



Module 4: Rural Mobility

Agricultural marketing and access to transport services

Session: 4.3

Part 1

Presentation: 4.3a

The Training Modules

Module 1. Policies and Strategies

Module 2. Planning, Design, Appraisal and Implementation

Module 3. Management and Financing

This Module

Module 4. Rural Mobility

Module 5. Social and Environmental Issues

Module 4. Rural Mobility

Session 4.1 Rural Mobility: Overview of the Issues

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

This session

Session 4.3 Agricultural marketing and access to
transport services

Session 4.4 Matching demand with supply in rural transport

1. Introduction

Learning Objectives

By the end of the session participants will be able to:

- ③ Describe the links between agricultural marketing systems and transport services
- ③ Explain how transport costs affect marketing and income to farmers
- ③ Analyse the role of IMTs in improving access to markets and marketing systems

Session Overview

- ⌚ Agricultural marketing
- ⌚ Transport costs
- ⌚ Impact of transport costs
- ⌚ Markets and marketing
- ⌚ Potential of IMTs for marketing

2. Agricultural marketing

- ◎ Strongly influenced by **transport services**
- ◎ Transport and marketing systems in many developing countries
 - monopolistic
 - low volume
 - high cost
- ◎ Economies of scale
 - transport
 - marketing operations

An efficient transport system is critical for efficient agricultural marketing

◎ **Expensive** transport services

- low farm gate prices
- seasonally impassable roads

◎ **Slow and infrequent** transport services with **poor storage** - losses

- crops deteriorate quickly e.g. milk, fresh vegetables, tea
- rough roads - losses from bruising e.g. bananas, mangoes

◎ **Agriculture is best served by: -**

- consistent high urban & international demand
- efficient, high volume, transport & marketing system
 - ... where transport & marketing unit costs are low

◎ **Agricultural yields will **not** be increased if produce cannot be taken to market**

3. Transport costs

◎ Transport operating costs

- higher on **rough** roads
- reflected in passenger **fares** and **freight tariffs**

◎ Zambia

- 24 km on good quality gravel road and costs 62.5 kwacha per passenger km.
- 74 km on poor quality earth road and costs 113 kwacha per km.

◎ Ghana and Zimbabwe

- transport charges **2 to 2½ times more expensive** than Pakistan, Sri Lanka, Thailand
 - comparable journeys to 30 km
 - tractors, power tillers pickups, trucks

© **Tanzania** 50 km distance & increase in road roughness of 50%

- increases truck charges by 16%
- increases pickup charges by 2x
- increase in fares by 60% in wet season on poor quality roads

© **Long distance** freight transport costs & charges

- higher in Africa than Asia
- 1986 - 1988 long distance freight transport tariffs in Francophone Africa were over 5x higher than in Pakistan
- Tanzania 3x higher than in Indonesia

◎ Large differences in

- **costs** between different countries for the same type of transport
 - particularly between Africa and Asia
- between rural **short haul** transport
 - pickups or small rigid trucks
- **long distance** inter-urban transport
 - heavy tractor and semi-trailer

◎ Cameroon, Mali, Côte d'Ivoire

- short distance local transport (10 km) **6x higher** than long distance transport (50 km)

4. Impact of transport costs

- ◎ Proportion of **transport charges** of final market price depends on:
 - commodity type
 - efficiency of the transport and marketing sectors
 - travel distance
- ◎ **Ghana: variation** in wholesale transport costs
 - 3.5 - 5% of final market price for maize, yam and plantain with mean distances 120 km - 200 km
 - 11% for maize (420 km) and 25% for tomatoes (360 km)

🎯 Marketing margins and transport costs

- subtract from the final market price
 - including the high cost of head loading produce to the village or roadside

🎯 **African** farmers received 30-50% of final market prices compared to 70-85% received by **Asian** farmers

- most of the difference is transport costs

Agricultural supply price elasticities ...

- ③ ... used to estimate the effect of reduced transport marketing costs on agricultural productivity

- 0 - 1.5

- ③ **Assume**

- transport costs of moving goods to urban market are 30% of farm gate prices
 - agricultural prices are set at the urban market
 - reduction of transport costs by 20% & passed to the farmer
 - then farm gate prices increase by 6%

- ③ If agricultural supply elasticity is +1

- agricultural output would rise by 6%

◎ **Road investment** reduces transport costs

◎ **But** ... there is little impact if **no change** in transport mode

- upgrading 5 km of feeder road from earth to gravel standard only increase farm gate prices by 0.1%
- new motor vehicle access 5km closer to a village (or farm) - when the alternative was headloading by hired labour
 - increased farm gate prices by 100x as much

Competitive transport and food marketing is required to ensure the benefits from reduced transport costs are passed on to farmers and to final consumers

© Where **food prices** are not government controlled

- wide variation of food prices between different regional markets in Africa
- not easily explained by transport costs

© **Other factors**

- small volumes, poor price information, commodity perishability
- differences in storage and retailing costs
- monopolistic marketing system
- individual farmers often have little choice whom they will trade with
- indebtedness force farmers to sell at peak harvest time when prices are low
- inadequate supply of vehicles at harvest time

5. Markets and Marketing

- ◎ Goods and people are amalgamated
 - concentrating the demand for transport
- ◎ If populations are dispersed - markets dispersed
 - long average distances - people less likely to make the trip
 - IMTs may not be viable
- ◎ Farmers get the best price if they sell it directly to final consumers at rural or urban markets

- ③ Farmers bringing their own produce to market
 - limits the power of the marketing **cartels**
 - but - **little support** by the authorities for this type of 'unofficial' trading
 - farmers are frequently **harassed** as they sell

- ③ If farmers rely on travelling wholesalers, traders, parastatals, large private marketing companies
 - reduces their **bargaining power**
 - **reduces demand** for transport services and the supply of vehicles

Access to marketing and storage

© Case studies in Ghana, Thailand, Zimbabwe, Sri Lanka and Pakistan

© Vehicle choice determined by:

1. Ease of access to storage facilities

- if the storage facility is close farmer may buy a non-motorised vehicle
- farmer will only demand a more advanced vehicle if it increases farm gate prices

2. Goods are amalgamated

- density of demand for vehicle services increases
- determining vehicle choice
- larger the demand - more efficient and cost effective vehicle is justified
- unitary costs of transport are reduced

🌀 If **distribution costs** are low

- increase farm gate prices
- give farmers the incentive to increase production

🌀 **Markets and storage facilities**

- closer to villages in Asia than in the African
 - farmers were more able to sell their produce at Asian markets

🌀 **Ghana**

- multitude of middlemen
- storage facilities
 - farmers not able to sell produce at reasonable prices

Characteristics of market and storage accessibility in the five survey sites

	Thailand	Sri Lanka	Ghana	Zimbabwe	Pakistan
Typical Dist. to nearest markets or storage	1-25 km's	5-10 km's	> 20 km's	10-100 km's	5-20 km's
Market access to farmers	Good.	Good.	Poor - market women have all marketing contacts.	Good - but must sell to the GMB or CMB.	Good.
Farmer ability to transport own produce	Good - except in hill country.	Good - but sometimes crop too small to justify.	Farmers have very little mobility.	Within 20km's it is good, but poor beyond this distance.	Good - will travel hundreds of kilometres.
Reliance on traders	Very little - except in hill country.	The poorer/smaller farmers are reliant on them.	Almost complete reliance.	Technically illegal but less accessible villages rely on them.	Very little.

6. Potential of IMTs for marketing

IMTs can significantly improve access to markets

If markets are within walking distance

- some villages transport products by walking instead of selling it to traders with trucks
- traders pay less than farmers receive at market
- footpath improvement
 - reduced travel times
 - increased transport loads
 - diminished accidents
 - stronger market integration
 - reduced rural isolation

But ... headloading & walking are restricted by

- weight carried
- distance to market
 - if more than half-day walk is involved

IMTs:

- ◎ increase carrying capacity
- ◎ increase speed
- ◎ reduce transport costs
- ◎ provide economic opportunities
 - *e.g. farmers could grow more or heavier crops*
- ◎ enable farmers to sell their produce when
 - *road conditions are bad, motor vehicles rare, producer prices high*



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