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A participatory approach to urban transport planning in developing countries

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Abstract

Traditionally transport planning and policymaking has used quantitative surveys to predict future demand for public transport. However, this paper argues that a more participatory approach is required in order to better understand household activity patterns and the impacts and implications of travel on livelihoods. Such an understanding will enable transport planning and policy to support the needs of low-income people and achieve broader poverty alleviation objectives.

This paper draws on case studies undertaken in Harare (Zimbabwe), Accra (Ghana) and Colombo (Sri-Lanka) as part of a broader study carried out for the DFID Knowledge and Research Programme. The authors look at the impact of public transport on certain dimensions of poverty, consider the links between urban transport and other sectors (health, education and employment) and summarise key methods of enquiry that might be adopted in effecting a more participatory approach to transport planning.

Key words: Public, private, partnerships, regulation, urban, poor, transport

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1 INTRODUCTION

Traditionally urban transport planners have been concerned with understanding trip or journey patterns (in terms of both distance and time) as an indicator of travel demand

1. Whilst, household trip rates can be disaggregated according to household attributes or characteristics and used to forecast future demand for transport⁴, one problem with this approach is that it focuses on average values and patterns (which reflect an historic and largely static picture of transport supply). Hence such quantitative approaches tend to conceal any variations in demand of interest to policymakers and planners together with much of the detail of transport use and supply 2.

This paper examines the case for a more participatory approach to urban transport planning than has taken place in the past. It is suggested that more information is needed to inform policy about the impact of interventions and planning on the poor, within efforts to improve the quality and access to public transport. For instance more information should be collected on:

- Transport patterns (trip rates and purposes, distances, the roles 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

⁴ Given a knowledge of how population characteristics are expected to change over time.

- 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.
- Level of services in communities; do other interventions such as health and schools, precipitate the generation of new travel routes?
- Activities of the urban poor; livelihoods activities, productive, personal investment activities, i.e. health care/education, investment in social networks and leisure activities

It is argued that collecting this kind of information through a more participatory approach would enable policy makers and planners to understand both the nature of activity patterns⁵ within the urban areas, and the role (both current and desired) of transport in meeting the livelihoods aspirations of the urban community 3. Furthermore, this kind of information would be an aid to predicting the likely outcomes (on poverty and in terms of impacts on the activities of the poor) of interventions (both direct and indirect) that influence the performance of the transport sector, and to suggest remedial measures as appropriate.

This paper focuses on how transport planning and policies can be developed to better support the needs of the poor⁶, whilst also contributing to the objectives and performance of other sectors (for example, health, education and employment) 4 5.

⁵ We take activity patterns to describe the nature of both individual and household movement that is undertaken as part of the process of fulfilling a particular lifestyle. It encompasses the need to access schools, medical facilities, job opportunities, etc. where activities take place, and hence the travel implications of 'reaching' the activity. The term is inclusive of the organisation and management of activities, the demands placed upon available resources (and hence the decisions that need to be taken by household members on sharing of resource access), the influence of household (and individual) characteristics (location, income, transport ownership, etc), and the activities that are to be pursued.

⁶ For example Millennium Development Goal 2: to achieve universal primary education, and Millennium Development Goal 4: to reduce child mortality.

Research techniques and methodologies are presented that might be adopted in effecting such an approach. These findings are based on a study undertaken as part of the DFID Knowledge and Research Programme⁷ and uses examples from case studies carried out as part of that study in Harare (Zimbabwe), Accra (Ghana) and Colombo (Sri Lanka) 6 7 8 9 .

⁷ Activity Patterns, Transport and Policies for the Urban Poor. Engineering KaR Research Project R7789.

2 TRANSPORT AND THE URBAN POOR

Poverty attributes

In recent years the justification for investing development aid in transport has shifted from that of pure economic efficiency to equity considerations: that is, *in what ways does transport provide benefits and disbenefits (disadvantages) for the poor?* There are many dimensions of poverty, but for the purpose of analysing the impact of transport, poverty is described below in terms of four key assets. This typology is based on the findings of the case studies undertaken in Zimbabwe, Ghana, and Sri Lanka.

- Economic growth: Transport networks and infrastructure are critical to the quality of formal and informal transport services and the provision of facilities for pedestrians. Transport related infrastructure and services contribute to economic growth by creating new opportunities for investment and employment and by mobilising human and physical resources. The improved productivity and output that transport contributes to helps to ‘lower transaction costs, allow economies of scale and specialisation, widen opportunities, expand trade, integrate markets, strengthen effective competition, and eventually increase real income and welfare of society. Without efficient transport, economic growth is not possible, and without growth, poverty reduction cannot be sustained’ 10.

There are distributional aspects to growth in that the growth may favour particular sectors of society. Redistribution can involve targeting transport interventions at the poor directly, (for example by creating employment within the transport sector, improving the affordability of transport, increasing access

to transport services that increase opportunities/social networks needed to find employment and income generating opportunities), and in this sense projects aimed at improving public transport can be viewed as pro-poor. However, such projects may not be as efficient economically as others to which the money can be put. This presents the difficulty of balancing efficiency and equity 11.

- Capability is that element of poverty associated with quality of life and refers to a person's capability, skills, knowledge and ability to labour. Transport can play a big part in improving this attribute of poverty by providing access to land and housing, education and training, healthcare facilities, social services and so on; that is, by providing access to the opportunities and means to improve human capital. Provision of adequate public transport can also reduce the extent of stress, injury, and mortality from travelling.

- Empowerment is that dimension of poverty that reflects the need (and inability on the part of the poor) to access and participate in political and social processes and networks such as financial services and income generation opportunities. Transport is a mechanism for supporting effective participation and maintaining social networks to strengthen social capital 12.

- Security reflects the vulnerability of the poor to the uncertainties of life (particularly the vulnerability of poor people to sudden shocks), and the ways in which they cope. Adequate provision of transport related infrastructure and services should contribute to greater security by removing any sense of

vulnerability or lack of personal security, which is a product of immobility, defined by isolation, marginalisation and risk. Furthermore, transport services should safeguard the quality of the local neighbourhood environment in terms of noise and pollution 13.

Interventions which impact on transport, and their outcomes

Table 1 identifies some of the possible transport interventions at policy, planning and strategy levels, and the possible outcomes those interventions could have for the attributes of poverty previously listed. Interventions may be of an indirect or cross-sectoral nature (for example, the locational policy of education facilities which will impact on transport requirements for students); alternatively interventions may be direct (for example, the policy adopted by government towards transport competition will impact on service availability and cost, hence will impact in turn upon access). The direct interventions, or transport projects, usually consist of a number of related components that address policy, institutional and regulatory issues, as well as infrastructure investment and operational efficiency.

Table 1: Examples of potential transport interventions and their outcomes

Level of intervention	Interventions (which affect or are part of transport)	Potential transport impacts and poverty outcomes
Macro-level: cross-sectoral policies	<ol style="list-style-type: none"> 1. Gender policy. 2. Decentralisation policy. 3. Location policy for health and education facilities. 4. Policies for people with disabilities. 	<ol style="list-style-type: none"> 1. A positive gender policy may impose planning and operating conditions on transport development. 2. Level of transport 'expertise' diluted by decentralisation – possibly less chance of planning for the poor. 3. Transport has to adapt to decisions made in other sectors; this is not necessarily efficient for sector. 4. A positive policy for people with disabilities may impose planning and operating conditions on transport development.

Transport sector policy and programmes	<ol style="list-style-type: none"> 1. Regulation and control of transport sector (standards and quality, quantity, fare levels, etc.). Distinguish between those who should enforce the laws and those who enforce contracts. 2. Policy in respect of dealing with growth in travel demand (e.g. encouraging mode shift). 3. Improved planning processes, which include participation (from the poor, including the voice of women, youths, the elderly and vulnerable). 	<ol style="list-style-type: none"> 1. The quality and performance of an urban transport system (and hence its impact on the poor) may depend critically on policies and programmes. 2. Funding for new schemes where the returns will be over a long time (e.g. new infrastructure) versus spending in the short term (i.e. subsidised public transport) and hence achievability of targets. 3. Policies if developed must be seen to be implemented or will lead to apathy in the participatory process. 4. People may expect something or some improvement for their participation (what's in it for me!). If nothing happens they might be less inclined to give up their time in the future.
Transport infrastructure	<ol style="list-style-type: none"> 1. New and rehabilitated roads and other transport infrastructure. 	<ol style="list-style-type: none"> 1. Improved transport productivity feeding through to economic growth, and hence job opportunities for the poor (but perhaps not for women). 2. Direct job opportunities in construction work. 3. Involuntary resettlement of the poor (burden for women). 4. Possible environmental damage. 5. Easier travel (and hence access to externally provided facilities, social networks and participatory machinery). 6. Decreased cost of vehicle running costs through better road conditions. 7. Boarding of transport made easier for the disabled and children (e.g. enclosing open drainage channels) 8. Poor construction and interaction of roads and urban drainage systems could increase water and sanitation problems.
Transport operations	<ol style="list-style-type: none"> 1. Investment in public transport. 2. Support measures for non-motorised transport (NMT). 3. Traffic management. 4. Training programmes and support for operational staff. 5. Enhancements in enforcement. 	<ol style="list-style-type: none"> 1. As with transport infrastructure, improved productivity feeding through to economic growth. 2. NMT will possibly benefit the poor but will impinge on economics of motorised transport(MT). 3. Less accidents (of which the poor are usually victims) through better driving. 4. Removal/retraining of poor drivers/mates who have a negative affect on other road users and passengers.

3 METHODS OF ENQUIRY

The purpose of this research was to find out why regulation of public transport fails in developing countries and how to increase the effectiveness of regulation for sustainable public transport. These kinds of questions led to the selection of a case study approach for this research. It was understood at the outset that case studies

would not generate statistically representative generalizations; however, they would contribute to the logical explanation of events on the basis of both quantitative and qualitative data 14 15. Case studies were undertaken in Harare (Zimbabwe), Accra (Ghana) and Colombo (Sri-Lanka).

Stakeholder consultation is a mechanism to facilitate the exchange of perceptions, attitudes, values and knowledge of those affected by or who significantly affect the transport planning and development process 16. Broadly, stakeholders in transport include the:

- community in general and in particular the poor, disabled, women and other disadvantaged groups (as users),
- operators such as bus companies, drivers associations, owners associations etc. (as suppliers) and
- regulators/administrators of public transport (primarily the transport ministry concerned and other government agencies, private bus companies, municipal traffic departments, city traffic police and licensing authorities).

It is clearly important to involve all stakeholders interests from the outset. Box 1 indicates the very extensive range of stakeholders that were involved in the participatory work in Accra, Ghana.

Box 1: Stakeholder analysis in Accra

The following groups were identified from within each of the communities:

- Women
- Men

- Opinion leaders
- Youth (mainly unmarried people from post-school age to late 20s)
- Citizen-based organisations (CBOs)
- Vulnerable groups
- Older school children (girls and boys between the ages of 12 and 15)
- Younger school children (girls and boys between the ages of 6 and 8)
- People with disabilities

Transport Regulators (those who (should) enforce the laws and those who (should) enforce the contracts)

- Ministry of Roads and Transport (initially the Ministry of Transport and Communications before government reorganisation)
- Town and Country Planning Department
- Department of Urban Roads
- Accra Metropolitan Roads Department (AMRD)
- Ashiedu-Keteke Sub-Metropolitan Assembly
- Ablekuma Sub-Metropolitan Assembly
- Accra Metropolitan Assembly (AMA)
- Driver and Vehicle Licensing Agency (DVLA)

Transport Operators

- Transport unions
- Government operators
- Private company operators

Other Stakeholders

- Ministry of Education, Accra Education Department, Education Officers and Teachers
- Accra Traffic Police (MTTU)
- Ministry of Social Welfare
- National Road Safety Council
- Department of Feeder Roads
- DFID Rural Livelihoods Office in Accra
- Other COMPTRAN (local consultants) departments
- Academic researchers

Drawing on a variety of appropriate quantitative and participatory approaches and methodologies, a participatory approach to transport planning should:

- identify and prioritise transport problems;
- assess the impact of transport constraints on other sectors; and
- identify possible solutions to counteract any adverse affects on people's livelihood opportunities.

It is believed that the most significant strengths of stakeholder consultation are that it:

- Produces a rich understating of local perspectives, differentiated by groups within the urban poor
- Engages key groups in the research process
- Enables all stakeholders to collaborate and forge a consensus on planning decisions and to prioritise interventions
- Provides a new source of information for stakeholder groups to consider
- Enables recommendations for improvements to emerge from, and be considered within, the research process.

There are a number of techniques that can be used to facilitate this process and these are discussed below with reference to the case studies undertaken in Zimbabwe, Ghana and Sri Lanka.

Key informant interviews. Interviews can be used to understanding how health, education, employment and transport systems are organised and function, as well as the way in which each sector is utilized by the poor, and the inter-connectivity

between sectors. Interviews would address the institutional capacity of the organisations involved in the provision, operation and use of transport and target among others:

- local and central government officials;
- transport operators and staff; and
- education and health officials and staff.

Participatory work. The general approach to the case studies performed for this research was to use focus groups to establish key issues and problems that relate to transport. The output from this technique was a broader appreciation (for particular target groups) of the resources needed for transport and the strategies employed by urban households to improve their livelihood outcomes and life chances. This information fed into the overall analysis of survey data, and more specifically helped to triangulate the data extracted from the questionnaire surveys on the behavioural and attitudinal aspects of the purposes of urban journeys by public transport.

Transport surveys. A transport survey of service availability should be undertaken to identify the transport opportunities available and should include information such as:

- characteristics of public services available (modes, frequency, operational times etc.); and
- frequency, distance and cost to key locations (e.g. schools, city centre, shopping facilities, health centres and so on).

These surveys may be based on existing data sources. However, even where they exist, these data sources will largely only provide inventories of transport facilities; covering road safety, road provision, vehicular fleet(s), transport prices and public transport output. There is usually no information on the quality or level of service being provided. Additional data can be captured through bus and car journey time and loading surveys; passenger and driver interviews; passenger waiting time surveys; traffic counts; and by the monitoring of prices. Each survey will yield information for more than one performance indicator and conversely, some performance indicators may be a composite from different survey types. For example, transport prices can be determined from driver interviews or passenger surveys, but information from both surveys may be needed to give a complete picture of fare structures, including any informal aspects of pricing policy.

Household surveys. Small-scale household surveys can be implemented, where appropriate, to provide benchmark information of how communities, households and individuals make use of the transport system available to them⁸. The purpose ultimately is to relate ‘transport issues’ identified by the focus groups to quantifiable data describing the activities of typical households.

A household travel diary can be used to collect information relating to the travel patterns of particular households over a continuous period of one week. In each of the six case study settlements selected for this research, five households were identified for creating a travel diary. The checklist of points to incorporate in diary entries included:

- Basic household data, name of the settlement, address, name of head of household, number of household members and number of members who engaged in daily travel.
- For each household member the following information was collected: dates of any trips taken; purpose of each trip; starting time and distance to destination; mode of transport used and the distance travelled using that mode. Normal time required to reach the destination, the actual time taken and the waiting time for transport.
- Cost of transport, any problems faced during the travel and how those problems affected the user and the user's opinion of the transport mode used.

Detailed activity analysis at household level. A limited number of households can be studied to establish in greater detail how transport related activities within the household are organised and managed. Such analysis will help identify where decisions on transport play a critical role in achieving activity goals, by providing:

- a clearer picture of what constraints and influences the existing transport system imposes on household activity patterns;
- the extent to which these constraints and influences are important (within a livelihoods framework); and
- hence (with a knowledge of how the transport system functions and the opportunities for change) the extent to which changes could be made to the transport system so that it might better serve household needs.

⁸ It is important to note that the dynamic of social and cultural circumstances within a 'household' is

4 KEY FINDINGS

This section presents generic findings, derived from a participatory case studies in Harare (Zimbabwe), Accra (Ghana) and Colombo (Sri Lanka). Transport provision in these cities is assessed in terms of its cross-sectoral effectiveness and its success in meeting user's activity requirements. The issues involved, and how user-friendly transport policy might be developed are discussed in the following section.

Cross-sectoral impacts

Some of the cross-sector influences in which transport plays a part have already been indicated in Table 1 (at the macro-level). Table 2 summarises the findings from the cases studies to give more detail on specific sectors.

Table 2: Transport cross-sector links.

Sector	Issues which impact on transport
Health	<ol style="list-style-type: none">1. Healthcare facilities and location policy. A key issue for transport provision concerns the types of facility, frequency of use, and ease of access by users. The cross-sector trade-off is likely to be between facility size (and the economies that can be gained by the health sector from larger size) and proximity to users (who, the further they have to travel, must rely increasingly on expensive transport).2. Another dimension to this trade-off concerns the ability to provision the facility; in particular, it may be harder to staff a large, more centrally-based facility, than a number of smaller units that are more dispersed and easier to access.
Education	<ol style="list-style-type: none">1. The issue for education is very similar to that of the health sector, the trade-off occurring between size of school facility and ease of transport access. For example, in terms of access for pupils and staff, some teachers are forced to go to the city centre and then come back out again (i.e. routes run in and out but radial routes are not common, which affects the central versus dispersed question).
Formal employment	<ol style="list-style-type: none">1. The location of employment opportunities with respect to community dwellings is crucial to the levels of transport needed to get commuters to and from work.2. Transport also provides an employment opportunity. However, in the formal sector, opportunities may be limited because of reactions against public sector involvement in transport operations, and the non-competitiveness of 'big-bus' operations.

changing over time, and local variances must be accounted for.

Informal employment	<ol style="list-style-type: none"> 1. Informal employment is often concerned with trading activities, and the special needs of traders to access urban markets 2. The informal transport sector is a very large source of employment for unskilled and semi-skilled workers. 3. Transport operators can be insensitive to informal traders as their goods can be seen to be taking up seats/room. They are then forced to hire vehicles at several multiples of the bus fare.
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In general, cross-sector issues are about location and travel distances for those who need to access facilities. In many instances there is no significant problem: for example, community clinics in residential areas are the first point of medical attention for the poor. Private sector hospitals and clinics are mainly used by more affluent people but were clearly unaffordable by the majority of residents living in the six areas under survey. Similarly, primary education in Zimbabwe was usually community-based. However, it was found that transport increased at secondary level, when students will be expected to travel longer distances, either because secondary schools are fewer in number, or because the students choose to travel a longer distance to a school of choice. Apart from the traffic safety implications of large volumes of student travel, there is also an excessive burden on transport operators; this creates other problems (for example discrimination by private operators of public transport against students is widespread).

A transport stakeholder workshop in Harare identified the transport problems relevant to education as safety, the need to interchange and high fares for school children (who may be forced to walk). Suggested solutions were:

- The need for public awareness campaigns and law enforcement in terms of safety for commuters.
- Provision of a contract service for school pupils and expansion of school capacities in order to reduce walking distances.

- The need to subsidise fares for children in order to make them affordable.
- The need for a substantial increase in transport allowances for teachers.

Understand users' perceptions

Users' perceptions of transport often reflect the purpose of a particular journey, but also personal attributes (such as gender, disability and age) and choice available (with, for example, more isolated communities being particularly vulnerable to limited services and access opportunities). User perceptions are inevitably highly subjective, and are often not based on the logistical problems of providing transport services. Whilst no transport system can conceivably meet every requirement of service users, there are likely to be many common (and probably negative) perceptions of transport that should be accommodated in policy development.

Some typical perceptions of transport that emerged from the case studies are presented in Table 3; the table also identifies how perceptions may vary with user attributes.

Table 3: User perceptions of transport

Key transport issues	Influence of personal attributes
The poor service provided by public transport (in terms of quality and quantity).	Specific problems for women, who may be able to travel at off-peak times only when transport capacity is reduced. The elderly, disabled and women may find travel conditions to be poor and so very difficult to cope with.
High cost of using public transport.	The poor may have little capacity to pay for public transport fares on a regular basis. Women and children may well be last in the allocation of scarce household budgets (i.e. priority goes to the income earners).
Indiscipline of transport personnel.	Drivers and their mates (conductors) often restrict student travel (where students are entitled to pay half-fare). The disabled are abused and ignored. The elderly and infirm harassed for what transport personnel see as taking too long to board/alight. Females are harassed by both personnel and passengers.
Road safety hazards for pedestrians and cyclists.	Students are particularly at risk on their journeys to school, but all pedestrians and cyclists encounter serious safety problems.
No provision for the disabled.	The disabled find travel particularly onerous; their position is made worse by the lack of awareness and training of staff to assist such passengers.

No clear policy towards (or 'champion' of) transport development.	This problem cross-cuts all individuals in that there is no obvious redress or platform (to voice concerns) for those who suffer from the bad performance of transport; where there is such a platform, staff have appeared derisory and have not followed up claims.
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These perceptions (often in different guises) surface again and again in participatory work. For example transport is critical to the pursuit of livelihood activities of the poor in Harare. Most of the informal sector livelihood activities of the poor are based in Mbare (5 kilometres from the central business district), where the largest fruit and vegetable wholesale and retail markets are located. Thus, traders involved can spend long periods travelling. General shortages of some commodities such as cooking oil, maize meal and sugar also necessitate such long-distance journeys by householders. Transport problems identified by a transport stakeholder workshop of formal employees in Harare, Zimbabwe included:

- Lack of assistance by employers in providing transport to the place of work; and
- Lack of public transport infrastructure.

Solutions suggested included:

- Introduction of travelling allowances for all employees. Apart from providing employees with money, schemes such as assistance in the purchase of a bicycle need to be put in place.
- Integration of existing rail services with road transport systems.
- Whilst minibus services provide social value and value for money, the need was raised to create citizen awareness and to challenge the minibus operators to improve public relations. Passengers are by and large not aware of their rights.

- The need to make customer care courses mandatory for public transport crews. Before a driver or conductor can be employed in the public transport industry, he or she should have completed a recognised customer care and public relations programme.

Table 4 illustrates (with an example from Accra, Ghana) in very clear terms just how important that transport is for the livelihoods of disabled people; inadequate access to transport adds to their vulnerability.

Table 4: Livelihoods issues facing people with disabilities in Accra

People with disabilities	Physical capital	Human capital	Social capital	Natural capital	Financial capital
Walk with difficulty	Unemployment	Poor access to health services	Lack of help from government	Unable to move around during rainy season	Difficulty in securing employment
Cannot walk at all	Discrimination in access to housing and other facilities	Poor access to education	Lack of public sympathy		Access to credit very difficult
Use a wheel chair	High transport costs		Discrimination by transport owners		High expense for transport
Speak and walk with difficulty	Discrimination in access to public transport		Neglect by family		
Cannot hear well or at all	Poor public service for disabled		Difficulty gaining employment		

Developing user-friendly policy and its implementation

The contribution of transport services 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 a 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. Accordingly, the need for cross-sectoral processes in relation to transport provision; for example, the question of whether student bus fares should be subsidised is one for education authorities to resolve, rather than bus operators. Providing access and better facilities for the disabled is an issue that may have to be shared between sectors, but with the health sector taking a lead.

As indicated earlier, the information collected from transport-activity analysis can be used to support the development of user-friendly transport policy. Stakeholder involvement in the early stages of urban transport planning exercises has the potential 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
- Understand the differentiated perspectives of the urban poor with respect to transport and the better understand the perspectives of providers of transport services.
- Identify improvements that can be undertaken
- Establish a process that develops a momentum for the implementation of these improvements

- Develop a framework for use elsewhere in order to improve transport services for the poor

While stakeholders need to be involved and carried from conception to implementation of transport planning and policy, there is also a need for a 'champion' to own, promote and push the programme. Typically in the urban context this would be the local transport authority (which may be a department of the local authority); however, one or more of the central ministries might also have a strong interest or claim to ownership. Given these varied interests, there are inevitable sensitivities that need careful resolution. However, a persistent problem in most third world cities is the lack of relevant expertise (in urban transport development), and hence a difficulty in identifying a suitable champion. Funding constraints further exacerbate the problem, as does the general lack of priority that governments and others give to urban transport. There is a need, therefore, to develop the institutions charged with executing policy, through both re-structuring and capacity-building processes, if participatory transport-activity analysis is to result in significant changes to transport delivery. Furthermore care should be taken with participatory stakeholder consultation to ensure the representativeness of key informants, for example by interviewing the main stakeholder groups and also any dissenting groups/individuals in order to present a wide variety of views. Furthermore, 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 possible.

5 CONCLUSION

Whilst traditional quantitative approaches to transport planning have appeal, particularly in the context of planning complex road and transport networks, this paper suggests that traditional approaches should be complemented by a better understanding of household activity patterns, and of the impacts and implications of travel on livelihoods. Seeking the views of the urban poor is vital since they are so reliant on public and non-motorised transport (bicycles and walking) for mobility and access to work, income generation and employment opportunities, access to education and health services as well as access to social relationships. However, the negative impacts of transport services for the poor might include the cost of transport, negative impacts on the local environment, traffic accidents, or congestion on busy streets in urban areas.

Stakeholder involvement in the early stages of urban transport planning exercises can yield useful insights for transport policy formulation (both in the transport sector and cross-sectorally), particularly with respect to the priorities of the urban poor. Involvement of key stakeholders in the transport planning process should emphasise the interaction of transport providing, using and regulating groups to ensure that the findings address their needs and influence the dynamic within the transport sector. It is hoped that this approach will assist in the introduction of a transport system based on social equality, ecological imperatives, health and safety considerations, public participation in its design and the intent to improve the quality of life of its users. In essence, stakeholder consultation is the means of giving ownership of transport development to those most critically dependent on it.

REFERENCES

1. Fouracre PR and DAC Maunder. *Travel demand characteristics in three medium-sized Indian cities*. Transport Research Laboratory (TRL)-Research Report RR 121. TRL: Crowthorne, UK, 1987.
2. Palmer C, A Astrop and DAC Maunder. *Constraints, attitudes and travel behaviour of low-income households in two developing countries*. Transport Research Laboratory (TRL) Research Report 263. TRL: Crowthorne, UK, 1997.
3. Sohail M, D Mitlin and DAC Maunder. *Guidelines: Partnership to improve access and quality of public transport*. WEDC: Loughborough University, UK. ISBN: 1 84380 035 7, 2003.
4. Ashley C and D Carney. *Sustainable livelihoods: Lessons from early experience*. Department for International Development: London, UK, 1999.
5. Carney D, M Drinkwater, T Rusinow, K Neefjes, S. Wanmali and N. Singh. *Livelihoods approaches compared*. Department for International Development: London, UK, 1999.
6. Sohail M (Ed.). *Partnership to improve access and quality of public transport: A case report: Colombo, Sri -Lanka*. WEDC: Loughborough University, UK, 2003.
7. Sohail M (Ed.). *Partnership to improve access and quality of public transport: A case report, : Dar -es -Salam, Tanzania*. WEDC: Loughborough University, UK, 2003.
8. Sohail M (Ed.). *Partnership to improve access and quality of public transport: A case report: Faisalabad, Pakistan*. WEDC: Loughborough University, UK, 2003.
9. Sohail M (Ed.). *Urban Public Transport and Sustainable livelihoods for the poor: A case study in Karachi, Pakistan*. WEDC: Loughborough University, UK, 2000.
10. Gannon C and Z Liu. *Transport: infrastructure and services. Poverty Reduction Strategy Paper (PRSP) Sourcebook*. World Bank: Washington D.C.: World Bank, 2000.
11. The World Bank. *Urban Transport: A World Bank policy study*. World Bank: Washington D.C., 1986.
12. Department for International Development. *Livelihoods of Poor People: What contributions can transport make?* Workshop Report. DFID: London, UK, 1999.

13. Fouracre PR and DAC Maunder. *A comparison of public transport in three medium-sized Indian cities*. Transport Research Laboratory (TRL)-Research Report RR 82. TRL: Crowthorne, 1986, UK, 1986.
14. Hakim, C. *Research Design Strategies and Choices in the Design of Social Research*. Allen & Unwin: London, UK, 1987.
15. Yin RK, *Applications of Case Study Research*. Sage Publications: Thousand Oaks, USA, 1993.
16. Mikkelsen B. *Methods for development work and research: a guide for practitioners*. Sage Publications: New Delhi, India, 1995.

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The Final Report and country case studies are available from the DFID Transport-Links website:

www.transport-links.org/transport_links/projects/kar_themes.asp