

Shortage of Public Transport Services in the Rural Areas of Limpopo Province: Causes, Challenges and Effects

SJ Mabeba and LM Mmila
University of Limpopo, South Africa

Abstract: In an economic, political, social and environmental context, public transport is regarded as the most important and safe transport which allow physical movement of people. Lack of sufficient public transport services (Taxis and Buses) in rural areas remains a concern in Limpopo Province. This is not only a concern for the society but the government in particular. Communities are struggling on a daily basis to access various destinations of their choice due to shortage of public transport. Amongst other places, some households find it challenging to access Central Business Districts (CBD's). Consequently, there are negative effects and consequences that could arise because of shortage of public transport services. The aim of this paper is to highlight the main causes, challenges and effects of shortage of public transport in the rural areas of Limpopo Province. The paper adopted a desktop content analysis method. This involves systematic review of literature with specific reference to journal articles, conference articles, newspapers, books and official reports. The paper successfully unpacked the causes, challenges and effects of shortage of public transport in rural areas. It must however be acknowledged that not all rural areas in Limpopo Province have adequate public transport services. As a result, rural commuters are struggling to conveniently access various destinations such as health care facilities (clinics and hospitals) shopping complex and workplaces. Insufficient public transport can compromise the safety of rural communities. Sometimes commuters have no choice but to use private transport of unknown motorists that tend not to be safe. Therefore, this makes rural commuters to be vulnerable to immoral practices such as rape, kidnapping and robbery along the way. The major finding of this article is that the absence of proper road infrastructure is still a major challenge, which makes public transport to be limited. The paper concludes by proposing measures that can be executed in an attempt to increase and improve mobility in rural areas.

Keywords: Causes, Challenges, Effects, Immoral practices, Safety

1. Introduction

Shortage of adequate public transport is one of the major challenges confronting rural communities to date in Limpopo Province. As such, this major challenge has become a critical issue of modern societal and scholarship debate. This is so as most rural areas are still confronted with insufficient, unreliable and inconvenient rural public transport services. Rural households need mobility to shops and markets (for buying and selling), to inevitable services (hospitals, schools, energy, information, civic functions), to income-earning possibilities and to socio-cultural opportunities (cultural and sporting events, religion, family visits) (Starkey, 2002; Starkey, 2007a). Many people in developing countries such as South Africa do not have cars. As a result, they rely on public transport as a means to move from one place to another (Starkey, 2007a). However, rural public transport is further regarded as a crucial factor towards achieving other goals and public values, particularly those related to economic and environmental issues (Stjernborg & Mattisson, 2016).

In rural areas, public transport service should be an important factor towards increased welfare, not least because it is publicly controlled (Holmgren, 2014).

Arguably, the National Household Travel Survey (NHTS) is a clear point to start. Conducted in 2014, it assessed the extent to which public transport services are offered and the facilities provided, and expresses the accompanying cost and affordability for the traveller. The survey reveals that only 30% of households in South Africa including rural people own a car with the other 70% depending on taxis and buses. It must however be stated that public transport system challenges can be in the economic, environmental or social context (Givoni, Macmillen, Banister & Feitelson, 2013). In pursuit of its aim, this article unpacks the causes, challenges and effects of shortage of public transport services in the rural areas of Limpopo. While the article argues that there is a shortage of public transport in rural areas. What is the important contribution of public transport in rural areas? To answer this question this paper conceptualises rural public transport

in the context of Limpopo Province with a view of providing a theoretical backgrounding, outlines the state of public transport services in the Province with a view of soliciting debates in an attempt to place an informed angle of discussion, unpack the causes, challenges and effects of shortage of public transport and highlight the essential contribution of public transport in rural areas.

2. Understanding the Meaning of Rural Public Transport

Public transport is defined as a significant planning aspect for arranging the South African rural society (Bjerkemo, 2011). In line with the transport policy goals of South African government, rural public transport is described as a key coordinator towards realising a number of societal goals, such as employment, education, improved environmental conditions and accessibility (Goals for future trips and transport, 2016). Public transport should not be viewed as a single element; rather, it is situated within a societal context. Often perceived as an important aspect for other public interests such as housing and working issues, public transport can be closely related to the everyday lives of many citizens in South Africa (Andersson, Bergman, Eriksson, Fredriksson, Gibrand, Hansson & Sjaunja, 2012). Rural public transport may further be defined as a facilitator whose role is to promote regional development and safety by means of reducing environmental effects such as rape, robbery and kidnapping.

Most importantly, Stjernborg and Mattisson (2016) defines rural public transport as a facilitator whose role is to link destinations and nodes, through the promotion of a central rural structure, and its contribution to increased accessibility to and from rural areas in South Africa. Rural public transport may further be defined as a critical component whose day to day function is to permit rural households to easily travel to and from work, school, hospitals, clinics, shopping complex, cultural activities and leisure activities. However, public transport is generally referred to as a better alternative than the car, both for the environment and for the prevention of unforeseen events (robbery and kidnapping) that commuters may be confronted with when using private cars of unknown motorists. Rural public transport plays a key role in getting land into production, in marketing agricultural commodities and in the development of industries, in the expansion

of trade, in the conduct of health and education programmes and in the exchange of ideas (Olawole, Aloba & Adetunji, 2010). An assertion can be made that the contribution of public transport in rural areas exists. The section that follows will explain the state of rural public transport in Limpopo Province.

3. The State of Rural Public Transport Service in Limpopo Province

According to the Department of Transport (2014) public transport has been neglected for 25 years, and by extension, there has been significant under-investment in rural areas, which explains the emergence of a vast backlog of public transport needs that require attention. Though there are areas which have full access to public transport, some settlements around Limpopo remain in distress due to lack of access to public transport. This is evident as there are difficulties with the provision of public transport due to scattered settlements (Department of Roads and Transport, 2010:26). Furthermore, road conditions in some of the District municipalities in the rural areas of Limpopo are still poor (Department of Roads and Transport, 2010:26). Quality of the road infrastructure always determines the improvement of the socio-economic conditions (Mamabolo, 2016:32). The quality of road infrastructure perceptibly attracts public transport and there will be increased mobility due to economic activities that will be taking place around a specific area. However, looking at some areas around Limpopo province such as Kutupu village in Sekhukhune District, lack of public transport is still relatively high as they only have access to transport in certain time periods. The village only consists of one mode of transport which is a bus. The bus moves only 3 times in a day, morning, midday and in the afternoon.

The village also lacks socio-economic activities, hence there is not much movement of people and transport. This type of arrangement affects the livelihoods of the residents negatively as they only run their errands on a specific time period. Furthermore, this continues to be a threat to the village's economic development. According to Department of Roads and Transport (2010:31) Greater Sekhukhune District Municipality (GSDM) is characterised by gravel roads and the roads are deteriorating due to poor maintenance and local storm water problems. This results in limited access to public transport in the community. Furthermore,

Department of Roads and Transport (2010:28) stated that there is limited accessibility to most rural areas as there is inadequate access to roads and internal street networks within the Mopani District Municipality (MDM). This put communities in a tough situation as public transport is unable to access their respective villages. Department of Roads and Transport (2010) stated that both the districts and local municipalities' roads within their jurisdiction needed more attention and delivery of municipal road network at local level needs to be considered for provision of access to settlements. The next section aims to provide a detailed analysis of the causes, challenges and effects of shortage of insufficient public transport services in order to gain a comprehensive understanding of the topic under investigation.

4. Causes, Challenges and Effects of Insufficient Public Transport Services

Public transport in rural areas generally suffers from lack of service availability and infrastructure, services are infrequent, not easily accessible, and not connected to other modes of transport (Halden, Farrington & Copus, 2002). Recently, to enhance accessibility and connectivity for socially-disadvantaged groups the provision of enhanced public transport in remote areas is seen as one of several major rural development rationales (Currie, 2010). Regardless of the efforts by the government, public transport provision in rural areas is still associated with poor service levels (Hurni, 2006). This leads to problems of social exclusion particularly for the young, old, low-income, and disabled (Farrington & Farrington, 2005; Shergold & Parkhurst, 2010). Key accessibility issues identified by surveys of job seekers and incapacity benefit claimants included a general lack of provision of off-peak travel, particularly at night, which inhibited them from taking part-time employment (Kent Jobcentre Plus District Implementation Team, 2010).

It is widely accepted that a basic problem with rural public transport is the lack of opportunities available to access a necessary range of basic service outlets and amenities located in distant centers (Nutley, 2003; Kamruzzaman & Hine, 2011). This range of transport supply may not be available for remote and sparsely populated rural areas, due to low population density. Often, these remote areas are provided with inadequate public transport options for most of the day. However, the

characteristics of rural areas present some of the contributing factors to lack of public transportation. Examples of such characteristics are: rural dwellings are distributed over large areas. Secondly, population density is low and so potential commuter numbers are limited, and the level of demand is unpredictable. As a result, shortage of public transport system in rural areas generally is caused by low and uncertain demand, and service coverage is very limited since the provision of frequent and widespread commercial public transport services is financially unjustifiable for the commuter numbers attainable (Mulley & Nelson, 2009). Access to basic needs through public transport is an essential requirement for rural dwellers, and inadequate public transport is a major cause of social exclusion in remote rural areas (Scottish Executive, 2001). Furthermore, Odaro (2012) argued that lack of adequate road infrastructure is one of the reasons that make public transport in rural areas to be limited. Therefore, improved road infrastructure will enhance mobility and accessibility. According to Hettige (2006) the presence of road infrastructure has advantage for rural communities as it creates opportunities in new markets and offers seasonal migration for employment (Hettige, 2006). Road infrastructure specifically, is important in rural areas as they connect rural areas to urban centres which lead to growth and mobility. Improved road infrastructure facilitates accessibility to schools (Barrios, 2008; Hettige, 2006). However, it is equally important for the article to highlight some of the effects of shortage of public transport in rural areas. On that note, on the 13th December 2017, The Sun newspaper reported that a male hitchhiker was drugged and raped by two women at gunpoint in Limpopo Province. In light of this, the article argues that shortage of public transport in rural areas could be one of the reasons for such terrible incidents. Therefore, provision of reliable and convenient public transport can eliminate incidents of such nature.

5. The Nexus between Public Transport and Rural Development

There is a relationship between public transport and rural development. Arguably, a place which has reliable and convenient public transport supply is likely to attract high movement of people, goods and services. Therefore, the more the movement in a particular area the more various economic activities could be attracted. People in rural areas of

Limpopo need reliable mobility to shops and markets (for buying and selling), to key services (health, education, energy, information, civic functions), to income-earning possibilities and to socio-cultural opportunities (cultural and sporting events, religion, family visits). This access can involve provision of facilities in rural areas (proximity) and the mobility to travel to towns or other areas. As it was stated elsewhere in this article that majority of the population in South Africa do not own cars, and the main means for mobility are walking, intermediate means of transport (IMTs) and public transport services. On rural roads, transport services are often provided by those who own cars and the means of transport may be buses and taxis (Starkey, Ellis, Hine & Ternell, 2002; Starkey, 2007a).

People in rural areas often see the need for better public transport (roads and transport services) as key investments that would improve their lives (Cook, Duncan, Jitsuchon, Sharma & Guobao, 2005; Lema, 2006; Riley & Bathiche, 2006; Odoki, Ahmed, Taylor & Okello, 2008). Investment on rural roads can involve connecting villages that are not on the road network and improving the maintenance and quality of existing rural roads in order to attract public transport services. Both types of investment bring significant benefits to rural communities and to poor people, but there is evidence that the greatest benefits often come from providing motorable access to people that are currently far from any road. To a great extent, a well-organised public transport system in rural areas can enhance economic growth by improving social inclusion, accessibility and mobility (Farrington & Farrington, 2005).

According to Hine and Riverson (1982) the benefits of upgrading footpaths to roads could be a hundred times greater than improving existing roads. This is because of the greatly reduced transport costs when trucks or other motorized transport replaced human porter age. Similarly, studies have shown very high benefit to cost ratios for new rural roads that allow human porter age to be replaced by light trucks (Shrestha & Starkey, 2013). The impact of small feeder roads on poverty reduction is three times greater than gravel or tarmac roads, per unit of investment (Fan, Zhang & Rao, 2004). Fan and Chan-Kang (2005) in an important study of the investments in roads in China, concluded that while China's huge investments in expressways was economically beneficial for China, the greatest returns to investments came

from the construction of low-volume rural roads. Investment in such roads also had a greater influence on poverty reduction than investments in better-quality, high-volume roads that will make rural communities to access transport services without any inconvenience. The benefit cost ratios of low quality (rural) roads were four times greater for National Gross Domestic Products (GDP) than investments in high-quality roads (Fan & Chan-Kang, 2005). However, Banjo, Gordon and Riverson (2012) in their World Bank review of rural transport emphasised the need to focus rural transport investments on the lower end of the rural road network, community roads in order to meet the rural access and mobility needs of those who fully rely on public transport.

Furthermore, public transport has much impact on access to education. Rural roads can greatly influence where schools are built, how many rural boys and girls go to primary and secondary schools and how adequately the schools are staffed. On that note, some of the staff will have to use public transport. In Limpopo, rural primary schools are within walking distances of their catchment communities, but secondary schools are more spaced out, requiring much longer average journeys (and perhaps boarding arrangements). Therefore, that is when one can consider using public transport rather than hitch-hiking which is often not safe. For example, China has closed most village-based schools and concentrated primary and secondary education in small towns. This policy necessitates the provision of good village-to-town transport infrastructure and transport services (Starkey, 2013).

When looking at Luapula Province of Zambia, education provision suffered from poor rural transport services. The transport problems caused absences from work for several days each month as teachers travelled long distances by bicycle to collect their salaries. The lack of public transport services made it difficult to keep rural teachers at their work places (Starkey, 2007b). Similarly, in rural Morocco, rural road building improved the quality of rural education as it was easier to recruit and retain teachers (Levy, 2004). Bell and Van Dillen (2012) were able to quantify the effect of public transport road access on teachers' attendance using follow-up surveys in Orissa. It can therefore be argued that access and mobility are important factors in reducing poverty and enhancing rural development (Hettige, 2006).

6. The Demand for Rural Public Transport

The demand for public transport needs to be clearly understood so that everyone can understand why there is a need to have it in rural areas. It must however be acknowledged that people need public transport for heterogeneous reasons. The need for transport services for socially disadvantaged groups (older adults, young and disabled) in rural and remotely situated areas is inevitable (Currie, 2010). Public transport is of particular importance to the rural poor (who do not own cars), as this is the only mode available to them to travel short and longer distances across the country (CoCT, 2006; Iles, 2005; Kwakye, Fouracre & Ofusu-Dorte, 1997; Sohail, 2000; Sohail, undated). Generally, public transport plays a significant role to the livelihoods of the rural people as it provides them with the means to access employment and income-generation opportunities, education, health, and social networks such as immediate and extended families (Booth, Hanmer & Lovel, 2000; CoCT, 2006; Gannon & Liu, 1997; Nyarirangwe & Mbara, 2007; Sohail, 2000; Sohail, Mitlin & Maunder, 2003; Sohail, 2005; Sohail, Maunder & Cavill, 2005a). Therefore, any improvement(s) in public transport provision in rural areas will result in improved quality and security of access to work, markets, and services. Furthermore, this will also improve the livelihoods and quality of life of the poor; enable the poor to develop and broaden their asset base; reduce the poor's vulnerability to household-level risks such as medical emergencies; and reduce their poverty (Gannon & Liu, 1997; Booth *et al.*, 2000; Kwakye *et al.*, 1997; Sohail, 2000; Sohail *et al.*, 2005; Sohail, 2005; Sohail, undated). Additionally, Mashiri, Nkuna, Chakwizira and Maponya (2008) emphasised that public transport is important for the purpose of transporting rural communities to access health-care facilities. According to Fox (2000) and Sohail *et al.* (2005) the value of public transport in allowing the rural communities to have access to economic and social opportunities depends on accessibility, affordability and quality of the public transport services. Thus, rural communities are expected to benefit from improved accessibility, reliability, travel times, affordability, frequency, capacity, safety and security of public transport services (Barter, 1999; Booth *et al.*, 2000; Gannon & Liu, 1997; Fox, 2000; Palmer, Astrop & Maunder, 1997; Sohail *et al.*, 2005; Wright, 2004).

In light of this, the formulation of appropriate transport responses to the travel demands of rural communities should include the provision of improved public transport in terms of this identified criteria (Howe & Bryceson, 2000). It is equally important to highlight that access to affordable public transport services is of paramount importance in rural areas as it offers a way out of economic and financial deprivation and social and physical isolation (Sohail *et al.*, 2005). One of the first considerations when going to look for a job is accessibility. Public transport in rural areas play a significant role in the decision making process about whether to apply for, accept or stay in employment. Arguably, jobseekers claim that a lack of personal transport or poor public transport service is a key barrier preventing them from getting a job (Passenger Transport Executive Group, 2011). In a number of studies, unemployed people and long term unemployed people in particular, have been found to be by far the most isolated from public transport provision (Department of Transport, 2000).

7. Conclusion and Recommendations

The article aimed to provide the causes, challenges and effects of shortage of public transport (Taxis and Buses) in the rural areas of Limpopo Province. This is crucial because the role of public transport in the society is inevitable. Through the reviewed literature the article successfully determined the causes of insufficient public transport in rural areas. In this regard, the article concludes by arguing that whereas shortage of public transport remains a concern for the government and the society at large, it is important to recognise and appreciate the fact that some rural areas are more developed than others. Therefore, this makes the challenges and causes of lack of public transport in rural areas to differ. Otherwise, the article recommends the government to be involved. It has to provide sustainable road infrastructure that will attract public transport investment in the rural areas. Secondly, investment on socio-economic activities could also be used as a strategy to increase and improve mobility in rural areas.

References

- Andersson, P.G., Bergman, A., Eriksson, P., Fredriksson, L., Gibrand, M., Hansson, J. & Sjaunja, E. 2012. A Planning Handbook for an Attractive and Effective Public Transport, Sweden.

- Baker, N. 2017. Available at: <https://www.thesun.co.uk/news/5129880/hitchiker-raped-south-africa-women-drink-mystery-substance/>. Accessed 21/10/2020.
- Barrios, E.B. 2008. Infrastructure and rural development: Household perceptions on rural development. *Progress in Planning*, 70(1):1-44.
- Bell, C. & Van Dillen, S. 2012. *How does India's rural roads program affect the grassroots?* Findings from a survey in Orissa. Policy Research Working Paper 6167, World Bank, Washington DC, USA. 39p. Available at: <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-6167>. Accessed 4/11/2019.
- Bjerkemo, S.A. 2011. *New Directions for Public Transport – An Evaluation of Knowledge*. STOUT: Stockholm.
- Booth, D., Hanmer, L. & Lovell, E. 2000. Poverty and Transport, Final Report, A report prepared for the World Bank in collaboration with DFID, Overseas Development Institute (ODI), London.
- Bryceson, D.F. & Howe, J. 1993. *Rural household transport in Africa: reducing the burden on women?* *World Development*, 21(11):1715-28. Available at: <http://www.sciencedirect.com/science/article/pii/0305750X93900790>. Accessed 2/11/2019.
- Cook, C., Duncan, T., Jitsuchon, S., Sharma, A. & Guobao. 2005. *Assessing the impact of transport and energy infrastructure on poverty reduction*. Asian Development Bank (ADB), Manila, Philippines. 290p. Available at: <http://www.adb.org/sites/default/files/pub/2005/assessing-transport-energy.pdf>. Accessed 10/11/2019.
- Currie, G. 2010. Quantifying spatial gaps in public transport supply based on social needs. *Journal of Transport Geography*, 18:31-41.
- Department of Roads and Transport. 2010. Desktop Study Report: Development of the Limpopo Rural Transport Strategy. Available at: <http://policyresearch.limpopo.gov.za/bitstream/handle/123456789/584/Desktop%20Study%20for%20Rural%20transport%20in%20Limpopo%20province.pdf?sequence=1>. Accessed 23/10/2020.
- Fan, S., Zhang, X. & Rao, N. 2004. *Public Expenditure, Growth and Poverty Reduction in Rural Uganda, Development Strategy and Governance Division (DSGD) Discussion paper 4*. International Food Policy Research Institute, Washington DC, USA. 71p. Available at: <http://www.ifpri.org/sites/default/files/publications/dsgdp04.pdf>. Accessed 08/11/2019.
- Farrington, J. & Farrington, C. 2005. Rural accessibility, social inclusion and social justice: Towards conceptualisation, *Journal of Transport Geography*, 13:1-12.
- Gannon, C. & Liu, Z. 1997. *Poverty and transport*. Discussion Paper TWU-30, World Bank, Washington DC, USA. 65p. Available at: <http://siteresources.worldbank.org/INTURBANTRANSPORT/Resources/twu-30.pdf>. Accessed 08/11/2019.
- Givoni, M., Macmillen, J., Banister, D. & Feitelson, E. 2013. From Policy Measures to Policy Packages, *Transport Reviews*, 33(1):1-20.
- Goals for Future Trips and Transport. Available at: <http://www.regeringen.se/contentassets/80dd7d80fc64401ca08b176a475393c5/mal-for-framtidens-resoroch-transporter-prop.-20080993>. Accessed 4/10/2020.
- Halden, D., Farrington, J. & Copus, A. 2002. *Rural accessibility. Scottish Executive Central Research Unit report*. Available at: <http://www.scotland.gov.uk/Resource/Doc/46922/0030639.pdf>. Accessed 3/10/2020.
- Hettige, H. 2006. When do rural roads benefit the poor and how? An in-depth analysis based on case studies.
- Holmgren, J.A. 2014. Strategy for increased public transport usage – The effects of implementing a welfare maximizing policy, *Research in Transportation Economics*, (48):221-226.
- Howe, J. (undated). *Transport and Poverty Reduction*. Available at: www.tiup.dfid.gov.uk/uploads/public/documents/.../transportandpovred.DOC.
- Hurni, A. 2006. Transport and social exclusion in Western Sydney. University of Western Sydney and Western Sydney Community Forum project report. Available at: http://www.wscf.org.au/uploads/File/Transport_disadvantage_report_web.pdf.
- Kamruzzaman, M. & Hine, J. 2011. Participation index: A measure to identify rural transport disadvantage? *Journal of Transport Geography*, 19:882-899.
- Kent Jobcentre Plus District Implementation Team. 2010. Existing evidence and measures to tackle accessibility problems.
- Kwakyie, E.A., Fouracre, P.R. & Ofusu-Dorte, D. 1997. *Developing strategies to meet transport needs of the urban poor in Ghana. World Transport Policy and Practice*, 3(1):8-14.
- Levy, H. 2004. *Rural roads and poverty alleviation in Morocco*. Case Study for 'Reducing Poverty, Sustaining Growth'. World Bank, Washington DC, USA. Available at: http://www.wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2004/12/07/000090341_20041207103309/Rendered/PDF/308170MOR0Rural0Roads01see0also0307591.pdf. Accessed 8/11/2019.
- Mamabolo, M.A. 2016. Provision of quality roads infrastructure in South Africa: Rural villagers' perceptions, Polokwane municipality in Limpopo province: *Journal of Public Administration and Development Alternatives*, 1(2):28-44.
- Mashiri, M., Nkuna, Z., Chakwizira, J. & Maponya, G. 2008. Strengthening Informal Healthcare Delivery: Gender Perspectives. Paper presented at the Proceedings of the 27th Southern African Transport Conference (SATC 2008).
- Mulley, C. & Nelson, J.D. 2009. *Flexible transport services: A new market opportunity for public transport*. *Research in Transportation Economics*, 25:39-45.
- National Household Travel Survey, 2014. Statistics South Africa: Pretoria
- Nutley, S. 2003. Indicators of transport and accessibility problems in rural Australia, *Journal of Transport Geography*, 11:55-71.
- Odaro, E.D. 2012. Causes of poor service delivery in Africa and their impact on development. Consilience, *The Journal of Sustainable Development*, (7):34-45.
- Odoki, J., Ahmed, F., Taylor, G. & Okello, S. 2008. *Towards the mainstreaming of an approach to include social benefits within*

- road appraisal: a case study from Uganda. *Transport Papers TP-17, Transport Sector Board*, World Bank, Washington DC, USA. Available at: <https://openknowledge.worldbank.org/handle/10986/17464>. Accessed 8/11/2019.
- Olawole, M.O., Aloba, O. & Adetunji, M.A. 2010. The Place of Transport in the Attainment of the Millennium Development Goals in Rural Areas of Nigeria. *Ife Journal of Environmental Design and Management*, 4(1):33-48.
- Palmer, C., Astrop, A. & Maunder, D.A.C. 1997. *Constraints, Attitudes and Travel Behaviour of Low-income Households in Two Developing Countries*. Transport Research Laboratory (TRL) 263: London.
- Passenger Transport Executive Group. 2011. *Total Transport; Social Exclusion Unit 2003: 'Making the Connections: Final Report on Transport and Social Exclusion'*; Department for Transport (2000): Social exclusion and the provision of public transport. Department of Transport: Pretoria.
- Scottish Executive. 2001. Evaluation of the rural transport fund. Government of Scotland. Available at: <http://www.scotland.gov.uk/Resource/Doc/156511/0042024.pdf>.
- Shergold, I. & Parkhurst, G. 2010. Operationalising sustainable mobility": The case of transport policy for older citizens in rural areas, *Journal of Transport Geography*, 18:336-339.
- Sohail, M., Mitlin, D. & Maunder, D.A.C. 2003. *Guidelines Partnership to Improve Access and Quality of Public Transport*. WEDC. Loughborough University: Loughborough.
- Starkey, P. 2002. Local transport solutions for rural development. Department for International Development (DFID), London, UK. 48p. ISBN 1 86192 427 5. Available at: <http://www.animaltraction.com/StarkeyPapers/StarkeyLocal-Transport-Solutions-A4-screen.pdf>.
- Starkey, P. 2007a. The rapid assessment of rural transport services. SSATP Working Paper No. 87A. Sub-Saharan Africa Transport Policy Program (SSATP), World Bank, Washington DC, USA. 80p. Available at: www4.worldbank.org/afr/ssatp/Open.aspx?id=814.
- Starkey, P., Ellis, S., Hine, J. & Ternell, A. 2002. *Improving rural mobility: options for developing motorized and nonmotorized transport in rural areas*. World Bank Technical Paper 525. World Bank, Washington DC, USA. 64p. ISBN 0821351850. Available at: <http://elibrary.worldbank.org/doi/pdf/10.1596/0-8213-5185-0>. Accessed 8/11/2019.
- Stjernborg & Mattisson, 2016. The Role of Public Transport in Society – A Case Study of General Policy Documents in Sweden. Knowledge Centre for Public Transport: Lund.