

# **LIGHT DELIVERY VEHICLE PASSENGER TRANSPORT IN THE VHEMBE DISTRICT OF LIMPOPO PROVINCE, SOUTH AFRICA**

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## **ABSTRACT**

In South Africa, particularly in rural areas, there is an increasing realisation that formal public transport, were seldom used because they were largely unaffordable and not suited to the poorly developed transport infrastructure and rugged terrain in most rural areas. Faced with such challenges rural community members had no other choice besides frequently relying on LDV, bicycles, animal-drawn carts and even animals such as donkeys to move around. An opportunity worth taking advantage of, is the fact that authorities in South Africa are increasingly recognising the potential of using LDV to accelerate socio-economic development in rural areas. This is informed by indications that the use of LDV (a) fills the gap left by the lack of formal public transport services in large parts of rural South Africa; and (b) provides an invaluable service to residents in remote rural villages. It was further observed that in various provinces and municipalities (including those in rural areas of the Limpopo Province) transport authorities are seeking ways of formalizing the use of LDV to carry passengers. Therefore it is important to contribute to these efforts through evidence-based research.

## **1. INTRODUCTION**

In South Africa, like any other developing countries, road transport is the main backbone of the economy. It has been well documented that inadequate transport systems in regions can slow socio-economic development and thus slow down poverty reduction efforts (Njenga and Davis, 2003). Such inadequate impede communities' access to essential services, employment and social networks. Efforts towards improving transport systems in rural areas in Sub-Saharan African countries such as South Africa where transport-related infrastructure is generally poor because of limited resources are therefore essential (Starkey,2007).

In particular, the study reported on was initiated because of preliminary indications that the informal LDV transport service in Vhembe District was more accessible than formal public transport services, especially in remote villages (Vhembe District Municipality, 2012). It was also said to be faster, cheaper and more reliable than available formal passenger transport services. However, because the service was illegal and thus not officially regulated, operators had scope for neglecting the safety and comfort of their passengers, although they apparently faced increasing pressure

to upgrade their service. It was thus clear that the suitability and extent of the use of LDVs as passenger transport in Vhembe District had to be investigated scientifically and in-depth. Given the disconnection between legislation and practical reality, empirically based ways to strengthen this service and integrate it with the mainstream transport system had to be found.

## **2. BACKGROUND**

The need for strengthening public transport and in particular the LDV passenger transport service in the Vhembe District Municipality of Limpopo Province becomes more clear when considering the following preliminary overview of public transport in this district: Taxis, buses and LDVs dominate public transport in Vhembe District. Operators of buses have a functional transport association, namely the Vhembe Bus Operators Association (VBOA). The latter association controls almost all buses that operate in the District. Various taxi associations operate daily in Vhembe District. Among these are the Thohoyandou, Vuwani, Sibasa-Siloam, Thohoyandou-Makhado, Thohoyandou-Malamulele, Thohoyandou-Polokwane and Venda-Johannesburg taxi associations. Metered taxis also offer informal, individual-oriented passenger transport. Since the latter are not registered as a transport service, their operations are not officially regulated and as a result, they are not allowed to use public transport facilities such as official taxi and bus ranks, including bus stops (VDM, 2009).

Light delivery vehicles are seemingly the most common means of passenger transport in the predominantly rural Vhembe District. They ply their trade in various parts of the District and ferry a diverse range of passengers such as civil servants, school children, the elderly and shoppers. However, unlike buses and taxis, LDVs do not follow specific operational schedules or timetables. The LDV operators are not organised or registered to provide passenger transport services. For this reason, they are not allowed to legally use public transport facilities. The LDV passenger transport often operates particularly in areas with poor road infrastructure. Apparently, most of the LDV operators are individually-owned businesses, with the owners or family members serving as drivers.

Given the importance of strengthening rural transport and anecdotal evidence that Light Delivery Vehicles (LDVs) rendered a vital, although not necessarily safe, informal passenger transport service in rural areas such as the Vhembe District in Limpopo Province, South Africa, an in-depth study of this service was done in the latter district.

## **3. AIMS, OBJECTIVES AND RESEARCH QUESTIONS.**

The study seeks to scientifically and in-depth unravel issues pertaining Light Delivery Vehicle passenger transport in the Vhembe District, by way of investigating the nature of and the extent to which LDVs are used to transport passengers as well as assessing the level of customer satisfaction with the use of LDVs to convey people in Vhembe District. These will answer the following research questions:

- 1) What are the nature and extent of the use of LDVs to transport passengers in Vhembe District?
- 2) To what extent are customers satisfied with the use of LDVs as passenger transport in Vhembe District?

#### **4. LITERATURE REVIEW**

Improved transportation has been widely pointed out in the literature, including in the Millennium Development Goals, as advantageous to socio-economic development (World Bank, 2010).

The literature reviews revealed that, rural transport system, policies and regulations, rural transport challenges are the prime contributing factors for VDM communities to rely on unconventional means of transport.

##### **4.1 The rural transport system**

The success of rural communities depends on well developed, balanced and sustainable rural transport systems. Rural transport is considered foundational to development, and it is a means to an end for rural poor (Payet, 2010). Lack of an effective transportation system is one of the major problems that hinder the full development of rural communities. Adeoti (2009) notes that most of the people in developing countries tend to live in fairly isolated communities in rural areas and as results their transport often differ.

##### **4.2 Policies and Regulations.**

The National Land Transport Act, (2000), the Rural Transport Strategy of South Africa (2007), the Transport Strategy Action 2007-2014, the Provincial Land Transport Framework 2011/12-2015/16 and the white paper on Transport Policy (1996), emphasize the need for a transformation of public transport, so that it becomes safe, affordable, reliable, and able to meet the needs of the users. Interestingly, however, the National Road Traffic Act (1996) prohibits the use of LDVs as a mode of transport by rural communities, making it impossible for rural communities to move from one point to the other (Regulation 250, Act 93 of 1996). Despite the prohibition, by the NRTA, LDVs continue to be the more popular mode of transport in many areas (Wosiyana, 2005).

##### **4.3 Rural Transport Challenges**

The fact that essential services are not necessarily erected within easy reach of rural communities makes the situation even more difficult. Quite often, residents of rural areas have to travel much further than those in more urban areas to reach basic health and educational services, as well as markets. Accessing essential services is thus quite costly to rural residents who are, in general, very poor and thus least able to afford transport costs. As a result, it is difficult for residents in rural areas to improve their living conditions (Adeoti, 2009)

##### **4.4 Ways of Strengthening Rural Transport Systems**

Arguments contained in the preceding sections of this manuscript suggest that the complexity of rural transport challenges demands that efforts made to address them should go beyond mere improvement of the road infrastructure. The South African Rural Transport Strategy of 2007) concur with this view. It is desirable to have in

place a combination of policies and measures that can help strengthen the rural transport systems. As Oyedemi (2009) points out, huge backlogs in the provision of various essential services in especially rural areas makes it imperative for governments to find innovative means to improve rural people's mobility. However, for governments to achieve this there is need for providing compelling evidence that makes it possible to make informed decisions.

According to Kane and Behrens (2002) efforts towards strengthening rural transport systems require in the first place careful customer-based planning. Planners should clearly specify short, medium and long term transport goals and the means for achieving them. The World Bank (2010) further cites this as one of the reasons why South Africa and other developing countries, viz. Tanzania, Kenya, India, Bangladesh, Cambodia, Peru and Madagascar, have started to develop such frameworks.

It is reported (Wosiyana, 2005; Ericson, 2011) that the South African Bureau of Standards (SABS) and the Department of Transport have accordingly embarked on a process of developing safety standards for using LDVs to convey passengers. Cognisance is inter alia taken of the measures taken in other countries to transform LDVs into safe passenger-carrying vehicles. In Cambodia, for example, various modifications are made to standard pick-ups to increase their carrying capacity (Ericson, 2011). The modifications include bars, canopies, removable tailgate seats and heavy duty tyres. It must be pointed out that the terrains of the two countries differ, which makes it unclear whether these are the only desirable modifications for LDVs used in the diverse rural South African conditions. Any efforts designed to improve the suitability of LDVs as passenger carrying vehicles must take this into account.

## **5. RESEARCH METHODOLOGY**

The study was conducted in Vhembe District Municipality, found in the northern part of Limpopo Province of South Africa. It shares borders with Botswana and Zimbabwe in the north-west, and Mozambique in the south-east. The District comprises of four local municipalities, (Makhado and Thulamela in the south, Musina and Mutale in the north) and is largely rural, (Vhembe District Municipality, 2012). The main towns are Thohoyandou (Thulamela Local Municipality), Makhado (Makhado Local Municipality) and Musina (Musina Local Municipality).

This study was qualitative and exploratory in nature. Qualitative in the sense that it sought to distil an in-depth understanding of human behaviour (transport users). The study was also exploratory in that this was the first time that the research of this nature was conducted in Vhembe District Municipality.

Participants in the study was LDV passengers/commuters. The research population comprised of 100 LDV passengers, 25 from each local municipality. In each municipality, and because of the informality of the LDV transport service and thus a lack of a clear sampling frame, research participants, representing the main target groups, were purposively sampled, using the snowball technique and selecting 100 LDV users.

Data were collected through self-administered questionnaires, in-depth interviews, focus group discussions and unobtrusive observations guided by an interview/observation schedule. Special care was taken to gather the data in an ethically responsible manner.

The qualitative data were thematically and statistically analysed, based on sub-themes, namely: frequency use of LDVs and the reasons thereof, and advantages as well as challenges associated with the use of such mode of transport. The results of in-depth interviews, focus group discussions were summarised based on frequency patterns, given the comparatively small samples and non-probability sampling technique.

**Table 1: Frequency with which users of the LDV passenger transport service in the commuter survey took trips by LDV, the main reasons for these trips and the cost**

Descriptors or variables	Proportion of respondents (%) in				$\chi^2$	Statistical significance
	Makhado	Musina	Mutale	Thulamela		
Sample size (n)	25	25	25	25		
Usual/typical frequency of trips by LDVs					27.61	*
Daily	28	16	28	36		
3-4 days a week	8	12	0	0		
Weekends	20	20	4	0		
5 days a week (Monday to Friday)	20	16	28	52		
Month-end	16	28	28	4		
Once a month	4	8	12	8		
Can't remember	4	0	0	0		

Usual/typical reason for taking a trip					30.03	***
To go to work	36	16	0	24		
To go to school	28	28	56	64		
To go to shopping	8	28	36	8		
To do business	20	20	4	0		
Can't remember/other	8	8	4	4		
Usual/typical cost of a trip by LDVs					25.78	***
R10-R20	20	20	24	68		
R30-R40	60	64	48	16		
>R50	20	16	28	16		

n = number of respondents;  $\chi^2$  = Chi-square; \* = P < 0.05; \*\* = P < 0.01; \*\*\* = P < 0.001;

ns = not statistically significant.

**Table 2: Main advantages and challenges of using the LDV passenger transport service, as reported by users of this service in the commuter survey**

Descriptors or variables	Proportion of respondents (%) in				$\chi^2$	Statistical significance
	Makhado	Musina	Mutale	Thulamela		
Sample size (n)	25	25	25	25		
Main advantage of travelling by LDVs					7.32	ns
Carried with luggage	24	28	36	8		
Affordable price	36	36	32	32		
No advantage	36	16	32	44		
Can't say/other	4	20	0	16		

Main challenge/difficulty travelling by LDVs					11.15	ns
Overload	52	36	56	48		
Exposed to bad weather	12	24	20	0		
Hard seats (steel/wood)	12	28	16	32		
Standing for the entire trip	12	8	8	4		
Can't say	12	4	0	16		

n = number of respondents;  $\chi^2$  = Chi-square; \* = P < 0.05; \*\* = P < 0.01; \*\*\* = P < 0.001; ns = not statistically significant.

## 7. RESULTS

### 7.1. Frequency with which users of the LDV passenger transport service took trips by LDV, reasons for these trips and the cost

As shown in Table 1, most (52%) of the users of the LDV transport service interviewed in Thulamela indicated that they took a trip by LDV five days a week (Monday to Friday), with a substantial proportion (36%) stating that they did so daily. In Makhado and Mutale the frequency with which the respondents took trips by LDV varied to a greater extent than in Thulamela. In Mutale, substantial proportions of the respondents either indicated that they took a trip daily (28%), or that they did so during weekdays (28%) or at the end of a month (28%). In Musina, taking a trip by LDV was particularly common at the end of a month (28%), and to a lesser extent on weekends (20%).

Regarding the typical reasons for taking a LDV trip, by far most (94%) of the respondents in this study's commuter indicated that their typical reason why they took a LDV trip was to access essential services such as education, employment and markets. For example, going to school (44%), to shop (20%), to work (19%) and to do business (11%) were given as the typical reasons for taking a trip by LDV. The relevant responses varied across the respective Local Municipalities in which the respondents resided, though. A Chi-square test also found a strong statistical relationship (P < 0.05) between the reasons given for a trip by LDV and the Municipalities where the respondents resided.

As would therefore be expected, many respondents in this study survey indicated that the main advantage of using LDVs was the affordability (34%) of this service and the fact that they could carry their luggage with them (24%). This implies that the fee of R40 or less that far most (80%) of the respondents indicated as the cost of a round trip by LDV was reasonable. Most (68%) of the respondents in Thulamela indicated an even lower fee (R10 to R20) (Table 1).

## **7.2. Advantages and challenges of using the LDV passenger transport service.**

The study also showed that the LDV transport service was advantageous to customers. Table 2, shows that the respondents indicated that the main advantage of using LDV transport was its affordability and carried with their luggage (36% Mutale, 28% Musina and 24% Makhado).

The respondents also indicated challenges when using LDV passenger transport service (Table 2). Nearly half (48%) of all the respondents highlighted the fact that LDV operators overloaded their vehicles as the main challenge. A substantial proportion (22%) of all the respondents identified the hard seats of the vehicles as their main challenge. Exposure to bad weather was another fairly commonly identified challenge. Fourteen per cent (14%) of all the respondents indicated the latter factor as the main challenge they faced when using the LDV transport service, with substantial proportions in Mutale (20%) and Musina (24%), known for their extreme weather, stating the same.

Reliable public transport services are virtually non-existent, especially in the remote rural areas (VDM, 2009; 2012). As a result, residents rely on informally operated light delivery vehicles (LDV) for passenger transport service. Vhembe District Municipality (2009) notes that although detailed scientifically generated information is not available, it is “common knowledge” that communities in especially remote rural areas mostly use LDVs to travel to and from places where essential health, education and other services are provided.

## **8. DISCUSSION**

The respondents' comparatively frequent use of the informal LDV passenger transport service was also consistent with the experience of rural communities in other parts of the world. For example, the World Bank (2010), Dennis (2001) and Archer *et al*, (2005), note that the range of suitable transport modes available in rural areas was generally small compared to towns and cities. Conventional motorised vehicles were seldom used because they were largely unaffordable and not suited to the poorly developed transport infrastructure and rugged terrain in most rural areas. Faced with such challenges rural community members had no other choice besides frequently relying on LDVs, bicycles, animal-drawn carts and even animals such as donkeys to move around.

The findings underlined that one of the key drivers of the use of the LDV passenger transport service in Vhembe District was the fact that residents were not necessarily within easy reach of essential services. Accessing essential services would thus be costly for them, especially when considering that they lived in a generally poverty stricken region and were personally subjected to economic hardship.

Various policies and legislations have been developed to facilitate the development of a safe, affordable and reliable transportation system that meets the specific transport needs of users. In this regard, the key policy documents and legislation include the White Paper on Transport of 1996, the National Land Transport Transitional Act 22 of 2000, the National Land Transport Strategic Framework of

2006-2011, the Transport Strategy Action Plan of 2007-2014, and the Provincial Land Transport Framework of 2011-2016. Despite the introduction of these legal frameworks and policies, provision of passenger transport services in rural areas of South Africa remains a major issue in development discourse.

An opportunity worth taking advantage of is the fact that authorities in South Africa are increasingly recognising the potential of using LDV to accelerate socio-economic development in rural areas. This is informed by indications that the use of LDV (a) fills the gap left by the lack of formal public transport services in large parts of rural South Africa; and (b) provides an invaluable service to residents in remote rural villages (Buffalo City Municipality, 2003; Wosiyana, 2005; Kekana, 2009;). Kekana (2009) observes that in various provinces and municipalities (including those in rural areas of the Limpopo Province) transport authorities are seeking ways of formalizing the use of LDVs to carry passengers. It is important to contribute to these efforts through evidence-based research.

## **9. CONCLUSION.**

To conclude, and consistent with the recommendations of international agencies, the study's findings implied that processes directed at formalising the LDV passenger transport service should be approached in a holistic and demand-led /people-centred manner that focused on the specific and variable needs that the affected communities expressed. An Intermediate means of transport particularly LDV is extremely important, and offers great potential for growth. This is because large areas are inaccessible to formal and legal public transport.

Safety awareness and education need to be gradually promoted to both operators and passengers, while safety regulations that are affordable and appropriate are enforced, without compromising the transport needs of poor rural people.

Given the general convergence between the data gathered and thus the integrity of the questions posed and answered, the finding should lead to the establishment of a multipurpose public transport system in Vhembe District, providing for the use of LDV alongside other forms of public transport in especially remote rural areas. This will further promote legislative reforms to allow LDVs to be used as passenger-carrying vehicles, with some conditions attached such as canopies, specified seating capacity, proper seats, route permits and other safety-related measures. Road traffic safety awareness campaigns to educate the public and transport providers about road safety issues should also be prioritised.

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