Transport and the Village in Sub-Saharan Africa

Past efforts to improve rural transport in Sub-Saharan Africa (SSA) have focused principally on building and maintaining roads. The issues of rural access, mobility and household transport were paid little attention. This study, *Transport and the Village*, emphasizes the significance of village-level transport in meeting the basic subsistence needs of rural households.

A series of 5 surveys on village-level travel and transport, complemented by case studies, was carried out through the Rural Travel and Transport Program (RTTP) under the Sub-Saharan Africa Transport Policy Program. These surveys and studies covered 5 areas of 3 countries in SSA: Burkina Faso, Uganda and Zambia. Eight hundred forty (840) households in 42 villages were covered by the investigation. The 5 areas cover a range of different physical environments - from the Sahel to the Savanna and Montage ecosystems - and contain examples of both dispersed and nucleated settlements, as well as different population densities.

Key aspects of local-level rural transport in SSA were investigated with a view to:

- developing an understanding of the time and effort spent on transport in the context of overall household labor allocation, and of the outputs deriving from the inputs to transport;

- analyzing local-level transport, and the time spent, as a factor and constraint in agricultural development and in the utilization of essential services;

- understanding the role of transport in women's daily lives and the impact upon women of improvements in mobility and accessibility, given that a major part of the transport
burden falls on women; and

- assessing the role of Intermediate Means of Transport (IMT) in improving mobility and addressing local level transport constraints as well as the policy, institutional and implementation requirements for developing its use.

**Household Travel and Transport patterns**

In the 5 areas, the time that an adult spends on essential (not leisure-related) transport averages 1 hour 15 minutes a day. Eighty seven percent of household travel is on foot. The time spent breaks down as follows: domestic (75%), agriculture (18%), health (<1%) and market (6%) - and represents a carrying effort equivalent to moving a load of 20 kg just over 2 km each day. While the time is no more than that devoted by many people in industrial countries to traveling to and from paid work:

- the time and effort invested in rural Africa only meets the transport need of subsistence, of limited participation in the productive economy, and of limited utilization of social services;
- the human energy, in often nutritionally poor rural areas, that is currently devoted to carrying loads could be better allocated to more productive purposes; and
- most important, in SSA, the burden of rural transport tasks falls disproportionately on women of all ages.

**Women and Rural Transport**

*Comparison of Female-Male Transport Burdens*

*(Ton-Kms per person per year)*

<table>
<thead>
<tr>
<th></th>
<th>Kasama (Zambia)</th>
<th>Lusaka Rural (Zambia)</th>
<th>Mbale (Uganda)</th>
<th>Kaya (Burkina Faso)</th>
<th>Dedougou (Burkina Faso)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Females</td>
<td>35.7</td>
<td>30.3</td>
<td>39.0</td>
<td>10.3</td>
<td>15.5</td>
</tr>
<tr>
<td>Adult Males</td>
<td>7.1</td>
<td>9.8</td>
<td>8.6</td>
<td>3.6</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Being responsible for domestic activities and contributing to agricultural tasks, women bear the greater part of the transport burden. Throughout SSA, women contribute at least 65% of the household time spent on travel and transport, and more than 65% of the effort. Transport of goods by women is predominantly by head-loading, an effort which equates, in the survey areas, to the adult female carrying a 20kg load over a distance of 1.4-5.3 km every day. Progressive deforestation and increasing distances to firewood and water sources will increase
the burden of domestic transport on women. The assistance provided by children, especially
girls, is offset by the fact that this would constrain their attending school.

**IMT**

Ownership of IMT (motorcycles, bicycles, donkey/ox carts and wheelbarrows) by rural
households in the study areas varies significantly. IMT can reduce the transport burden on
women. However, there is a reluctance by men (who tend to control the IMT) to allow the IMT
to be used for "women's work".

Income level is clearly one factor that influences the level of ownership of IMT. As might be
expected, in all of the study areas people who own IMT tend to have higher income levels than
those who do not. There are, however, important factors other than income level which relate
to the level of ownership of IMT, including: (i) local availability of IMT and spare parts; (ii)
familiarity of people with IMT; (iii) topographical conditions; (iv) cultural acceptance, e.g. the
acceptability of women riding bicycles; (v) availability and terms of credit for the purchase of
IMT; (vi) the income-generation potential of IMT; and (vii) attitudes towards communal
ownership.

**The Role of Rural Roads and Transport Services**

The evidence from the study areas is that typical rural people make only limited use of the "for
hire" transport services offered by buses and pick-ups for personal travel. A small minority of
"untypical" rural people, such as local government officials, local businessmen, and people
with paid employment outside the locality, are the main users of passenger transport services.
In three study areas producing substantial crop surpluses, the use of hired trucks to transport
marketed crops was quite limited because of the risks involved and because it is often
necessary to travel to a distant urban center to hire the vehicle not available locally.

The studies show that proximity to an active local urban center and to a main road,
complemented by good rural road access, has a positive influence on the level of household
income. Not surprisingly, for areas producing large quantities of low unit-value surplus crops,
the highest agricultural incomes were concentrated in the villages with the best road access,
and this did not necessarily mean all-weather access.

**The road ahead**

**Rural transport and access to services**

One of the determinants of the rural transport problem in SSA is the long distances that many
people have to travel, for the most part on foot, to access facilities, often inadequate. Thus, in
addition to measures to increase the mobility of rural people, access to domestic, economic and
social services can be improved by siting facilities (water points, health posts) closer to rural
communities, and by improving the quality of service provided by existing facilities.

Means of addressing specific access constraints identified in (i) water and firewood collection,
(ii) crop production, (iii) crop marketing, (iv) access to economic and social services, and (v) non-agricultural income generation, are summarized in the table below.

**Means of Addressing Specific Access Problems**

<table>
<thead>
<tr>
<th>Element of Accessibility</th>
<th>Mobility</th>
<th>Siting and Quality of Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mobility</td>
<td>Siting and Quality of Facilities</td>
</tr>
<tr>
<td>Rural Transport Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of Transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport Tasks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water and Firewood Collection</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Crop Production</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Access to Economic and Social Services</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Non-agriculture Income Generation</td>
<td>*</td>
<td>**</td>
</tr>
</tbody>
</table>

** most important means of addressing an access problem.
* complementary means of addressing an access problem.

**Toward a Rural Transport Strategy**

Rural transport is relevant to a number of key rural development issues, and there is a wide range of institutional stakeholders in the sector. There is no shortage of pilot projects addressing rural transport problems, but they are frequently not replicable in other locations, and only rarely have they formed the basis of country-wide applications. In both central and local government in SSA countries, and in most donor agencies, responsibilities for rural transport is dispersed between a large number of ministries and agencies. A finding of the survey is that these dispersed responsibilities can only be effectively discharged within a framework of an overall, and widely accepted, strategy. A recommendation ensuing from the surveys is that SSA governments and donor agencies develop such explicit rural transport
strategies. To do so, a wide range of actions must be developed including:

measures in the fiscal and regulatory fields;

- measures to encourage involvement by the private sector, NGOs and community-based organizations;
- reforms to increase the effectiveness of extension and community development services; measures to increase the availability of rural credit; and the adoption of more effective procedures for the planning of social and economic facilities; and
- encouraging the employment of local labor for road improvement through the development of viable local contracting industries that use labor-based work methods.

The findings indicate that accessibility should be the most important criterion in the preparation of any sectoral or multi-sectoral project designed for the improvement of rural well-being. Further investigations are needed into the problems of (i) promoting intermediate means of technology, (ii) planning of rural roads, (iii) using labor-intensive methods of building and maintaining rural roads, (iv) creating institutions that can manage the resource mobilization and administration of rural roads, and (v) provision of transport services in the rural setting.


For copies of the report, please contact P.C. Mohan, Rm. J5-171, World Bank, 1818 H Street NW, Washington, D.C. 20433. Tel. no.: (202) 474-4114. Internet address: pmohan@worldbank.org