus stops, but since there are no waste bins provided we throw them on the road.'

'When school children cross the road using pedestrian crossings, drivers do not normally give way.'

'Some pedestrian walkways are not properly constructed and children sometimes fall and get hurt.' 'Most of the pavements are narrow, hence I cannot catch hold of my mother's arm and walk with her along the pavement.'

'On rainy days our uniforms get dirty because of splashes of muddy water from fast moving vehicles.'

'Road names are not properly displayed on the streets and we sometimes get lost as a result. Proper name boards on roads are necessary.'

'Sometimes we cannot walk along the pavements due to the thick vehicle smoke. Our clothes get dirty and we also find it difficult to breath.'

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The Dar es Salaam report suggests:

*'... overall, the present civil society is not playing any significant role in the public transport sector. There is therefore an urgent need to establish a forum for discussion whereby bus owners, operators and users would meet to discuss pertinent problems on public transport so as to improve the quality of public transport service to the users.'*

Section 5.4 discusses some of the problems faced by special needs groups such as the sight impaired and those with physical disabilities. For any stakeholder consultation process it is necessary to identify the special needs groups to be consulted along with others.

### **5.4 Key issues**

The overriding concern in all three cities is the lack of effective regulation of private sector services, which are mostly in the hands of small operators and inevitably fragmented. This is an advantage in one important sense, in that regulation can be lighter in sectors that are open to free competition and where there are no significant economies of scale. Light regulation is a particular advantage in environments where corruption is a real or potential problem, since the heavier and more detailed the regulation, the greater the incentive to corrupt practices. However, a highly fragmented market brings its own problems, since it is easier for a regulator to liaise with and enforce regulations upon a small group of operators rather than a large number of individual operators. It is also easier for passengers to communicate meaningfully with such a group than with individual owners/ drivers.

The role of transport regulators is crucial. They have to ensure that the supply of public transport services is sufficient to meet the perceived demand, and that vehicles registered to operate on a particular route only operate on that route in accordance with the agreement. The process of regulation should also be carried out in a demonstrably open and honest way, since regulation combined with corruption can produce a worse situation than an unregulated market. Owners' and employees' associations could play a supporting role in ensuring that regulation works effectively. There is also the question of who should monitor the regulators, and whether they should be directly responsible to government; or whether they should be independent, but required to operate in accordance with the relevant laws and simply to report regularly on their regulatory activities.



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There is a clear division of responsibility and interest between owners and drivers/ conductors. Owners generally stipulate what daily income is expected, and drivers have to meet such an objective before generating their own income. Service levels and the owner's long-term reputation are irrelevant to the drivers, who want to maximize the number of trips operated and hopefully their own personal income. To improve the communication between the stakeholders, forums are required to bridge the gap between the various parties. It is desirable that each of the distinct interest groups should have their own association. Thus there could be an owners' association, a group to represent employees (operators/ drivers and conductors) and groups representing passengers and civil society. However, there is also a need for an all-embracing forum including regulators or local government, which could address policy and strategic issues as well as more immediate concerns.

Passengers, especially the poor, need access to such a forum to ensure services are provided as near to their residential area as is operationally possible. Where streets are narrow and poorly maintained, even minibuses cannot be expected to operate, but some kind of 'feeder' service might be arranged using perhaps the existing modes such as cycle and auto rickshaws. However, new combinations can also be developed such as the informal minibuses or chinchas (motorcycle taxis), which could provide feeder services to intersections with public transport routes. There is also a need for the interests of pedestrians to be taken into account in respect of the provision and maintenance of pavements. In addition, low-cost traffic management measures could also be considered by such a forum, including bus priority, segregation of motorized and non-motorized vehicles, parking, traffic signals, and pedestrian-only areas.



## Section 6

### **Social issues**

The urban poor in the larger towns and cities of developing countries face a dilemma in deciding where to live. Do they choose a well-located central area with high housing costs or a more peripheral location? Increasingly the decision is made for them. Evictions from better-located land combined with high rents (and no possibility of affordable land purchase) push them towards settlements located some distance from central areas. When cities were small, moving to peripheral locations was less of a problem. As cities have grown, so too have the transport needs of their citizens. It is increasingly unlikely that walking alone can meet all transport needs in the larger urban centres, despite the low incomes of many citizens.

The three city studies in Colombo, Dar es Salaam and Faisalabad, together with the earlier study of Karachi, provide an insight into the need for and the use of transport services by those living in urban poor settlements. Due to low incomes, the major focus of the research has been on public transport. However, it should be remembered that other forms of low-cost transport are also used by the urban poor such as cycle and walking.

The discussion in this chapter focuses on the relationship between transport in the broadest sense and the livelihoods of the urban poor. The first section reviews the nature of poverty in the three cities, including a description of low-income neighbourhoods within each city. The discussion then considers successively the significance of transport for livelihoods (both employment and income-generation), issues to do with the quality of transport services, how service quality influences the well-being of passengers, the significance of transport as a direct source of livelihoods, and social organizations within the transport sector.

## 6.1 Poverty, location and transport services

Clearly the need for transport services depends on the location of residential accommodation relative to income-earning opportunities. In order to add insight to the discussion of transport services in the following sections, what is required is to discuss the nature of the urban space and the location of low-income settlements within the three cities.

Colombo has a population of 690,000. About half of the residents live in urban poor settlements, of whom 38.6 per cent live in slums (old tenements for low-income workers, maybe subdivided), 22 per cent live in relocated housing (having been moved by the authorities, generally from central areas) and 20 per cent live in squatter settlements (on state or private land with no regular services, often subject to flooding). Table 6.1 summarizes the relationship between type of settlement and the need for and provision of services for the six settlements studied in detail in Colombo. Only one case location suggests a positive correlation between the distance to a public transport route and the distance of case location from the city centre. However, the experience of *katchi abadi* (which are houses developed in an unplanned manner and illegally occupied by squatters) relocation in Faisalabad, it is in the more peripheral settlements that residents have the farthest distances to walk to public transport, whilst then having to travel the greatest distances to get to work.

**Table 6.1. Nature of settlement, need and provision of transport services in Colombo**

Settlements* <sup>1</sup>	Distance from centre (km)	Distance to public transport route (km)	Distance to workplace of majority (km)	Status
Kadirana Watta	4	0.5	6	Relocated
Poorwarama	8	0.5	5-6	Relocated
259 Watta	3	0.5	5	Squatter
121 Watta	3	0.25	3-4	Slum
43 Watta	5	0.5	3-4	Slum
Badowita	8	2-3	4	Relocated

1. See the research report for an explanation of the choice of settlements

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The population of Dar es Salaam is around 2.3 million. An estimated 75 per cent of residents live in unsurveyed areas lacking basic services and infrastructure. Figures for 1994 suggest that 25 per cent of the city residents walk or use bicycles and 66 per cent of vehicle users in the city use public transport (i.e. buses). Between 1970 and 1983 bus fares were subsidized, but the government could not afford such funding and private suppliers began to charge commercial rates. Badly maintained roads increase the transport costs for the poor even further, particularly during the rainy season and at peak periods when fares sometimes increased arbitrarily. Once again, suburban areas suffer from a lack of transport infrastructure. An estimated one-sixth of the total road area in the suburban areas is bituminous (rather than gravel) compared to 66 per cent in the inner city area.

Faisalabad has experienced rapid urban growth of 4 per cent in recent years and is now a city of 2.2 million people. There are three types of low-income settlement: planned settlements, which cater for 60 per cent of the population, unplanned illegal *katchi abadis*, and slums (on private land leased by a land owner without the authorities' approval). Lack of adequate infrastructure (including roads) is a problem, particularly in some of the study locations. Generally speaking, a diversified manufacturing sector of small power looms has ensured livelihood opportunities locally throughout the city and has, therefore, substantially reduced the need for transport services by the urban poor for cross city travel.

There remain considerable problems with poverty in the city of Faisalabad. An estimated 33 per cent of households are living with incomes below Rs.3,000 a month and are therefore classified as income poor. In the *katchi abadis*, drawing on data from 1996 in order to give a picture of the nature of poverty within these settlements, the average household size was 7 and household incomes estimated to be Rs.3,535, with 1.5 working persons per household.

As noted in Colombo, relocation from central to more peripheral locations has been one factor that has increased difficulties for the urban poor. In Faisalabad, households were moved to the periphery of the city when their inner city *katchi abadis* were demolished. However, these new areas are not on any transport routes making it difficult for livelihoods to be maintained. People were not able to settle '*...due to the non-availability of transport, thus returned closer to the city centre, relying on their relatives or squatting*'.

In a spatial assessment, the authors estimate that across the city of Faisalabad, 35 per cent of the population live considerably further than 500 metres from a public

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transport route, which is generally the universal norm for access to a bus route. Such people's only options to reach these routes (apart from walking and bicycle) are tongas or motorcycle rickshaws. The relevant agencies recognize that some areas lack transport services due to the poor condition of the roads but felt that they are powerless to effectively intervene.

### 6.2 Livelihoods and access to transport services

The significance of transport services for livelihood opportunities emerged in each of the cities. Equally significant was the level of expenditure on transport. Despite having incomes that are little more than subsistent levels, transport costs often comprise a considerable proportion of expenditure for many citizens.

#### **Box 6.1. Voices from the poor**

'Without public transport, I cannot survive here, i.e. I cannot earn my daily bread.'

'There is hardly anyone in Charambe who does not depend on public transport for his/her livelihood.'

'We travel by bus to the ferry fish auction market at 5.00 a.m. so as to buy fish at a cheap wholesale price during the early morning auctions.'

'I use daladalas daily to go to the ferry fish market, at the city centre and to come back to my fish-selling place. I have limited options and means in terms of public transport to the fish market, so I totally depend on the daladalas.'

'Daladalas are so basic and a necessary service since there is no alternative means of transport from our residential areas to the work places.'

'I usually go to Manzese or Tandale three to four times a week to buy cereals and other goods. I therefore use public transport to and from these wholesale centres. You know the fluctuating nature of goods which necessitates the number of trips I make.'

In Colombo, as can be seen from Table 6.1, the distance to work was 3 km or more for residents of the case study settlements. Those in the more peripheral settlements have to travel further to reach public transport services, and have longer journeys to work once they board these services. As regards transport costs, respondents in the six settlements spend between 8–9 per cent of their

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incomes on transport for those earning less than Rs.11,000 a month. For those earning over Rs.11,000, the significance of transport expenditure as a percentage of income fell sharply to an average of 2.7 per cent. Generally speaking, those with higher incomes are using transport services to carry goods for their enterprises. Most of the respondents in Colombo do not believe that the fares are too high. Generally, the ‘starting’ fare for a bus journey is Rs.3.00 and is controlled by the state. The amount of time spent on travelling by people in the study settlements in Colombo did not emerge as an issue of major concern. The latter related to health and well-being and are discussed below.

Table 6.2 summarizes transport details for the three selected settlements in the Dar es Salaam study. The table highlights a number of issues including the relatively long distances people have to travel to reach public transport routes (measured in time), the significance of buses for livelihoods (in some settlements), and the relatively high numbers of people using buses for at least part of their daily transport needs. As elsewhere, walking is the most dominant mode used for intra-settlement movement.

**Table 6.2. Transport needs and provision in three low-income settlements in Dar es Salaam**

Settlement* <sup>1</sup>	Distance from centre (km)	Distance from major public transport routes	Percentage using buses daily	Reason for bus use	Percentage of income spent on buses
Charambe	20	Up to one hour	48	Mostly for livelihood (trading)	14
Mabibo	8	Up to one hour walk	80	Mainly for livelihoods	20
Buguruni	5	5–10 minutes walk		Mainly for petty trading	4.7

1. Reasons for selection of settlements are given in the city report

In Charambe, the significance of public transport for livelihoods is argued strongly by some, for example ‘*Without public transport, I cannot survive here; I cannot earn my daily bread*’. It is notable that transport use is often associated with micro-enterprise activities, particularly the transportation of goods for vending. When 42 people were interviewed during 10 separate journeys, 19 separate reasons emerged for those journeys. All but two of these reasons were related explicitly to work and enterprise activities. In Mabibo, the transport

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situation is broadly similar, although the high percentage of those using buses daily is notable. Once more, buses are used overwhelmingly for livelihood-related activities. Taxis are only used for emergencies. There are also tricycles in this settlement that are used commercially to transport goods. The picture that emerges in the more central settlement, Buguruni, is similar, although 17 per cent of respondents use push carts in their daily activities, perhaps because they are vendors and have more local trading opportunities.

In Dar es Salaam, fares were controlled during the 1970s with a subsequent divergence between public and private fares. In practice, fares have fluctuated considerably in dollar terms during the last 30 years and now approximate US\$0.16—in the mid-range for the period. Whilst 50 per cent of users in Charambe thought that the fares were reasonable, 45 per cent thought that they were too high. A survey of 30 respondents found that on average 14 per cent of income was taken up in transport costs (see Table 6.2). The percentage of income was generally higher among those with the lowest incomes. In Mabibo, respondents thought that the cost of the service was fair, however, some said that it was expensive in comparison to their own low incomes. Average weekly expenditure was almost twice the level of Charambe at TSh.5,400 compared to TSh.2,400, whilst expenditure as a percentage of income was also higher at 19.9 per cent. The likely explanation for this is the significance of trading-related transport in Mabibo. Once more, transport costs were higher for those with higher incomes. In Buguruni, average transport expenditure was TSh.2,200 and this equalled about 4.7 per cent of income, significantly lower than in the other two areas. In part this is explained by the closer proximity of Buguruni to the city centre and hence possibilities for walking. The opinions about transport costs varied, with 70 per cent of those interviewed in Buguruni saying that fares should be reduced to improve affordability.

Why the reliance on public transport? It might be thought that this relates to the low ownership of assets, but this does not appear to be the case. Ownership of some form of transport is common in Faisalabad: 45 per cent of households own either one or two bicycles, 15 per cent own a donkey cart (of which one third also own one or more bicycles) and only 5 per cent do not own any means of transport. However, few are willing to use bicycles because of the perceived dangers involved during travelling. Ownership of bicycles was also noted in Colombo, but again there was low usage. Only 10 per cent of households use bicycles to meet their transport needs considering them to be 'high risk' given present traffic conditions. In Dar es Salaam, the significance of bicycle use (both inside and outside the settlement) was also noted. However, 73 per cent of



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respondents in Buguruni said that they were frightened to use bicycles for safety reasons. Nevertheless, bicycles appear to remain popular for tracks on which motorized transport cannot be used and for local journeys. No other form of transport appears to be widely owned by low-income households.

The significance of social networks to livelihood activities has been noted in many studies of urban poverty. Despite this, relatively few journeys appear to be related to visiting friends and relations. For example, less than 4 per cent of trips in Faisalabad were concerned with leisure or visiting relatives (although the researchers noted that this might have been higher if the question was asked on a weekend ) In Dar es Salaam, it was noted that public transport is not used to meet friends and relations because of the costs (except for those who are not so poor).

In Faisalabad, the overwhelming majority of trips are made for livelihoods (income related activities) or for education (which can be considered to be an investment in human capital and future livelihoods). When looking at the trips made on the previous day to the interviews, 44 per cent of trips were made for employment and 38 per cent of trips were made for education purposes. For journeys to work, three-quarters were for less than 1km (reflecting the diversifying carpet manufacturing industry) and 51 per cent of trips were made on foot. The next commonest mode of transport was the FUTS wagons, which accounted for 33 per cent of trips. Generally, journeys are short; only 8 per cent of trips were longer than 3 km.

The average time for trips to work was 30–35 minutes, whilst the average cost for those who paid was Rs.6 (one-way) suggesting a monthly average cost of about Rs.250. Thirty per cent of households spend more than Rs.20 each day on transport (implying a monthly cost of about Rs.400). Whilst transport expenditures are not correlated against household incomes, 85 per cent of households earn less than Rs.6,000 each month and for those households it is likely that expenditure on transport is between 4 and 8 per cent. Despite the relatively high levels of expenditure (given that travel modes generally comprise public transport) on transport, perspectives on value for money in regard to transport services varied. The views of respondents are summarized in Table 6.3. These data are drawn from focus groups and interviews in selected communities. Consultations with local organizations reinforced opinions of the poor quality of service and concerns about the scale of fares.

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**Table 6.3. Consumer perspectives on motorized transport services in Faisalabad**

	Price/Fare	Quality	Other
Intercity buses	Thought to be relatively low.	Not good, but value for money given low prices.	Longer distances
Suzuki pick-ups	It was noted that prices have risen recently.	Very poor	No regulation and routes liable to change.
Motorcycle rickshaws	Max. Rs.10 and similar to <i>tongas</i> in price, but quicker.	Open on both sides, so depends on weather.	Most popular for short to medium journeys.
FUTS wagons	Thought to be relatively high.	Supposedly better quality without overloading.	Generally customers appear satisfied.

### 6.3 Quality of travel

Detailed community surveys offer insights into the problems experienced by the urban poor when using public transport. Conditions at bus stops and on pavements were criticized consistently. Concerns were also expressed about the conditions inside the buses. Safety issues were a further priority. Whilst the time spent in travelling emerged as a major issue in Karachi, perhaps due to the smaller size of the cities it was not raised by many respondents in Colombo, Dar es Salaam, or Faisalabad. A further explanatory factor is that low-income settlements in Karachi are located away from the major employment centres.

In Colombo, there were widespread concerns about the lack of proper stopping places, poor information about services, and the lack of pavements and safe crossing places for pedestrians. One older person said: *'We do not go out of the home except for an essential purpose because now the roads are too dangerous for us to walk. Even if we go out, we seek the help of our children or someone we know'*.

In Dar es Salaam, respondents argued that many bus stops are poorly marked (causing potential traffic hazards) and lack facilities, and there was considerable concern about the danger of traffic accidents given the location of bus stops and the close proximity of vendors' stalls. Residents also noted that bus stops provide inadequate protection against sun and heavy rain. In one settlement there were concerns about the infrequency of buses during peak hours when commuters may wait for up to one hour. Overcrowding in peak hours is a major problem in

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Charambe (although the condition of the buses was thought to be satisfactory by 85 per cent of those interviewed).

In Faisalabad, households noted that the roads were often in poor condition and there were no waiting facilities at the stops. Eighty per cent thought that the waiting areas were dirty and 20 per cent that they were unhygienic—none thought that they were clean. The lack of provision for bus stops was also noted in the study of Karachi (Sohail, 2000,). The lack of provision for bus stops combined with informal vending activities around major junctions, and a need for well-located service and repair stops, results in considerable congestion at key transport intersections.

Conditions inside the buses were also criticized. In Colombo, community members noted reckless driving, the poor quality of interiors and overcrowding on the buses. In Dar es Salaam, comfort on the big buses was generally regarded as satisfactory, but there were concerns with overcrowding in the smaller minibuses. In some areas, there is considerable overcrowding; 55 per cent of respondents in one settlement thought that minibuses were in a bad condition. Despite the fact that many of those who travel in Dar es Salaam are traders with large quantities of goods, there is little provision for such luggage. In Dar es Salaam, there were also complaints about the harassment of women in the buses; in one settlement 36 per cent believed that women were mistreated whilst travelling.

In Faisalabad, there were concerns that the vehicles were never washed or cleaned. With respect to the way in which passengers were treated, 90 per cent thought that the drivers' behaviour towards females was acceptable, but their behaviour with males was thought to be poor. Only 17 per cent found the service satisfactory. With respect to the consequences for health, 90 per cent thought the buses were bad in terms of stress and fatigue, whilst 95 per cent regarded the FUTS wagons as not bad.

Those with special needs include the visually and hearing impaired and physically disabled. In Colombo, it was stated that *'The disabled are being neglected by society. There are no designated seats or spaces for disabled people inside the bus. ... It is so dangerous getting in and getting off the bus, even with a helper, due to the impatience of the bus crews.'* In Faisalabad, one association for the blind notes that there are particular problems faced by blind people in using public services. The problem of disabled people is also highlighted in Karachi (URC 2001, 230). In addition ,in Dar es Salaam, there is a specific problem facing school children. The government has directed that they only pay

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33 per cent of the adult fare, but there are no compensation arrangements for operators. Hence, the conductors try to exclude them in favour of passengers paying the full fare which often leaves school children unable to board buses for lengthy period of time especially in the peak periods.

There is limited information about accidents. Several respondents in Colombo expressed their concern. Ninety per cent of respondents in one settlement in Dar es Salaam said that the buses and minibuses drove too fast in order to earn more. Kombe quoted a press report, which suggested that 93 per cent of fatal accidents in Dar es Salaam in 1992 involved *daladala* (minibuses). Respondents gave anecdotes of the accidents that they had witnessed. *‘Two accidents occurred recently at a sharp corner near the Police Post, at Charambe. The first accident involved a nursery school pupil who was knocked down by a daladala and sustained injuries. The second involved a soldier who was knocked to his death by a moving vehicle while riding a motorcycle’*. In Faisalabad, 50 per cent of the respondents felt that the speed of bus drivers was dangerous but this was not felt to be a problem for the FUTS wagons.

A further concern in Faisalabad and Dar es Salaam in regard to accidents relates to the lack of designated bus stops, combined with high levels of congestion due to informal vending near to the “preferred” stops. Similar safety concerns also emerged in the study in Karachi (URC 2001, 228).

It was also found that there are few, if any, facilities for emergency health care. For example, in Dar es Salaam, there are no ambulances for emergencies and, hence, residents have to use taxis at considerable cost (an estimated US\$4 per journey).

### **6.4 Livelihoods in transport**

The significance of livelihoods in transport and transport services emerged as an important issue in each of the three city studies; for example, it is estimated that in Sri Lanka, 2.2 million people depend on the transport sector for their livelihoods, which amounts to approximately 10 per cent of the Sri Lankan population. In Dar es Salaam a similar percentage of the work force are employed in the transport sector and related industries. This highlights the significance of the transport sector to the local and national economies (3-5% of GDP).

This section summarizes the possibilities for ownership, remuneration and conditions of employment within the public transport sector.

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### **Box 6.2. Voices of the elderly on the behaviour of bus drivers and conductors**

'Private bus drivers often do not take us when they see us at the bus stop; they halt the bus a little away from the stop, either in front or behind. They treat us as a nuisance. We feel very embarrassed.'

'We have to wait at the bus stop (for a long time). They do not come very frequently.'

'Private bus drivers do not give us enough time to get in or get out off the bus, even if we do have a chance to get in.'

'Sometimes private bus drivers do not stop at the right bus stop for us to get off. They take us further up, sometimes one bus stop or more, and when we protest they ask us why we have not come near to the door to get off.'

'They drive very fast and apply the brakes suddenly without thinking of the passengers. If we did not get a seat, it is difficult for us to keep standing inside the bus.'

'Some drivers are drunk.'

'I seriously doubt whether some of these private bus drivers are capable of driving such heavy vehicles. I do not know whether they have licences or enough experience.'

'The private bus drivers gather at the bus stops or drive very slowly to get more passengers. The moment they see the next bus coming behind, they start racing.'

'We have quite often seen that they simply disregard traffic rules and regulations. They pass traffic lights even when the red light is on.'

'Although smoking is prohibited inside the bus and signs are displayed, some drivers smoke while driving.'

'Private bus conductors keep shouting at passengers to move forward or to go back, even though the buses are already crowded.'

'They cheat and do not return our balance (change). When we ask for it, they scold us.'

'Sometimes the private bus conductors delay giving change and when we are about to get off, they give us the change in small coins. There is no time for us to count the money; we get down and often find that they have cheated us.'

### **Box 6.2 continued**

'They do not issue tickets; forgetting that we have paid they keep asking for money. When we say that we have paid, they do not believe us and use rough and filthy words.'

'Private bus conductors encourage the drivers to stop anywhere on the road to take passengers onboard.'

'Some bus conductors pull the bell to signal the driver to drive off even before we get off. I once fell down and was injured.'

'When we ask for the bus route, some private bus conductors tell lies to avoid us and say that their bus does not take the route we wish to travel.'

'When we argue, the private bus conductors have one definite answer! They say, "If you have any problem, get out and take another bus. We have enough people to take." On such occasions, most of the time other passengers keep quiet, without supporting us.'

'I have witnessed that some private bus conductors harass women and girls. They touch women when they get onto or off the bus, and they creep along the aisle of the crowded bus, pressing against women.'

The private bus conductors keep silent even when they know that pickpockets have got in.'

### **Box 6.3. Voices of the poor on facilities inside the vehicles**

Sometimes we are told to carry our luggage while seated in the bus. During peak periods, conductors force people to pay for their luggage. In some instances, minibuses that are supposed to carry 16 passengers carry as many as 25 passengers. In the morning between 6.00 a.m. to 9.00 a.m., the situation becomes worse; first one has to scramble/ fight to get into the bus through the windows. Moreover, the buses arrive at the station when they are already full.

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### **Box 6.4. Voice of the disabled**

Mr. Pushpakumara is a 29-year-old disabled person who lives in the Poorwarama community. Both his legs are non-functional and he uses a wheelchair for all his daily movements within the settlement and around about. But for longer distances he depends on relatives to accompany him. According to his experience, there is no consideration for disabled people like him in the preparation of designs and the operation of public transport.

The disabled are being neglected by society. There are no designated seats or spaces for disabled people inside a bus. But, sometimes, people offer their seat to him voluntarily; however, this is not happening at peak hours. It is so dangerous getting in and getting off the bus, even with a helper, due to the impatience of bus crews. Most of the time, the conductor rings the bell before he is able to get in or off the bus. One day, the driver drove off before he was able to get off and he fell down from the bus and was badly injured. The conductor and all passengers blamed him, because they were becoming late.

Besides travelling on buses, he cannot use his wheelchair to move along any of the city streets because the pavements are so narrow and the surface is uneven. There is no place on the pavement to take in his wheelchair.

Therefore, he has to run his wheelchair by the side of the pavement, which is very dangerous because motorists have blocked the side of the road and sometimes reckless drivers do not give him room to use his wheelchair. Therefore, it is a real frustration and a risk for people like him to go out of their homes to the street. He feels the disabled are being discriminated against, knowingly or unknowingly, by the present arrangements and planning of public transport in the country. He feels really sorry for himself and blames the people who are responsible for managing transport services.

'I have no hope of moving fearlessly'.

**Box 6.5. Voices from women on travel experience**

'Due to overcrowding I was standing in the bus. The conductor was collecting the fares; when he passed by me he put his foot on my foot. I thought that it was because of the crowd. But next time when he again passed by me he did so again. This time I protested and told him strictly not to do so again. But he passed as if he did not know any thing, as if nothing had happened.'

'A man sitting behind me was singing a vulgar song. After a while he put his head on the back of my seat and then started smoking. He was continuously bending over my seat. I could hear his breath near my ear. At last I asked him not to do so. For a while he acted upon my advice, but later on he again started singing. This time I told him off severely but in vain. I said to the driver to stop the van and let the man down. But the driver did not do so. He was continuously talking but no one listened to me. At last I reached my stop.'

'I was sitting beside the driver and another female was also sitting with me. During the journey, whenever the driver changed gear he touched my body (my thigh). When I protested and asked him to be careful driving he responded that it was not his fault rather it was the fault of the company who has set the gear at that position. When he continued this I had to ask the driver to stop the van. At last I got off the van.'

'One day while travelling, because of the rush hour I was standing in the bus. A man standing behind me was continuously bending over me and sometimes tried to touch my body. At my protests he replied that it was just due to bumps because of the bad road conditions. When I reached my stop I started moving to leave the bus, but then some body held my duppatta so that I became bare headed. My doppatta was on the floor and people were just looking innocently at this event as if they had not played any part in this. It was the worst and most insulting experience of my life while travelling.'

'Two boys were standing near my seat and were continuously singing vulgar songs. Sometimes I felt their breath near my face because they were bending in the van due to the rush hour. I was unable to say anything to them. At last one of them sat in front of me and gave an audio cassette to the driver to play. The driver did so. The songs were not good, even the words of the songs were very bold with lyrics of love and affairs. The boys also started staring at me. I was so confused that I left the van in the middle of my journey and took another van to reach the destination.'

'The conductors help only when we get onto the bus; when we get down from the bus they shout at us to get off quickly. Sometimes they signal the driver to drive off before we have got off.'



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### **Box 6.5 continued**

'Normally, private bus conductors do not issue tickets. When we ask for a ticket they say not to worry and move forward, that they will issue the ticket later.'

'When conductors realize that a ticket inspector is going to get onto the bus, they quickly issue tickets to passengers that do not correspond with the trips that the passengers are making.'

'Private bus conductors purposefully delay returning the balance money (change) to passengers. Usually, we forget to ask them for our change.'

'Conductors often touch women and young girls unnecessarily when they get on to the bus.'

**Box 6.6.**  
**Voices of schoolchildren on facilities inside buses**

'A girl who wishes to travel on a school bus, but no luck'

Nimesha is 15-year-old schoolgirl from Kadirana community. She uses public transport to go to her school, which is 5 kilometres away from her community. There is a small school very close to her community, but her parents believe that this school does not have good facilities and teachers. Therefore, they send Nimesha to a school in the city. According to Nimesha's experiences travelling on public buses, she finds it is very difficult to get onto the buses during school hours because conductors consider school children a problem. They do not stop the buses for school children because most of them are half-fare ticket users.

'I find it is difficult to carry my school bag inside the bus during my journey, because there is no space for the bag. Normally, I do not get a seat either in the morning or on my return after school. My friends and I, all of us, travel standing on the bus. We also prefer travelling standing when the bus is not crowded. When it is heavily crowded we always get crushed between people. My clothes get dirty. One day I lost my water bottle inside the bus. I think someone must have stolen it during the rush. I feel tired after travelling on the bus. I wish we had a good school bus and could travel freely.'

School children cannot see the name board of the buses clearly.

'The handrail is too high to hold. Therefore, we have to hold onto the seat edges while we are standing.'

'There is no space for us to keep our school bags.'

'We schoolgirls do not like to sit on dirty seats because our dresses get dirty.'

'The bell is fixed onto the roof, which is too high for us to reach.'

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In Colombo, in addition to the larger passenger capacity vehicles that are owned by people in higher income groups, three-wheelers imported from India provide transport services offering 'significant self-employment activity' in the city. It is estimated that there are 50,000 three-wheelers operating daily in the city; given the recorded/licensed total of 112,302 three-wheelers in the city as a whole, this figure is likely to be accurate. Three-wheelers have been criticized for violation of traffic rules and inappropriate parking, but may become integrated into the city's future transport plans. Those operating the three-wheelers note that they face multiple difficulties including the lack of designated areas to park their vehicles. Whilst there was once an association, it is no longer functioning. The drivers feel excluded due to illegal action by some drivers, and a lack of training or awareness programmes informing them of the rules of the road, In addition, they feel vulnerable to pressure from the police.

In Dar es Salaam, there are 7,500 privately owned and 20–30 UDA publicly owned buses that provide public transport services in the city. Most of the 7,500 vehicles are owned by single owners; 6,000 are registered. The cost of a used medium-sized bus (35–50 seater) is between US\$10,000 and 12,500. Generally there has been a trend for owners to switch from medium-sized to minibuses, in part because of the lower capital cost. Presently a minibus (pre-owned) costs US\$7,000, but getting it through all the required registrations and preparation may cost an extra US\$2,000. Hence the cost excludes the poor from any form of ownership.

In Faisalabad, there are multiple transport opportunities in the informal sector. Of significance are tongas (carts drawn by horses), rickshaws, motorized rickshaws and Suzuki pick-ups. For those aspiring to be owners, capital is required. It is estimated that lower-middle income households can enter the 'pick-up' market with savings of Rs.150,000 to Rs.200,000 and will probably earn Rs.300–400 a day after paying wages. The investment required for a motorcycle rickshaw is less at Rs.70,000–80,000 and earnings are estimated to be Rs.100–150 per day (most are operated by driver/owners). FUTS wagons require a more sizable investment of Rs.600,000 to 900,000 and profitability varies according to the route that the owner is able to secure. A deliberate attempt has been made to distribute ownership more widely and owners are allowed only one FUTS route. However, some owners by-pass this restriction by registering vehicles in the names of other family members.

The lack of credit was highlighted as one factor preventing access to the industry for those aspiring to be owners. There is no formal credit provision for the transport industry in Faisalabad, and the only regular source of loans are said to

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be informal lenders charging between 2 to 6 per cent a month. In practice, there appear to be several informal sources as several owners reported obtaining their vehicles on interest-free credit. The same problem is found in Dar es Salaam: *'Access to loans for purchasing buses is generally limited.'*

Transport workers would generally be included among the urban poor. In Faisalabad, 87 per cent of drivers and 100 per cent of conductors were found to be illiterate, suggesting that there are limited alternative employment opportunities. A similar picture emerges in Colombo; bus conductors explained that one attraction of the job is that qualifications are not required. *'Since there is a difficulty in finding a job for their qualification, they have chosen the job of a bus conductor.'* Generally, drivers and conductors in Colombo obtained their jobs through personal contacts. In Dar es Salaam, drivers are anxious to emphasize the difficult nature of their job. One commented that *'People think that we are comfortable minting money and are happy to do this job; it is not an easy job; we work like "wamwaga zege'I" meaning we work "like casual labourers" at a construction site'*. Generally drivers in Dar es Salaam only have the most basic of driving licences.

In Faisalabad (and elsewhere) there is no provision for training of either drivers or conductors. Daily earnings were reported to be Rs.150 and Rs.100 respectively on the buses, and Rs.200 and Rs.100 on the FUTS wagons; lower wages were reported on other forms of transport. In the case of the motorcycle rickshaws, most drivers are also the owners. Earnings (after direct costs) are around Rs.250–300 a day but there are monthly taxes, bribes and repairs to pay. Drivers in Dar es Salaam are allowed to keep any additional revenues that they make after paying the remittance to the owner and paying for fuel, puncture repairs, bribes and fines, and meals for themselves and the conductor. They receive a monthly salary of between TSh.30,000 to 60,000 plus daily commission (an example given for daily commission was TSh.10,000). Conductors may earn up to TSh.3000 a day (approximately US\$3).

With regard to traffic behaviour, the system of renting out buses to drivers and conductors encourages them to travel as quickly as possible (often racing each other along the route) in order to maximize their incomes. In Dar es Salaam, drivers and conductors have to pay a fixed daily amount to the owners. They are particularly frustrated by school students, because of the low fares that they pay and the fact that they are not willing to give up seats to adults paying the full fare. Whilst the users complain about the foul language used by the conductors, some reported that passengers also behave inappropriately.

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Job security and working conditions are major problems. This was mentioned as a key problem in Colombo, coupled with difficulties in collecting all the fares in the rush hour and the lack of organized stops. The bus owners in Colombo acknowledged the difficulties of the job. Several owners had been drivers themselves but the hard work meant that they employed others as soon as feasibly possible. Generally speaking, they believe it to be difficult to operate the service profitably. The best strategy is to rent out the bus to a driver. Employees in Dar es Salaam also noted the lack of job security. Long working hours add to the pressure. In Colombo, the working day is 12–15 hours, while in Dar es Salaam, bus drivers and conductors generally work for 15–18 hours per day. Working hours for employees in the transport sector in Faisalabad were reported to be 10–12 hours on the buses and Suzuki pick-ups, 12–14 hours on the FUTS wagons, with no provision for rest (apart from waiting at the bus stand for passengers) or retiring places with toilets.

### **6.5 Transport-related social and civil society organizations**

Social networks have an important role to play in addressing immediate and individualized livelihood needs. More formalized social networks, such as residents' associations or community organizations, may also be important in representing the interests of the poor in negotiations with the relevant authorities and private operators. Such organizations play a widespread role throughout the South in lobbying authorities for access to water, sanitation, drainage and other essential services. In the city of Karachi, the role of the Urban Resource Centre as a meeting point for numerous grassroots organizations and more specialist urban development associations has been significant in helping to ensure that the urban poor's perspectives on transport are heard. However, it should be noted that the Urban Resource Centre has had less success in securing pro-poor decision-making.

There is no citywide organization or even local community based organizations actively involved in respect of transport issues in any of the three cities studied. It is unlikely that the interests of the urban poor are being represented in any decision-making on transport issues in these cities.

Although not directly concerned with the poor, mention should be made of the Faisalabad Urban Transport Society (FUTS). The Society was created by the government as a public-private partnership for the provision of public transport. Consumers used to think highly of the FUTS at the start due to its strict enforcement of overcrowding controls, but standards have been falling more

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recently. However, in general, satisfaction remains high. There do not appear to be any other associations in Faisalabad dealing with the provision of public transport services.

Whilst there have been active passenger associations in Sri Lanka, they do not play a significant role. After private buses began to dominate the sector the regulators of passenger transport service failed to regulate the sector effectively. The situation was further exacerbated by lack of public participation. Whilst the passenger associations continue to exist, passengers facing difficulties do not show many signs of joining as members and strengthening their voice. The associations continue to publicize transport issues, act for passengers at Ministry forums, and receive complaints. However, they have few resources and do not believe passengers wish to become more active in addressing their needs. There is a lack of strong operators' and commuters' associations in Dar es Salaam as well. It is thought that this results in the provision of poor public transport facilities, although it is not really clear that such associations have necessarily achieved success elsewhere.

## Section 7

### **Poverty perspective**

This chapter aims to bring together the emerging lessons and considers what can be learnt. It takes up the opportunity offered by the research findings and reviews the earlier framework of sustainable livelihoods and transport services included in the inception report. An analysis of transport services is made in the context of the assets identified within the sustainable livelihoods framework.

Table 7.1 summarizes the significance of transport services for livelihoods (and assets) in respect of access to income, basic services, quality of the local environment and social networks. Table 7.2 then summarizes the significance of the assets of the poor in enabling them to enter the transport market as entrepreneurs or employees. Transport as a source of livelihoods for the urban poor is considered in sub-section 6.4 above.

The key issues most frequently raised by the urban poor mostly relate to the availability, cost, quality and safety of public transport. Many have reported issues related to noise and air pollution within the context of quality.

#### **7.1 Availability**

Despite the difficulties faced by the urban poor, transport services do at least exist in the low-income settlements of Colombo, Dar es Salaam and Faisalabad in some shape or form. Whilst those residing in peripheral settlements are some distance from public transport services, the distances for many do not appear to be grossly excessive. However, it should be remembered that in many cases the roads are unpaved and may be difficult to use in bad weather. Furthermore, residents' health and mobility may be poor due to low incomes and insufficient nutrition and medical care.

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**Table 7.1. Anticipated and identified influences on livelihoods from transport services**

<b>Assets</b>	<b>Anticipated influence of transport services*<sup>1</sup></b>	<b>Identified influences of transport services</b>	<b>Comments</b>
Financial	Access to work, employment and income generation opportunities	Access to work, employment and income generation opportunities. Limited opportunities for ownership. Employees generally with limited skills and qualifications.	Transport is critical for a high proportion of livelihoods in low-income settlements (upwards of 40 per cent).
Human	Access to education, health services, etc. Extent of stress, injury, mortality from travelling.	Public transport important for access to education. Problems of emergency health provision. Notable comments about stress associated with travelling. Few injuries documented.	Transport for education appears to be the second major use after livelihoods. Generally speaking, education is correlated to improvements in incomes.
Natural	Quality of local neighbourhood environment—extent of noise and air pollution	Few comments on how transport reduces the quality of the neighbourhood. Impacts appear to be highly localised around stopping places.	Localized impacts are much worse because stopping places are not planned but develop incrementally with associated services.
Physical	Use of road network	Limited physical investment in roads. High risk for pedestrians and cyclists. Poor quality of bus stops and waiting places.	Road and pavement network generally inadequate in low-income settlements.
Social	Ease with which city-based networks can meet to negotiate with local authorities.	Relatively low importance of transport in maintaining social networks. Few or non-existent associations of passengers, employees and owners.	Access to mobile telephone and internet tends to reduce the needs to travel for social purposes.

1. As noted in the inception report.



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**Table 7.2. Anticipated and identified influences of assets on the provision of transport services**

Assets	Anticipated influence of transport services*	Identified influences of transport services	Comments
Financial	Availability of credit and investment finance for transport-related investments (informal and formal sector). Ability to afford transport services.	Credit sources are very limited and this appears to reduce ability of poor to provide services. Investment is often in the family. Affordability is an issue.	It might be worth exploring specialist credit services with micro-finance NGOs. Lack of affordability related to low incomes.
Human	Quality of staff undertaking services and regulatory duties.	Training emerged as an issue in interviews with staff. It is evident that many of those working in the sector have a low education attainment. Regulatory agencies lack capacity.	Explore ways of putting in place basic training schemes and adult education with local providers. Measures to strengthen regulatory capacity.
Natural	Terrain and climatic conditions will influence costs of transport provision and maintaining networks and services.	Not the subject of research.	
Physical	Road and rail network is critical to quality of formal and informal transport services. Facilities for pedestrians.	Problems with the quality of poor roads increase costs for peripheral areas. Facilities for pedestrians lacking.	Costs of road improvement are likely to be high. Pedestrian facilities usually low down in terms of priority projects.
Social	Organizations to bring together transport services e.g. bus transporters. Citizen pressure on providers—is transport a political issue.	Limited number of trade associations. Few civil society organizations appear to be campaigning effectively on transport issues.	It might be worth considering further with local civil society groups if there is a local interest in lobbying for improvements.

### 7.2 Affordability

The cost of transport is considerable for those living in the peripheral districts. Typically, food costs are assessed to be 60 or 70 per cent of total income for the poorest urban groups. Transport costs take up a significant share of non-food expenditure. Transport expenditures of 10 per cent of household income are

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typical in many developing countries, so that the expenditures in the cities studied are broadly in line. In most cases, such costs are an essential part of livelihoods and transport is primarily used for income-generation and employment. As central city locations become more expensive and harder to find for the urban poor, more and more families are likely to relocate to low-income neighbourhoods some distance from the centre.

### **7.3 Are fares fair?**

Despite the significance of transport expenditure in household income, there are many who believe that public transport fares are fair, even if they are not seen as affordable. Generally speaking, transport workers are not well paid and are under considerable pressure to secure earnings. The problem of school students in Dar es Salaam is evidence that price controls may be ineffectual and even counter-productive, resulting in a lack of services and considerable pressure (even violence) towards the students.

It is not evident that profits are excessive. The relatively low pay of workers, the lack of attractiveness of employment in the sector and the level of overcrowding on buses suggest that profits may in fact be low except on highly favoured routes. On these favoured routes, reports of an oversupply of services suggest that profits are being kept down by market competition. In the absence of a deliberate policy of fare subsidies (which would be costly), it can be broadly concluded that the current tariff levels are indeed broadly fair. Indeed the fact that new operators are willing to remain in or enter the market suggests that there remains scope for profitable operation, albeit with sub-optimal vehicles and relatively unfavourable wages and conditions of employment. The scope for improved performance depends on more effective regulation and control, coupled with better infrastructure and improved communication between stakeholders.

### **7.4 Quality and safety**

As a broad generalization, public transport vehicles are not intrinsically dangerous. They could become dangerous if they did not adhere to maintenance standards through the annual licensing system (such as appropriate roadworthiness tests). The way the vehicles are driven may be another matter, particularly where the infrastructure is inadequate. Also the country reports suggest that commercial pressures may lead drivers to work excessive hours and take unacceptable risks in terms of driver behaviour. Low purchasing capacity and resistance to raising tariffs implies that improving the quality of transport services may endanger commercial viability unless it is done carefully. There

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may, however, be ways to improve quality for at least some of the users. In Karachi, higher standard buses have been introduced for those willing to pay appropriate fares. It appears to be likely that market segmentation will take place, with services improving for those that can afford to pay.

Nevertheless, there are some ways in which quality and safety for travellers could be improved through relatively modest investments in infrastructure. In particular, the scale of congestion around bus stops and terminuses is both unpleasant and dangerous, and it may be possible to negotiate improved arrangements that better meet the needs of operators, vendors and customers.

### **Box 7.1. Voices of women on facilities available inside the buses**

'Sometimes we like the playing of cassette recorders inside the buses. Passengers can enjoy music and nice songs.'

'In private buses there are no seats allocated for the disabled, clergy or pregnant women. Therefore, such passengers have to wait until someone offers them a seat.'

'The route number and the name of the destination (bus board) are not large enough to read from a distance.'

'Some private buses use similar colours [to public buses], therefore we cannot identify them. The interiors of buses are very poor. The seats are torn, the side mirrors are broken and the interiors are not cleaned.'

'Some private buses are small coaches, which have low roof levels, narrow spaces between the seats and no spaces to keep luggage.'

## **7.5 Is regulation working?**

Regulatory capacity is clearly limited, and sometimes ineffective. Excessive regulation might drive operators from the market, or lead to them diverting their energies to subverting it. It is important, therefore, to focus on the more important regulatory tasks that will maximize welfare for the consumer, without introducing a massive bureaucracy. In the case of the FUTS, overcrowding has been controlled for some time, but there are concerns that standards are now slipping. In other cases, services appear to operate irrespective of safety standards. Regulation can be ineffective and counter-productive due to the lack of enforcement capacity and relatively weak instruments. It can also lead to

**Box 7.2. Voices of the poor on safety hazards**

'At peak hours, there are many passengers. Others resort to using bus windows to get into the buses.'

'Road humps are very important as they check and discipline speeding drivers.'

'I normally do not board buses that are overcrowded, as I fear communicable diseases and pick pockets.'

'A lot of passengers travel while standing; as a result if the brakes are applied abruptly people lose their balance and fall forward. This may cause accidents.'

**Box 7.3. Voices of the poor on accidents**

'At the transfers area, - in May 2001 (this year), a person who was riding a motorcycle was knocked down by a moving vehicle. Up to the period this study was being conducted, the victim was still hospitalised at Muhimbili national hospital.'

'Near Charambe Machinjoni bus terminal, in July of this year (2001), a young boy was knocked down and killed by a light truck, a Toyota Hilux.'

'Two accidents occurred recently at a sharp bend near the Police Post, at Charambe. The first accident involved a nursery school pupil who was knocked down by a daladala. She sustained injuries. The second involved a soldier who was knocked down and killed by a moving vehicle while riding a motorcycle.'

'Some years ago I witnessed a lorry running into vendors who were operating vegetable stalls on the roadsides at Rang'i Tatu. Several people were killed.'

unanticipated and undesirable results. For example, the discounted fare scheme for students in Dar es Salaam appeared to benefit a vulnerable group (school children), but has come to be associated with considerable difficulties and inconvenience of travelling by bus. The earlier reported experiences in Karachi explained how low minimum fares simply resulted in bus drivers making a 'stop' en route thereby enabling them to charge passengers twice and recoup their lost income.

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### **7.6 The needs of pedestrians and cyclists**

Each of the three city reports emphasizes the poor quality of provision for pedestrians and the lack of safe passage for bicycles (despite apparently high levels of bicycle ownership). Clearly, improving public transport services is not the only way to improve the lives of the urban poor, and investment in suitable infrastructure could help by improving pedestrian facilities and providing safe cycle routes within urban centres



## Section 8

### **Making partnerships work for the poor**

#### **8.1 Introduction**

In an international workshop in Colombo in January 2003 where the findings from this work were presented, the participants were asked to prioritize actions for a given city. They came up with the following.

- Running buses on fixed time tables
- Uniforms or an identify card for drivers and conductors
- Continuous awareness programmes on passenger rights and responsibilities, as well as programmes for the operators (drivers/ conductors)
- Promote use of bicycles
- Introduce by-laws for proper traffic management in the city
- Provide regular training for the operators and regulators
- Re-introduce express and semi-express buses in Colombo
- Introduce a metropolitan bus service in the city
- Introduce easy ticket purchasing mechanisms, such as buying tickets from newspaper stands etc.
- Provide multi-modal terminal facilities
- Proper maintenance for bus shelters
- Provide adequate pavements in the city
- Regulate para-transport (i.e. informal modes such as three-wheelers, auto rickshaws etc.)
- Increase government operated school bus service

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Many of these improvements appear relatively straightforward but (in general) in each of the case studies such actions were missing and one wonders why that is the case?

For many years priority was given to publicly owned transport services, often at the cost of preventing private services. However, as shown by the experience in Dar es Salaam, banning private bus operators in 1975 did little to address transport needs. The private operators continued to provide services, albeit illegally, and in 1983 they were once more allowed to provide (limited) services. A similar experience happened in Colombo between 1958 and 1979. At present, as noted in the Introduction, transport services in all four cities (including Karachi) are provided by both the private and public sectors. However, there is only limited (or a lack of) coordination between either the different providers, or between a broad spectrum of stakeholders and the providers of the services.

On one hand, the case studies show the benefits of involving the private sector in the delivery of urban services, including public transport, which previously was regarded as the domain of the public sector. On the other hand, there is evidence of the problems that can arise due to a lack of regulation and regulatory capacity, poor service provision and a lack of affordability.

One possible strategy to resolve some of these potential problems arising is through partnerships to secure service improvements. Numerous opportunities for partnerships emerge, in particular, within the private sector and between public agencies and private firms. Additional potential groups to be involved in such partnerships (as discussed below) are the users themselves, the regulatory agencies, and those responsible for government transport policy.

The term partnership may mean different things to different people. Partnerships can be described as: non-adversarial organizational relationships, (both formal and informal) involving public and private organizations, public and public and private and private. For the purpose of this study, 'public' relates to any government agency (e.g. local authority or state) either directly (for example, as a regulator) or indirectly (for example, as principal where a commercial firm acts as an agent), and 'private' relates to any other type of organization involved in local government services (e.g. private operator, small-scale private provider, community-based provision).

As noted above, the organizational context is one where public institutions (including regulatory agencies) are frequently weak and service coverage is



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limited, poorly maintained and often non-existent for the poor. At the same time, the private sector is unproven and often informal. The service delivery problem includes the need for substantial service expansion to new, informal and marginal settlements as well as an improvement of the existing services. Access and quality are the two main aspects that potential partnerships might address in the context of service delivery.

Whilst partnerships may not address all the problems listed above, they may offer a potential solution to some. Experience suggests that partnerships are likely to be most successful when 'win-win' solutions can be identified providing an incentive for both parties to the agreement. Drawing on an example in the earlier study of Karachi, one citizens' group, SHEHRI, went to court to prevent the sale by the state of plots of land intended for depots and workshops for city buses. In this case, the alliance was between the users and the bus owners, both of which wanted to retain this facility (Sohail, 2000, p.75). Other opportunities for 'win-win' solutions also emerged in the case studies, for example, bus route improvements in Karachi, and improved visibility of dala-dala minibuses in Dar es Salaam.

In a further example of partnership between organizations within a specific transport services sector, Sohail (2000, p.149) illustrates collaboration between operators in Karachi. Due to the large number of buses being burnt in political unrest and the non-availability of insurance cover, the operators themselves established their own insurance. Each member pays Rs.15 per day per bus and the Scheme pays out whenever a bus is set on fire. A final illustration of partnership between sectors also comes from Karachi. In 1997, a group of government officials and professionals from the private sector worked together with the Airport Security Force to improve traffic management at the airport. Two years later, activities were expanded to include a 14-kilometre road from the centre of town to the airport.

### **8.2 Policy framework for transport governance**

Experience shows that effective partnership requires a clearly defined framework to guide governments, municipalities, and other stakeholders through the process. Although this framework needs to be developed within the specific local public transport context there are a number of general issues that such a framework needs to consider. These include:

- *political processes*, supporting the role of municipalities in representing constituents, maintaining power over the allocation of resources, regulating

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partnership arrangements, and other service delivery options to serve the public good;

- *money*, and ensuring revenue flow to support service delivery;
- *economic benefits*, to improve efficiency, generate economic growth, and develop a market of service providers or users;
- *social equity*, addressing the needs and impacts of service partnerships on communities, with sensitivity as to how this is relevant to different groups, such as women, children, the poor, and other vulnerable people;
- *environment*, ensuring basic health and sustainable use of natural resources;
- *institutional imperatives*, to improve the capacity of municipalities and other organizations to manage and govern local areas through partnerships;
- *conciliation and mediation*, to facilitate a rational and pragmatic rather than ideological perspective; (Throughout the developing world there are examples of processes where the debate has taken an ideological perspective and thus lost the pragmatic approach. Intermediaries, International and domestic, can provide space for different parties to air their differences and come to a consensus.)
- *reducing transaction costs through better information provision*, which reduces asymmetries of information by creating a pool of information to be used for planning for better transport services. Many partnership arrangements lack basic information relating to the poor and hence it is difficult to design pro-poor partnerships.

Two crosscutting elements are also important.

*Comprehensive and holistic approaches*, though not prescriptive, are critical. These help municipalities to:

- determine how to prioritise objectives;
- assess past initiatives in terms of municipal objectives;
- transcend the traditional bias in many partnerships towards economic and financial objectives; and address instead the range of social, political, and institutional issues that lead to a search for alternatives.

The scale of the potential problem in regard to policy fragmentation is illustrated in the study of Dar es Salaam in which four Ministries have an involvement in transport services: the Ministry of Communications and Transport, the Ministry

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of Finance (collecting taxes), the Ministry of Home Affairs (vehicle inspection), and the Ministry of Regional Administration and Local Government (with responsibilities including Dar es Salaam's transport licensing authority and route allocation).

*A pro-poor focus is essential.* As mentioned in the introduction, partnerships in developing countries often face extensive challenges in dealing with poverty. A pro-poor public-private partnership is about meeting the service needs of the poor and improving the quality of the lives of poor households. This raises several fundamental questions such as:

- what type of service delivery arrangement benefits the poor?;
- what form of delivery is most sustainable?;
- what level of benefit is most feasible to achieve?; and
- what form of cost recovery would be appropriate?

In practice, a pro-poor focus may be hard to secure. For example, in Faisalabad, a partnership has been set up between the FUTS and a telephone company to establish 70 bus stops. The telephone company (which offers telephone booths at each stop) has now established the ones that are profitable and it is reluctant to continue the venture in places where the telephone income is likely to be insufficient. This example suggests that whilst partnerships may go some way to improving the current situation, they are unlikely to be sufficient to address all the needs, especially those of the poorer groups. The advantage of such partnerships is that they enable the authorities to focus their resources more efficiently.

### **8.3 Partnering context**

The potential partners can be broadly classified as:

- users;
- operators;
- regulators;
- government policy makers; and
- support organizations such as financial institutions.

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**Users** can be individuals or a group. In all of the case studies, the researchers noted that the mechanisms for the users to have a voice were very limited, particularly for the poor.

It is important to recognize that generalized user groups may not be fully representative of all the interests of the poor. In Karachi, for example, the Karachi Public Transport Society mainly addresses the needs of higher income groups (Sohail, 2000, 136). As discussed in Section 6 above, there is a need to consider groups in particular need, such as those with disabilities who require access to safe public transport services to sustain their own medically constrained livelihoods. In some cases, intermediaries have acted as representatives of users in some forums.

**Operators** are informally and in some cases formally organized. Such organizations are often only effective around short-term issues such as a fare increase.

**Regulators** are mostly formal and in most cases very complex. These include various public sector organizations such as police. For example, in Karachi it was estimated that there were around 60 organizations connected with the issue of public transport without any effective organizational hub.

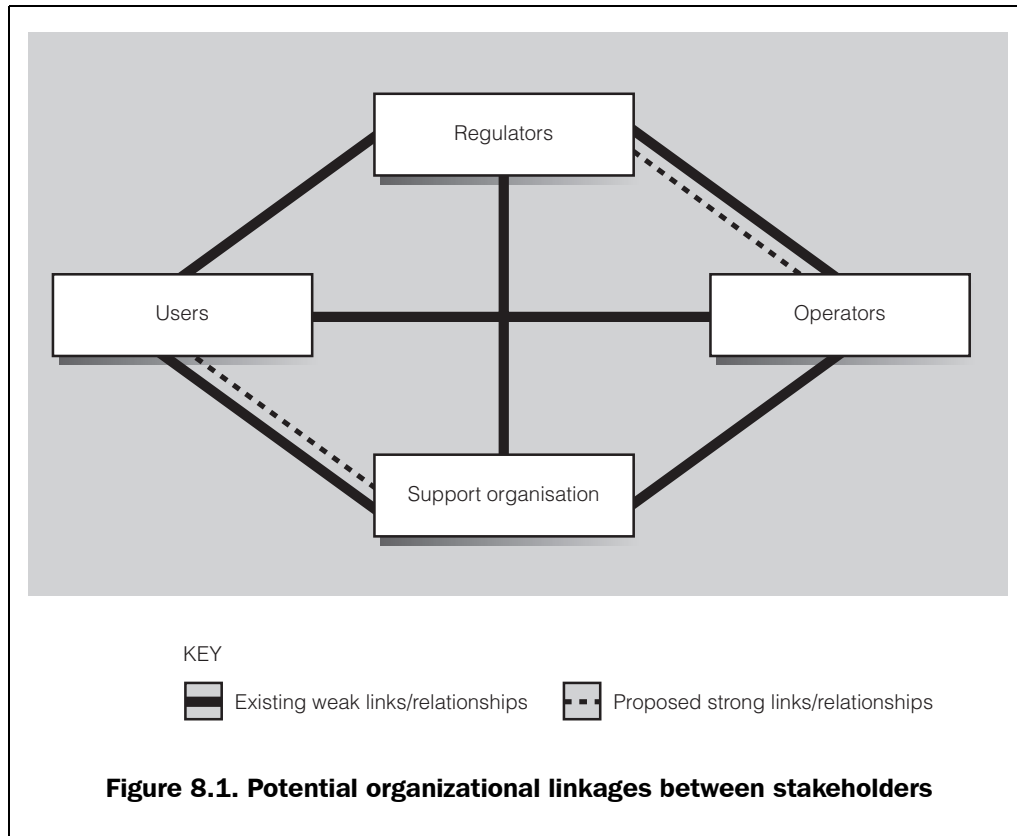
**Government policymakers and local government representatives** are also important potential partners in their own right, (as well as the target of other partnerships) in terms of national and local transport initiatives.

**Support organizations** are both formal and informal. There are numerous support organizations such as those providing transport and maintenance services. There is a tendency for small-scale operators to seek assistance from informal support organizations though, these are very costly to utilise. Whilst at the same time the formal support organizations have not even reached to the stage of acknowledging the existence of informal potential partners.

The lack of credit, for example, is an illustration of how partnerships with financing institutions might offer benefits to the public if investment can increase to potential owners and operators thereby increasing service provision. In a further example of the type of organization that might be involved, in Faisalabad, FUTS is planning an arrangement with a minibus leasing company to increase the scale of services that it offers.

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The current situation is illustrated by Figure 1, which shows some links between potential partners. Existing links are mostly adversarial and uncoordinated. Potential partnership links are shown as a dotted line.

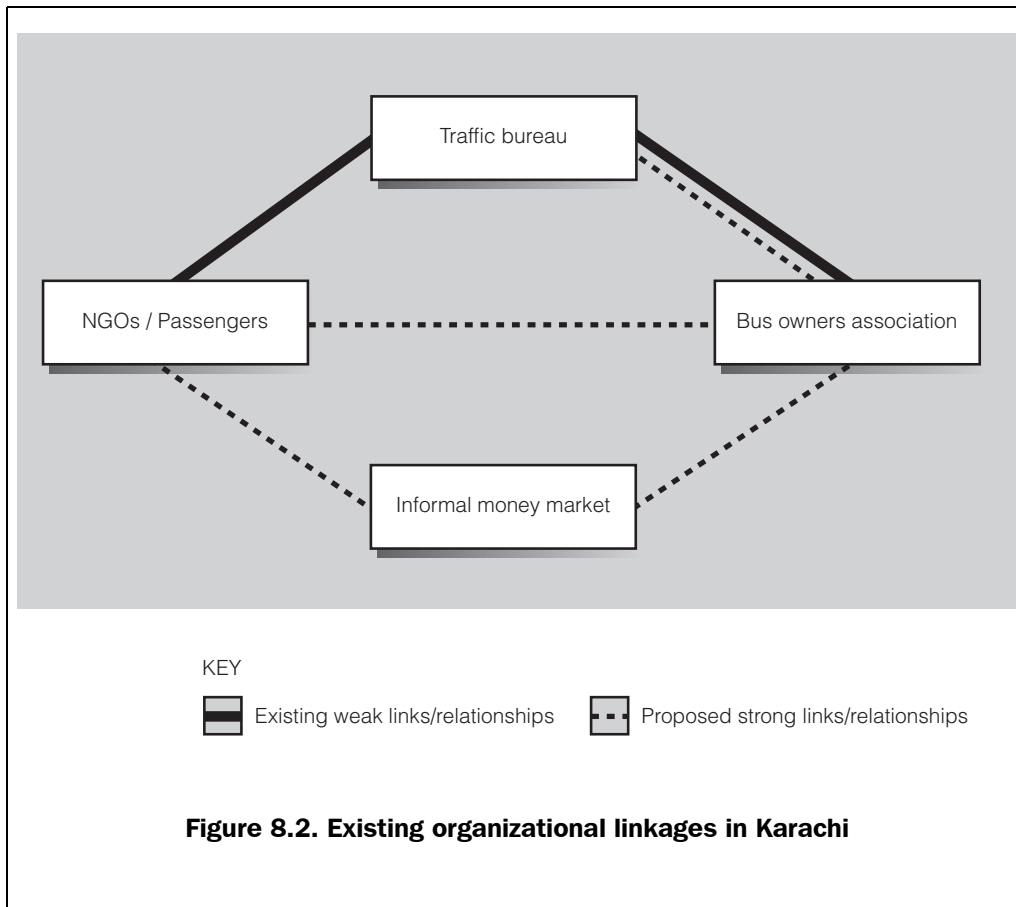


For example the links in Karachi can be illustrated as in Figure 8.2:

The figures demonstrate how the existing links can be converted into a partnering link to improve the provision of public transport services. The potential for partnerships to improve the current situation emerges on several occasions within the studies:

In Faisalabad, the city commissioner conceived of and implemented the Faisalabad Urban Transport Society (FUTS), which has been referred to in earlier sections. FUTS is a voluntary organization that provides a transport system and licenses over 1,000 private vehicles to provide services. The objectives of the Society are to “...provide, maintain and supervise transport facilities for the commuters.” Whilst the maximum number of vehicles on each route is not set, the operators ensure that additional services are viable before

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allowing an additional bus. A single central terminal has assisted in the interchange of passengers between routes, but congestion has resulted in a second terminus being prepared.

A second and earlier example in Faisalabad is that the municipality provided eight stands for tongas in several places within the city. Such stands provide the animals with some relief from the heat in the summer and also offer animal drinking facilities.

In Karachi, both users and operators agree that speed bumps (and other traffic calming measures) would assist in enforcing speed restrictions (Sohail, 2000, 145 and 147). Clearly it is in everyone's collective interest for speeds in dangerous places to be reduced. But if restrictions are not enforced, then each operator has an incentive to break restrictions to increase their potential number of passengers and consequently their earnings.

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In Karachi, for a further example of need, the governor of Sindh Province failed to include transport in his Annual Plan for 2000/2001 even though the ordinance establishing the Karachi Metropolitan Transport Authority had lapsed (Sohail, 2000, 135). Users, operators, and regulators have an interest in ensuring that transport remains on the policy agenda otherwise funding will be difficult to earmark for transport improvements and maintenance of the existing network in the city.

### **8.3.1 Types of partnerships**

For a partnership to exist, it is not necessary for it to be articulated in formal contractual terms. In the case studies links between operators and regulators were set up in order for both parties to achieve a particular goal; in cases such as these the relationships evolved into a partnership without the parties actually knowing that they had developed into a partnership situation.

The question of partnership types can be approached from at least two angles: institutional and contractual. But one should not restrict oneself to any classifications as in many cases it may not be feasible to conform strictly to any one typology. The real issue is for parties to analyse robustly their situations and options and to develop meaningful solutions. Broadly speaking, contractual relationships can be divided according to the way they are enforced. Some contracts are legally enforceable while others are essentially relational and self-enforcing. The latter occur mostly in informal transactions. The financing of public transport and in some cases even insurance is dealt with by the organizations in informal sector.

### **8.4 Clarity in roles and responsibilities**

Partnerships may involve a coming together of parties to address an issue of common interest. such partnerships are characterised by autonomous and independent organizations, each with something to contribute and each party negotiating to establish the rules of their collaboration. Alternatively, a partnership may involve one party, usually the public sector, setting out a framework in which the role of the other party (or parties) is already defined. The need for clear and precise contracting arrangements in the provision of public transport cannot be over stressed. Different contract types always have to be tailored to suit local conditions and it is here that significant differences are likely to be required between partnership contracts in northern and southern countries. The following generic options exist:

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*Service Contracts.* The most common approach is the service contract characterized by the contracting-out of services to a private provider to an agreed level within defined specifications and for a fixed period of time.

*Management Contracts* are somewhat more complex than basic service contracts. Again the client retains ownership of the assets and is responsible for capital expenditure, working capital and commercial risk of the collection of service fees. The contract is normally output based. The private party manages the provision of service without committing significant investment capital and without accepting much risk.

*Leases and affermage contracts* provide for the client to lease infrastructure and facilities to a private firm that will then have exclusive rights to operate and maintain the system for a fixed period of time. The main distinguishing feature from a management contract is that the private operator bears the commercial risk of non-payment of fees and charges. There is no transfer of ownership and the client remains responsible for capital investment required to upgrade or extend the system.

*Franchise arrangements* are based upon granting exclusive rights to provide a type of service within a specific geographical area. Such arrangements are often for waste services. Instead of leasing facilities and infrastructure the operator is given the right to deliver a service in return for a payment, and will in turn levy charges for the delivery of the service and/or for generating income from the service through other means, such as selling by-products.

*Concessions* entail the municipality transferring full responsibility for service delivery in a specified area to a concessionaire. This will include all construction, maintenance, collection, and management activities. The concessionaire is responsible for all capital investment to build, upgrade or extend the system. The client will generally retain responsibility for establishing and monitoring performance standards, regulation of price and service volumes. This regulatory authority is crucial in public goods that have monopoly characteristics. The main distinguishing feature from a lease is the additional responsibility for financing capital investment. Although the fixed assets are entrusted to the concessionaire for the agreed period (usually over 25 years) they still remain the property of the client.



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### **8.4.1 Nurturing partnerships**

Partnering is not discrete but involves a continuous process. Of course, partners do disagree and complex arbitration systems may be established as a part of the partnership. However, experience suggests that such adversarial attitudes should be avoided. To be successful, a partnership needs monitoring and sustenance.

It should be emphasized that partnerships do not absolve the regulators from their public responsibility but merely shift the government focus from managing the inputs of service provision to managing outcomes. There is a need to remain vigilant to carefully crafting principles and practices that create a supportive and credible environment, involving the right stakeholders in the right roles, and blending social and institutional dimensions of poverty reduction with the economic and financial gains of all partners.

There are three main constraints to partnering.

- *Lack of Transparency / Trust?*. There is a need for processes to be open, fair, and reasonable. Distrust is a function of perception and not necessarily of facts.
- *Lack of Professionalism*. There is a need to use people who are good at doing what needs to be done. Sound local management also means an organization must address those areas in which it lacks acceptable levels of professionalism.
- *Lack of capacity*. Partnerships involve new ways of doing things and new ways in which different groups can work together. As a first step, it is essential that groups learn to talk to each other. It has been noted in the case studies that the different groups lack the capacity and facilities to engage with each other. The research process itself offered a chance for groups to meet and talk. In many of the city forums, it was clear that such forms of cooperation were held for the first time in the city. These forums offered a chance for the tentative emergence of a list of issues that might usefully be addressed. Sadly, however, it is not clear that there is sufficient support mechanism to maintain this process within the cities.

### **8.5 Supporting partnerships**

What are the emerging lessons in respect of partnership support in these case studies?

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Whilst the examples above have illustrated that collaboration between the sectors is possible, partnerships are clearly lacking in the cities studied. For example, in the city of Dar es Salaam: “... *there is no dialogue between key actors, thus critical issues in the public transport service sector have not been resolved.*” This quote emphasizes that a first step to partnership is dialogue. The authors of the Dar es Salaam report conclude that as a result of their lack of dialogue, stakeholders tend to blame each other for the problems that they have to suffer. Without shared perspectives, little will move forward. A similar experience emerges from the study of Colombo. However, there are no partnership arrangements currently in operations in respect of transport provision/infrastructure and hence little appears to be undertaken to address needs. In Karachi and Faisalabad, some experience of collaboration exists, although there remains a need to strengthen and deepen existing initiatives and create new ones.

As argued in the Dar es Salaam report, it is the role of the state to “...*provide a platform for the various stakeholders in the sector (including operators and users) to meet and exchange views and derive opinions for addressing problems facing the sector.*” Whilst partnership arrangements may then occur between interested parties, the prime responsibility of bringing groups together should be taken by government (in the absence of another instigator). To realize a sustainable partnership requires that there is a champion to bring the parties together over an issue that can be successfully addressed.

However, more than a simple bringing together of different stakeholders is needed. In Faisalabad, for example, in a discussion with 16 drivers it emerged that only one had studied traffic rules and regulations. However, the majority of the group were not satisfied with the implementation of traffic rules and thought that there should be greater enforcement. Such contradictions need to be identified and suitable proposals put forward. Operators in this city recognized that service delivery would be improved through partnerships, especially those between three groups: public-private, private-private, and banks-public/private.

Partnerships are a means to an end rather than an end in itself. Partnerships have to provide perceived benefits and incentives both for partners and service users. Thus issues of equality and equity become relevant. Equality is necessary between the parties, in that they are duly treated on a par and without being disempowered by the agreement.

## Section 9

### **Priorities for intervention**

In summary, transport services are essential for livelihoods, particularly in the peri-urban settlements of cities. However, transport costs may be unaffordable for the urban poor even if the fares levied are considered fair in relation to the costs and risks incurred by the providers. Whilst travel conditions appear to be capable of considerable improvement if investment of various kinds is made available, public funds are usually already heavily committed and low incomes are likely to limit the capacity of passengers to pay for such improvements. There may be merit in subsidies. These are widely used to ensure access at an affordable price for low-income communities in the North. However, the costs are frequently high and targeting may be weak with many not-so-poor benefiting.

There is a need for intervention, but this should be limited and carefully calculated in order to ensure that the effects are beneficial and make optimal use of resources. Intervention can essentially be in four areas: infrastructure investment; land use and employment strategy; regulation of public transport services; and the promotion of stakeholder collaboration.

#### **9.1 Infrastructure investment**

Inadequate infrastructure is a major hindrance to the operation of public transport services, and a cause of danger and discomfort to the users. In this context, the main improvements that are required to improve transport services appear to be:

- ***Improve access to major roads*** from low-income residential areas to ensure that there are bus services at a reasonable distance. Alternatively, encourage feeder services by para-transit modes from such localities to major road or bus routes.
- ***Ensure safe and secure bus stops*** for motorized transport with provision for shelter for passengers and designated areas for vendors. In particular, passen-

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gers are looking for somewhere to shelter and somewhere where it is safe to wait. In respect of protection from rain and sun, local solutions need to be developed so that they are appropriate and low-cost. In respect of safe stopping places, there is a need to distinguish between major and minor stops. Minor stops may be improved simply by designating an area that enables vehicles to leave the road. Improving safety at major stops is likely to be more difficult to achieve. Solutions require the co-operation of all transport providers and also vendors who provide services to transport users. However, the considerable potential for 'win-win' solutions suggests that improvements are possible.

Experiences in Faisalabad suggest that private sponsorship may be a partial solution to the provision of bus stops, enabling the public sector to focus scarce resources within lower-income areas.

- ***Improve pedestrian routes that are also suitable for bicycles*** (perhaps by encouraging community self-help schemes). This may be particularly important for some of the poorer households that cannot afford to pay for transport and would reduce the difficulties faced in reaching major roads. Once more, appropriate local design is important. Attention should be given to safety and environment. For example, tree planting may be used to divide pedestrian routes from major roads.

There may be opportunities for partnerships between the state and community groups, or with environmentally orientated youth groups. Several cities have tree-planting programmes, although it is not known if there is potential for such programmes to be linked into transport planning programmes.

### 9.2 Land use and employment strategy

A partial alternative to direct or indirect investment in public transport is to improve the situation of the poor by applying a positive land use and employment strategy. Two measures could achieve this.

- ***Identify well-located land*** that is suitable for settlement by the urban poor and which reduces their need to travel for essential goods and to find work. There is much pressure on urban land, but resettlement locations are frequently a considerable distance from the centre with little consideration of transport costs.
- ***Encourage employment opportunities*** within low-income settlements so as to minimize the distance that workers need to travel. This may involve re-examining restrictive regulations and providing water, waste and electricity services to at least some low-income settlements.

### 9.3 Regulation

As set out in chapter 5, regulation can be applied in three ways, over *quality*, *quantity* and *price*.

- **Quality control** in the bus industry mainly concerns the construction, maintenance and operation of vehicles, although it is also strongly affected by the behaviour of drivers and conductors. It is justified by the difficulty faced by consumers in assessing whether the vehicle they are boarding is safe, and the advantage in applying common minimum standards. However, if standards are specified in excessive detail, it is possible that useful innovations may be stifled and operations will become steadily less efficient and economical. In addition, from a quality and safety standpoint, it would be helpful if regulators made more effort to encourage owners to provide better conditions and security of employment for their drivers and conductors. As indicated in the study of Karachi, higher incomes are likely to result if higher quality services and an increasingly segmented market are developed.
- **Quantity control**, by limiting the number of vehicles that may operate on a particular route, can bring about a more efficient use of resources and combat congestion. However, it can also be anti-competitive and, by offering preference to a limited number of operators, such control offers potential advantages to those with undue or improper influence.
- Authorities may be in danger of regulatory capture if they work too closely with the industry. However, the example of FUTS suggests that it is possible to find a middle ground, restricting access to routes but being somewhat flexible. Clearly there is an incentive for excess supply on some routes, but such conditions are not in the interests of either users or the industry.
- **Price control** can be useful in avoiding excessive tariffs, particularly where quantity control limits competition. However, “fair” tariffs are difficult to set, and there is again a danger of corruption if the regulator enjoys excessive powers. Moreover, transport providers can avoid such controls. For example, they will not transport low paying passengers (such as students) and/or they break their journey arbitrarily to ensure a ‘double’ payment. Thus regulation, although necessary, should be light and unobtrusive and should be applied only to meet well-considered and generally agreed objectives.

Governments should also influence the structure of the industry generally to seek improvements for users. For example, they may encourage the entry of private sector operators if they feel it is in the interest of the community as a whole to provide competition or may seek a public monopoly.

## 9.4 Stakeholder collaboration

Stakeholder collaboration can be promoted both within and between various interest groups and parties.

- ***Owners' associations:*** With the fragmentation of ownership, there are likely to be benefits from encouraging operators to collaborate in order to raise standards and provide a more integrated service. There may also be benefits for regulators in being able to negotiate with a single group, even though many such associations will not be able to enforce decisions on their members. Even if enforcement is unlikely, there are many advantages in having an association, providing that it has a capacity to represent the needs of its members, however diverse.

It may be objected that an owners' association may have more interest in forming a cartel to exclude newcomers and protect their existing franchise. To counterbalance this tendency, encouragement for owners' associations should be balanced by encouragement for users' associations.

- ***Users' associations:*** There is a need for users' perspectives to be represented both to the industry and government regulators. It is evident from the findings of the research that users find their voice is generally non-existent or under-represented. Such organizations need to recognize the differing interests of different groups of users.

User groups are likely to have an interest in working with many other groups within the sector. They have already demonstrated collaboration with the private sector to improve public provision for transport services. At the same time, they may provide useful support to the regulatory agencies if offered this opportunity.

- ***Stakeholder forums:*** Support could also be given to setting up a forum at which the various stakeholders can exchange views and experiences on a regular basis.

It is difficult to exaggerate the lack of opportunities for dialogue within the transport services sector. It is evident from the earlier sections that transport has a critical role to play in the livelihoods of the urban poor. The priority that people give to transport is indicated by the significance of transport expenditures as a proportion of household income. However, there are simply no opportunities for the users to enter into a dialogue with the providers and the transport authorities.

There appears to be considerable opportunity to improve the existing provision of public transport services through partnerships among key stakeholders.

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Frequently, several ‘win-win’ opportunities were missed due to a lack of “dialogue” amongst stakeholders. Such opportunities offer a potential to address some of the existing constraints and issues facing the provision of public transport services in a highly dynamic and complex environment. Partnerships appear to be a significant missing link to improve access to and quality of public transport in a highly contested market with limited capacity within regulatory agencies.

Improving access and mobility is a fundamental factor in ensuring the sustainable livelihoods of all urban habitants but especially the poor.





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## Appendix 1

A number of key issues are discussed in relation to partnerships to improve access to and quality of public transport .

### **Informal settlements**

Informal settlements are growing in number and density and thus are often overcrowded and congested. Population growth affects transport systems as more people generate a greater demand and more journeys. A greater density means longer travel times if people cannot walk or use non-motorized vehicles (NMVs) and more complex journeys if operators focus on general patterns of movement along major corridors. Additionally, unplanned settlements may be difficult to access because of their situation, i.e. hillsides or marginal land. Accessibility is further complicated by the lack of transport infrastructure and erosion or flooding in the rainy season. The internal transport infrastructure of these settlements can be improved as part of labour- intensive works and thus mechanisms for service distribution works can be bettered. Attempts to improve:

1. main access roads;
2. minor roads;
3. footpaths;
4. waste collection systems; and
5. stormwater drainage systems.

would also contribute to poverty alleviation. Labour-intensive methods (with wages or food for work programmes), community participation, community contracting, and employment opportunities for women could be adopted to improve the access to and quality of public transport in informal settlements. The use of light equipment and tools, appropriate standards of construction, and high levels of management must also complement the use of local labour. Within settlements there would be light vehicular traffic; thus the construction of narrow tracks for use by NMVs would reduce investment costs. The community could then easily manage the maintenance of low-volume roads, bicycle paths, and

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footpaths. Community contracts would involve a partnership between the *client* (within city councils), *contractors* (from within the community), and *consultants* (who design the system and monitor works). The contract may be:

- labour only;
- labour and materials; or
- full contract.

The contracts would require technical assistance to provide technical and managerial know how. Community contractors may then find long-term employment opportunities as a result of this contract in terms of training, capacity building, self esteem, and empowerment and investments of income in local economies. Use can be made of *rural labour-based works experience*, with respect to urban application. However, community participation, as a cost-reduction strategy, shifts the burden of service provision from government to the urban poor and necessitates time and community organization, and the rigid structure of the authorities needs to be altered to facilitate community involvement in provision. A consequence of improvements to informal settlements may be to force up house rents due to higher land values.

### **Gender**

Women's involvement in transport activities is essential to the productive and reproductive well being of households. The uniqueness of women-specific transport problems deserves special attention and planning on behalf of planners and policymakers. The mobility needs of women are grounded in the gender division of labour; men are characterized as the 'breadwinner' and women are typically homemakers as well as income-earners. Technology has also been gendered: historically men make greater use of public transport, cars, and motorbikes/ bicycles than women, though this situation is changing. Women may be seen as substitutes for transport technologies: walking and carrying loads on their heads or backs, in addition to often having to carry their children. The costs of this can be seen in terms of time, energy, and health risks, as over long periods of time head-loading may lead to deformities, headaches, exhaustion, skeletal damage, etc.

Efforts need to be made to alter societal attitudes and gender discrimination in public transportation policies. A gender analysis of household income distribution would suggest that efforts concentrated on reducing the cost of transport for male 'breadwinners' do not necessarily represent a saving to the

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household budget (or that savings will be distributed to improve the well-being of all family members). Transport can play a role in lessening and simplifying women's chores through the promotion of non-motorized modes of transport and reductions in trip volume and length. Transport may also expand the income-earning activities of women and promote gender equity in society and the household.

The barriers to adopting transport technologies for women appear to be more to do with cultural attitudes than finance. Women in some societies are excluded or secluded from public life and thus concepts of honour/shame have become associated with the use of public transport or the possibility of being hooted at by cars. Women may also feel threatened and worry about their security on public transport.

There needs to be:

- improved services at off-peak hours (especially where women are working shifts in factories etc.);
- improved timing and frequency of services;
- a variety of modes;
- improved vehicle design including internal lighting;
- improved public safety; and
- a wider variety of routes and connections outside the commuter corridors (which go straight into the city centres).

### **Special needs**

As has already been shown, the shortage of transport impacts on personal well being generally; however, some groups within society have special needs and this affects their ability to make use of transport systems. The elderly, disabled, and children have needs that should be identified and addressed. Their mobility and freedom may be curtailed by busy, badly lit, unsafe streets and poor public transport provision. Specific provision could be made to subsidize their fares, or small-scale public transport could be arranged for trips to health clinics, community centres, etc. to improve accessibility.

Analysis of the urban poor is needed; the poor are not typically a homogenous group. The sex, age, and role of household members will affect travel characteristics. Indicators that reflect income distribution, access to services,

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literacy rates, etc. of the population can be used to affect the quality of and access to transport infrastructure. These indicators can be used to identify strategies to improve livelihoods through better access to opportunities. The urban poor may have adapted to unreliable public transport services by task sharing among the extended family units in order to make a living. These coping mechanisms should be recognized and strengthened. Transport is linked to social relationships and the maintenance of social links and networks that are used in crisis. In addition, the role of rural-urban linkages should be recognized, where an urban family/individual may be supporting relatives in their village and travel may be necessitated by family concerns or business interests.

### **Road accidents**

Pedestrians are highly vulnerable road users. The more the poor rely on physical work, the higher the potential costs of physical disability. Whilst men account for the majority of road fatalities in developing countries, households in general are affected by their loss in emotional, financial, and social terms. Initiatives to protect the vulnerable through training and resources for road-user safety education must be coupled with infrastructure improvements and the effective reporting of road traffic accidents. Hospital and police records can be used to develop statistics regarding the economic costs of accidents, regional analysis, and causality by age, sex, and road-user type. These can then be used to judge the efficacy of safety measures and the costs and value of protection. The roadworthiness of public transport should be assessed in terms of:

- the mechanical condition of vehicles;
- maintenance practices;
- speed limits; and
- passenger safety and comfort.

Restrictions on the number of hours worked, incentives for accident-free journeys, health checks of drivers, and improvements in driver behaviour could all be addressed by partnerships. In addition, drivers need to undergo suitable driving training programmes throughout their career and municipalities should minimise the potential for road accidents by suitable highway planning, maintenance and transport management policies.

### **Environmental aspects**

The environmental aspects of transportation must be integrated within the traditional themes of safety, social, and economic concerns in the development

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of policies and programmes. Public transport vehicles are significant polluters and require effective control and regulation in this respect. Actual performance should be measured and monitored against a base line and the transport department's environmental management goals. An understanding of the environmental costs of transport options would involve the:

- assessment of infrastructure from an environmental perspective;
- the application of a 'pollution prevention' approach;
- reduction of air emissions from transport sources;
- maintenance of biodiversity; and
- application of cleaner technologies where practicable.

The environmental and health impacts of pollution fall on those who are already disadvantaged, i.e. those living in poverty, the disabled, those with insecure housing rights, etc. The degradation of transit corridor zones may also lead to land use changes. The urban poor are more likely to take long journeys in non-air-conditioned vehicles and so suffer from air pollution. Air pollution (in terms of carbon dioxide, carbon monoxide, nitrogen oxides, hydrocarbons, suspended particulates, and lead) is responsible for respiratory and cardiovascular diseases, and high levels of smog have led to increased hospital admissions.

### **Motorization**

The growing ownership and use of motor vehicles in developing countries is seen as an inevitable outcome of moves towards modernization, increasing GDP, and household income. Cars are mainly owned and operated by higher income groups, but the growing middle class are rapidly acquiring motorcycles and cars. There is an increasing misapplication of economic resources to the minority who use private cars, for example councils may prioritise primary and secondary roads over bicycle lanes and footpaths. Local demands of car owners are often greater than the capacity of existing urban infrastructure to deal with them and other road users. Increasing private car ownership requires adequate road maintenance and the redesign of existing roads to provide a safer and more user-friendly environment for non-motorized modes. Motorization is influenced by public policy regarding:

- street space allocation;
- petrol prices;
- priorities for the mobility of private vehicle owners;

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- availability of parking spaces
- transport subsidies; and
- transportation system investments.

Policies that promote motorization can be seen to damage sustainable low-cost non-motorized modes of transport economically and environmentally.

### **Non-motorized vehicles**

NMVs (which include walking, bicycles, rickshaws, hand carts, etc.) are a typically low-cost form of private transport suited for short trips. In some areas NMVs may be a tool for targeting the mobility of low-income people. Interventions that promote NMVs (e.g. through shortcut routes for NMVs) could contribute to the welfare of the urban poor and the economic activities of petty traders and hawkers (due to carrying capacity, speed, and range of capabilities). NMVs may also play a direct role in creating sustainable livelihoods through employment opportunities for unskilled workers (driver skills are typically lower and maintenance is less skill-intensive). The efficiency and sustainability of NMVs can be maximized by stratifying different travel markets by length of trip and thus encouraging different travel modes for the different segments of the market, i.e. walking, NMV modes, or motorized transport. The emphasis on NMV modes is labour-intensive rather than capital-intensive and this means that they emit no pollution and use renewable energy. Thus, NMVs have an important role to play in urban transport systems and sustainable planning. NMVs are an appropriate and efficient form of transport where the construction of motorized roads is costly/unfeasible; where access is limited, NMVs can penetrate congested areas and improve travel time and provide route options. Bicycles, for example, may be widely owned and used, allowing the rider to travel long distances for low marginal cost. NMVs are threatened by:

- growing motorization and a lack of segregation from such modes;
- loss of street space;
- other changes in the urban environment, i.e. urban sprawl (meaning longer journey times); and
- energy use.

The informal privatization of transport services may produce a denser pattern of urban settlement. There is also a high rate of accidents associated with NMVs, presumably because of the competition for space on the road, inadequate driver



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training, and the lack of protection in event of a crash. Thus, projects that protect NMVs from motorized traffic in terms of safety and congestion may benefit the poor. Cultural considerations also play a part in the adoption of NMVs, as well as concerns over safety and the cost of purchase, i.e. bicycles may be associated with rural or village life and thus backwardness/ poverty. Micro-credit schemes may be used to enable the poor to purchase NMVs, or NMV operators may organize themselves into associations, and thus create the capacity to mobilize savings from members and negotiate with local authorities. Operators may then be given formal recognition by local authorities.

### **Pedestrians**

The prevalence of pedestrians as part of the urban traffic on roads suggests that walking is the only option for low-income groups not served by affordable public services. Pedestrians must be accounted for in any public transport policy encompassing the urban poor. A focus on the major journeys associated with employment opportunities may miss the shorter trips household members make on foot for subsistence purposes. Women and children may make the majority of these short trips to collect water and fuel or household supplies. These may be undertaken on a daily basis depending on household demand, household budgeting, and time. Measures to improve their safety include improving or providing:

- pedestrian access;
- pavements;
- junctions;
- crossings and overpasses;
- street lighting; and
- eliminating accident black spots.

### **Institutional reform**

The fragmentation of institutional transport efforts is highlighted by the involvement of many ministries and local authorities within a transport sector. There needs to be co-ordinated activities, services, and financing mechanisms in the development of inter-modal policy. A regulatory role for the state is also demanded. Public transport/ supply can be integrated into urban planning by:

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- using joint planning teams;
- sharing planning capabilities and responsibilities; and
- pooling financial resources.

There is a need to minimise urban public transport regulations and thus the barriers to supply of informal transport services. Involving the private sector in decision-making would also improve the distributive impacts of transport projects on the poor. Decisions must be made regarding the priorities in use of infrastructure or subsidy for public sector suppliers. There is a need for systems management. Public transport is part of the total transport facilities of urban areas, thus there is a need for co-ordinated activities between the various transport modes. Integrated planning would encompass motorization, public transport traffic congestion, environmental impacts, economic growth, social policy and poverty reduction, infrastructure within settlements, and land use planning. In addition, there is a need for institutional strengthening of local government ability to develop and manage the transport network.

### **Income generation and enterprise development**

Formal corporations and numerous operators in the informal sector meet demands for urban transport. These small operators have been able to match service, demand and cost by providing affordable services to the poor. These modes go where standard buses cannot, often giving a door-to-door service, tailored to what people can pay. In addition, these 'para-transport' services have evolved to adapt to low capacity and poorly interconnected road systems.

Yet there is criticism that the private sector is based on profitability not sustainability. Free entry to the transport market can lead to traffic jams, pollution, unsafe vehicles, unscheduled stops, decline in the quality of services, and businesses serving only profitable lines. The knock-on effects of a move from 'public' to 'private' may mean withdrawal of public services from low-demand routes and the loss of cross subsidies and thus withdrawal of fare reduction. There are a number of considerations that need to be taken into account as regards free entry to the transport market, including:

- motorized modes, which may be made in part by local manufacturers, should be subject to crash safety specifications to improve the safety of the vehicles; and
- the private sector may be equally prone to monopolistic tendencies and bad practice, i.e. it may focus on high-demand routes and avoid weak markets.

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For these reasons there is a clear need for the regulation of service standards and control to safeguard consumers.

### **Control of land use**

Residential segregation and compartmentalized land use activities accentuate the cost of maintaining existing, and developing new, transport infrastructure. For example, these distorted land-use patterns mean that children of lower income households have long distances to travel to state schools in the absence of schools in their own neighbourhoods. Urban sprawl and segregated land-use zones create greater fuel consumption, petrol use per vehicle, and pollution, as well as longer journey times. Cheap peripheral land for low-income residential location is used at the cost of having to provide and subsidize cheap mass transit systems to bring employment opportunities closer to residential areas. Location is important because proximity to the city centre brings increased modal choice and higher levels for trip making per capita. The number of trips tends to decline with increasing distance from the city centre.

There is then potential for the integration of urban development and transport planning, i.e. public transport corridors. These corridors would enable existing cities to be restructured by intensifying the development of commercial or residential areas along these connecting corridors. Large metropolitan areas are increasingly becoming decentralized structures with the development of multiple sub centres (new self-contained, complete communities, towns/ satellites) and local markets to supply basic household needs. The decentralization of land use also requires the decentralization of central government to district and local forms. This transfer of capacity, finances, and resources would bring decisions and services closer to the people. Thus, there is potential to prevent transport problems from becoming entrenched in these satellite towns. There is room for the packaging of land and property development rights with transport concessions. The role of security of land tenure for the urban poor also needs to be considered.

### **Bus services**

Experience has shown that investment in public transport has a financial risk. However, there is a rationale for investing in the efficiency and capacity of existing infrastructure. Private investment is likely to have an increasing role to play in improving the provision and performance of public transport services. There is a need to make better use of existing roads and bus networks to encompass:

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- consistency in fare structures;
- operation at night/weekends/holidays;
- marketing of services (advertising, promotion and ticketing, route numbers which are understood, timetables and route maps);
- redirection of spending from highways to public transport;
- the better use of existing networks and increasing the capacity of existing road networks;
- the speeding up of passenger transfer and congestion (off-bus payment systems, wide multiple-entry doors, bus shelters, dedicated lanes for public transport vehicles, traffic signals to give priority to public transport modes);
- the gauging of consumer satisfaction with the quality of service offered; and
- the segregation of motorized and NMVs, and the limiting of the use of vehicles in mainly pedestrian areas as well as providing pedestrian crossing facilities.

Managing the maintenance, operations, and renewal of existing systems is often more complex than managing new projects. Extensive community involvement (not just consultation) is required in the restructuring of services, to identify alternative policies (not just to steer people into a predetermined agenda). Much depends on the development of a 'bus culture' rather than a 'car culture'.

Transport systems should be economically viable and sustainable, i.e. low cost and high benefits. There are high capital costs for mass transit systems and so they might not be viable for low-income areas if these costs translate into unaffordable fares. The barriers to affordable urban public transport must be removed since public transport has the potential to be the most efficient mode, able to serve the majority of the population. The government also has a role in regulating and controlling tariffs to prevent undue increases, which are harmful to low-income users, and to monitor levels of service against pre-agreed targets. There is a belief that urban public transport must be subsidized in order to allow the poor to get to work. Artificially low fares may be used to support the urban poor (through cross-subsidy from more profitable routes or government blanket subsidy), controlled fares, subsidies, and operator subsidies. However, these subsidies can lead to overcrowding, loss of revenue from the better off, lack of vehicle replacement, and reduced incentives to operate efficiently, effectively and competitively. If subsidies are used, then, there is a need to monitor that

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policy objectives are achieved and the non-poor do not capture the benefits of targeted interventions.

### **Consensus building mechanisms**

In order to achieve efficiency and equity in transport operations and improve the treatment of poverty issues, it should be recognized that transport is not just a technical issue. The urban poor should be involved in collaboration with other users, suppliers, governments, environmental groups, and NGOs/ CBOs (Community-based organizations) to implement transport solutions and locate institutions that can deliver resources outside the control of the poor. Pedestrians, bicycle and public transport users, along with taxi users, usually lack organized voices. These stakeholders need to be included in policy decisions in addition to the powerful champions of the fuel industry, i.e. car and lorry drivers. The poor have little influence on political processes, hence, there is a need to incorporate the expertise, knowledge, and perceptions of communities of the urban poor in order to meet their needs and develop homegrown solutions specifically to local situations. A successful public/ private/ community interface depends on working with communities to define and develop good outcomes from legislation, regulations, authorities, government resources, political power and private sector involvement. That said, people's participation does not reduce poverty unless people have the capacity to organize, identify local resources, plan for and maintain change, and have bargaining power and the ability to negotiate with the public sector.



## Appendix 2

### **Methodological considerations**

The following are some of the considerations for the design of the research which were proposed in the Inception report and were perused during the research.

#### **The hypotheses to be tested and/or research questions and issues to be addressed**

The assumption of this research project is that transport services make a significant contribution to the livelihood strategies of the urban poor. Transport services' contributions (both positive and negative) to livelihoods includes access to employment and income generation opportunities, education, health, and social networks such as extended families, which can help in securing incomes and necessary goods and services. Variables that affect use include the cost and accessibility of transport services, reliability, safety getting onto and off the vehicles, along with levels of comfort during the journey, and location and quality of pick-up and drop-off points. Transport services have a further potential impact on environmental and health aspects of life in low-income settlements through noise, air pollution and traffic accidents.

With this understanding, this research project seeks to:

- investigate existing community-based, commercial, NGO and institutional roles and responsibilities for the provision of transport services in urban poor communities in case locations and, in so doing, better understand the impact of such services on the well-being of the urban poor;
  - identify improvements that can be undertaken;
  - establish a process that develops a momentum for the implementation of these improvements; and
  - develop a framework for use elsewhere in order to improve transport services for the urban poor.

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The research project seeks primarily to understand the differentiated perspectives of the urban poor with respect to transport. In order to identify service improvements, it is also seeking a better understanding of the perspectives of providers of transport services. The research process is designed to bring together these perspectives in order to increase the possibility of securing such improvements.

### **Possible methods to be used for collecting information/ data and analysis**

The following methods will be used for the collection of information during the research process.

- A literature review and synthesis of secondary data, including an historical analysis of transport provision in case locations and a review of existing user studies and existing studies of transport providers;
- Case studies in specific communities.
- Case study information will be gathered through semi-structured interviews with key informants in four to five low-income settlements. Focus group discussions with different ages, ethnic and gender groups within each settlement will follow up on issues identified through the individual interviews. The perspectives, problems and proposals of the urban poor in the case locations will be presented back to the communities at local meetings, both for validation and further exploration. The findings will be presented to a wide group of leaders from urban poor communities throughout the city.

If relevant, interviews will also be conducted with providers of transport services who are living within the case study areas.

- Analysis of transport issues for groups working across the city. Semi-structured interviews will be held with public, private and civil society representatives. Focus group discussions will also be held with the private sector providers (especially the drivers of the vehicles as strong, city-based organizations do not exist for this group) including trade associations. These private sector vehicles are primarily rickshaws, taxis, buses and mini-buses.

The semi-structured interviews will be analysed by the local research teams and the results further explored through the city forums.

- City Forums



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Using city-based forums, the information emerging from the interviews and analysed by the local research team will be further explored. The forums provide the means by which stakeholders can become involved in the research process. Each stakeholder forum involves five steps:

1. identify issues through semi-structured interviews (as described above);
2. identify further critical actors through the same interviews;
3. ask one of the interviewees to be a resource person presenting a perspective to a group of others from the same stakeholder group; the chosen individual is one who has an insightful view of the issues;
4. hold a stakeholder forum at which the perspective of the above individual is further discussed and explored; (At this stage, the local researchers use the analysed results of the interviews to provoke the discussion, presenting key problems and issues before them.) and
5. following the forum, the researchers draft a summary note and circulate this to participants.

The analysis of data will be undertaken in the following ways:

- Information from the semi-structured interviews will be compared across the case study communities, with similarities and discrepancies being highlighted. Comparative analysis (pattern matching) will also be undertaken by the user group and by the transport group. Differences between user groups, transport groups and settlements will be identified and further explored through the city forums.
- Numeric information (for example, on the numbers of journeys, cost of journeys, reasons for journeys) will be tabulated where possible.
- The analysis of information from the interviews will be summarized prior to the focus group discussions. The focus group discussions within the low-income settlements will be structured to allow for comparative analysis.

Verification will be primarily through triangulation with the following four sources of data being cross-checked to ensure reliability:

- individual interviews;
- discussions with communities and stakeholder groups;
- existing data on transport and the urban poor; and

- interviews with key informants.

### **Source and quality of data/ information to be used or generated in the research**

Secondary data are available on some of these issues and links have already been established with the relevant departments and institutions. Whilst these data are considered to be reliable, it is limited. In particular, there is no good information on the cost of transport, or on the perspectives of different groups of users.

The research will generate, as a result of participatory research methodology, very rich primary qualitative data. It will add to the existing data that are available locally and internationally. The local researchers will be supported with training and orientation in research methodology and will be closely monitored by the project team to ensure high quality data. At the same time, they will provide the contextual understanding necessary to maintain the quality of the outputs.

### **Methods chosen in relation to the research objectives and the possible alternatives**

There are two major alternatives that might be used: a more in-depth ethnographic study of the experience in one or more low-income settlement, or a more quantitative study with a structured questionnaire for statistical analysis. The chosen methodology is preferred because:

- **‘generalizability’**: the breadth of experience means that it is more likely to produce results that may be generalized, i.e. results that are valid across the city whilst, for the same cost, a household-level study would focus on a smaller area;
- **involvement of key stakeholders**: the emphasis placed on the interaction of important transport providing and transport regulating groups is to ensure that the findings address their needs and influence the dynamics within the transport sector; It is hoped that this will assist in the introduction of improved services; and
- **understanding experiences**: an exploratory study is required to better understand the experiences of the urban poor when using the transport system. We are anxious to identify a range of needs, possible problems and their consequences for the livelihood strategies of differentiated groups within the urban poor.

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### **Strengths and weaknesses of the chosen methods and implications for the validity of the conclusions reached**

It is believed that the most significant strengths of the chosen methodology are that it will:

- produce a rich understanding of local perspectives, differentiated by groups within the urban poor;
- engage key groups in the research process;
- provide a new source of information for stakeholder groups to consider; and
- enable recommendations for improvements to emerge from, and be considered within, the research process.

However, there are weaknesses within this methodology. The critical weaknesses are given below, together with a short discussion as to how the authors will seek to mitigate these problems:

**Representativeness of settlements:** The authors have concerns over whether the case study settlements are representative. The sample chosen can be criticized for not being sufficiently large to give an accurate representation of the experience of the urban poor. Care will be taken to examine the existing documentation of low-income settlements in the study cities to ensure that the areas for this research do not have anomalous characteristics.

**Representativeness of key informants:** City-based stakeholder groups are not necessarily representative. Not all the perspectives within each group may be represented at the meetings and second, there may be some groups that are not strong enough to participate through such forums. To address the first problem, care will be taken to interview both the main office bearers of any stakeholder group, and also any dissenting groups or individuals in order to present a variety of views. To address the second problem, care will be taken to interview more widely within groups which have weak representative lobbies (for example, drivers of private transport services); a number of additional workshops for such groups will be held.

**Limited vision of what is possible:** Whilst the research process will gain a comprehensive and detailed understanding of the transport-related problems faced by the urban poor, solutions are likely to be limited to those that existing stakeholders believe are possible.



## Appendix 3

### **Summary of case studies**

#### **Colombo, Sri Lanka**

##### **Background**

This study was carried out by a research team of the Sevanatha Urban Resource Centre, Colombo, and aimed to examine the links between the public transport system and livelihoods, especially among the urban poor. The team carried out interviews, focus group discussions and public meetings in six communities within the Colombo area. Care was taken to capture the special needs of distinct categories such as adult men and women, the physically impaired, school children and the elderly. This report presents the views of the users, service providers and regulators of the public transport system and presents their recommendations for improvements.

##### **The public transport system**

Responsibility for bus transport in Sri Lanka has been decentralized from the former Ceylon Transport Board and is presently managed by eight provincial councils covering the Island's nine provinces. When the councils were created, Regional Transport Companies (RTCs) shared the assets and responsibilities of the previous regional bus companies, with the state retaining 50 per cent of the shares and the remainder distributed among the employees of the RTCs. The objective of breaking the government monopoly in public transport was to provide a better service to the public, while at the same time providing an incentive to improve its management. At present, the public bus companies attract about 44 per cent of the daily passenger kilometres while the balance is met by private sector transport operators

The decision to allow the re-entry of the private operators into the public transport sector in 1979 was a (further) privatisation initiative. However, the study team felt that the whole exercise was carried out hastily without the necessary pre-requisite planning, infrastructure and regulatory framework, and

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this has led to a chaotic situation. They noted that there are no effective standards for public transport vehicles and a wide range of vehicles operate within the city. These range from old buses to minibuses, motorcycles and three-wheeler cycles. Most of these vehicles have a seating capacity of less than 30 passengers and the influx of such vehicles into the system has contributed to traffic congestion. There is poor co-ordination among the various actors in the sector, and a general lack of skilled personnel (drivers, mechanics and conductors). The private operations are characterized by a large number of individual owners (about 94 per cent) whose main aim is to maximize short-term profits with little regard for the safety and well being of passengers or for the impact on the urban environment. It is proving very difficult to control the activities of these operators and the biggest challenge facing the public transport sector is the unregulated competition by the private bus operators, particularly with regard to allocation of routes and time schedules.

Sri Lanka Railways, which has the status of a government department, provides both passenger and freight transport services throughout the island. The contribution of the railways to passenger transport has always been less significant than that of buses and private vehicles. However, it is estimated that about 15 per cent of the workforce comprising mostly residents of the suburbs and other regional centres make daily use of the rail service. Freight transportation has shifted significantly from the railway to road since the early 1990s, due to the poor performance of rail services as well as the limited coverage of the rail network. The recent Colombo Metropolitan Regional Structure Plan (CMRSP) has proposed the construction of a circular rail network to cover the city of Colombo and its suburbs, which would bring significant improvements to the passenger transport service within the city.

### **Public transport and the poor**

Colombo is the capital and the largest city in Sri Lanka, with a residential population of about 690,000. It is a rapidly expanding conurbation with a large number of poor informal settlements. About 50 per cent of its inhabitants live in these settlements, and most of them have to travel to the city centre each day to earn a living. It is estimated that about 400,000 people commute daily to and from the city. The studies showed that most households in the selected communities spent between 2.7 per cent and 8.9 per cent of their monthly income on transportation, which is below the national average of 12.4 per cent. Thus, transport fares may be said to be affordable for most people within the selected communities.

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It is evident that the public transport service makes a significant contribution to the livelihoods of individuals and especially the urban poor. Because of the widespread poverty within the city, most people are unable to provide their own means of transportation and so depend heavily on the public transport system for almost all their travelling needs. Thus public transport plays an important role in providing access to employment, education, health services, and other social functions. Unfortunately, the poor coverage of the present public transport system, together with the inadequate infrastructure, puts many people, especially the poor, elderly and disabled, at a disadvantage. In addition, since the services are not properly scheduled, such transport is often unreliable and occasionally passengers have to queue for a long time before boarding a vehicle.

The public transport sector provides employment and income generating opportunities for both the skilled and unskilled. Because there are no prerequisite qualifications, a large number of unskilled and uneducated people have found jobs as drivers or conductors. The operation of the vehicles also provides a source of income for the vehicle owners. In addition, the sector has led to the proliferation of small enterprises such as auto mechanic shops/ garages, dealers in spare parts, vulcanizers and so on.

### **Stakeholder perspectives**

Through interviews with passengers, operators and other key actors in the sector, a number of issues were identified.

#### ***Passengers***

Generally, there were few complaints about the level of fares, which suggests that most passengers consider the present fares to be affordable. Passengers are more concerned about the quality of the buses, the inadequate infrastructure and the behaviour and attitudes of bus crews. The lack of properly planned and maintained bus stops, shelters and terminals is a common complaint, as is the poor state of pedestrian facilities generally. Pavements are too narrow, poorly constructed and maintained, and are blocked by pavement hawkers and motorists, causing pedestrians to walk on the roads.

It was reported that there is a lack of appropriate outlets for making complaints and enquiries about public transport services. Passengers are unable to channel their complaints to the right authorities for the necessary action to be taken, and operators and regulators do not seek information on passenger needs and demands. Passengers felt that buses are generally poorly maintained and their interior conditions are totally inadequate. They also commented that competition among bus drivers leads to reckless driving, resulting in road accidents and,

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occasionally, loss of life. There is also a poor attitude toward passengers, especially women and children.

### **Vehicle owners**

A lack of proper guidance, rules and regulations at the initial stage of private bus operation has led to many private bus owners starting their businesses with a lack of proper technical knowledge or sense of responsibility. The lack of effective regulation and control by government agencies is a complementary problem. Some owners feel that they need government subsidies or incentives to help them provide an efficient, reliable transport service to passengers.

They complain that most of the city routes have become too congested with an oversupply of passenger transport vehicles, which leads to excessive competition among drivers. They also feel that three-wheeler operators have become a problem, due to the lack of regulation of fares and undisciplined driving behaviour. Private individuals have started operating school van services and it was estimated that about 7,000 school vans enter the city daily, leading to further congestion.

The majority of bus owners are individual operators, who simply seek to earn an income and make a profit on their investment. Due to competition with the uncontrolled number of buses and high running costs, their profit margins are constantly under threat. Operating to a strict time schedule, providing job security to bus crews, and providing an optimum service to passengers can easily be neglected in the effort to cut operating costs.

### **Bus drivers and conductors**

Private bus owners employ the minimum possible number of bus crew to save costs, so the drivers and conductors work 12 to 15 hours a day (starting at 4.30 or 5.00 a.m. and continuing to 7.30–8.00 p.m.) for five or six days per week. There is little job security, and the work is seen as lacking in professional status and respect. Poor social recognition of bus crews and ineffective law enforcement, coupled with a lack of proper training and performance monitoring, lead them to behave in an impatient, undisciplined, and irresponsible manner.

### **Regulation**

A number of agencies exist in Sri Lanka to guide and regulate public transport services. However, due to a lack of proper co-ordination at national as well as city level, these agencies fail to properly address the problems relating to public



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transport and to provide a quality service to the public. The large number of individually operated private bus services makes it difficult to control and monitor their activities. There is a view that the lack of strong political commitment to regularize the operation of private bus services is due to pressure from influential bus operators. Reckless driving by private bus drivers is an additional problem, due partly to poor law enforcement. There are also complaints that government-owned buses are restricted to inherently unprofitable routes, while the most profitable routes are left to private operators. This situation has led to a general withdrawal of services from some routes, so that some passengers are left without any form of public transport service available.

Regulatory agency personnel emphasize the need for all parties to co-operate in implementing traffic rules and regulations. It has been observed that there are currently no significant partnership arrangements in operation in the sector. The intended partnership between the Ceylon Transport Board and private bus operators proved to be unrealistic. Other transport modes, such as school vans, three-wheelers, and office staff transport vans, are operated mostly on an individual basis with no effective partnership arrangement. The issue of partnership arrangements among different modes of transport operators, as well as among the users, and regulators, should be considered seriously in the future.

### **Issues**

Passengers, service providers, and regulators were all asked to suggest ways to improve public transport within the city. Their main priorities were:

- Provision of bus bays, passenger waiting places, traffic signals, pedestrian facilities, and other infrastructure to improve passenger safety and comfort.
- Proper design of pedestrian walkways (pavements) to suit children, women, the disabled and the elderly; and the removal of hawkers from the pedestrian walkways
- The extension of bus routes to low-income communities.
- A campaign to educate both motorists and pedestrians on traffic rules and regulations, and to promote a better relationship between drivers of public transport vehicles and passengers.
- The implementation of strict measures to deal with indiscipline within the passenger transport sector.

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- Establishing a body to co-ordinate the activities of the private operators in order to improve efficiency within the public transport sector and promote the welfare of both passengers and service providers.
- Upgrading the employment status of private bus conductors by proper training, recognition, greater security of employment, and better conditions of service.

Although most of the above measures would be relatively costly to implement, there was no indication of how they could be realistically funded.

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### **Dar es Salaam, Tanzania**

#### **Background**

The city of Dar es Salaam has grown rapidly since the late 1940s. In the 1948 census the population was 69,227; by the census in 1957 it had grown to 128,742. During this period the city remained highly concentrated, with its boundaries on average less than five kilometres from the sea front or the then town centre. The growth has continued and the estimated population in 2000 was 2,286,730, with a continuing annual growth rate of about 4.5 per cent against the national average of 2.8 per cent. In 2000, the city was divided into three municipalities: Ilala (209sq.km), Kinondoni (501sq.km), and Temeke (684 sq.km) In total the city presently occupies 1,394sq.km.

#### **The public transport system**

In May 1974, Dar es Salaam Motor Transport was split into two semi-autonomous transport companies, namely Shirika la Usafiri Dar es Salaam (UDA) and the National Bus Service (NBS) commonly known as Kampuni ya Mabasi ya Taifa (KAMATA). While UDA was charged with the responsibility of providing urban public transport in Dar es Salaam city, KAMATA had the responsibility of providing inter-regional passenger transport services throughout Tanzania Mainland. Neither company was seriously expected to operate commercially; consequently they had no mandate to set economical fares and proposed fare increases had to be approved by the cabinet before being applied. This was probably intended to make public transport affordable to the poor, although there was no policy document to support this. Moreover, there was no mechanism to compensate the companies for the difference between economical fares and those approved by the government, which were far lower than those necessary to breakeven and cover costs.

Use of public transport by city commuters increased from 18 per cent in 1965 to 60 per cent in 1982, while walking remained almost constant between 1965 and 1968 and then decreased drastically from 68 per cent in 1968 to 25 per cent in 1982. City residents, especially the poor, who are captive commuters suffered from the inadequate service provided by UDA in the 1970s and early 1980s, which suffered a range of problems. These included:

- lack of foreign exchange to purchase spares directly from overseas where the price was relatively low;
- lack of qualified technicians, engineers, and transport planners to carry out regular maintenance, leading to frequent breakdowns;

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- buses failing to adhere to scheduled timetables due to increased congestion, especially on narrow roads in the Central Business District;
- poor relations between operators (drivers and conductors) and commuters, characterized by bad language, congested buses, long waiting times at bus stops, and the presence of pick-pockets inside the buses and at bus stops;
- an aged and obsolete fleet prone to breakdown (during 1981/82, 60 per cent of UDA's fleet was between six and seventeen years old);
- uneconomical fares that did not reflect current costs (while passenger fares remained stable for eight years from 1974 to 1982, operating costs doubled);
- high fleet replacement costs (while a locally manufactured standard bus cost TShs.235,000/= in 1974, in 1980 it cost the UDA TShs.700,000);
- while operating revenue per vehicle kilometre stood at TShs.9.50 in 1980/81, the operating cost per vehicle kilometre was TShs.14.40; and
- high staff/vehicle ratios leading to high overheads. It was already high in 1975 at 7.6:1 against a national standard ratio of 3:1, but rose during 1991/92 to no less than a 28:1 ratio for serviceable vehicles!

When the UDA was established in 1974, the government set and maintained low tariffs to promote the welfare role of public transport by making it affordable to most of the city dwellers. The gap that resulted from non-commercial fares was partially compensated for through government subsidies. Moreover, fares became even lower as a result of competition after liberalization of public transport, with fares in the range of US\$0.04 to US\$0.17 flat rate per trip.

The liberalization of public transport in Dar es Salaam came about due to the poor performance of the UDA, which was meeting only 60 per cent of demand. As a result, there were long queues at bus stops, buses were overcrowded, and commuters spent longer journey times in congested buses. In an earlier attempt to fill the gap in 1972, private operators started providing a public transport service parallel to UDA, but the government banned private operators in 1975. The demand gap then increased, prompting an influx of informal operators. Because daladala (minibus) operators were not complying with safety and traffic regulations, the government resolved to grant short-term operating licences to them as 'sub contractors' to the UDA, which had an exclusive licence or monopoly for providing public transport in the city.

In 1980/81, UDA tried to improve matters by buying 40 'Ikarus' buses from Hungary (150 passengers capacity), 45 standard single deck buses (90

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passengers capacity), and 20 minibuses (30–50 passengers capacity). Fifty-five bus shelters were built. Two hundred and thirty toolboxes for workshop personnel were bought through a grant from West Germany to improve vehicle maintenance. A 5-year corporate plan was prepared for the financial years 1981/82–1985/86, aiming to increase the fleet from 275 to 600 buses. It also sought to increase vehicle availability from 57 to 75 per cent, reduce usage per bus/year from 83,463 to 60,000km, increase the number of passengers from 99.7 million in 1980 to 327.8 million in 1986, and increase operating revenue per bus from TShs.758,805 to TShs.1,481,345. This was to be achieved by charging economic fares, training personnel, and motivating staff.

Prior to 25th July 1997, bus fares in Dar es Salaam were fixed by the Price Commission upon proposals made by UDA based on a 'cost plus' approach. The main reason for keeping fares low and subsidizing the company was that public transport was considered a service to promote commuters' welfare. However, the government's inability to fund these subsidies grossly affected UDA's performance.

### **Public transport and the poor**

While the government kept the fares below commercial rates, it had to subsidize the UDA in various ways. For instance, by 1978 the government had granted 42 per cent of the investment required by UDA as capital investment, which stood at TShs.77.146m (at current prices). Despite a massive injection of capital by the government into UDA and suppressed fares, records do not show any evidence that this support was intended to protect the urban poor. In other words, there was no specific policy to support the poor.

The period after 1983 saw the dominance of private operators over the UDA. However, there were various problems with privately operated services. Despite repeated government directives, the private operators were reluctant to carry students because school children paid only a fraction of the adult fare. It was also reported that daladala drivers often drove recklessly, and occasionally operated only for part of a route but still charged a full fare. This behaviour resulted from the fact that most daladala operators rent their vehicles on a daily basis, and so have to generate income over and above the rental payment in order to make a living.

Poor people were also affected by the fact that private operators were not willing to serve areas that had poor roads. The limited capacity of the buses used for public transport and the individual ownership profile do not lead to economies of scale, or encourage cross-subsidization. Bus services used to run (on certain

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routes) between 4am and midnight, with the highest number of buses available during the peak hours of 7a.m. to 9a.m. and 4p.m. and 7p.m. By the time of the case study (August 2001) availability was from around 5a.m. to 10p.m. Currently, there are 40 routes providing public transport in the city.

The main income sources for bus passengers are:

- petty trading, generating travel to wholesale markets and shopping centres, such as the vegetable and cereal markets and the fish market;
- formal employment, requiring travel to industrial areas, the Central Business District, and minor centres in the suburbs;
- schooling, social, and recreational activities, including travel by pupils to attend schools in the city centre; and
- farming and market gardening, requiring transport to take produce to market outlets in the city.

Students, the majority of whom are members of the less privileged sector of society, frequently face difficulties in travelling during peak hours as they pay a fare of TShs.50 whereas adults are charged a fare of TShs.150/= per trip and as there is no compensation arrangement by the government for the students' concessionary tickets conductors often refuse entry.

### **Stakeholder perspectives**

#### ***Passengers***

Most poor residents of Dar es Salaam rely entirely on public transport. Due to their high relative cost, most residents only use taxis during emergencies, for instance, such as the need to rush a sick person to the hospital. Cycling is not seen as a feasible option and most respondents (73 per cent) said that they are afraid to use bicycles for safety reasons, because the roads are narrow and congested, the climate is hot and humid, and vehicle drivers are observed to be reckless. The current fare charges for buses are seen as too high, especially for those who have to board more than one bus to reach their work places. Although there were many complaints about the quality of service, few respondents were prepared to pay a higher fare for an improved service.

Few respondents were happy with the bus services, and commented that daladala buses sometimes even stop in the middle of the road or at sites where visibility is poor. This was reported to be one of the prime causes of traffic accidents and

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traffic jams. The alternatives are medium sized Toyota-DCM, Isuzu, and Toyota-Coaster buses, which operate between Rangi Tatu and the City Centre/Kariakoo, or minibuses, which carry between 20 and 22 people. Even though these buses take much longer to reach their destinations, their fares are the same as those charged by minibuses.

Respondents claimed that both minibuses and larger buses operate without timetables or bus stops along the route. Because of the lack of bus stops, there is often undue traffic congestion and degradation of roadside pavements. Impatient minibus drivers who cannot cope with traffic bottlenecks aggravate the congestion. Interviewed passengers complained that disputes frequently arise because minibus drivers and touts often act rudely and cause inconvenience to pedestrians, cyclists, and vendors operating on the roadsides. Users added that because of the overcrowding, particularly during peak hours, passengers tread on each other's feet as well as push one another. The general feeling among the users was that even though ultimately people are able to meet their livelihood pursuits using the available public transport services, overcrowding, poor hygiene, and mistreatment of women and school children make public transport services in the city substandard and unattractive.

Infrastructure, such as bus stands, was also regarded as inadequate and dangerous, particularly for school children. Conditions at bus stops are generally poor and unhygienic.

Vehicles were frequently overcrowded, particularly during peak hours, and it was reported that women are pushed aside by men. Conductors were also reported to use abusive language against women and young girls who do not get into the bus sufficiently quickly. Buses were stated to be unhygienic, particularly on hot days. As a result, passengers' clothes are often soiled and wrinkled. Children complain that they are discriminated against by conductors, who block the door until it is filled by full fare-paying passengers. Other problems associated with public transport include unnecessary loud music, hooting, and smoking in the buses and pick-pocketing. Unfortunately, because bus drivers and conductors do not abide by the regulations that require that they wear uniforms, it is often difficult for passengers to differentiate between a "deiwaka" and "shanta" and a licensed driver.

### **Vehicle owners**

There is a demand for tax relief on the running costs paid by owners of daladalas, especially on some of the levies and other operational costs related to spare parts and fuel. Owners would like bus fares to be raised from the current range of

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TShs.100/=–150/= to Tshs.200/= to cover operational costs. They felt that traffic police should monitor bus movements at terminal points so as to check route shortening, instead of focusing on minor offences made along some roads.

There was a general demand for improvements in infrastructure. Owners felt that roads and terminals should be improved, so as to improve the quality of public transport services and accessibility. Other issues reported were provision of shelters and benches for passengers, public toilets, stormwater drains, bus stops, and parking bays at terminal points.

Vehicle owners felt that the issue of uniforms being worn by bus drivers and conductors should be left to bus owners to decide, instead of requiring staff to purchase uniforms from institutions identified by the Dar es Salaam Regional Transport Licensing Authority (DRTLA). There was a demand that the DRTLA should be more transparent, especially on the issue of allocation of bus routes. Finally, owners suggested a need to establish a course on public transport issues focusing on primary and secondary schools, so as to impart knowledge on the use of transport services by students.

### ***Bus drivers and conductors***

Many drivers and conductors complained that because they have to remit fixed amounts of money to the bus owners daily, they are obliged to use whatever means are at their disposal (foul and fair), so that they can reach the target, otherwise they will lose their jobs. They stated that they start early in the morning (usually at 5a.m.) and work until late in the night (sometimes beyond 10p.m.) without even a half hour break for lunch.

Drivers and conductors also complained about the lack of formal employment contracts with bus owners, which mean that the owners can terminate employment without a notice. Some drivers proposed that the DRTLA should help them to establish a Drivers' and Conductors' Association to help safeguard their employment and reduce excessive working hours. Many felt that unless all drivers and conductors are paid monthly salaries (as some are), mistreatment of passengers and reckless driving cannot be checked, because they are bound to obtain the target return agreed with the owners (plus some extra income for themselves). They felt that uniforms should be more durable and comfortable bearing in mind the difficult climate, and complained about corruption among the traffic police. Some suggested that the Public Corruption Bureau (PCD) should work closely with drivers and conductors to deal with the problem.



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### **Regulation**

The Traffic Department of the police force is responsible for designating and allocating routes to public bus operators, whereas the DRTLA is inter alia responsible for monitoring and enforcing route compliance among the operators. Currently there are 7,500 privately owned and 20–30 publicly owned vehicles, of which only 6,000 are properly registered and licensed. A permit for a route is normally valid for one year. The entire process from the time of lodging an application to its issue, takes about two days. Total costs for processing the permit amount to TShs.200,000/=. This excludes unofficial ‘incentive payments’, which certain respondents suggested may be imposed by corrupt officers involved in the permit and or route allocation process. The police force is also involved in inspecting vehicles for their roadworthiness and testing of drivers for professional competency in driving various categories of vehicles.

The authors of the case study concluded that there is no clearly defined and applicable urban public transport policy to make Dar es Salaam an attractive place to investors, residents, and especially the urban poor. They felt that the regulatory institutions are ineffective as there are no procedures for assessing customer service levels or providing a forum where stakeholders could propose improvements.

### **Issues**

Dar es Salaam has the highest rate of population growth and urbanization in Tanzania. Most of the poor depend on public transport for their livelihoods. However the authors of the case study concluded that there is no clear policy on the part of the government to ensure provision of an affordable, convenient, and efficient means of accessibility, especially to the poor. Some of the main issues affecting the poor are as follows.

- Poor road conditions are a general problem, and there is a case for prioritising investment on the main bus routes. There is also a need for investment in associated infrastructure, such as bus terminals.
- Seventy-five per cent of residents live in ‘unsurveyed areas’, which lack essential social services such as roads, clean water, electricity, schools, and health facilities; such residents also suffer from the absence of direct access to public transport.
- The road network in most parts of the city does not encourage the use of non-motorized transport. Taxes are high, and very few of the poor can afford to own a bicycle or a tricycle, even if road conditions were suitable for their use. There are no separate lanes for cyclists and pedestrians.

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- Public transport in Dar es Salaam is dominated by private operators, most of whom own only one vehicle. It could be argued that this fragmentation is the cause of poor public transport services (although earlier experience with the UDA does not present a strong case for a public sector monopoly). The fragmented provision of public transport makes it difficult to prepare focused plans and effective traffic management. This particularly affects the poor.
- More effective regulatory and inspection procedures are required. This could include shortening routes, removal of vehicles that are not roadworthy, improving cleanliness, revoking the licences of reckless drivers, penalizing bad behaviour by conductors, and prohibition of operators from carrying excess passengers; *daladala* buses should be checked or inspected regularly for roadworthiness.
- Public transport for school children needs special attention, since they are frequently denied access to public transport services due to the disparity between adult and children's fares.
- There is a need for alternative means of goods transport. A number of residents recommended the establishment of shared goods transport so as to transport goods from the wholesale markets to settlements where the poor households require them to sustain their livelihoods.
- There is an urgent need to establish a forum for discussion whereby bus owners, operators, and users would meet to discuss pertinent problems on public transport. One of the issues which needs urgent attention is a provision for employment contracts or agreements between bus owners and operators so as to safeguard the interests of both parties; at the same time such agreements might improve the quality of public transport services to the users.

## **Faisalabad**

### **Background**

Faisalabad had 1,977,246 residents at the time of the most recent census in 1998, and it is likely that the population is now well in excess of 2 million. The traffic growth rate was 4.25 per cent in 1991, and that growth rate is likely to have been at least maintained since then. Public transport availability varies strongly according to the nature of the community, but has certainly not grown at the same rate as the workforce. Sixty per cent of the city's population live in 'colonies', which are planned developments recognized and accepted by the council. The remainder live in '*katchi abadis*' (houses developed in an unplanned manner and illegally occupied by squatters) or slums consisting of poor people who have moved to the edge of the city in the hope of finding work or education.

Public transport services generally only cover the 'colonies', so the poor lack ready access to work opportunities and essential services, such as education or health. Land distribution in 1996 showed that the residential area covered 46 per cent of the city land compared to the 1.8 per cent for roads, many of which did not have public transport services running on them.

### **The public transport system**

Although there is a considerable variety of modes of public transport in the city, including tongas, conventional rickshaws, motorcycle rickshaws, buses, wagons, and taxis, the market is dominated by Suzuki pick-ups. Their key comparative advantage stems from the lack of control on route permits, or any other form of meaningful regulation on the public transport services provided. Even though permits exist today, the system is not tightly regulated. There have been some attempts to allocate particular Suzuki pick-ups to various routes and areas of the city. However, there are so many different providers and such a high demand that overcrowding becomes a serious issue. Traffic signals have recently been installed in the busiest areas of the city, but these only cater for the flow of motorised vehicles. Pedestrian crossings have not been provided and signs for road safety are very limited.

City buses, wagons, and pick-ups are overcrowded during peak hours. Some passengers are forced to travel on the roof in order to get to work or school on time. The capacity for the urban bus is 50, but during peak hours buses reach 100 passengers due to standing, sitting on the roof, and holding on to attached ladders. The government has failed to maintain a fleet of vehicles and corruption has limited the provision and regulation of public transport. Since private operators find it uneconomic to service routes on the outskirts during off-peak

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times, users are unable to rely on the service to undertake economic or social activities. Despite a high frequency, services are still not adequate to meet passenger demand in off-peak times on some routes.

### **Public transport and the poor**

Transport services make a significant contribution to the livelihoods of most individuals, especially the urban poor. Better understanding of the operation of the public transport system is required to improve employment, income generation, education, health, and social networks. The disparity in service between different parts of the city might be tackled through cross-subsidization. An improved frequency of services is desirable, as well as more discipline in adhering to timetables. Regulations are required to stop excessive noise and air pollution as well as to stop overloading. Under a public-private partnership, it should be possible to foster competitive bidding for route or area contracts and affordable fares. Policies could be developed through discussions at forums including users, operators, and regulators.

### **Stakeholder perspectives**

#### ***Passengers***

Users have suggested that an improved public transport system would significantly improve their access to education and health services across the city. They also commented on the efficiency gains from reliability and work opportunities that would also be a benefit of improving public transport services. Passengers complained that the council had reduced spending on public transport, and were keen to see this policy reversed. The roads are not in good condition or wide enough for the density of traffic that attempts to travel on them during peak periods. More than 72 per cent of the people were unhappy with the level of service they were offered through public transport. Many complained that clothing was dirty after trips on buses or wagons. Sixty-three per cent stated that transport was dangerous and 90 per cent suggested that the overall standard was bad for passenger's health.

44 per cent of respondents use public transport for work, 38 per cent for education, and only 10 per cent for shopping. Travel on foot is sufficient for short journeys, but for any long distance public transport is essential. The average family will not be able to afford their own car or motorized transport, but might have 2–3 bicycles or perhaps a donkey and cart. Most users live in households with around 6–8 people. In some areas the literacy rate is only 47 per cent, which means that jobs are often poorly paid. The cost of transport is a high proportion

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of users' incomes, and their disposable income is always very low. Thirty-five per cent of the people in the survey earn Rs.2,001 to 3,000 and 22.5 per cent earn Rs.3,001 to 4,000. There was only one person found who had an income over Rs.5000. Due to the size of the city, jobs are spread across a substantial area and it is difficult for people to find work close to their homes.

### **Vehicle owners**

Owners recognized that their employees were largely untrained, and the survey revealed that 76 per cent were illiterate. Few crew members understood the mechanics of the vehicles they were driving or conducting. Management controls were minimal, and the drivers were trusted to return daily incomes to the owners after a day's work.

### **Bus drivers and conductors**

There was little evidence that the drivers or conductors were officially trained and few had contracts for work. They were paid on a weekly or day-by-day basis and could lose their jobs if they did not achieve certain targets each day. Both drivers and conductors often worked 10–12 hours a day with only a small break for lunch. Drivers and conductors have no choice but to work these hours, as there are no unions or government organizations that they can turn to for help. If they don't work then someone else will do their job.

Regarding traffic rules and regulations, the government has produced few clear guidelines; even these are rarely studied by drivers or conductors. However, 89 per cent said that the traffic signals and signs were below standard. They believed that corruption exists within the police. Since fines imposed for infringement of the rules can be costly, drivers are tempted to offer bribes to officers. The officer does not report the offence, but obtains cash as a bribe; drivers or conductors only have to pay a small amount and still keep their job. Traffic violations include:

- driving without a valid licence;
- use of horn near hospital and schools, even using a pressure horn;
- driving on full beam at night;
- driving unfit vehicles emitting black exhaust fumes; and
- overloading passengers inside or on the roof of the vehicle.

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### **Regulation**

Regional Transport Authorities (RTAs) were established under section 46 of the Motor Vehicle Ordinance, 1965, with power to:

- issue route permits to all motorized vehicles;
- issue vehicle body manufacturing licences;
- check overloading;
- issue licences to goods forwarding agencies; and
- impose penalties on violators.

After separation from the Sargodha Division in 1982, an independent office of the RTA was established for the Faisalabad Division. With the introduction of the District Government plan in 2000, the administrative set up was amended and the RTA is now responsible for the Faisalabad District. It has started planning to reduce traffic congestion at important junctions, especially during rush hours, and has suggested the following measures to improve the system:

- provide effective training courses for users, operators, and regulators;
- eliminate corruption;
- construction of good quality roads; and
- reduce encroachment from the city, particularly the Central Business District, to improve transport flow.

The office of the Motor Vehicle Examiner reports directly to the Secretary of the RTA and operates under the powers of Motor Vehicle Rules. Its main functions are to:

- issue roadworthiness certificates to all modes of motorized public transport operating on roads within Faisalabad District;
- renew roadworthiness certificates within the stipulated period; and
- impose penalties on those found guilty of running unfit public transport vehicles.

The Traffic Police Department is responsible for:

- issuing licences for Heavy Transport Vehicles (HTVs) and Light Transport Vehicles (LTVs);

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- controlling the flow of traffic on the city roads;
- implementation of traffic laws and watching for violators;
- apprehending defaulters and following up traffic violation cases;
- designating parking places and one way streets;
- restricting or allowing certain vehicles to travel particular roads;
- fixing timings for the entrance of heavily loaded traffic (trucks) to city premises;
- setting routes for the passing of intercity transport; and
- checking vehicle ownership and holding stolen vehicles on behalf of the Punjab Police.

The main responsibilities of the Tax Branch are:

- issuing licences or permits for animal drawn vehicles, such as donkey carts, horse carts, *tongas*, camel carts, bullock carts and so on;
- enforcing and implementing bylaws for animal driven transport; and
- imposing penalties on violators.

There is a general suspicion of both regulators and operators, and a wish that traffic laws should be followed ‘to the letter and spirit’, that corruption should be eliminated from the system, and violators should be strictly penalized

### **Issues**

The study demonstrated the urgent need to improve the access to and quality of the urban public transport system. The government faces a growing dilemma due to the widening income gap. Income inequality is high within Faisalabad and this causes problems for the pricing of public transport. With some individuals living on less than \$1 per day it is impossible for them to contemplate the use of public transport unless it is heavily subsidized. Existing partnerships need to be strengthened and there is a case for the government to establish a consultative council as a forum for the views of users, operators, regulators, and other interested parties. There is also a strong case for a drive to eliminate corruption from regulatory and other authorities.

Inadequate infrastructure is a basic problem. The government has to either find funding to build new infrastructure or allow the private sector a role in financing the works through some form of PPP (public-private partnership) arrangement.

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Most of the poor areas are not directly linked to the main roads, and local roads are in a very poor condition. As well as roads, infrastructure such as pavements or cycle lanes are needed to make walking to work or school safe and accessible. Traffic management measures, such as one-way streets, removal of encroachments, and better signalling, may be helpful. Apart from new building, the maintenance of existing infrastructure is also an urgent priority.

The government can act as a regulator of the system, but must strictly enforce rules that will ensure their objectives can be carried out. These tasks include:

- developing enforcement technology systems;
- strict criteria for the fitness of vehicles;
- strict enforcement of the traffic laws to reduce speeding and overcrowding;
- introducing traffic warden schemes;
- ensuring safety of school transport;
- promoting community involvement in roadside maintenance;
- improving the training of traffic police;
- analysis and research on road safety;
- better systems of accident rescue and first aid; and
- training public transport staff (particularly drivers and conductors).



## Appendix 4

### Photographs

#### Transport - Tanzania



# Transport - Sri Lanka





## Also in this series:

### Partnerships to Improve Access and Quality of Public Transport:

*A case report: Colombo, Sri Lanka*  
*SEVANATHA Urban Resources Centre*

*A case report: Faisalabad, Pakistan*  
*Atta Ullah Khan, assisted by Wajid Hassan*

*A case report: Dar es Salaam, Tanzania*  
*W. Kombe, A. Kyessi, J. Lupala and E. Mgonja,*  
*University College, Land and Architecture*



### Urban Public Transport and Sustainable Livelihoods for the Poor:

*A case study: Karachi, Pakistan*  
*An 18 minute WEDC film based on information taken*  
*from this publication is available on video and DVD.*

