

Rural Transport Training Materials

Module 5:

Social and Environmental Issues

Social benefits of rural transport: a mixed response from a road improvement project in the Thuchi-Nkubu area of Kenya

Session 5.1

Part 2

Presentation 5.1b



The World Bank



DFID Department for
International
Development



theIDLgroup 

1. Introduction

Learning Objectives

This session enables participants to:

- ③ Analyse changes in transport modes, journeys purposes, and frequency of travel as a result of the new road
- ③ Reflect on lessons learnt from the impact of the new road in Kenya on travel patterns, including gender differences

Session Overview

- © Background to the case study
- © Results of the surveys

2. Background to the case study

- © May 1985 a new 54 km bitumenised road opened between Thuchi village and Nkubu town in Meru District, Kenya
 - built under British aid
 - replaced 84 km winding earth road
 - completed all-weather road link between district capitals of Embu and Meru
 - important route for through traffic
 - improved access to a fertile coffee and tea-growing area

More background information ...

◎ Objective of the study

- examine how rural travel behaviour was affected by the new road

◎ The data drawn from a series of **household** surveys

- first survey was in 1983, two years after the road was opened, of 300 hundred households
- survey was repeated in 1986 and 1989

◎ In addition to household data other data was collected from

- **traffic surveys**
- **surveys of transport services**

Effect of a new road on travel: Kenya case study



Case Study Activity

- A. *What has been the impact of the new road on transport mode?*
- B. *How has the “journey purpose” changed?*
- C. *How does the “journey purpose” differ between men and women? What might be possible reasons for these differences?*

3. Results of household survey

Travel rates

Transport modes

Journey purpose

Gender differences in journey purpose

Main origin and destinations

Household income & journey frequency

Travel rates

© 1983 - 1986

- travel rate rose from 5.0 to 11.2 journeys/household/month = **125% increase**

© 1986 - 1989

- travel rate declined to 8.4 journeys/household/month = **25% decrease** since 1986

© Decline was due to

- rise in transport **fares** between 1986 and 1989 because
 - the initial **fierce competition** between services **subsided**, and a more realistic pricing policy was established
- unseasonably **late rains**

Transport modes

Number of Trips by Transport Mode

Transport Mode	Number of Journeys (and %)					
	1983		1986		1989	
Matatu	3175	(85%)	6126	(74%)	4192	(76%)
Bus	111	(3%)	582	(7%)	216	(4%)
Private Car	162	(4%)	556	(7%)	306	(6%)
Bicycle	23	(<1%)	159	(2%)	158	(3%)
Motorcycle	0		56	(<1%)	108	(2%)
Other Vehicle	36	(1%)	156	(2%)	21	(<1%)
Walk	243	(6%)	638	(8%)	531	(10%)
TOTAL	3750		8273		5532	

Transport modes

- ◎ Most journeys began and ended at the residence of the household
 - were composed of a number of trips = one "leg" of the journey
- ◎ The new road **increased modal choice**, especially for households living **close** to road
 - bus users preferred buses because of cheaper fares and comfort
 - *matatu* (small van taxi) users preferred *matatus* because of quickness of service
 - more prepared to walk to access the bus and *matatu* services

Transport modes

Bicycles

- © 1983 bicycles were used very little
- © 1986 - 1989 bicycle travel had increased to become a significant transport mode
- © Majority of bicycle journeys began and ended in villages next to the new road
- © New road encouraged longer distance travel by bicycle

Journey purpose

Breakdown of Journeys by Purpose and Gender

Journey Purpose	Number of journeys (Percent of total)			Percent of journeys in each category by females		
	1983	1986	1989	1983	1986	1989
Work	304 (20%)	964 (30%)	787 (33%)	23	30	23
Shopping	272 (18%)	543 (17%)	401 (17%)	43	33	39
Social	326 (21%)	560 (17%)	419 (18%)	48	35	34
Health	192 (13%)	450 (14%)	314 (13%)	64	63	60
School	27 (2%)	183 (6%)	67 (3%)	48	58	27
Trading	112 (8%)	176 (5%)	114 (5%)	80	51	77
Personal Business	191 (13%)	260 (8%)	138 (6%)	16	13	21
Bank	70 (5%)	124 (4%)	132 (6%)	14	21	23
Total	1494	3260	2372	41	37	35

Journey purpose

🌀 Work

- paid, self employed, household farm
- widening journey pattern reflects increase in **non-agricultural employment**

🌀 Shopping

- to purchase higher order goods rather than necessities, from Meru

🌀 Social

- Visiting relatives and friends most important components of social travel

Journey purpose

🌀 Health

- visits to hospitals/dispensaries retained relative importance
- increased importance of Chogoria hospital
- most journeys by **roadside households** - assisted by decreased travel costs to the hospital

🌀 School

- majority of trips: secondary education - boarding school
- timing of the travel surveys coincided with the publication of the secondary entrance examination results & parents travelling to enrol children in schools

Journey purpose

☉ Trading

- travel to sell/buy agricultural commodities and foodstuffs
- mostly by **women** to nearby licensed markets to sell surplus produce (maize, vegetables)

☉ Personal business journeys

- administration and agricultural reasons
- consistently declined in importance since 1983 - probably due to decline in bureaucratic need to register personal identity
- In 1989 problems with **land registration and tea payments** generated the highest number of journeys in this category

Journey purpose

⊙ Bank

- salaried workers and household heads depositing or cashing Co-operative Society or Crop Parastatal payments
- number journey increased

Gender differences in journey purpose

- ③ **Males** dominate **5 of the 8** journey purpose categories
 - work, shopping, social, personal business, banking
 - reflects the social & economic dominance of men in Meru society
- ③ **Females** dominate only **health** journeys
 - reflects the norms of Meru society - women produce food and care for the family
 - the high birth rate - frequent visits to maternity units

Gender differences in journey purpose

☉ Trading journeys dominated by **women** in 1983 and 1989

- buyers and sellers of foodstuffs - usually in the local markets

☉ **Men**

- buying and selling of non-food products/ consumables - usually from kiosks, stalls, shops throughout the area
- this trading decreased in importance after 1986
- allowing female organised trading to dominate once again

Main origin and destinations

🌀 **Urban bias** for most journeys

- health, shopping, trading, business and banking
- **48%** of all journeys were to **Meru**
- **41%** journeys to **Nkubu** - geographical proximity to the study villages

Main origin and destinations

© Rural bias for work and education journeys

© 1983:

- 64% of work and 65% of school journeys were to rural destinations, due to
- high rural population densities
- dynamic rural economy
- rural location of primary and several secondary schools

Household income & journey frequency

- ◎ Average journeys per month rose with increasing income
- ◎ 1986: number of journeys made by all income classes rose by **125%**
 - the increase was lowest in the low-income groups and greatest in the higher income classes
 - due to reduced cost of travel (from the new road)
- ◎ **But by 1989**
 - travel of low-income groups fell to 1983 levels
 - high-income groups maintained high levels of journey-making