

ACCESS TO RELATIVE SPACE AND QUALITY OF LIFE FOR PERI-URBAN COMMUNITIES OF SMALLER TOWNS OF SOUTH AFRICA: PUBLIC TRANSPORT INSIGHTS FROM THE LIMPOPO PROVINCE

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ABSTRACT

This paper is concerned with ascertaining what subsidized public transport service is actually doing to the livelihoods and quality of life of people in and around small towns of South Africa. It uses Tohooyandou and Luis Trichardt towns in Limpopo Province to investigate the variables underlying the quality of public transport service and its impact. It finds that communities are unhappy with the quality of service of public transport. Subsidized public transport is still expensive and unaffordable. A large segment of the communities is struggling or failing altogether to access and optimize its usage. About 54% getting around R1, 000.00 per month in cash income or social grants and spending 15-25% of it on public transport, is struggling to afford, access and optimize access and usage. On the other hand, the segment of 36% dependent on self-employment and social grants below R500.00 per month is spending as much as 30%-50% on public transport. The paradox is that the segment is, in fact, the most needy and dependent on public transport for economic and social livelihoods. Current economic, organizational, policy, operational, social, cultural, emotional, infrastructural and public-private cooperation variables that underlie subsidized public transport need to be investigated and properly aligned and balanced so that communities in marginal areas may optimize mobility and livelihood and economic growth possibilities and opportunities available to them, if subsidized public transport and development practitioners are to ensure that South Africa's 2014 social and economic growth and development objectives and targets will be attained.

1. INTRODUCTION

What is public transport doing to communities in the peri-urban and peripheral areas of small towns of South Africa, and perhaps Southern and Eastern Africa? The purpose of this paper is to pursue this question by investigating how public transport is impacting on the lives of people and communities in the peripheral hinterlands of small towns. The variables underlying public transport service and access to relative space and quality are investigated in the case study context of Louis Trichardt (Makhado) and Tohooyandou towns of the Limpopo Province. The findings and conclusions of a field survey conducted are summarized in following sections. The remainder of the paper is organized into four main sections focusing on: *background and rationale*; *study areas and methodology*; *findings and discussion*, and *conclusions*.

The following definitions are introduced early on in order enhance interpretation and understanding of the paper:

- a) *Access to absolute space*; access to land for production or residential use
- b) *Access to relative space*; the perceived or actual travel destination from one point or locality to another, distance and effort to be overcome to reach that destination (e.g. place of work, entertainment, schools, services or social and economic activity)
- c) *Public transport*; land passenger (motorized or non-motorized, mechanical or non-mechanical) means and modes of conveyance of people: omnibus, taxi, and walking
- d) *Inter-government machinery*; decentralized government of South Africa – national, provincial, district and local municipal levels
- e) *Peri-urban area*; immediate service zone up to 10 kilometers from the core
- f) *Peripheral/ Marginal/ hinterland area*; intermediate service zone beyond 10 kilometers and up to 50 kilometers of the core.

2. BACKGROUND AND RATIONALE

This brief background places the research into a broader context of public transport research of Sub-Saharan Africa and South Africa. Indeed, in South Africa and Southern and Eastern Africa, some notable efforts in public transport research are evident since the 1990s. A greater part of this research comprises conventional transport planning studies of the nature of technical feasibility, operational and management for large urban and metropolitan nodes such as Johannesburg/ Gauteng, Pretoria, Cape Town, Durban, Port Elizabeth and others. At present, over R10 billion (or US\$1,4 Billion in 2008) is earmarked to drive key national and World Cup 2010 and 2014 infrastructure projects such as the Gautrain, the taxi recapitalization programme, upgrading of commuter rail systems and various rapid-bus transit systems such as the Rea Vaya in Johannesburg.

A notable research agenda with focus on rural public transport, gender, poverty and sustainability and poor people in disadvantaged rural areas has taken shape since the 1990s driven by, among others, the Department of Transport (DOT), Council for Scientific and Industrial Research (CSIR), Sub-Saharan Africa Transport Programme (SSATP/World Bank). However, a knowledge and intelligence gap still persists with regards to conducting specific inquiry on what public transport is actually doing for and to people and their livelihoods in communities located in peri-urban and peripheral areas of the small towns of South Africa. Such inquiry has special significance drawn from the fact that both the communities and settlements comprise the formerly disadvantaged and now national and local targets for interventions aimed at attaining South Africa's 2014 national, provincial and local strategic objectives for social and economic growth, poverty reduction, and development.

South Africa is a relatively large country measuring 1,200 km² with a population close to 49 million in 2007 (Wikipedia: 2008). It is highly urban and economically developed, but has the majority of its people living in rural villages and townships outside the modern and highly developed small and large urban nodes.

Provision of public transport to South Africa's geographically and spatially divorced but interdependent small town and peripheral rural village and township settlements, is but a serious service delivery challenge and nightmare. Several fundamental issues needing interrogation are: how is public transport impacting on the livelihoods and quality of life of people living in these communities? Is public transport meeting the needs of these people and communities? To what extent are people optimizing access and usage of public

transport service? To what extent is public transport catalyzing and accelerating social and economic growth, and improvement of the quality of life of the people and communities overall in the historically disadvantaged settlements? What are the variables that explain the quality of public transport service and its bearing on livelihoods? What can be suggested? Below, is the methodology used to gather data.

3. STUDY AREAS AND METHODOLOGY.

A public transport service quality indicator survey was conducted in and around Louis Trichardt/ Makhado town including village and townships of Elim, Nzhelele, Sinthumule and Thohoyandou town and townships and villages of Nzhelele Valley, Siloam and Dzingahe. The study towns are located to the northern areas of Limpopo Province and respectively 110 kilometers north and 175 kilometers north-east of Polokwane. Louis Trichardt is a former exclusively commercial and residential European town surrounded by large swathes of open private agricultural land extending 10-15 kilometres from the core towards former African homeland townships and rural villages beyond. Thohoyandou is the former capital of Venda homeland and a town with immediate townships and rural village hinterland. Both towns and settlements are surrounded by rugged mountain terrain and experience relatively harsh dry, wet and hot weather all round which, collectively pose major challenges to public transport and walking. The towns provide a laboratory for examining and understanding what public transport is doing to and for poor people living in these peri-urban and marginal settlements.

An unframed sample survey comprising 44 respondents per each study town and settlement and total sample of 88 respondents was implemented to gather intelligence data on user satisfaction with public transport service and variables at play. The composition of each sample was: 30 community public transport users; two (2) government key informants; six (6) public omnibus and taxi transport operators, and six (6) drivers. User and driver key informants were intercepted at strategic town and community omnibus and taxi and bus termini and depots. Research guides were utilized to conduct the interviews.

Settlements and public transport infrastructure configuration and morphology, including livelihoods, were investigated by way of transects and **recording in automobile**. Although, the unframed sample size was limited in scope owing to resource human, financial and time resource constraints, it is felt that the methodology succeeded in extracting vital indicators with which to filter the key public transport issues affecting people in areas surrounding small marginal towns.

4. FINDINGS AND DISCUSSION.

This section is divided into two main parts. The first consists of findings on the organization of public transport and impact on access to relative space. The second provides pointers on the impact of public transport on the livelihoods and quality of life of people in the study areas.

4.1 The Organisation of Public Transport and Space, and Impact on Access to Relative Space

a) *Sector Delivery Framework:* In South Africa, public transport is a sector and policy domain of the Department of Transport (DoT) and unlike in other developing countries, it is highly regulated and controlled. However, like anywhere else, its fundamental developmental role is to provide sufficient modal choice and affordable transport for conveyance of people to optimize livelihoods possibilities and opportunities. In South Africa, public land transport is an inter-governmental and public and private sector responsibility concerning policy, regulation and control, and operation cutting across national, provincial, district and local interface: see table 1 below.

Table 1 Public-private cooperative framework for public transport

National (DoT)	Provincial (Limpopo)	District Municipality (Vhembe)	Local Govt. (Thulamela / Makhado)	Service Providers (Private)	User
Policy and Standards Regulation	Strategy	Administering and monitoring Subsidy	Licensing	Capital Investment	Demand for Quality Service.
Funding of Infrastructure	Coordination		Standards and Monitoring	Operation	
Funding Infrastructure Monitoring	Enforcement		Enforcement	Compliance	
			Infrastructure Development		
			Settlement and Route Planning		

Source: Musandu-Nyamayaro (2008)

a) ***Dichotomous settlements and travel distances:*** The main issue is that the dichotomous alignment of small town and peripheral village and rural settlements is problematic. They are interdependent nodes for employment, labour, commerce, industry, education, administrative and private services and housing residential use which are far flung from each other and separated by large swathes of open and mountain terrain and agricultural farmlands, but very dependent on each other. The distances between them necessitate long and costly travel which poor people of the marginal settlements have to endure and live with. The village and township settlements themselves are far flung from each other and intervened by mountains and irregular topography which severely limit inter and intra connectivity and access. Also, trunk routes radiate from the small towns to the outskirts of village and townships settlements necessitating further linkage with places where people actually live. This alignment marginalizes settlements and people and reduces linkage, connectivity and accessibility. As a result, poor people travel first to the main roads, then to town and connect to other settlements in pursuit of social economic possibilities and opportunities such as purchase of fruit and vegetable products for sale and piece-job contracts.

b) ***Routes and Route/ Fare Splitting:*** Routes are designated by municipal town planners. The fact that trunk roads lie marginal to the settlements is creating a major linkage, access and transport problem for poor people. On the other hand, most of the roads linking settlements with trunk roads are gravel and unpaved and are, for that reason, shunned by public transport operators. The link roads are characteristically of rough surface and dusty conditions during dry weather and muddy during wet weather. Shunning of the link roads by operators splits routes and leaves gaps which are then filled by informal taxis and call for additional fares and or walking to connect with home or transport on the main roads. Large bus operators assign old and squeaky iron horses to dust roads which people do not like at all. On the other hand, formal taxis shun the dusty routes completely. The poor condition of the roads arising from route splitting is proving costly to

poor people and creating access and mobility problems.

d) *Frequency, Availability and Mobility:* Social and economic travel patterns and mobility of poor people in these settlements are regimented to the frequency, operation and availability of public and hours of business in the distant small towns. Omnibuses are active and available only during the narrow peak periods of 0600-0800hrs and 1600-1800hrs respectively, and virtually inactive off-peak, owing to low passenger volumes and unaffordability of public transport. The problem is that communities are not getting the needed and desired services along the gravel routes and settlements shunned by taxis and the poor people, especially traders and piece-job contractors are paying more for public and alternative transport for business mobility and conveyance. It can be said that public transport is severely compromising the ability of poor people to access possibilities and opportunities elsewhere that could uplift their lives.

e) *Commuting Distances and Costs:* Commuting distances are in the range of 20-50km for one-way trips and 40-100km for round trips while round omnibus fares fall between R12.00-R16.00 and R20.00 – R30.00 for taxis. Thus, a person who works 6 days of the week would have public transport expenditure in the range of R72.00 to R96.00 per week or R300.00 to R400.00 per month. Were it not for subsidy, such expenditure levels are unaffordable to a majority of households whose cash incomes generally fall below R1, 000 per month.

f) *Affordability, Subsidy and Access to Relative Space:* Private vehicle ownership is generally around 1% in the peripheral settlements though increasing and close to 10% in the relatively affluent nodes. Such ownership patterns suggest that over 90% of the communities are very dependent on public transport and are thus affected by any vagaries in public transport. Walking remains a major mode of travel and mobility, but is severely challenged by difficult environmental factors. The state's intervention to increase affordability and mobility as well as make public transport catalyze growth is in the form of subsidy administered by the Theme District municipality. Subsidy is availed to specific operators and routes that serve the historically disadvantaged areas and groups such as school children. However, not all operators and routes receive subsidy, hence the existence of differential fare tables between operators (such as Magwaba, Great North, Phadziri and Mabirimisa) on the Nhjelele and Louis Trichardt route. There is, however, no doubt that the subsidy is making public transport universally affordable and accessible.

The fact that a monthly ticket costs between R90.00 - R130.00 or 20% - 30% of the economic fare while accounting for 16% - 20% of the monthly cash incomes of those earning around R1, 000 per month, suggests to us that the state is doing good and well to subsidize the public 70% - 80% of their travel fares.

However, what is problematic is the fact that a large segment of the communities upward of 36% with monthly cash incomes of R500.00 per month or less are spending more or 30%-50% of their meager cash and grant incomes on public transport. The fundamental issue here is that this basement segment lives and survives on public transport service to access income-generating activities such as vending and piece jobs in other sprawling neighborhoods and distant towns. The irony of it is that it is the poor people who are spending more on public transport while gainfully employed people with better incomes have their public transport costs cushioned twice by the state subsidy and by employers.

g) Types of Public Transport and Mobility: There are three types of public transport and mobility servicing the communities, respectively: *omnibus*; *taxi* and *walking*. Large 50 - 75 passenger capacity omnibus are individual or firm - operated fleets while 14 – 20 passenger capacity taxis are of two types: *formal* and *informal*. Formal taxi operators are affiliated to route associations whose function is to regulate entry and enforce code of practice. Affiliation fees range from R15, 000 - R20, 000. Owner operated informal taxis have no affiliation as they are the unlicensed and older un-roadworthy owner-operated 14-passenger vehicles. However, though much more expensive, the informal taxi is providing a vital service to communities by availing access to formal public transport on the main roads.

h) Labour Characteristics and Quality of Service: Omnibus drivers are salaried personnel earning between R1, 400.00 - R2, 400.00 per week. Unlike taxi drivers, omnibus drivers enjoy pension and other labour and social premiums. On the other hand, taxi drivers earn between R800.00 - R900.00 per month plus higher incentive premiums on higher productivity. In part, it is this wage structure and the pursuit to optimize bonus premiums that is putting taxi drivers under heavy pressure to accomplish as many trips as possible in the shortest possible time leaving little or no time for customer care, hence: intense competition, poor driver attitude, violent behavior, disregard of road traffic codes, concerns for overloading, passenger safety and security, loud irritating music or noise which give passengers in discomfort and fear.

i) Public Transport, Livelihoods and Quality of Life

Table 2 Impact of public transport on communities in the Study Areas.

		TOHOYANDOU N=30	LOUIS TRICHARDT N=30	COMPOSITE N=60	ISSUES.
1	Are there activities not optimized because of public transport?	70% (21)	80% (24)	75% (45)	The majority is involved in petty commodity trading and piece jobs and are not able to optimize social and economic growth possibilities and opportunities in other communities and towns because of constraints placed by both unavailability, limited access an mobility, and high cost of public transport. .
2	Satisfaction with taxi service.	46% (14)	43% (13)	44.5 % (30)	Communities are unhappy with taxi service: split trips and fares; expensive; indeterminate; shuns unpaved collector/ distributor roads; compromises accessibility; overload; are speedy, and of poor customer care.
3	Satisfaction with omnibus service	42% (12)	46% (14)	44% (26)	Communities are not happy with omnibus service; Only available during peak hours , ply mainly trunk roads, differential fares; no inter and intra community services; assign old and poorly maintained buses to rural routes.
4	Overall satisfaction with quality of public transport service.	46% (14)	43% (13)	44.5% (27)	Generally unsatisfactory: expensive and increasingly out of reach of poor; poor roads; and old buses, and unavailable
5	Walking as alternative mode of public transport	3km (16 minutes)	2km (10 minutes)	2.5 km (12 Minutes)	Tolerance to walking has shrunk to 1.5km.
6	Necessary trips made in proportion to those not made per week because it is expensive.	1 trip per month out of four.	1 trip per month out of four.	1 trip per month out of desired four.	Only a quarter of the trips are made because of high cost and failure to afford as much travel is needed and necessary to optimize social and economic livelihoods
7	Do perceptions and experiences and preferred mode differ by age group?	Youth (84%): <i>taxi</i> Women (86%): <i>buses</i> Men (91%); <i>own car and taxi</i>	Youth (76%): <i>taxi</i> Women (94%): <i>buses</i> Men (92%): <i>own car and taxi</i>	Youth (80%): <i>taxi</i> Women (90%): <i>buses</i> Men (92%): <i>own car and taxi</i>	<i>Youth:</i> (80%) prefer speedy, loud music and sporty taxis. <i>Women:</i> (90%) prefer large omnibuses which are cheaper, where they feel safer, and secure, and can also carry luggage or wares. <i>Men;</i> (92%) prefer to own cars and taxis but prefer taxis if they have to use public transport because they want to get to destinations quickly.
8	Do municipalities have information and intelligence on what public transport is actually doing to people / communities?	50% (15) said no; and 50% said yes.	56% (17) said no and 44 said yes.	53% (32) said no and 47 said yes.	Generally, people think that officials do not have intelligence information on what public transport is doing to the people and believe that there is too much emphasis on regulation, compliance, and enforcement.
9	What should be improved?	Road paving, taxis to serve settlements and further subsidy. Reducing fares.	Settlement collector roads. Availability times. Reducing fares.	Improve collector and distributor roads	Road must be paved for taxis and buses to enter into settlements. Make public transport affordable and accessible to the poor people who need it most for livelihood activities.

Source: Musandu-Nyamayaro 2008.

4.2 Analysis

It is possible to cluster several interlinked and complex geographic and spatial, structural, historical, organizational, operational, infrastructural, cultural, economic, social, and environmental factors shown in Figure 1 to understand and explain findings and views expressed about the quality of public transport and its bearing on quality of life in peri-urban and peripheral communities of small towns of South Africa.

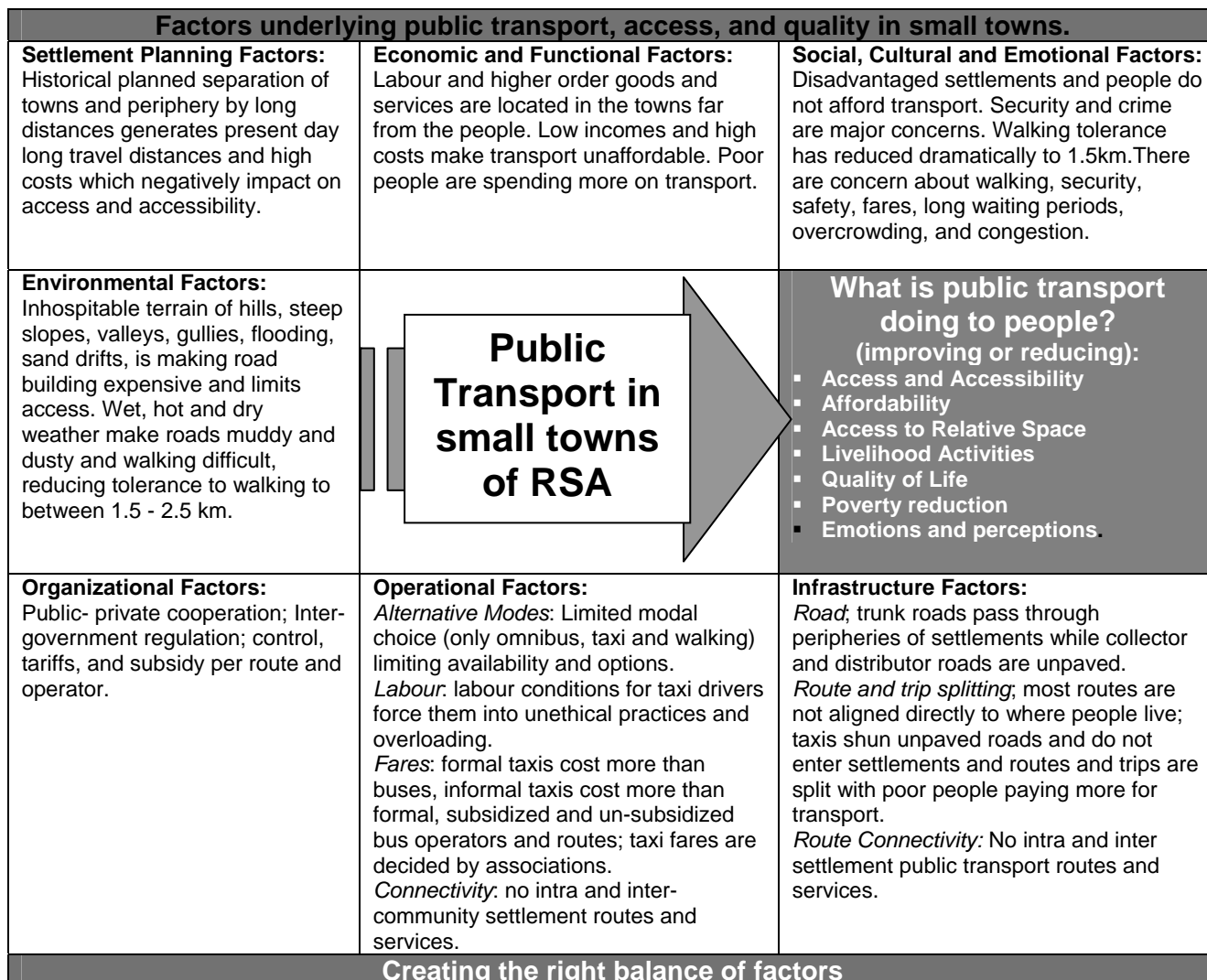


Figure 1 Cluster analysis of variables underlying public transport and access to relative space

Musandu-Nyamayaro (2008)

5. CONCLUSIONS

This study established that communities in the study area are generally not happy with the quality of public transport arising from cost impact on incomes and livelihoods and route and fare splitting. A large segment of people with incomes falling below R1, 000 located in peri-urban and peripheral settlements of small towns are struggling to afford access and optimize the use of subsidized public transport. Because of their dependence on public transport for mobility to carry out daily economic livelihood activities (trade and piece jobs) in and around their expansive neighbourhoods and small towns, they have no alternative but spend between 30-50% of their meager incomes on public transport. In this regard, public transport is limiting and holding back communities from pursuing and optimizing

their social and economic possibilities, potential and opportunities. The variables identified as underpinning this state of public transport, constraining access to relative space and optimization of livelihood activities are complex, interlinked, fixed and dynamic and include behavioral, organizational, economic, environmental, operational, public and private sector, social and cultural and emotional factors. These need to be investigated, understood and sensitively balanced if subsidized public transport is to make significant positive impact by enabling access and optimization of social and economic growth livelihood activities of people.

Finally, two public transport policy, operational, and infrastructure development aspects clearly call for immediate improvement. The first overriding policy and operational concern is that poor people are paying a large percentage of their meager cash incomes on subsidized public transport. Secondly, the developmental concern is to improve standards of settlement collector and distributor roads to facilitate improved entry into marginal areas and increase connectivity as well as reduce problems arising from route and fare splitting.

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