2.4 COLLECTION OF SOCIO-ECONOMIC PLANNING DATA

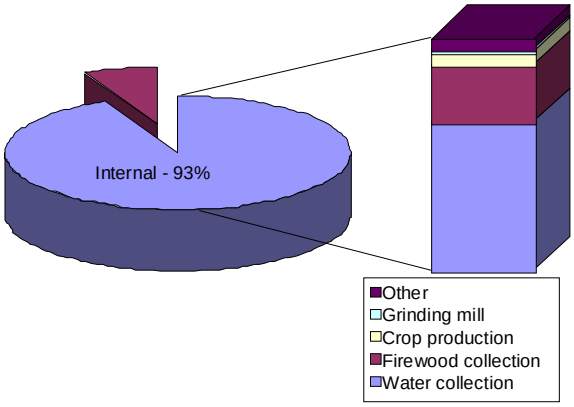
Problem: **Individuals and households in rural communities are unable to make sufficient trips to essential economic and social facilities or too much of their time is taken up with travelling to these, due to inaccessibility or lack of affordability of the means of transport.**

Solution: **Collection of data at village and household levels to analyse travel patterns in relation to transport needs and accessibility.**

BACKGROUND

Inaccessibility of essential domestic, social and economic amenities is a key factor in rural poverty in the developing world. Despite the fact that the role of an efficient rural transport system in the current process of economic and social development is self-evident, most transport policies of developing countries fall short of clear strategies to address rural transport problems.

Figure 1:Trip Purpose by Activity



Distances to social and economic facilities are greater in rural communities than urban or suburban ones, particularly in sparsely populated regions. It should also be borne in mind that the vast majority of rural dwellers do not use motorised transport on the primary, secondary and feeder roads but walk or cycle on tracks and paths in, around and between villages in fulfilment of their travel and transport needs. Movement of goods, farm produce and other essential commodities, such as firewood and water, is done to a large extent by headloading, the greater part of which is carried out by women who, due to cultural reasons, have little or no access to bicycles or other forms of Intermediate Means of Transport (IMT).

THE SURVEY INSTRUMENTS

Demand-side survey techniques are based on traditional methods and more participatory ones (described earlier in Section 2.3) which seek to achieve greater involvement of the poor in deciding on the policies, which affect them. The more traditional survey methodologies include:

Origin destination surveys: used to establish the nature of travel patterns in and around the area of enquiry. Typically, on the basis of sampling, an estimate is made of all daily trips between and within a pre-defined set of zones. The zones are usually based on existing demographic and political divisions, for which some socio-economic data may be available. The trip information is usually presented in matrix form, or graphically with a line (with width proportional to size of trip-making) linking each pair of zones and representing movements between any pair of zones. This information can be further refined by presenting, say, public transport trips separately from private vehicle trips.

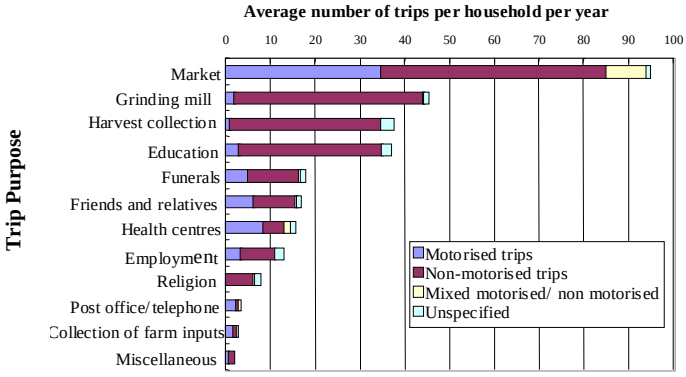
Cordon and screen-line surveys: these surveys yield similar information to an origin-destination survey, though on a smaller scale since they only capture traffic movements across the screen or cordon. They are often used to up-date an earlier origin-destination survey.

Stated preference and revealed preference surveys: in Stated Preference Surveys respondents are given the opportunity to make choices between proposed transport options. Questions are structured in such a way that the analyst can have some confidence that the respondent is making a logical selection. The technique, which has its origins in market research, can be used to gauge the likely support and demand for a particular option. The analyst can also establish how the respondent 'trades' between

different attributes of transport options, and in particular between time and money. Hence, through this technique it is possible to derive a value of time. Revealed Preference Surveys seek to establish in retrospect how respondents reacted to changes in transport that have been completed, and to use this information as a model for future change.

Village level questionnaires: aimed at a group of key village informants within each village visited, which would include the village headman/woman, other village elders, business operators, political party leaders, church elders, school teachers and/ or extension officers. The purpose of this is to obtain base data relating to the community (village structure, location, demography, amenities, agriculture and other resources) and an overview of its travel patterns, transport constraints and problems. This is the first stage in developing a dialogue with villagers about their transport problems and possible solutions to these (Barwell, 1988).

Figure 2: Trip purpose by trip frequency

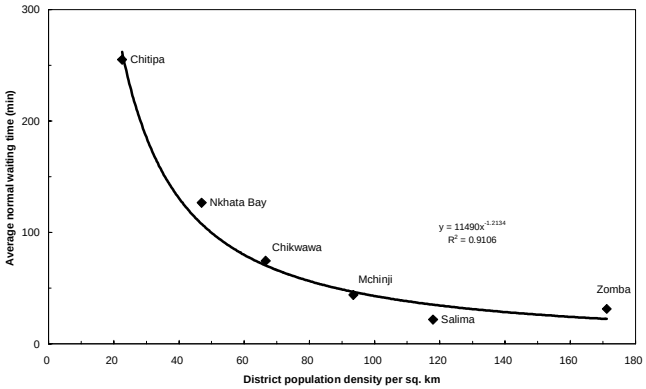


Household surveys: are based on questionnaires in which a household head, his or her spouse or another adult member of the household is interviewed to determine the constraints and problems faced by the household in undertaking rural travel and transport needs and explore feasible interventions (refer to **Appendix C** for an example of a household questionnaire). Data is collected on:

- **Socio-economic indicators**
  - Household size and composition,
  - Income and livelihood,
  - Breakdown of expenditure,
  - Type of house construction
  - Possessions and energy source for cooking, lighting and heating,
- **Travel and transport patterns**
  - Travel requirements and mode of transport,
  - Use of motorised transport,
  - Household transport costs and
  - Perceptions on the provision and availability of transport means.

Transport supply/ demand relationships: addresses the accessibility of social and economic facilities. This depends on physical factors such as distance, the quality of the infrastructure linking the household with the facility, particularly as affected by the rainy season, and the terrain. Socio-economic factors include the use of motorised transport, access to, or ownership of, IMTs, the availability, frequency and affordability of transport services, and the division of labour between men and women

Figure 3: Transport service waiting times



Population density is a good indicator of density of demand for rural transport services and this has a large impact on the cost and provision of these and on accessibility to social and economic amenities. Better services are associated with higher District population densities as evidenced by fares, goods charges, frequency of vehicles serving the villages and waiting times for vehicles.

KEY REFERENCES

Airey, T. and Cundill, M. (1998). A Study of Household Travel in Meru District of Kenya. TRL Report No. 353. *Crowthorne: Transport Research Laboratory*

Barwell I (1988). Guidelines for remote area transport and socio-economic surveys. Report for the Transport, Communications and Tourism Division, UNESCAP. *Ardington: IT Transport*