

UNIVERSITY OF ZULULAND



**The Role of National Land Transport Strategic Framework in enhancing human
development, with specific reference to income generation at uMlalazi Local
Municipality**

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South Africa**

Supervisor

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DECLARATION

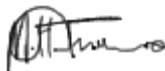
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DEDICATION

I dedicate this dissertation to my late precious parents, Sesi Treah Maseko and Lucas Thulare; they have been a motivating factor throughout my studies.

My Pastor, Mr. Edward Mgwenya who by God's grace has lived to see me coming from nothing to become somebody in life:

(Ngiyabonga kakhulu Phangas)

I also dedicate this work, to my friends Njabulo "Shimza" Maphumulo, Bongani "Che" Ntombela, Sifiso Ndwandwa, Nonkululeko Mlombo, Thembela Ntshangase, Thulani Maphosa, Philani "Sxaka" Mthethwa, Sandile "Msetie" Ncube, Mbasha "Mtumaseli" and Sihle "Gwara Nation" Mkhize for always believing in me and being supportive throughout my academic journey.

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ABSTRACT

Literature of the study showed that the transport studies in general that have examined the causality between transport and economic development. The literature revealed that there is a lack of studies that have specifically examined the role of road transport frameworks in enhancing human development. The present study examined the role of the National Land Transport Strategic Framework (NLTsf) in enhancing human development with a specific reference to income generation at uMlalazi Local Municipality. Using the New Public Management as an approach which guided crafting of strategic plans such as transport frameworks, the study examined the role played by strategic frameworks such as NLTsf in enhancing human development. The study adopted a mixed research method approach for collecting and analyzing both qualitative and quantitative data. The study used both approaches for the purposes of fully and broadly comprehending the phenomenon studied. Findings of the study revealed that there is a mixed picture about the contribution of road construction projects towards improving the socioeconomic livelihoods of the subjects of the study area. The study concluded that the provision of proper rural road transport infrastructure enhanced income generation capabilities, improved mobility, and, stimulated economic development through the establishment of small local businesses. However, lack of transparency and adherence to fair practices during the recruitment of projects participants, power contest between traditional leaders and councilors and political dynamics in the implementation of projects appeared to be the key challenges. Therefore, the study recommends the evaluation and monitoring of project recruitment procedures and the intensification of cooperative governance between government and civil society.

LIST OF ABBREVIATIONS AND ACRONYMS

DOT	Department of Transport
EPWP	Extended Public Works Programme
GDP	Gross Domestic Product
GIS	Geographical Information Systems
HD	Human Development
HDI	Human Development Index
IDP	Integrated Development Plan
LED	Local Economic Development
SPSS	Statistical Package for the Social Sciences
NGI	National Geographic Institute
NLTA	National Land Transport Act
NLTSF	National Land Strategic Framework
NPM	New Public Management

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1. 1 Introduction

Provision of adequate rural road transport infrastructure has been identified by governments across the globe as one of the important areas of focus in the development agenda (Herrero *et al.*, 2012). The significance of transport has grown beyond the provision of modes of transport (Kayode *et al.* 2013). Amongst other things, transport has been significant in facilitating trade, job creation and economic development, thus also ensuring that it influences and enhances socioeconomic livelihoods (Deng, 2013).

The view is also that transport infrastructure is crucial in the agenda of human development mainly on the socioeconomic upliftment and social well-being of people (Gustav *et al.* 2006). There is evidence in literature that rural road transport infrastructure plays multiple roles (Travers, 2009). Road transport infrastructure has economic as well as human development spin-offs (Harttgen & Klasen, 2012). Road transport infrastructure ensures that indicators of human development such as education and access to health facilities are prioritized. In this way road infrastructure becomes a catalyst in ensuring that human development is achieved (Widner, 2015).

Therefore, the study examined the role of the National Land Transport Strategic Framework (NLTsf) in human development with a specific reference to income generation in the uMlalazi Local Municipality. The section below briefly discusses the theory of the NLTsf.

1.2 Theoretical Framework

Neoliberal theory has proven to be a catalyst in the establishment of modern economic and social models used by institutions such as government. The dominance of neoliberalism since the 1980s has largely influenced economic and social policy development in the public sector. The influence and significance of neoliberalism perspectives has been largely noticeable in the restructuring and reengineering of public institutions into the adoption of corporate principles. These principles include amongst other good governance, accountability, results driven, efficiency and financial controls (Hardin, 2014; Peck, 2013; Venugopal, 2015).

The neoliberal theory and its application has resulted in the development of various managerialism approaches which amongst other includes the New Public Management (NPM). Historically, the reforms that occurred in the civil service in the 1880s influenced and shaped the reforms in the public administration field which gave birth to numerous theories, prominently the dominance of the neoliberalism theory in the 1980s. Since then, management approaches such as NPM has gained prominence in the public sector territory in terms of management, functionality and financial controls of public sector institutions (Ikeanyibe, 2016; Knafo *et al.*, 2018; Kalimullah *et al.*, 2012; Travers, 2009).

The momentum and prominence of NPM as a management approach orchestrated by the neoliberal theory, subscribes to corporate principles of good governance, accountability, efficiency and financial controls. The adoption of the NPM approach by public has since influenced restructuring and reengineering of the public sector institutions, government in particular. The NPM approach seeks to inculcate the culture and principles of the private sector in the public sector institutions so that government plans strategically, evaluates and monitors performance, promotes financial controls, efficiency and becomes more results driven (Walters, 2013; Alexander, 2010; Zhu, 2013; Hardin, 2014; Peck, 2013).

The abolishment of welfarism approaches and policies in the public sector institutions form part and parcel of the key areas of focus of the NPM approach. Thus ensuring that public sector institutions are structured in a way that cost recovery measures are put in place to recover the costs of basic services such as water, waste removal and electricity. Furthermore, NPM approach strives to eliminate glitches such as lack of coordination, fragmentation, duplication and lack of coherence in policies of public institutions (Kodongo & Ojah, 2016; Elbanna, 2013; Kalimullah *et al.*, 2012; Madra & Adaman, 2010).

The NPM as a managerialism approach subscribes to principles that ought to make public sector institutions more effective and efficient, especially in terms of governance and rendering services to the people. Hence through NPM as a managerialism approach adopted by public sector institutions, government therefore establishes various strategies that seeks to enhance key

government priorities especially those that are related to service delivery. It is in this regard that Strategic Planning became one of the managerial instruments adopted in the public sector. Through strategic planning, government is able to plan strategically and most precisely on what needs to be done and how (Knafo *et al.*, 2018; Madra & Adaman, 2010; Hardin, 2014; Peck, 2013).

Government through its various institutions set standards and targets in different strategies as informed by policy positions. Through the development of strategic plans in the public sector that ought to enable the realization and attainment of the set standards and targets by government, strategic planning becomes the yardstick to guide the planning, monitoring and evaluation of the set standards and targets. The application of monitoring and evaluation assist government to assess if the strategies put in place are meeting the desired outcomes, which mostly are service delivery related since government services people (Zhu, 2013; Hardin, 2014; Peck, 2013; Kodongo & Ojah, 2016).

In the sense of applying NPM as a managerialism approach and the use of strategic planning as an instrument for establishing strategies, the NPM managerialism approach positions public sector institutions to become efficient, effective, adhere to good governance, accountability and apply financial controls. The attainment of set standards and targets by government as informed by policy positions becomes possible to trace if the strategies are meeting the desired outcomes. (Albrechts & Balducci, 2013; Elbanna, 2013; Radnor & Osborne, 2013).

Having stated the above, it becomes important to outline the neoliberal theory as a foundation of the theoretical framework of the study. The relevance of the neoliberal theory as the theory underpinning the theoretical framework of the study is informed by its gene in the establishment of the NPM as a managerialism approach. The NPM as a managerialism approach derives its existence from the neoliberal theory. As outline above, the NPM as a managerialism approach ought to change and shape the manner in which public institutions conduct their business.

Now, the relevance of the neoliberal theory as a theoretical framework of the study comes through the NPM as a managerialism approach. It is through NPM that public sector institutions have established and adopted Strategic Planning when it comes to planning, establishment of service

delivery strategies, promotion of efficiency, good governance, accountability and sound financial controls. Through Strategic Planning in the public sector, government managed to establish various strategies and frameworks to guide the path of rendering different services to people and ensure the efficiency of public institutions.

It is through NPM as a managerialism approach that public sector strategic planning as informed by NPM has guided the establishment of frameworks in government, but to be precisely, the National Land Transport Strategic Framework (NLTSF). The NLTSF is a strategic framework used by the National Department of Transport to strategically provide road transport infrastructure planning and landuse planning. It is through NLTSF that the National Department of Transport is able to deliver on its key priorities in as far as road transport infrastructure and land planning is concern. The relevance of the neoliberal theory in this study comes in as a result of its genetic factor to NPM, strategic planning and ultimately NLTSF.

The above discussion is just a brief review of the theory that underpins NLSTF; Chapter Two below expands on the theory of the study. For now, the discussion proceeds into the statement of the research problem.

1.3 Statement of the Research Problem

Preliminary literature review reveals that there are general transport studies that have examine the role of transport in economic development. However, in South Africa, studies conducted to assess the role of government transport strategic frameworks such as the NLSTF on human development are limited. Therefore, the present study sought to fill this gap.

The effects of the colonial history in South Africa continues to linger and perpetuate inequalities in all possible ways in society. The apartheid system orchestrated spatial dispossessions that created a divided society in terms of where people work, live and receive social services such as healthcare services and access to education. Moreover, the development disparities that were perpetuated by apartheid came in a form of segregation in terms of areas of residence. This created settlement patterns that were based on racial lines which did not favor the majority groups in terms

of development and access to opportunities such as employment and services (Musvoto, 2014; Kepe, 2016; Noble & Wright, 2013).

The segregation that was created by apartheid system promoted development disparities which promoted the location of the poor, marginalized and oppressed in areas where there was no access to roads, water, electricity and sanitation. This then meant that, the development of rural people and rural areas was put at ransom for a very long. As a result, the poor and marginalized rural areas were deprived services that will make them economically viable and to compete with urban centres, which then placed urban centres ahead of rural areas all the time. The racial divide meant that remote rural areas, which is where the poor and marginalized resided, were located far away from areas of services which meant that rural poor will have to travel longer distances, more time on travelling and more costs to areas of services and economic activities (Krugell, 2014; Rogerson, 2009; McLennan *et al.*, 2016, Musvoto, 2014).

The apartheid government disregarded rural areas, meaning infrastructural development such as establishment of rural roads and other essential developments did not occur in rural areas. However, since the advent of democracy in South Africa, it still appears that the provision of adequate rural road infrastructure development has been a major setback in terms of the development agenda of rural areas. Hence the priority since the democratic breakthrough was to prioritize rural development which goes together with the provision of adequate rural road infrastructure, shelter, electricity, water and sanitation. This has found expression from government through the formulations of different rural development strategies, which amongst others includes rural road transport strategies and plans intended at fast tracking social and economic development (Noble & Wright, 2013, Krugell, 2014; Nel, 2016; Gopalakrishna & Jayaprakash, 2012; Smith *et al.*, 2011).

The lack of adequate rural road transport infrastructure in South Africa remains one of the key challenges that appear to impede social and economic development of rural communities (Department of Transport, 2015). There is a view that that the state of existing rural road infrastructure is deteriorating, hence the provision of adequate rural road infrastructure remains a priority (Musekene, 2013). The provision of adequate rural road infrastructure is believed to be

essential towards the attainment of the human development on education attainment, access to health and income generation (Carson & Carson, 2014).

The study arose from the understanding that there limited studies that have evaluated the role and influence of government transport strategic frameworks such as NLTSF.

1.4 Purpose and Objectives of the Study

The aim of the study was to assess the role of the NLTSF in enhancing human development with a specific reference to income generation. Human development is defined as an approach and process to ensure that people have access to education, income generation, access to health facilities and other developmental opportunities (Widner, 2015). However, the purpose of the study was achieved through the following objectives:

- 1.4.1 To examine the effects of the NLTSF on the living standards at uMlalazi Local Municipality
- 1.4.2 To establish if the NLTSF has led to sustainable improvements in the lives of the people of the study area.
- 1.4.3 To assess if the NLTSF has helped to enhance income generation capability of the people at uMlalazi Local Municipality
- 1.4.4 To identify opportunities NLTSF has created to empower the local communities

The section below presents the primary research question as well as the secondary questions of the study.

1.5. Research Questions of the Study

What is the role of NLTSF in enhancing human development, specifically income generation in the uMlalazi Local Municipality?

Secondary research questions of the study are:

- 1.5.1 Have living standards at uMlalazi Local Municipality improved because of NLTSF?

1.5.2 Has the NLTSF led to sustainable improvements in the lives of the people of the study area?

1.5.3 Has the NLTSF helped to enhance income generation capabilities of the people?

1.5.4 Has the NLTSF enhanced opportunities to empower people in the local communities?

The research methodology is briefly presented in the next section, details of which appear in Chapter Three.

1.6 Research Methodology

Research perspectives in any research inquiry have implications for research design and methods (Scotland, 2012). The application of different philosophies in research inquiries delimits the methods used for data collection and analysis to understand a particular phenomenon (Ryan, 2015). Moreover, the usage of certain paradigms or philosophies in any research inquiry enhances comprehensive understanding of the particular phenomenon studied (Grant & Giddings, 2002).

In light of the above, the study followed a mixed research approach which allowed the use of both qualitative and quantitative research methods. The conclusion of using a mixed research approach was informed by the desire and intention to derive a comprehensive understanding of the phenomenon in question. Hence the use of both qualitative and quantitative methods was mainly meant to create a complimentary approach on data collection, data analysis and interpretation for both qualitative and quantitative methods. Moreover, the choice of this research approach was also to eliminate the possibility of gaps that could have risen in a situation whereby one method was applied, which could have possibly prevented a comprehensive understanding of the phenomenon studied but rather apply both to enhance the understanding of the phenomenon studied.

The study integrated both qualitative and quantitative research methods into a single research inquiry in order to gain insight and comprehend the phenomenon studied. Therefore, the methods of data collection, data analysis and interpretation were undertaken using the both qualitative and quantitative research methods in this study.

The next section presents the organization of the study.

1.7 Organization of the Study

The study consisted of five chapters. Chapter one focused on the introduction of the study which covered, amongst other things, the statement of research problem, purpose of the study and the study objectives. Chapter two dealt with outlining the historical background of NLTSF, its philosophical underpinnings and the broader literature review. Chapter three covered the research methodology. In chapter four, data analysis and interpretation was provided. Finally, chapter five covered the evaluation of the research objectives, recommendations and conclusion.

1.8 Summary

This Chapter has covered the introduction of the study and its theoretical framework. Moreover, other critical aspects of the study such as the statement of the research problem, purpose of the study, aim and objectives, a brief research methodology and the organization of the study were covered in this Chapter.

The next chapter which is Chapter two presents the historical background and philosophy of the NLTSF and a thorough literature review.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature of the study which is the contribution of the National Land Transport Strategic Framework (NLTsf) to human development. The chapter is broadly organized into the following subtopics: the background of the NLTsf, the philosophical grounding of NLTsf, and, an exploration of the concept of Human Development. The chapter opens with the background to NLTsf.

2.2 The National Land Transport Strategic Framework (NLTsf)

The advent of democracy in 1994 saw the South African government focusing on bettering the lives of its citizens economically, socially and politically (Nel, 2016). This has been translated into numerous government legislations, policies and strategies which are meant to advance human and economic development of the country (Department of Transport, 2015). NLTsf emanates from the National Land Transport Act (NLTA) 2009 (Act, No.5 of 2009), of which section 34 is a legal requirement guiding the Minister in terms of regulating, planning and providing for all transport related matters in South Africa (DoT, 2015).

The idea behind the establishment of NLTsf as per the requirement of NLTA is to create an effective, efficient and sustainable transport system which has been identified as a key driver required to stimulate economic growth in South Africa (DoT, 2015). The framework is expected to contribute towards the realignment of previously marginalized areas, rural villages in particular, with areas of economic activities and other social opportunities (Kepe, 2016). Through adequate land transport infrastructure, rural areas will be integrated and linked urban areas in an attempt to reduce economic and social inequalities (Nel, 2016).

Moreover, NLTsf seeks to achieve sustainable and efficient transport system that will be able facilitate import and exports of goods. Through proper transport planning and development of transport plans, NLTsf seeks to achieve a high dynamic transport system that will contribute towards growing the GDP, reduce travelling distances and link low areas of production such as

rural areas with areas such as urban areas or metropolitans. Through proper transport plans, NLTsf intend to provide efficient and sustainable transport system to rural areas for purposes of economic growth and diversification of the structure of the rural economy (Omoyefa, 2008; DoT, 2015, Nel, 2016).

The policy context of NLTsf are carried by the National Development Plan (NDP). In the NDP, economic growth has been identified as one of the areas of focus by the South African government. Adequate infrastructure remains the point of departure in order to stimulate trade and attract foreign direct investment. Provision of efficient transport system will create an advantage for job creation opportunities. However, this requires different stakeholders such as the private sector to work close with the government in the process of job creation. In order to achieve economic growth, private-public partnerships need to be developed between government and the private sector so that investors find a conducive environment to invest (Nel, 2016; Walters, 2013; DoT, 2015).

In the post-apartheid era, South Africa is confronted by the triple challenge of unemployment, poverty and inequalities. These were challenges that faced the black majority even before the democratic breakthrough but they still linger even in the post-apartheid era. Though great strides have been made post 1994, these challenges have proven to be the core in the decay of the moral fiber of the South African society marked by the scourge of social ills, crime and several service delivery protests (Musvoto, 2014; Kepe, 2016; Noble & Wright, 2013).

The democratic government inherited an ailing system that was largely founded and based on racial lines which perpetuated both social and economic inequalities as result of the apartheid setup prior 1994. Social and economic inequalities were engineered under the apartheid regime in manner that even in the new dispensation, inequalities continue to be reproduced. At the center of what appears to be a perpetual contributing factor on social and economic inequalities in South Africa, is the structure of the South African economy (Rogerson, 2009; McLennan *et al.*, 2016, Musvoto, 2014).

The economy of South Africa is not reflective of what was described as a rainbow nation, but rather a reflection of a dominance of a minority group. The nature in which the structure of the South African economy relegates black majority in the mainstream economy proves enough that there is still white supremacy and the promotion of white privileges. The racial divisions which the colonial rule and an apartheid regime were architectures, positioned white people to be the sole beneficiaries of both social and economic opportunities (Krugell, 2014; Nel, 2016; 2012; Smith *et al.*, 2011).

In the new dispensation, post 1994, the people's government embarked on a mission of redressing the injustices of apartheid which deprived the majority groups liberty on self-realization in terms of economic and social opportunities. However, the black majority that was marginalized prior to 1994 faces an uphill mission of redeveloping themselves to the level of the beneficiaries of apartheid and colonialism. Even post-apartheid, the marginalized black majority still faces massive barriers to access to economic opportunities due to structural issues. The change of government did not necessarily mean the change of everything, the structure of the economy continues to favor people based on racial lines (Carson & Carson, 2014; Noble & Wright, 2013, Gopalakrishna & Jayaprakash, 2012).

As a result of all these racial divisions, the integration of the marginalized groups into the mainstream economy continues to face massive hostilities because of structural issues. The racial divisions in South Africa have created social and economic inequalities, where those that are rich become richer and those that are poor become poorer. Thus widening the social and economic inequalities causing societal issues such as crime and all other forms of social ills (Nel, 2016; Krugell, 2014; Kepe, 2016).

2.3 The Philosophical Foundations of NLTsf: New Public Management

The New Public Management (NPM) which is a managerialism approach was first advanced in the 1980s and forms the foundation for the NLTsf. According to Kalimullah *et al* (2012), the reforms that occurred in the 1980s in the field of public administration gave birth to NPM. Even though the concept of NPM became more prominent in the 1980s, reforms in the public administration are traceable to the civil service reforms of the 1880s (Travers, 2009). Appearing

to reconcile the above differing views on the development of reforms in public administration, Ikeanyibe (2016) maintains that public administration reforms cannot be attached to a specific period but rather to the changing epochs and evolution of public administration over time.

The neoliberal theory commonly referred to as neoliberalism advocates for the restructuring and reengineering of public sector institutions in the process adopting philosophies and practices of the private sector (Walters, 2013). Neo-liberalism forms a fundamental foundation in the emergence of the NPM as a managerialism approach (Alexander, 2010). Application of neoliberalism in the public sector, through NPM, seeks to inculcate the culture of efficient financial control, value for money, promoting efficiency and monitoring performance (Zhu, 2013).

Furthermore, NPM strives to eliminate glitches such as lack of coordination, fragmentation, duplication and lack of coherence in policies of public institutions (Kodongo & Ojah, 2016). Amongst many other things, the NPM seeks to develop public sector institutions that do away with welfarism (Elbanna, 2013). This approach believes in the creation of individual capabilities and prosperity of society without relying on the government to provide for their needs (Kalimullah *et al.*, 2012).

NPM as a managerialism approach largely believes in driving efficiency of institutions both in the public and in the private sector (Kodongo & Ojah, 2016). The development of strategies that will enable the realization of the set standards and targets form an integral part of the approach (Albrechts & Balducci, 2013). The approach promotes the culture of being result-driven and performance-based in order to achieve key strategic objectives (Elbanna, 2013). In order to achieve the desired outcomes, NPM as a managerialism approach considers importance of recruiting knowledgeable and skilled workforce to help in achieving the set objectives and standards by institutions on key deliverables (Radnor & Osborne, 2013).

Having briefly described the NPM approach, the discussion proceeds to look at how it influences public sector institutions and their practices. The influence of the NPM approach within the public sector institutions can be noted by the emergence of public sector strategic planning (Naz & Ehsan, 2003). The emergence of public sector strategic planning resulted in the development of strategic

frameworks within the public sector (Alexander, 2010). These strategic frameworks carry a clear embodiment of government's vision when it comes to its objectives and targets (Walters, 2013).

The strategic framework derived through strategic planning as per the NPM approach has helped government to budget wisely and also to spend accordingly (Elbanna, 2013). This implies that public funding is directed to key strategic projects and programmes which are in line with the set targets and objectives of government (Kodongo & Ojah, 2016). Moreover, strategic frameworks have helped to influence public sector institutions to reduce wasteful expenditure which largely comes as a result of duplication of projects and programmes (Weimann *et al.*, 2016).

Furthermore, the strategic framework, as per the requirement of strategic planning, has influenced public sector institutions to plan properly and accurately (Zhu, 2013). The development of strategic framework as influenced by NPM approach has greatly assisted public institutions to become people-driven institutions (Ikeanyibe, 2016). The NPM approach has influenced public institutions through strategic framework to use the bottom-up approach when delivering the needs of the citizens (Alexander, 2010). This includes, amongst other things, involving the citizens in planning and decision making as well as allowing citizens to identify their own needs (Nel, 2016).

Through the NPM approach, public institutions have been influenced to become more result-driven and performance-based (Naz & Ehsan, 2003). The model of NPM approach within public sector institutions has brought the establishment of financial controls, value for money, efficiency, setting targets and monitoring performance (Sanni & Hashim, 2014). It is also important to note that public sector institutions have, since the adoption of NPM approach, applied private sector management models in order to achieve set objectives and standards (Omoyefa, 2008).

Moreover, the development of control measures which comes in a form of monitoring and evaluation tools has helped public sector institutions to track progress on the strategies put in place by government (Weimann *et al.*, 2016). In the same notion, developing effective control measures such as monitoring and evaluations tools has greatly assisted government to be precise and accurate on interventions needed by citizens (Wijeweera & Manwa, 2016). The NPM approach, through all these identified areas, has had a good influence in the public sector and has since

ensured efficient, result-driven and performance-based public sector institutions (Ikeanyibe, 2016).

Among other noticeable changes brought by the NPM approach within the public sector institutions, is the development of a proactive and responsive government in terms of meeting the needs of the citizens (Walters, 2013). The approach has positively influenced government to be projective, plan ahead and to come up with solutions for societal challenges (Kalimullah *et al.*, 2012). The NPM approach has abolished the culture of having reactive public sector institutions that are not in touch with realities of the world and often caught napping when issues reach boiling point (Nel, 2016).

On policy matters, the NPM approach has had massive influence on government when it comes to policy positions (Martin & Thelen, 2007). The abolishment of welfarism and socialist policies has been one of the noticeable changes within public sector institutions globally since the emergence of NPM approach (Fenwick & McMillan, 2012). In many countries, the NPM approach has influenced government to approve neoliberal policies that promote privatization and transfer of ownership of sources of income from public to private sector institutions (Vandenabeele, 2007). Amongst other things, the influence of NPM approach has been largely recorded after the global meltdown experienced about a decade ago which forced the adoption of free-market policies within public sector institutions (Nel, 2016).

The adoption of NPM approach in the public sector institutions has not only recorded good reputation only, but there are instances where there were glitches. In some instances, the practical application of set standards and targets as required by NPM has been used to override processes and systems for purposes of looting from the public purse. This has manifested itself through bogus capacity building programs such as workshops and team buildings. Even though NPM as an approach ought to promote sound financial controls, financial mismanagement has occurred (Walters, 2013; Fenwick & McMillan, 2012; Naz & Ehsan, 2003).

There are cases where corrupt practices have unfolded within public sector institutions putting on hold community development initiatives on hold. Disappearance of public funds has stalled

community projects due to corrupt government officials under the guise of bureaucratic procedures meant for nothing other than squandering public funds. Thus delaying the wheels of development for many poor and marginalized rural villages who had pinned their hopes on the government (Venugopal, 2015; Knafo *et al.*, 2018; Hardin, 2014; Zhu, 2013).

The foregoing discussion has dealt with the theoretical framework and philosophical underpinnings of NLTSF. Furthermore, the section has looked into the influence neoliberal theory and NPM approach in public sector institutions. The next section examines the Human Development concept. It is important that the concept of Human Development be clearly unpacked as it is also one of the key concepts of the study, as the study assesses the NLTSF in relation to human development with specific reference to income generation (Travers, 2009; Peck, 2013; Hardin, 2014; Walters, 2013).

2.4 Examining the Human Development Concept

The Human Development concept is difficult to define since it is broad and does not consist of a singular definition (Sannusi, 2008). There is an ongoing discourse in the general interpretation of the human development concept, which is, what it means and what it stands for (Harttgen & Klasen, 2012). Moreover, the ongoing discourse is largely influenced by various schools of thought that seek to take dominance in the definition of the Human Development concept (Travers, 2009).

Human Development is defined as a process that seeks to promote inclusive development through balancing both social and economic benefits of the people (Widner, 2015). Furthermore, Human Development is also defined as a mechanism that is needed for the composition and distribution of skills needed to partake in the mainstream economy (Mazumdar, 2003). The concept is also defined as a process of attaining equity and balanced views on social, economic and political matters (Robinson, 2015).

Moreover, Human Development is defined in terms of improving human welfare and creating an enabling environment for socioeconomic development (Herath, 2009). While Human Development is also regarded as a process focusing on the integration of solutions on economic

challenges, expanding people's choice, building capabilities and widening opportunities (Herranz & Luiz, 2012), the concept is also defined in terms of eliminating barriers towards inclusive and holistic human development which considers empowerment of people in terms of participation in the processes of decision making (Herrero *et al.*, 2012).

So, in view of the above, Human Development could be conceptualized to mean promotion of inclusive growth, attainment of equity, and balanced social and economic benefits. Human Development is also defined in terms of improving welfare and creating an enabling environment for socioeconomic development.

The concepts of Human Development and Human Development Index (HDI) are related, and there is no clear distinction between the two terms. This lack of distinction has intensified the ongoing discourse on human development and HDI on the basis that although the indicators of human development, but HDI itself is an indicator of human development (Gopalakrishna & Jayaprakash, 2012). Similarities between the human development and HDI are drawn from the causal relationship and twoness of HDI containing human development indicators and HDI as an indicator itself (Mazumdar, 2003). HDI measures human development commonly through income generation, education attainment and life expectancy as the key performance areas (Deng, 2013).

Having briefly highlighted the various definitions of human development, the next section looks into HDI as an indicator of human development. HDI consists of three key performance areas used to measure human development (Vijayabaskar *et al.*, 2004). These key performance areas of human development include income generation, educational attainment and life expectancy (Widener, 2015). The identification of these key performance areas was informed by the assumption that they are the most critical elements that can be used to measure human development (Gonzalez & Martinez, 2017). Most importantly, these focus areas are articulated in various government policies and strategies as key areas of focus for human development (Gosh, 2006).

Education attainment is considered an important element in the process of human development (Sachs, 2009). The acquisition of knowledge through education is believed to have power to equip people with both skills and knowledge needed to influence decision making (Travers, 2009).

Moreover, the eradication of high school dropout forms part of the key areas of human development (Lepenies, 2008). The enhancement of primary education enrollment is considered as an important pillar in nation building as well as promoting adult literacy (Sannusi, 2008).

On life expectancy related matters, human development seeks to promote healthy living (Hou *et al.*, 2015). In order to achieve long life span, creating an active citizenry on sport has been deemed as one of the most important things for human development (Plant, 2009). The improvement of access to adequate and decent medical health care facilities has been identified as critical in the realization of long life expectancy (Beja, 2014). Furthermore, life expectancy of early new born babies and eradication of deaths during birth forms part of critical areas of focus in human development (Engineer *et al.*, (2010).

Since HDI comprises of three key performance areas as it has already been shown, this study focuses on income generation. The economic independence of people in any society has been identified in human development as a pillar that brings prosperity to a nation (Seth, 2009). The well-being of citizens economically in any nation provides social coherence and eliminates confrontations between the rich and the poor (Ranis *et al.*, 2006). Most importantly, economic emancipation of people reduces government expenditure on social related matters such as provision of basic needs to the poor like water, shelter, electricity and food (Ray, 2014).

In human development, income generation can be achieved through establishing a stable and growing economy that is able to facilitate income generation opportunities, jobs in particular (Saha, 2009). The creation of income generation opportunities is realized through promoting access to opportunities both in the private and public sector (Crabtree, 2012). Human development believes that the creation of income generation opportunities such as job creation should not rest with the public sector alone, but with the private sector as well (Rende & Donduran, 2013).

The creation of income opportunities such as job creation should strive to accommodate both the skilled and unskilled workforce (Sleszynski, 2016). Moreover, both the skilled and unskilled workforce should be given decent living income that can contribute positively in their wellbeing in terms of their needs (Ray, 2014). The capacitation and skilling of the unskilled workforce should

be prioritized in order to provide them with an equal opportunity to compete and enjoy equal benefits like the skilled labor force (Amoa, 2016).

The perspective is that, human development believes that rural areas are the future investment hubs in terms of industrialization (Alizadeh & Farid, 2017). Generally, industrialization is associated with both economic growth and massive job creation (Lecoutere, 2017). The future projections show that the current industrial areas cannot cater for the future production demands, which then makes rural areas favorites due to their vast untapped resources (Kimbu & Ngoasong, 2016). The industrialization of rural areas will favor the income generation indicator of human development since industries bring various economic benefits, jobs in particular (Rock *et al.*, 2016).

Like all other concepts, human development has been largely contested and criticized. It appears that the composite index instrument used to measure human development which is HDI fails to deal with issues of empowerment, inequalities, poverty and human security (Ge *et al.*, 2011). Moreover, human development through HDI neglects matters of sustainable development when measuring human development (Dobes & Leung, 2015). On the other hand, it appears that HDI also fails to incorporate the environmental aspect when measuring human development (Zhang *et al.*, 2015).

Apart from criticism, both human development and its composite index instrument have been commended. Human development and its composite index instrument successfully managed to broaden the perspective of viewing human development progress and further assisted in the direction of policy development (Maqsood & Ullah, 2014). The consistency of HDI over the decades has made it a reliable and very successful technique in measuring welfare of the people economically and socially (Dervis & Klugman, 2011). Moreover, various nations through HDI have managed to plan, evaluate and monitor policies relating to human development (Herror *et al.*, 2012).

Given the above reflections and deliberations on HDI, the rationale on the focus of HDI in this study is informed by the need to monitor and evaluate progress made through various government strategies and policies. Government policy positions articulated in different strategies and

frameworks are established to enhance the standard of living of the people economically and socially. So the focus on HDI necessitates the need to locate and navigate progress made by various government policies, strategies and frameworks towards the attainment of income generation, long life expectancy and education attainment. In this case, NLTsf is a government framework envisioned for the enhancement of living standards of the people, so HDI will help in discovering if NLTsf contributes towards the attainment of the key performance areas of human development. The above section has broadly examined the concept of human development. The following section explores the rural road infrastructure and its role in enhancing income.

2.5 Rural Road Infrastructure and Income Generation: A South African Situation

Historically, in South Africa, rural road infrastructure prior 1994 and post-apartheid era, the state of rural road infrastructure has been deteriorating. Majority of rural areas are predominantly without proper roads, as a result, accessibility of rural areas has been a major stumbling in major parts of South African rural areas. The inaccessibility of rural areas has in some parts of the country deprived rural dwellers an opportunity to access basic services such as health and resulted in forcing rural people to travel longer distances for such services (Berg *et al.*, 2018; Chaminuka *et al.*, 2008; Tselios, 2009).

However, though there are still challenges with regards to provision of adequate rural road infrastructure, there are several cases across South African rural areas where adequate rural roads have been provided. The provision of proper rural roads has stimulated better living conditions in some parts of rural areas in South Africa, especially in rural Limpopo and some part of the Eastern Cape, Mpumalanga and KwaZulu-Natal (Gresh *et al.*, 2012; Lecoutere, 2017; Hull, 2014).

The provision of adequate rural road infrastructure in South Africa has stimulated economic competitiveness of rural areas. Road networks connecting rural areas with other areas of economic activities has enhanced the exchange of goods and services between rural and urban areas. It appears that there is a growing trend on the establishment of rural based businesses as a result of improved rural road infrastructure. This has in many instances being coupled with the establishments of shopping complexes in rural areas across South Africa which have also played

a significant role in stimulating and supporting local businesses (Chatiga *et al.*, 2016; Mulder & Brent, 2006; Israel & Wynberg, 2018).

Through adequate rural road transport infrastructure expansion and development, agriculture in rural Limpopo in areas such as Tzaneen, Giyani, Phalaborwa and many others, has recorded massive progress in terms of product output. The accessibility of rural farms has enhanced the demand and supply of agricultural products by surround markets such as supermarkets. Adequate rural road transport infrastructure provision has enabled the expansion of rural farms in order to meet the demand and supply chain of products. The progress recorded by agriculture in rural areas has been noticeable even on the GDP, which indicates that rural farms in South Africa plays a significant role in the contribution of agriculture in the GDP of the country (Hull, 2014; Hilson, 2016; Chaminuka *et al.*, 2008).

In KwaZulu-Natal and Eastern Cape, rural road expansions and development has also assisted rural farmers to transport their production to markets. Through the expansion and good performance of agriculture in rural areas in South Africa, jobs were created for people in the production process. This has even escalated into the establishment of rural based agro-processing industries, which has further enhanced the creation of income generation opportunities (Gresh *et al.*, 2012; Musekene, 2015; Israel & Wynberg, 2018).

The expansion of rural roads in South Africa has also impacted positively in the tourism sector. Many rural areas across South Africa boast about rich heritage sites and other tourist attractions. In rural KwaZulu-Natal in areas such as Nqutu, improvement of rural roads has enhanced the tourism sector. Many tourists from across the world travel across various rural areas of KwaZulu-Natal to learn about the cultural heritage of the Zulu Kingdom. Through proper rural access roads, tourism has flourished and managed to provide livelihoods to surrounding rural communities. Many rural areas even in the Eastern Cape, Limpopo and Mpumalanga has benefitted from local tourism through selling art and crafts to tourists. So the role of adequate rural road transport infrastructure has been significant in the process of income generation in South Africa (Perez *et al.*, 2017; Anthopoulou, 2010; Schumcki, 2012; Lecoutere, 2017).

In South Africa, the provision and expansion of rural road transport infrastructure has been carried out using various approaches and mechanisms with an intention of ensuring that communities benefit during the construction of roads. The introduction of labour intensive work in road construction projects has contributed positively towards income generation by rural dwellers. Labour intensive work as a strategy that requires high volume of personnel, has enhanced income generation opportunities for rural people. In rural Limpopo and many other provinces across South Africa, the use of Extended Public Works Program (EPWP) during the construction of rural roads and other projects has assisted rural people to generate income (Rahman, 2014; Perez *et al.*, 2017; Musekene, 2013; Tselios, 2009).

This section highlighted the effects of rural road infrastructure provision in South Africa. Reflections were drawn from rural areas such as Limpopo, Mpumalanga, Eastern Cape and KwaZulu-Natal with an intention of showing the impacts of rural road transport infrastructure has played out in some parts of South Africa. The next section will look through on the impacts of rural road expansions and income generation outside South Africa.

2.5.1 Rural Road Infrastructure and Income Distribution

Historically, roads have generally played a huge role in spreading economic opportunities and benefits amongst the people (Porter, 2007). The significance of roads in the process of distributing economic opportunities is largely recorded in various rural areas across the world (Shahidur, *et al.*, 2009). Rural road infrastructure has been a significant factor in the process of distributing income in rural areas which allows rural dwellers to actively participate in the mainstream economy (Gachasin *et al.*, 2015).

The changing trends and patterns on income generation within rural areas show that rural road infrastructure has improved the distribution of income in rural areas (Chen, 2012). The massive investment directed in erecting and reviving rural roads infrastructure has helped rural areas to have an advantage in attracting investors to rural areas (Hong & Wang, 2011). Rural investment in terms of infrastructure has unlocked investment opportunities in terms of businesses which have assisted in the process of income distribution (Morphet, 2009). The investment made towards

provision of adequate rural road infrastructure has well positioned rural areas as investment hubs of huge industrial projects (Pereira *et al.*, 2017).

The provision of adequate rural road infrastructure facilitates the development of rural-based industries which play an essential role in the process of income distribution (Jan *et al.*, 2011). The establishment of rural-based industries triggered by adequate rural road infrastructure stimulates the supply and demand chain of both services and goods (Widner, 2015). The maximization of production through rural based industries enhances the export and import of goods, which comes with job creation as a form of income distribution (Sachs, 2009).

Moreover, the establishment of rural industries supported by adequate rural road infrastructure ensures that rural-produced products are processed locally before taken to the markets (Deng, 2013). The extraction and processing of raw products such as mineral resources unlock both economic opportunities and job creation especially for rural dwellers (Hong & Wang, 2011). The absorption of rural dwellers within the rural-based industries plays a significant role in distributing income within rural areas (Broni *et al.*, 2014). Moreover, the rural GDP growth further unlocks more opportunities in terms of building more industries within rural areas which further create jobs and distribute income (Porter, 2014).

Furthermore, to achieve the desired outcomes of income distribution, harmony and coherence should be maintained between already existing rural businesses and newly established rural based industries (Deng, 2013). The distribution of income is easily achieved through the coexistence of all forms of businesses in rural areas (Kayode *et al.*, 2013). The establishment of a viable business environment supported by well-developed rural road infrastructure facilitates creation of jobs and promotes income circulation within rural vicinities (Olsson, 2010).

In the process of income distribution, rural road infrastructure should promote mobility (Gopalakrishna & Jayaprakash, 2012). The erection of a dynamic rural road infrastructure ensures mobility of rural dwellers to form part and participation directly in the mainstream economy (Herath, 2009). The promotion of mobility through well-functioning rural road infrastructure grants rural people access to economic and employment opportunities (Hong & Wang, 2011).

Access to labor markets is made easier as adequate and efficient rural road infrastructure reduces travelling distances and time (Broni *et al.*, 2014).

The connection of rural areas with areas of high production such as economic corridors helps in circulating income within rural areas (Herranz & Ruiz, 2012). Adequate rural road infrastructure becomes necessary in ensuring that rural areas benefit from economic opportunities from areas of high production (Sabandar, 2007). The link between rural areas and economic corridors also assist in nourishing rural economies that are able to create job opportunities (Gosh, 2006). Adequate rural road infrastructure ensures that the connection promotes trade between rural and urban markets, which also helps in distributing income.

Furthermore, the outcomes of the interconnectedness of rural areas and economic corridors maximizes the demand and supply of goods and services (Gustav *et al.*, 2006). The supply and demand chain greatly assists in income accumulation and further spreads economic benefits to various people in rural areas (Dev & Ravi, 2003). Through well-established rural road infrastructure, the expansion of rural labor markets brings benefits not only in terms jobs, but also business opportunities which distribute income (Glapska, 2013).

Similarly, efficient rural road infrastructure strengthens already existing rural markets as part of broadening and spreading income generation opportunities (Laird & Venables, 2017). Strong rural markets enable rural areas to compete economically with other well established markets (Purcher *et al.*, 2007). As rural markets grow stronger, assisted by adequate rural road infrastructure, trade between rural and outside markets stimulate economic opportunities (Shahidur & Koolwal, 2010). Adequate rural road infrastructure unlocks economic opportunities through untapped rural land for further expansion of rural markets with creating jobs being a priority.

The agricultural sector has been identified as an integral sector in the process of income distribution in rural areas (Dholakia, 2003). It prevails that majority of the rural populace largely depends on agriculture for employment and income generation (Popova, 2017). The provision of adequate rural road infrastructure ensures that the agricultural sector continues to be a backbone of rural employment and income distribution (Limani, 2016). Efficient rural road infrastructure

enhances the optimization of production and facilitates that production reaches markets and creates more jobs (Plummer *et al.*, 2017).

However, contrary to the good narrative provided on above on the good contribution of rural road transport infrastructure improvements, it appears that there are instances where these expansions impacted the lives of the people negatively. For example, Cejas (2015) reveals that expansion of rural roads for purposes of improving access to local tourist destinations such as National Parks has resulted in impeding free access by rural dwellers. The initiation of access fees for tourists visiting tourist's attractions located within rural vicinities has in many instances deprived rural dwellers from using natural resources such as National Parks (Ward *et al.*, 2018).

Moreover, the professionalization of businesses and operations in the tourism sector as a result of improved infrastructure such as roads has affected hawkers from rural areas rendering various services and products to tourists. The survival of some rural households in terms of income generation has been pinned on selling products and services to tourists, as a result of business formalization, many rural venders suffer since they do not have capacity to compete with professional businesses. It is through such developments that rural dwellers continue to suffer instead of benefitting both socially and economically (Yang *et al.*, 2018; Zhang & Watson, 2017; Cejas & Kimura, 2015).

Majority of rural areas across the world boast about the existence of various natural resources mostly related to tourism. It appears that as these areas are being improved especially in terms of accessibility, there are restrictions imposed to rural people in terms of accessibility. The regulation and commodification of these areas has often created conflict between those managing the areas and rural communities. The responsible governing bodies of these areas have in many cases failed to create a cohesive environment between these areas and the surrounding communities (Damania *et al.*, 2018; Liu *et al.*, 2017; Aslund *et al.*, 2017).

Rural communities have often been relegated into the periphery as modern management of natural resources including those that are located within rural vicinities intensifies. Infrastructure improvements which comes in a form of rural road expansions and protection of natural resources

such as nature conservation areas, has in some cases barred and imposed restrictions on rural dwellers from utilizing natural resources. It is known that some of these areas have dams and rivers that have fish species that are on small scale used by rural dwellers for subsistence and commercial purposes. However, as natural resources management intensifies, barrier to access as a result of improved roads and the need to pay for access deprives rural communities the rights they had for decades of using such natural resources (Sievers & Urbatsch, 2018; Aslund et al., 2017; Donaldson et al., 2016, Mertens et al., 2015).

The above section indicated how adequate rural road infrastructure helped in the process of income accumulation and distribution. The next section focuses on rural road infrastructure labour intensive work as a source of income generation.

2.5.2 Income Generation through Labour Intensive Work

The use of labor intensive work in the construction and maintenance of rural road infrastructure helps rural dwellers generate income (Wong, 2016). The adoption of labor intensive work as a mechanism used for constructing and maintaining rural road infrastructure has helped in poverty reduction in numerous rural villages (Yan, 2007). The use of labor intensive work to construct and maintain rural road infrastructure has not only helped in terms of income and poverty eradication, but also in the general maintenance of rural road infrastructure (Kateja, 2012).

Labor intensive work has promoted the use of both skilled and unskilled work force (Zhang *et al.*, 2015). The construction and maintenance of rural road infrastructure, both skilled and unskilled people benefit from employment opportunities (Rahman, 2014). The construction of roads requires enough labor force and this has helped in the absorption of people in larger numbers to work in various road construction projects (Chen, 2012). The inclusion of various people of the society for construction and maintenance of rural infrastructure such as roads has boosted household income in rural areas (Amoa, 2016).

Furthermore, the use of local skills and people in the construction of rural road infrastructure has resulted in the establishment of road construction community ventures (Gao *et al.*, 2015). The involvement of local people in various construction projects has helped local people to acquire

skills and experience in order to establish their own construction entities (Crawford, 2016). Rural-based entities in some areas have been appointed to offer road construction and road maintenance services; as a result, income generation opportunities have been created in the process (Rahut *et al.*, 2016). These rural-based construction and maintenance entities have a reasonable contribution towards income generation amongst rural households (Kimbu & Ngoasong, 2016).

The Extended Public Works Programme (EPWP) used by the South African government serves as an example of a programme which symbolizes or resembles the attributes of a labor intensive work approach (Musekene, 2013). During the construction of rural road infrastructure, rural people are employed through the EPWP labor intensive work to participate in the construction of rural roads as well as maintenance (Hof *et al.*, 2012). Through EPWP labor intensive work, the majority of rural people have benefited with income accumulation for basic needs such as food (Carson & Carson, 2014). Over the years, the construction and maintenance of rural road infrastructure, through EPWP, has managed to stimulate income generation opportunities for many rural dwellers (Limani, 2016).

The above section reflected on the contribution of labour intensive work on income generation which normally takes place during the construction and maintenance of rural road infrastructure. Furthermore, EPWP has been pointed as one example of labor intensive work programme. The section has outlined and explained how EPWP help rural dwellers to generate income. The next section looks at agriculture as a source of income generation in rural areas.

2.5.3 Agriculture, Mining, Tourism, Fishing and Rural Livelihoods

Over the years, adequate rural road infrastructure has positioned agriculture as a backbone of many rural economies and rural livelihood (Jan *et al.*, 2011). The success of the agricultural sector has been attributed to the efficient rural road infrastructure which has been an influential factor in job creation (Dholakia, 2013). The contribution and influence of adequate rural road infrastructure in the agricultural sector has been witnessed through the rise of job creation and income generation opportunities in the sector (Olsson, 2010).

The development and improvement of rural road infrastructure has been a factor in influencing yield output in many rural farms (Johansen & Hansen, 2016). Rural farmers have produced more yield as a result of available adequate rural road infrastructure (Mulley & Weisbrod, 2016). Rural road infrastructure has ensured mobility of agricultural products to reach markets (Deng, 2013). The production output of the agricultural sector has contributed in income generation (Glapska, 2013).

The success of the agricultural sector in rural areas has resulted in the establishment of community agricultural projects and cooperatives (Wang, 2005). The role of rural road infrastructure has been central in this success and rural cooperatives in enhancing income generation for rural people (Lyons, 2004). The success of the agricultural sector in rural areas has resulted in the establishment of agricultural markets such as fresh produce markets (Bollman & Reiner, 2009). Local farmers produce agricultural products and sell to these fresh produce, in the process, income accumulation happens as result of cash circulation. Moreover, adequate rural road infrastructure has helped fresh produce markets supply external markets leading to more job opportunities and other income generation opportunities in the sector (Saari *et al.*, 2015).

The significance and influence of adequate rural road infrastructure has also been seen through the establishment of rural agro-processing industries (Gachasin *et al.*, 2015). Rural agro-processing industries have played a significant role in stimulating income generation opportunities (Hong & Wang, 2011). Through rural based agro-processing industries, rural people have benefited in terms of employment, business development and skills development (Wong, 2016). The production output of rural areas through agro-processing industries and rural fresh produce markets has been central in the creation of income opportunities (Kateja, 2012).

Moreover, the labor force that is required by established rural based agro-processing industries continues to help distribute income generation opportunities amongst rural dwellers (Glapska, 2013). Rural areas are identified as future agricultural hubs given the enormous untapped arable land (Shahidur *et al.*, 2009). Through adequate and efficient rural road infrastructure, rural areas continuously attract investment for more agro-processing industries (Amoa, 2016). The provision

of adequate rural road infrastructure has triggered diversification of income opportunities through rural investment in the agricultural sector (Laird & Mackie, 2014).

Investment in erecting adequate rural road infrastructure will make it possible for the agricultural sector to become more productive and viable in rural areas (Skorobogatova & Merlino, 2017). Since rural areas are largely characterized by vast open land, investment in food security projects will trigger job creation (Wang, 2005). Rural areas can create jobs and other income generation opportunities through the optimal use of the available arable land (Jiminez, 2009). The investment in establishing rural road infrastructure that is able to support agri-hubs remains important (Amann *et al.*, 2016).

The use of available arable rural land will position rural areas to become global suppliers of food to countries affected by drought and other natural hazards (Mulley & Weisbrod, 2016). Through agro-processing industries and other agricultural rural markets, rural economies will grow and create jobs for rural people (Vijayabaskar *et al.*, 2004). So, high dynamic and efficient rural road infrastructure will promote trade in terms of export and import of goods between rural markets and other external markets (Olsson, 2010). The supply and demand chain of both goods and services will bring income generation opportunities in a form of jobs (Shahidur & Koolwal, 2010).

The use of modern farming methods such as greenhouses for crop production also provides rural areas with a competitive advantage due to open rural land (Johansen & Hansen, 2016). The modern farming methods will maximize production output of the agricultural sector in rural farms (Mulley & Weisbrod, 2016). The maximization of production output will require labor force to carry out the process and this will likely bring income generation opportunities (Hong & Wang, 2011). Adequate rural road infrastructure will ensure that production output in the rural agricultural sector supplies rural fresh produce markets which are also sources of income for rural people (Crawford, 2016).

Mining has over the years formed part and parcel of the key primary activities of the rural economy, thus providing income generation alternatives for rural dwellers across the world, more especially in Africa. As a result, mining communities have continued to benefit from mining

activities taking place in their respective communities. The provision of adequate rural road transport infrastructure has enabled smooth transportation of mineral resources to their respective markets. Proper rural roads have ensured efficiency and dynamic interaction of the demand and supply chain in terms of goods and services (Bennie, 2011; Dutt & Dondov, 2017; Hilson & Bockstael, 2012).

Through mining activities, rural people have managed to get income generation opportunities through direct employment and community beneficiation which comes mostly in a form of community development projects. Furthermore, the mining sector in several rural areas has managed to empower rural business through various entrepreneurial programs which capacitated rural business people. The rural business development has also managed to create job opportunities for rural people instead of relying only from mining industries (Bryceson & MacKinnon, 2012, Bangura *et al.*, 2013; Hilson & Banchirigah, 2009).

Although there are instances where mining communities decry the lack of community beneficiation in terms of jobs and business opportunities, the provision of rural road transport infrastructure has continued to boost investor confidence. Adequate rural road transport infrastructure has stimulated the establishment of rural based industries that offer services that required by mining industries. These includes amongst other things engineering and environmental services. The establishment of such services enhances the creation of job opportunities which ultimately helps people to generate income (Sseguya *et al.* 2009; Gilberthorpe *et al.*, 2016; Pijpers, 2016).

The improvement of access roads in rural villages has seen the development and expansion of fish farms. Farming is slowly becoming prominent globally and the provision of adequate transport infrastructure in rural areas stimulates fish farming. Through proper rural access roads, rural fish farmers are able to transport their products to various market. The fish farming business has flourished in rural areas and it has attracted markets outside of rural areas which has helped rural fish farmers to produce on larger scales. Through adequate rural road transport infrastructure, fish farmers have created income generation opportunities for other rural dwellers since the demand and supply has grown (Olsson 2010; Wetengere & Kihongo, 2012; Qin & Zhang 2016).

The establishment of adequate rural transport infrastructure has boosted the economy of fish farming communities. The role played by proper rural roads has seen fishing contributing immensely on GDP, thus creating income generation opportunities through business and jobs. Access roads in fish farming communities has attracted people to visit fish farms with an intention of acquiring the skills and securing supply of fresh fish for commercial purposes. Through proper rural road infrastructure, rural fish markets have flourished creating jobs for rural people (Olale & Henson, 2013; Kim & Jamal, 2015; Wetengere, 2010).

In the tourism sector, rural road infrastructure continues to be an important factor in the distribution of income amongst rural dwellers regardless of gender (Anthopoulou, 2010). Although the tourism sector is largely dominated by women who sell crafts to tourists, rural road infrastructure has ensured access to tourist attractions by both rural men and women (Lecoutere, 2017). The tourism sector has continued to boost rural livelihoods and rural household income especially rural female headed households (Schumcki, 2012).

Due to some rural areas being located adjacent to heritage sites which are tourist attractions, accessibility through adequate rural road infrastructure has contributed to income generation for rural women (Pereira *et al.*, 2017). Although the income levels are low, many rural households have been surviving for years with the income generated by women selling crafts to tourists (Popova, 2017). The financial independence of rural women, though at a slower pace, has somehow recorded good progress in ensuring income equity amongst rural men and women (Kimbu & Ngoasong, 2017).

A summary of how rural road infrastructure enhanced income generation through agriculture was provided in the section above. The next section looks into the role of adequate rural road infrastructure on employment opportunities.

2.5.4 Rural Road Infrastructure and Employment Creation

The development of adequate and efficient rural road infrastructure in rural areas has been the primary area of focus for purposes of job creation and development (Otsuka et al., 2017). Rural

road infrastructure plays a significant role in strengthening economic activities which translate into job opportunities (Hof *et al.*, 2012). The provision of a well-developed rural road infrastructure has over the years, facilitated economic competitiveness of rural economies (Wong, 2016). The competitiveness of rural economies, through adequate rural road infrastructure, has promoted export and import of goods in rural areas which contributed in the creation of job opportunities (Papagiannakis *et al.*, 2016).

Furthermore, through adequate rural road infrastructure, rural economies have managed to expand rural sources of income (Peters, 2017). The increasing direct foreign investment in rural areas has triggered the establishment of rural industries which have proved to contribute positively towards job creation (Lairs & Venables, 2017). Rural industries have stimulated the demand and supply of goods and services which resulted in expansion of income generation opportunities (Broni *et al.*, 2014).

Rural road infrastructure has boosted the creation of income sources through the expansion of rural markets (Loo & Banister, 2016). The trade between rural markets and other external markets promoted the circulation of income (Balakrishnan *et al.*, 2017). Rural livelihoods have been uplifted through income generation opportunities which use local people for production purposes (Davis *et al.*, 2017). Moreover, rural road infrastructure has successfully managed to diversify rural economies and continue stimulating various sources of income as well (Amoa, 2016).

Interestingly, technological advancement combined with efficient rural road infrastructure could continue to be central in rapid rural economic growth and job creation (Foster *et al.*, 2016). The provision of access to technology in rural areas has been a factor in the productivity of rural areas and economic competitiveness (Amann *et al.*, 2016). The expansion of rural markets and the maximization of production resulted in massive job creation in rural areas (Hakim & Merkert, 2016). The more rural areas produce, the more they maximize the export of goods to external markets which brings good income (Farhadi, 2015). The supply and demand chain both on goods and services has been boosted by technology to occur faster and efficiently (Meersman & Nazemzadeh, 2016).

Moreover, for rural GDP growth to be realized, maximization of exports supported by efficient rural road infrastructure will produce income generation opportunities in rural areas (Debowicz & Golan, 2014). The growth in GDP will come with additional economic activities that will require production levels to be maintained through absorbing more labor force (Perez *et al.*, 2017). The creation of jobs will ultimately become the benefit that comes with efficient rural transport that is able to facilitate trade between rural markets and other external markets (Nelson *et al.*, 2016).

Government expenditure in the establishment of adequate and efficient rural road infrastructure will play a significant role in attracting private investors to rural areas (Shi *et al.*, 2017). The high demand of income generation opportunities such as jobs, necessitates that provision of adequate rural road infrastructure should be given enough attention and priority (Qin *et al.*, 2016). Maximizing government expenditure on rural road infrastructure will enable rural areas to have at least a fair chance to compete economically with other areas of production such as urban areas (Esson *et al.*, 2016).

The global economic challenge that caused a decline in economic performance of many nations triggered the importance of rapid investment towards erecting adequate rural road infrastructure (Mullen & Marsden, 2015). The economic stagnation of many global economies necessitated growing rural economies in order to boost and support economic growth and job creation (Farhadi, 2015). The economy of space identifies tapping into the potential possessed by rural areas to achieve economic growth and job creation (Peters, 2017). In this regard, efficient and adequate rural road infrastructure becomes the fundamental pillar to achieve both economic growth and job creation (Laird & Mackie, 2014).

The investment by government on rural road infrastructure will reduce the traveling costs and times enabling rural people to spend less on transport (Loo & Banister, 2016). Affordable travelling costs will help people to save and direct the savings on other basic needs (Debowicz & Golan, 2014). The reduction in travelling distances will promote accessibility to sources of income and expand creation of more job opportunities (Shi *et al.*, 2017). The more it becomes easy to travel, the easier it becomes for rural dwellers to form part of the mainstream economy (Feng *et*

al., 2017). The improvement in the travelling patterns will also stimulate income circulation within rural vicinities (Mulley & Weisbrod, 2016).

Furthermore, reduction of travelling distances and times through adequate rural road infrastructure will also enhance the production process to become faster and efficient (Weisbrod *et al.*, 2016). The more rural areas maximize production of goods and services, the more rural economies become stronger and sustainable (Peters, 2017). The flexibility in terms of travelling will make production to become much easier and cheaper (Rock *et al.*, 2016). The exchange in trade through the demand and supply chain will be the most important factor when it comes to maximizing rural livelihoods (Mullen & Marsden, 2015)

The relationship between spatial planning and rural road infrastructure planning goes hand in hand with modern ways of development (Li & Lin, 2017). Spatial planning practice and methods require that people be located adjacent to areas of economic activities and other services such as schools and hospitals (Feng *et al.*, 2017). Moreover, modern spatial planning techniques will make it easy to connect low production areas like rural areas with high production areas (Ramessur *et al.*, 2010). The availability of adequate rural road infrastructure will make it faster and efficient to distribute income opportunities through connectivity of areas (Achour & Belloumi, 2016).

The connectivity of rural areas with economic corridors through adequate rural road infrastructure will create employment opportunities as a result of the exchange of goods and services (Martinez *et al.*, 2014). Furthermore, the connectivity of rural areas with other areas of high production will maximize demand of services and goods (Hartmann *et al.*, 2017). In the same notion, rural dwellers will get employment opportunities by actively participating in the demand and supply chain (Incera & Fernandez, 2015). It is in this sense that adequate rural road infrastructure becomes significant in the process of job creation and economic growth. (Gao *et al.*, 2015).

The above section deliberated on the role of adequate and efficient rural road infrastructure in stimulating job creation. The next section discusses rural road infrastructure and gender income gaps.

2.6. Rural Road Infrastructure and Gender Inequalities: A South African Rural Situation

In the post-apartheid era, South Africa continues to face a plethora of social and economic issues. Even though the democratic government since 1994 has embarked on a journey of creating a just society founded under the principles of non-racialism, non-sexism and democracy, it still appears that gender inequalities remains a thorny issue. Despite numerous commitments that have been translated in a form of government policies and strategies, gender inequalities have proved to be a lingering issue since the dawn of democracy (Rogan, 2016; Phiri, 2017; Moletsane & Ntombela, 2010).

The manifestation of gender inequalities has been visible across South Africa. However, rural areas in Provinces such KwaZulu-Natal, Eastern Cape and Limpopo appears to be the mostly affected Provinces in as far as gender inequalities are concern. Patriarchy has proven to be the contributing factor in the perpetual occurrence of gender inequalities. Majority of rural areas in these three Provinces are still largely under the rule of traditional authorities. As a result, patriarchal practices are rife in most the rural areas in these Provinces (Burns *et al.*, 2017; Tibesigwa & Visser, 2016; Bhana, 2010).

The patriarchal setup of many rural areas in South Africa, with specific reference to KwaZulu-Natal, Eastern Cape and Limpopo have relegated women into the periphery. Rural women are basically treated as subordinates of men. This has also manifested itself even in the nature in which the traditional councils are arranged. In many instances, rural women are not considered when it comes to decision making of matter relating to the social well-being of rural communities (Moletsane & Ntombela, 2010; Ataguba & Alaba, 2012; Coffe & Bolzendahl, 2011).

There is a perception amongst rural men that women should be the custodians of household chores. Such a belief has reduced the role of rural women in society to bearing children, fetching water and fire wood, cooking and looking after children. The escalation of the failure to recognize women as an integral part of society has gone to a level whereby patriarchal beliefs deprives women an opportunity to access opportunities such as employment and education (Magidimisha & Gordon, 2015; Aardt, 2011; Bower, 2014).

In rural South Africa, there is prevalence of gender income inequalities. This has often been perpetuated by the lack of equity in terms of property ownership and land ownership. Rural men have rights to property, livestock and land ownership as opposed to rural women. Through this unjust practices, the income gap between rural men and women has widened, leaving rural women in an awkward space of competing with their counterparts (Hart, 2008; Rogan, 2016; Phiri, 2017).

However, gender inequalities have prevailed beyond gender income gaps. In rural South Africa, gender inequalities have manifested itself even through the allocation of household responsibilities amongst rural boys and girls. Like rural women, young rural girls are expected to carry out a host of household chores on their own as opposed to their other counterparts. Similarly, in most cases young rural girls have a responsibility to always fetch water, collect firewood, cook and look after the young children (Amoateng & Setlalentoa; 2015; Groener 2013; Bower, 2014).

Even access to education and other opportunities, the patriarchal beliefs especially in many rural areas in the Province of KwaZulu-Natal has relegated rural women into commodities. Rural women are viewed in a manner that revolves around them being wedding materials. This has often deprived young rural girls access to education with the beliefs that getting a girl educated is a waste of time and resources. Thus the illiteracy levels being dominated largely by rural women as opposed to rural men (Aphane *et al.*, 2010; Salisbury, 2016; Madhavan et al., 2017).

Patriarchal beliefs, exclusion of women from accessing education, lack of involvement of rural women in decision making bodies such as traditional councils and lack of property ownership by women are the fundamental causes of gender income gaps. The escalation and spread of gender income gaps are as a result of societal structural issues that treats men as superior than women, while reducing women to subordinates of men. This has largely perpetuated gender inequalities but gender income gaps in particular (Bower, 2014; Moletsane & Ntombela, 2010; Rogan, 2016).

The section above has provided a brief South African narrative of gender inequalities in general and gender income disparities in particular. The next section looks into gender income gaps beyond the South African border.

2.6.1 Rural Gender Income Gaps

The income disparities based on gender appears to be a challenge especially in rural areas (Rijkers & Costa, 2012). Gender income disparities have received attention in terms of policy with emphasis and importance of gender parity being reflected on the Millennium Development Goals (MDGs) (Djurfeldt *et al.*, 2013). In order to narrow gender income disparities, adequate rural road infrastructure has been identified as an important factor needed in the process of equal distribution of income (Ge *et al.*, 2011).

Amongst multiple challenges, women empowerment in rural areas is behind which includes, amongst other challenges, the deprivation of income opportunities (Pereira *et al.*, 2017). The sidelining of rural women in the mainstream economy has been a concern by gender groups (Barbier, 2016). An opinion shared in the academic literature suggests that the relegation of rural women in the mainstream economy and other key economic activities has widened and deepened the income disparities (Withanaarchchi & Setunge, 2014). Prevalence and persistence of patriarchal beliefs and practices have been identified as one of the major setbacks for rural women empowerment (Laird & Mackie, 2014).

Moreover, factors perpetuating gender income disparities in rural areas appear to be patriarchal practices that make women subordinates of men (Foster *et al.*, 2016). In rural areas, the manifestation of patriarchal beliefs and practices is rife and it elevates men above women (Dobes & Leung, 2015). The elevation of men above women as the main participants and beneficiaries in the mainstream economy is one of the causes of income disparities (Rahman, 2014). Adequate and efficient rural road infrastructure is believed to be essential in promoting mobility of rural women in order to have access to income opportunities (Rijkers & Costa, 2012).

Furthermore, the gender stereotype perspective that disassociates rural women with physical jobs in some sectors such as manufacturing forms part of the challenges of gender income disparities (Kateja, 2012). Employability of rural women is under-looked in terms of gender instead of skills and capabilities (Willis, 2015). The labor force in non-farm sectors such as manufacturing is predominantly male-dominated, meaning high income jobs largely benefit males as opposed to women (Rahman, 2014). Meanwhile, income gaps between rural men and women are perpetuated

by the gender stereotype which undermines and relegates women to less paying jobs (Tokunova, 2017)

Equally, the exclusion of rural women on high paying jobs and other economic activities can also be attributed to the exclusion of women on education attainment (Xie *et al.*, 2015). Historically, it seems as if rural women have been left behind when it comes to knowledge acquisition; hence, their development and empowerment appears to be behind (Willis, 2015). The levels of illiteracy of rural women are alarming and have contributed in widening the income disparities (Tirado *et al.*, 2016). The level of rural women participation in the mainstream economy has been hindered by lack of education and knowledge (Olivetti & Petrongolo, 2014). Moreover, acquiring decent employment and other development matters has also been stalled by illiteracy (Ge *et al.*, 2011).

On a different angle, sector productivity appears to be another setback and cause for gender income gaps (Alonso & Trillo, 2014). The structural challenges of sectors continue to produce income disparities between rural men and women (Seedhouse *et al.*, 2016). For instance, agriculture as a sector is largely associated with low income with a bigger labor force in the sector being rural women (Foster *et al.*, 2016). On the other hand, non-farm sectors such as industries are largely associated with decent income with men being dominant in the labor force (Dobes & Leung, 2015). So, the perpetual gender income gaps are informed by such sectorial inequalities given the assumption that jobs in non-farm sector are meant for men than women (Lecoutere, 2017).

Apart from the plethora of challenges on gender income gaps, rural road infrastructure appears to be essential and significant in dealing with gender income disparities (Ge *et al.*, 2011). Adequate rural road infrastructure has been identified as a fundamental role player in ensuring equal access to economic opportunities for all, regardless of gender (Emran & Shilpi, 2015). The significance of rural road transport infrastructure comes with the ability of diversifying sources of income in rural areas (Kimbu & Ngoasong, 2016).

The ability to diversify sources of income in rural areas through adequate rural road infrastructure will help in promoting fair competition to economic opportunities by both rural men and women (Agenor & Ganuto, 2015). High dynamic rural road infrastructure that facilitates exchange of

goods through export and import will ensure high sector productivity and employability of people regardless of gender (Anthopoulou, 2010).

Moreover, the diversification of sources of income through efficient rural road infrastructure will result in the expansion of rural labor markets (Alonso & Trillo, 2014). Patterns in labor markets and production will change through adequate rural transport that promotes mobility and access to opportunities by both rural men and women (Whitacre *et al.*, 2014). Establishment of rural industries that employ people based on capability as opposed to gender is significant in the reallocation of resources and income (King & Vullnetari, 2016).

Furthermore, the provision of efficient rural road infrastructure will play a huge role in ensuring participation of rural women in the mainstream economy (Lecoutere, 2017). Bargaining power in household decision making will be realized by empowering women economically (Ali *et al.*, 2016). Through rural road infrastructure that allows women to be mobile, both men and women will compete equally for economic opportunities and other resources (Poon *et al.*, 2012). The ultimate goal of providing adequate rural road infrastructure is to achieve inclusive development that delivers economic opportunities without looking at gender (Rahman, 2014).

Additionally, adequate rural road infrastructure is a key in promoting mobility of rural women and ensures their representation in labor market opportunities (Plummer *et al.*, 2017). Improving mobility of rural women will likely make favorable conditions in terms of accessing income generation opportunities (Kemmerling & Stephan, 2015). Moreover, mobility of rural women as a result of rural road infrastructure will reduce the lack of participation of rural women on economic activities (Vaishar *et al.*, 2015). By promoting mobility of rural women, narrowing the widening income disparities between men and women will likely be achieved (Emran & Shilpi, 2015).

Establishing efficient and adequate rural road infrastructure becomes important in moving towards an industrialized rural economy (Olivetti & Petrongolo, 2014). Through industrialization, employment opportunities will likely offer equal incentives to both men and women (Ge *et al.*, 2011). The gender income disparities in a more industrialized economy will likely shrink due to broad sources of income that will be created (Chen, 2012). The allocation of labor force in non-

farm sectors will also shift allowing rural women to swell the ranks within industries (Ali *et al.*, 2016).

Equally so, the connection of rural areas with other areas of production will create expansion of rural labor markets which will yield employment creation for both rural women and men (Limani, 2016). Moreover, connectivity of rural areas with economic corridors will improve trade and intensify the exchange of goods and service between rural markets and other external markets (Zhang *et al.*, 2015). The maximization of production output of rural markets will help create more jobs and narrow gender income disparities (Popova, 2017).

Having said that, what needs to be done in closing the gender income gap requires an effort in diversifying sources of income (Kimbu & Ngoasong, 2016). The establishment of rural-based industries supported by high speed rural road infrastructure networks will improve output production, expansion of labor markets and job creation (Rijkers & Costa, 2012). Rural areas that are competitive economically and with adequate rural road infrastructure in place will be able to facilitate the process of redistributing income and resources (Rock *et al.*, 2016). The demand and supply chain of both services will offer equal opportunities to both men and women (Seedhouse *et al.*, 2016).

The society that is able to move remains fundamentally in the process of reducing income gaps between men and women (Tokunova, 2017). In this case, adequate rural road infrastructure takes the center stage in the process of closing gender income gaps (King & Vullnetari, 2016). Moreover, promoting mobility of rural women largely involved in agriculture will ensure access to markets (Foster *et al.*, 2016). The observation made tells us that mobility will promote economic emancipation and financial independence of rural women by providing access to economic opportunities (Kateja, 2012).

There are successes and benefits as opposed to the number of recorded challenges on gender income disparities. For instance, the agricultural sector supported by adequate rural road infrastructure is a major source of income in many rural areas (Rijkers & Costa, 2012). Rural women appear to constitute a bigger portion of the labor force which makes them beneficiaries of

income generation in the sector (Dobes & Leung, 2015). Adequate road infrastructure has ensured mobility of rural women in the agricultural sector to drive the production process and ensuring that production reaches markets (Agenor & Ganuto, 2015).

Adequate rural road infrastructure has been a significant factor in the process of narrowing sector productivity and income disparities (Poon *et al.*, 2012). Although there is a need to transform the agriculture sector in terms of income, it is equally important to ensure that this sector employs men in addition to women (McCullough, 2017). The income received in the agricultural sector should at least be equivalent to those received in non-farm sectors (Foster *et al.*, 2016). The gender income gaps will shrink creating at least equity in terms of income between men and women (Anthopoulou, 2010).

Although the gender income gaps are persistent, rural road infrastructure has played a huge role in the diversification of income sources for both men and women (Rao & Qaim, 2013). Proper rural road infrastructure has facilitated equal production between men and women headed farms (Vaishar *et al.*, 2015). This has ensured that both men and women farms are resourced in terms of infrastructure and equipment needed for production purposes (Kimbu & Ngoasong, 2017). Such effort have essentially contributed towards closing the income gaps between men and women headed farms and also ensure that production reaches markets (Kemmerling & Stephan, 2015).

Moreover, equity and efficiency based considerations revealed that income inequalities between men and women farmers were attended through adequate rural road infrastructure (McCullough, 2017). Rural road infrastructure has maximized production and reduced income gaps between men and women headed farms (Rao & Qaim, 2013). Rural road infrastructure also strove and managed to provide equal access to landholdings belonging to both men and women (Schumcki, 2012). Both men and women headed farms were provided with access roads to farms and further equipped with assets such as land, labor and technology (Plummer *et al.*, 2017).

The establishment of rural co-operatives to facilitate and spread income distribution has been a major success through rural road infrastructure (Limani, 2016). This has been a measure of redistribution of wealth and income opportunities amongst rural people, especially rural women

(Agenor & Ganuto, 2015). Through rural road infrastructure, many rural women co-operatives have successfully managed to participate in the demand and supply chain of both goods and services (McCullough, 2017). Rural co-operatives have a good instrument of narrowing gender income gaps by ensuring that they expose a bigger number of rural women to income generation opportunities (Whitacre *et al.*, 2014).

In tourism, the income patterns have shifted in some rural areas, with crafts previously being the biggest contributor of income generation for rural women in tourist destinations (Alonso & Trillo, 2014). It appears that due to improved rural road infrastructure, rural women are now owners of catering services, accommodation, restaurants and event planning for tourists in the tourism sector (Foster *et al.*, 2016). This is opposed to being involved in the informal business of being hawkers, merely selling crafts to tourists (Hogarth *et al.*, 2013). Improved access roads to tourist heritage sites have ensured accessibility of rural-based tourist attractions which continue to help rural people to generate income (Lecoutere, 2017).

This section above discussed the challenges of gender income gaps in rural areas. It also reflected on how rural road infrastructure contributes in narrowing gender income gap. The next section discusses income generation through the economy of space and rural road infrastructure.

2.7 Economy of Space and Rural Road Infrastructure

In the past decades, regional economic disparities and high unemployment rate has been largely reported as well as the variability of production of regions (Gutiérrez & Rey, 2013). The unequal distribution of resources and income has largely affected various rural areas widening the inequalities between rural and urban areas (Saari *et al.*, 2015). It seems as if the majority of the rural areas that are located outside of the economic corridors are languishing in abject poverty, income inequalities and underdeveloped (Popova, 2017).

As part of redressing the regional economic disparities, the provision of efficient and adequate rural road infrastructure has been pointed as the point of departure (Crawford, 2016). Rural road infrastructure has been considered as an instrument needed in the process of redistribution of wealth and resources across various rural areas (Lairds & Venables, 2017). In the development

agenda and inclusive development, rural road infrastructure has been identified as one of the determining factors of regional economic growth (Farhadi, 2015).

Shi *et al.* (2017) believes that efficient and adequate rural road infrastructure is eminent in the process of facilitating trade between economically developed regions and less economically developed regions. Through a well-established and high dynamic rural road infrastructure, import and export of goods between rural and external markets will stimulate economic growth and ultimately income generation opportunities (Popova, 2017). The process of demand and supply chain in the import and export of goods will yield job opportunities through the demand and supply of goods and services (Kimbu & Ngoasong, 2017).

In other regions, rural areas specifically, the contribution of rural road infrastructure on GDP growth has resulted in the creation of employment opportunities (Zhang *et al.*, 2015). The records of job creation opportunities as a result of rural road infrastructure development show the influence of transport in general (Amoa, 2016). The development of viable rural labor markets driven by high dynamic rural road infrastructure will stimulate export and import of goods within rural vicinities (Mendoza, 2016). This will result in the maximization of GDP growth and job creation opportunities (Laird & Mackie, 2014).

The growth in rural GDP as a result of dense economic activities taking place within rural areas and abroad will ensure maximum production output in rural areas (Verd & Porcel, 2012). But for this to happen, well-established rural road infrastructure that drives trade needs to be in place in order to achieve economic growth and job creation (Olson, 2010). Moreover, the increase in production output and GDP growth of rural areas will result in the expansion of rural labor markets which will also unlock other sources of income (Peters, 2017).

The geographical location of other rural areas makes trade and production highly impossible to occur (Nelson *et al.*, 2016). The development of highly modernized and high speed rural road infrastructure will help rural areas to form part of the mainstream economy (Loo & Banister, 2016). It is for this reason that the causality of adequate rural road infrastructure and economic growth becomes eminent in the discourse of rural road infrastructure and space economy (Mansfeld *et al.*,

2017). The complexity of rural road infrastructure has proven to have multiple roles and effects in the quest for regional economic growth and social development of rural areas (Davis et al., 2017).

The connection of low production areas and high production areas will enhance distribution of income and resources amongst regions and further promote trade for economic growth and job creation (Kateja, 2012). Rural road infrastructure will promote mobility of both goods and services but also ensures mobility of people to access areas of production and labor markets for both employment and economic opportunities (Rahman, 2014). Since rural areas are less dense in terms of economic activities, adequate rural road infrastructure will provide faster growth in terms of economic growth and job creation (Carson & Carson, 2014).

The importance of rural road infrastructure has been given attention even by spatial planners. The modern spatial planning methods put adequate rural road infrastructure amongst the important factors of reconstruction and reshaping rural areas to become economically viable (Chen, 2012). Spatial planners require land use planning that considers the future needs of the society both economically and socially; in this case, economic productivity of rural areas becomes a priority (Pollitt & Steer, 2012).

The integration of both rural road infrastructure and land use planning will help in the process of linking less developed areas with well-developed and productive areas in order to ensure productivity and economic competitiveness of rural areas (Mohino *et al.*, 2016). Rural road infrastructure should be well developed to drive exports and import of goods needed to stimulate job creation and income opportunities through the demand and supply chain of services and goods in rural areas (Barbier, 2016). Locating people closer to areas of economic opportunities will easily make them participate in the economic activities (Alizadeh & Farid, 2017).

In the process of developing rural economies to become viable and sustainable, space remains a considerable factor of consideration. Without space, job creation and rural economic development will face difficulties given the fact that the world is largely becoming industrialized. However, to achieve rural economic growth and job creation in rural areas, rural road infrastructure should

trigger investment in rural areas which will come in a form of making rural the future of industrialization given the vast open land. Adequate and high dynamic rural road infrastructure will stimulate the demand and supply chain of both rural goods and service (Pereira *et al.*, 2017; Tokulova, 2017; Pollitt & Steer, 2012).

Rural road infrastructure has been widely identified as crucial factor in reducing economic disparities and income inequalities between rural and urban areas (Alizadeh & Farid, 2017). Government funding should be largely directed towards developing rural road infrastructure since rural areas appear to be the future economic hubs (Tonts *et al.*, 2014). Efficient and adequate rural road infrastructure will enable trade to take place within rural vicinities ensuring economic competitiveness of rural areas (Crawford, 2016). The rise in exports of goods being driven by rural road infrastructure will lead to rural areas becoming highly saturated with economic activities (Pereira *et al.*, 2017).

In both social and economic sense, rural road infrastructure will help in terms of equity by promoting competitiveness of all regions and equal access to resources needed for the wellbeing of the rural populace (Niavis *et al.*, 2016). On the other hand, the provision of rural road infrastructure in various rural areas should strive to facilitate amongst other things the creation of job opportunities (Park & Seo, 2016). Improving the economic competitiveness of areas by attracting investment to rural vicinities requires a well-established rural road infrastructure (Ge *et al.*, 2011).

In the same notion, rural road infrastructure development will unlock economic opportunities (Chen, 2012). Since rural areas have abundant untapped land, this presents rural areas as suitable destination for future investment and industrialization (Lecoutere, 2017). Massive government expenditure on rural road infrastructure will put rural areas at an advantage for investment but adequate rural road infrastructure is needed to drive trade and promote production (Carson & Carson, 2014).

This section reflected on income generation, economy of space and rural road infrastructure. Below is the summary of what this Chapter covered.

2.8 Summary

This chapter began with the discussion of the historical background of NLTSF in as far as its legislation is concerned. The deliberations and reflections were also made on the philosophical background of NLTSF. Moreover, the literature review in this Chapter discussed the concept of human development, which, amongst other things, included the indicators, namely, education, income generation and life expectancy. Other aspects of this chapter included discussions on issues of rural road infrastructure, gender income gaps and other elements that promote income generation, especially in rural areas. The next Chapter provides research methodology.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The study investigated the role of National Land and Transport Strategic Framework (NLTSF) in enhancing human development with specific reference to income generation at uMlalazi Local Municipality. The previous chapter presented the literature and theoretical framework of the study. The current chapter presents the research methodology of the study. This chapter opens by discussing and outlining the implications of research philosophy for research approach and for research methods. The chapter proceeds to review research methods of similar studies. After this, the chapter presents research methods which take the larger part of the chapter.

3.2 Description of the Study Area

The study was conducted at uMlalazi Local Municipality. The municipality is located in the province of KwaZulu-Natal under King Cetshwayo District Municipality (formerly, Uthungulu District Municipality). The uMlalazi Local Municipality is predominantly rural but consists of three towns which are the commercial hubs of the municipality: Gingindlovu, Eshowe and Mtunzini. Geographically, the municipality covers a total area of 2 217 km² which makes it the largest municipality in South Africa (Statistics South Africa, 2011; uMlalazi Local Municipality Integrated Development Plan, 2016).

UMlalazi Local Municipality consists of 27 wards. It shares a boarder with iLembe District Municipality, the Mandeni Local Municipality in the South and Maphumulo Local Municipality in the Southwest. Moreover, the municipality further shares borders with Nkandla Local Municipality in the Western regions and Mthonjaneni Local Municipality. Lastly, in the north, it shares borders with uMhlathuze Local Municipality. Umlalazi Local Municipality has 14 tribal authorities that are custodians of land on behalf of Ingonyama Trust Board (Statistics South Africa, 2011; uMlalazi Local Municipality Integrated Development Plan, 2016).

The population size of the municipality is 223 140 with a growth rate of 0, 8 %. The number of households was 46 953 with a number of 4 to 5 occupants per household. In terms of gender

breakdown, males consist of 47%, while females consist of 53%. The age breakdown reveals that the age group from 0-14 consists of 43%, 15-64 consist of 49% and 65 years and above makes 8%. The educational part shows that the municipality has 22, 5% of people with no schooling, 23% of people hold a Grade 12 certificate and 5, 7% of people have tertiary education (Statistics South Africa, 2011; uMlalazi Local Municipality Integrated Development Plan, 2016).

The municipality has an unemployment rate of 26, 2% overall. However, the people employed range from 15 years to 65 years. The formal employment makes a total number of 26 999 and the informal employment makes a number of 4 685 which brings the number of employed people to 31 684. The economic profile of the municipality shows that it has a GDP of 19, 4%, which amounts to 7 861 854 million (Statistics South Africa, 2011; Umlalazi Local Municipality Integrated Development Plan, 2016). Figure 3.1 below is a representation of the study area.

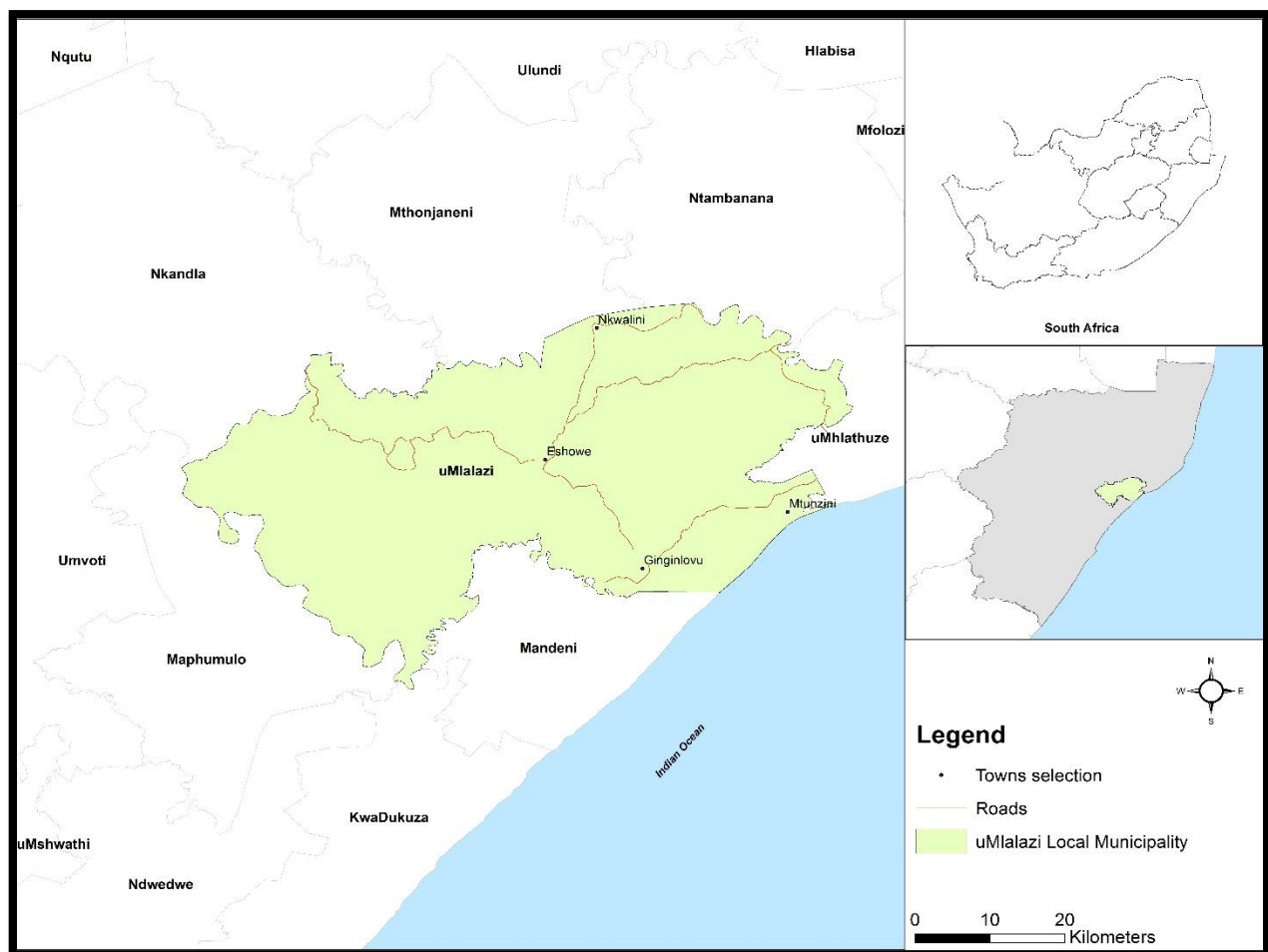


Figure 3.1: Map of the study area (Source: Author)

3.3 Research Approach of the Study

The study followed a mixed research approach, meaning it has used both qualitative and quantitative research methods. The qualitative nature of the study was the use of interviews containing structured questions that ought to answer the key research question of the study. Qualitative methods allow the use of interviews as an instrument for data collection. Hence through the use of interview sessions for the collection of qualitative data, the researcher practically conducted interviews with ward councilors and traditional leaders for purposes of collecting qualitative data.

Since qualitative methods are exploratory and investigative in nature, the use of interviews in this study assisted in gathering a comprehensive and in-depth understanding on the phenomenon studied from ward councilors and traditional leaders. The choice of interviewing ward councilors and traditional leader was on the basis of their positions in society and the conviction that as leaders, they might have more and relevant information needed to answer the research question of the study. Thus, trying to understand the underlying factors on the occurrence of the phenomenon studied.

The quantitative nature of the study was the use of a questionnaire containing both open and close ended questions for purposes of collecting quantitative data. Since this was a socioeconomic study, the questionnaire assisted in the quantification of demographic variables such as employment status, source of income, income level, education, gender and many other related variables. Through the use of a questionnaire, the study managed to collect data and quantified the demographic variables in relation to the phenomenon study. Thus also helping in getting the trends and patterns of the phenomenon studied through the quantification of demographic variables such as employment status,

Moreover, data on households' income received from Statistics South Africa (StatsSA) from Census 2001, Census 2011 and the 2016 Community Survey, was used to compliment the quantitative data collected through the use of a questionnaire as an instrument for quantitative data collection. The employment statistics obtained from job creation initiatives by uMlalazi Local Municipality was also used to show that there were jobs that were created by the Municipality.

The quantification of demographic variables through the use of questionnaires together with the use of data from StatsSA and employment statistics from the Municipality assisted in the creation of graphs illustrating the trends and patterns of demographic variables such as income levels, source of income and employment status.

3.4 Research Methods

This section presents methods that were followed in the collection and analysis of data. It opens by discussing how research participants were recruited.

3.4.1 Sampling Technique

Using mixed research methods in any research inquiry assists in covering the limitations and weaknesses of using a single sampling procedure. Mixed research method compensates for the weaknesses of a single research method. The study used both probability and non-probability sampling approaches. In order to ensure that the chosen sampling method in a research inquiry represents accurately the larger population, simple random sampling technique provides an opportunity that all participants or units stand an equal chance of being selected in the parent population. Purposive sampling allows the researcher to select specific participants or units that are going to help in answering the research question of the phenomenon (Zoellner & Harris, 2016; Endacott & Botti, 2007; Xu & Zhu, 2016).

Since this study was exploratory in nature, for qualitative methods, a maximum variation sampling was used as a sampling technique in the study. This type of sampling allows for the capturing a diverse views or perspectives on the subject studies, thus allowing the capturing perspectives not from one sources but from a variety of sources that answers the research question.

As part of gaining deeper insight and comprehensive understand on the phenomenon studied, maximum various sampling was used in the study in capturing different perspectives form different sources in the study area. Through interviews conducted with various traditional leaders and ward councilors, the study managed to gather sufficient perspectives from these participants in an attempt to get a comprehensive and deeper grasping of the phenomenon studied.

While the study looked into quantifying and establishing the impacts of the phenomenon studied in terms of demographic variables such as employment status, source of income, income level, level of education and many other related demographic variables, a simple random sampling technique was used in the study. This sampling technique allowed collection of quantitative data from participants in the study area. Simple random sampling technique allowed the study to identify participants randomly, which provided all people in the total population to stand an equal chance of being selected without any biasness.

3.4.2 Sample Size

The process of choosing a sample size depends on many factors that need to be taken into consideration. Generally, qualitative research uses smaller sample sizes which are relevant to provide a comprehensive understanding of the studied phenomenon. Qualitative research considers the saturation principle as an important factor. Contrary to this, quantitative research considers a small sample size in order to generate statistical data in understanding the studied phenomenon. The key things that need to be prioritized when choosing a sample size either in qualitative or quantitative research include rationale for the selected sample, description of how sample was selected and the sample size (Rosenthal, 2016, Fetzer 2017, Twining et al., 2016).

The study area consisted of a total number of 27 Municipal wards. Since the focus of the study was on the examination of rural road transport infrastructure provision through NLTsf and its ability to stimulate income generation opportunities for rural dwellers, out of all these 27 wards, 4 wards namely ward 10, ward 24, ward 26 and ward 27 benefitted previously on rural road infrastructure projects. In order for the study to establish if NLTsf played a role in enhancing income generation opportunities, the study zoomed into the aforementioned wards with an intention to examine if NLTsf through rural road transport infrastructure projects contributed towards income generation opportunities. Through these 4 wards, the study managed to gather substantive data and insight on the phenomenon studied.

For qualitative data given the focus of the study on 4 wards, ward councilor from each ward respectively formed part of the interview participants of the study. Moreover, since the study area is predominantly rural and most villages are under traditional councils, authorities, traditional

leaders belonging in each ward were interviewed. The study interviewed a total number of 8 participants consisting of 4 ward councilors and 4 traditional leaders. This was in line with the maximum variation sampling which allows gathering of deeper insight and comprehensive understanding using various perspective from research participants in enhancing the understanding of the phenomenon studied.

Due to the size of the parent population in the study area, the application of the simple random sampling technique allowed an extraction of a particular sample size which was used by the researcher on the subject studied. In this regard, from a parent population of 223 140, as sample of 20 participants was drawn from this parent population. The use of a simple random sampling technique for quantitative data collection meant that all units from the parent population stands a chance of being selected without any biasness. This allowed for generalization to made using the selected sample size. The study used the findings from the 20 participants to generalize the findings of the study in relation to the entire parent population in terms of the phenomenon studied.

3.4.3 Data Collection

The study followed a mixed research method. Below is a breakdown on how qualitative and quantitative data were collected.

3.4.3.1 Qualitative Data

In qualitative research, the use of interviews, especially in-depth interviews, becomes useful when a researcher in a research inquiry seeks to understand the phenomenon, and in the process relying in the personal experience and knowledge of the participant (Seita, 2017). Moreover, a research inquiry that is exploratory requires the researcher to use open-ended interview questions to cover a broader scope of the subject (Devers & Frankel, 2000). Observations form an integral part of data collection in qualitative research which enhances understanding a phenomenon through the use of experiences and knowledge of both the participant and researcher (Robinson, 2015). For qualitative data collection, in-depth interviews were used.

Using the maximum variation sampling for ensuring a comprehensive understanding of the phenomenon studied, for qualitative data, interviews were used as an instrument for data collection

in the study. Interviews were conducted with traditional leaders and councilors from 4 municipal wards of the study area. Qualitative data that seeks to answer the research question was sought from the interviewees through structure open ended questions. The use of structure open ended questions enabled the study to gather the needed information as well as a deeper and better understanding on the role of rural road transport infrastructure provision through NLTSF in enhancing income generation opportunities in rural areas. As required by the maximum variation sampling, different perspectives were shared by interview participants which enhanced the understanding of the subject studied in the study.

3.4.3.2 Quantitative Data

Using questionnaires in Social Sciences research has over the years gained momentum when it comes to the tools of data collection (Zoellner & Harris, 2016). The limitations of other data collection tools have been compensated by the use of questionnaires when studying a phenomenon that deals with social issues (Kelle, 2006). For quantitative data collection too, questionnaires, quantitative data (documents) showing income status of the people, maps and satellite images of the study area showing road network of the study area were used.

For purposes of quantitative data, questionnaires containing both open and close ended questions were developed and used as tools of data collection. Following the principle of simple random sampling technique on the random selection of research participants without any form of biasness, 20 participants were randomly selected from a parent population of 223 140 from 4 municipal wards. From the selected sample size of 20 participants, the studied managed to quantify the demographic variables such as employment status, source of income, income level, level of education, gender and many other related variables in an attempt to answer the research questions. This assisted the study to generalize based on the findings from the 20 participants and relate them with their entire parent population of the study area.

The quantitative data used in the study included households' income data from Census 2001, Census 2011 and the 2016 Community Survey obtained from StatsSA. The period of the data that was used from StatsSA was informed by the need to establish the trends and patterns of households' income in the study areas and also to establish the causality between the quantitative

data collected through the use of questionnaires in relation to the rural road infrastructure projects. The study also used employment statistics gathered from various Municipal job creation initiatives.

3.4.4 Data Analysis

This section outlined how different instruments were used for data analyses:

3.4.4.1 Qualitative Data Analysis

Content analysis is essential in the process of analyzing qualitative data and enables the researcher to classify, summarize and tabulate verbal data captured from the responses of participants during interviews and observations (Kohlbacher, 2006).

For qualitative methods, the study applied content analysis for purposes of making replicable and valid inferences by interpreting and coding textual material. This assisted the study to analyze and interpret responses of respondents gathered during the interview sessions conducted with traditional leaders and ward councilors. The study through the use of content analysis managed to extract excerpts qualitative data from the responses of interviewees with an intention of answering the research question. This was in line with the maximum variation sampling since it requires gathering deeper and comprehensive understanding using various perspectives to understand the phenomenon studied, in this case being the interviewees.

3.4.4.2 Quantitative Data Analysis

The study used Microsoft Excel for creating graphs and tables from the quantified quantitative data of demographic variables such as employment status, income level, source of income, gender, level of education and other related variables. This quantitative data was collected using questionnaires as tools of data collection for the study. The quantitative data on households' income obtained from StatsSA was also used to create graphs and tables that ought to answer the research question about the phenomenon studied.

3.4.5 Other Research Methods and Tools

The study used ArcGIS to create a map of the study area using GIS data obtained from uMlalazi Local Municipality consisting of spatial data of road networks and towns. GIS was used for

mapping road networks, job creation areas as well as nodes and corridors. Through GIS, satellite images were extracted showing terrestrial features needed to substantiate findings of the study. Moreover, the study used GIS to extract satellite images that shows the conditions of road infrastructure before NLTSF and road infrastructure post NLTSF. Through the use of satellite images, the study managed to draw a comparative analysis prior and post road construction in the study area.

3.5 The Role of the Researcher

It is important to establish and maintain conducive relationship with participants when conducting a research inquiry in order to have favorable and cooperative field relations, thus enhancing the interaction between the researcher and the researched (Wang, 2013). Moreover, a researcher becomes a participant observer when conducting a field work research in order to understand the different relations between the phenomenon and the participants (Borochowitz, 2004).

Furthermore, a researcher forms part of the process of research inquiry with an intention of getting a deeper understanding of the responses of participants and establish a sound interpretation of those responses (Yu, 2011). The role of the researcher in logistical arrangements of the research inquiry includes, amongst other things, compiling questionnaires, preparing and conducting interviews as well as data collection and analysis (Maree, 2013). Lastly, it is common that a researcher plays a central and sometimes a leading role in facilitating a research inquiry process which automatically makes the researcher to participate and interact with the research subjects in understanding the phenomenon (Moore, 2012).

In this study, the researcher directly interacted with the research subjects with an intention of gaining insights and understanding about the phenomenon and the relationship between the phenomenon and participants. This enabled the research to establish the social changes and the different relationship each participant has with the phenomenon.

3.6 Ethical Considerations

The institution where the researcher comes from should firstly approve the research topic and research methods to be used by the researcher with an intention to establish if they are ethically

sound and will not cause any harm and conflict (Roberts, 2015). The ability to observe and follow ethical considerations in any research inquiry provides an opportunity to conduct a successful study without any hindrances (Bruess & Greenberg, 2008).

It is an ethical requirement for a researcher to obtain a pre-approval from authorities, either traditional leaders or any other authority to grant permission to interact with the required research subjects in the study area (Beihammer *et al.*, 2013). The researcher should strive to observe and respect the necessary protocols which could include things such as cultural practices and beliefs observed in the study area to avoid causing conflict (Giorgini *et al.*, 2015).

Moreover, when conducting the study, the researcher should prioritize and emphasize issues that guarantee participants confidentiality, anonymity and autonomy (Wasserman, 2013). The researcher needs to point out at the outset that participation in the research inquiry is voluntary (Beattie *et al.*, 2002), this would ensure that participants grant consent for their participation and fully understand their involvement and role in the research inquiry (Roberts, 2015).

In achieving ethical consideration and research ethics in this study, permission was sought to conduct the study from all the relevant authorities such as the municipality and traditional leaders. The confidentiality in terms of participation and response of research participants was highly considered, thus further ensuring that participation was voluntary without any obligations from both the researcher and the participants. The status of anonymity was considered should the participants deem it necessary to remain anonymous. The participants were clarified on what the study was about and their role in the research inquiry.

3.7 Quality Assurance

The importance of ensuring quality in research remains important, thus the process of evaluating the quality of research practice being one other aspect identified as key in any research domain (Martensson *et al.*, 2016). Quality assurance in any research inquiry begins from the planning, execution, until reporting phase (Hoff, 2011). For any research to be deemed as quality research, chief amongst many elements that determines the quality of research is the research methodology. Research elements such as instruments for data collection and analysis are the most fundamental

aspects (Henley *et al.*, 2017). Equally, ethical consideration, validity and reliability in terms of research participants, data collection, and data analysis are critical aspects which are directly linked to research methodology (Tangat *et al.*, 2014).

For the purposes of this study, developing a proper plan in terms of protocols on how the research unfolded was one of the critical aspects of achieving quality assurance. The researcher used research methods and research tools and procedures for data analysis that were valid and reliable to justify the research outcomes. In order to achieve quality research, the study must be evidenced based.

The research ethics were applied in order to have quality research. Risk assessment was conducted prior to conducting the study as part of ensuring that quality research is achieved. Assurance in terms of confidentiality, anonymity and autonomy status of research participants were fundamental aspects of the study in terms of quality assurance. Moreover, technical writing formed an integral part in the process of ensuring research quality which includes editing the research document before submission or publishing.

3.8 Disposal of Data

Data handling remains important in ensuring that research data is stored, archived or disposed in a manner that is safe and secure after completing a research project. The importance of data handling is mainly to ensure the integrity of research data since it focuses on issues of confidentiality, security and preservation. The use of both electronic systems such as laptops, personal storage systems and non-electronic systems such as paper files and journals form the core of data handling process. Both electronic and non-electronic systems are also used for disposing and destruction of research data records after completing the research project (Childs & McLeod, 2004; Boucher & Convery, 2011; Khayat & Kemppler, 2015).

For the purposes of this study, electronic instruments such as laptop and external drive and non-electronic instruments such as paper files and textual documents were used to store, archive and dispose data after the completion of the research project. Priority was on ensuring that confidentiality, security and preservation of the research data records is achieved, thus destroying

and disposing research data records in a manner that protects confidentiality of the research data records.

3.9 Challenges of the Study

The study faced a challenge of obtaining data from StatsSA reflecting households' income after the Census 2011. As a result, the study had to rely on the 2016 Community Survey conducted by StatsSA in order to accommodate the 2011-2016 period, thus also relying on employment statistics obtained from the Local Municipality in order to close the glitches. It was also anticipated that the main challenge of the study would be time constraints, however, in order to overcome this challenge, time schedule detailing personal submission schedule and deadlines helped to fast-track progress. Commitment and hard work also helped to propel progress in this research so that deadlines are met.

3.10 Delimitations of the Study

In any research inquiry, both qualitative and quantitative research, generalization provides a platform for the researcher to analyze and interpret research findings from both the observed and unobserved research subjects. Analytic generalization allows the researcher, especially in a qualitative inquiry, to use rigorous and inductive analyses to establish insightful and inductive generalization about the phenomenon in question. In the same notion, generalization also helps the researcher to analyze, shape and interpret response from participants and shape research findings (Polit & Beck, 2010; Toewsa *et al.*, 2017).

Since quantitative research in its nature becomes a confirmatory research, generalization occurs within the statistical model which is enacted by the application of random sampling methods, thus enabling manipulation of outcomes. The application of generalization in qualitative research seeks to understand the perspective and experiences of people, thus enabling the conceptualization, development and implementation of needed interventions. In this regards, generalization will allow extrapolation in terms of trends of the phenomenon. The research findings in qualitative research allow generalization by the researcher to influence policy and decision makers to derive accurate interventions to resolve problems (Leppink, 2017; Larsson, 2009).

Since this was an exploratory study, on the part of quantitative data, research findings were generalized with an intention to allow extrapolation by the researcher to explore, analyze and interpret trends about the phenomenon. The researcher had the platform to analyze, shape and interpret the research responses by participants in order to ensure that the study achieve the desired outcomes, thus also extracting accurate and needed information from participants' responses.

3.11. Summary

This Chapter provided a description of the study area and provided the research approach of the study. Research methods were outlined in terms of sampling techniques, data collection and data analysis. Amongst other things, the Chapter outlined the role of the researcher as well as matters relating to ethical consideration. Lastly, quality assurance, disposal of data, anticipated challenges and delimitations of the study were also critical aspects discussed in this chapter.

The next Chapter deals with data analysis and interpretation.

CHAPTER FOUR

RESULTS OF THE RESEARCH STUDY

4.1 Introduction

This chapter presents data analysis and interpretation. Data analysis and interpretation is based on research findings of interviews with traditional leaders and councilors, and also on interviews with the communities of the study area. The study also performed spatial analysis of road system in the study area.

4.2 Results of the Study on Interviews with Traditional Leaders and Councilors

The findings are presented in the form of themes. The themes are pointers to the research findings in relation to questions asked.

4.2.1 Awareness of NLTsf Road Projects

Findings of the study revealed that some stakeholders were aware and some were not aware of various NLTsf projects in their areas. Those that were aware indicated that areas such as Nkweleni, KwaBulawayo and Ndlangubo had seen the implementation of projects such as the construction, expansion and maintenance of the Nkweleni R66 road. The Nkweleni R66 road connects the towns of Eshowe and Empangeni with several other towns:

“Yes I’m aware of some of the community projects such as electricity, water and roads. People from government have visited our Traditional Councils to inform us about projects and also to introduce the contractors and also outline how our people will benefit” (Traditional Authority, Maqhwakaza area, 3 October, 2017).

Further responses were:

“Ward councilors do come to make presentations to the Traditional Council on any activities taking place in the area especially things that have to do with community development. We meet every Tuesday of the first week of the month” (Traditional Authority, Mtilombo area, 5 October 2017).

“Well, yes I am aware of a few projects. We have established our ward committee that is evenly spread across all corners of the ward. Part of the duties of this committee is to ensure that information on service delivery reaches people. Recently we were requested to identify and submit 15 people that will be part of construction of walk paths and road markings on the road to Ndlangubo as part of curbing cars hitting school kids” (Councilor, Ward 26, 3 October 2017).

Moreover, the study also discovered some levels of disagreements between traditional leaders and ward councilors, which led to the conclusion that in some cases, working relations between councilors and traditional leaders were not smooth. It also appeared from the findings of the study that there was no mutual respect between traditional leaders and councilors; where in some instances, councilors appeared to be undermining the existence of traditional leaders. This resulted in traditional leaders in some areas not being aware of ongoing or upcoming projects:

“The role of the Traditional Council is not recognized by the ward councilor as a result we are lost when it comes to any activities and projects. He does not come during our monthly sittings of the Traditional Council to update us” (Traditional Authority, Habeni area, 8 October 2017).

The study further found prevalence of issues that related to disagreements between traditional authorities and ward councilors. There were issues of lack of involvement, sidelining and sabotage. In particular, some traditional leaders raised issues of being sidelined and not being informed about upcoming projects. They assumed that their exclusion was because of their affiliation to a different political organization. Hence, in some situations, political dynamics seemed to determine implementation of community development projects. This then affected implementation of services:

“What has been an issue is the difficulty of creating good working relations between the Traditional Council and politicians. These people do not understand that traditional leaders have to work with all the people of His Majesty, King Zwelithini (King of the Zulus). The community suffers because of lack of agreement. You see, sometimes we are not informed

about what is happening in the area. We see people in overalls clothing digging the roads, while we do not know what is happening. That is why sometimes the Traditional Council ends up deciding to question and object to some projects that were not introduced to the Traditional Council. Even worse, the people working there are not from our community. Why are our people not benefiting?” (Traditional Authority, Habeni area, 8 October 2017).

A further response during the probing of participants was:

“Yes I’m aware of projects that we have identified on the basis of the Integrated Development Plan (IDP) but it is not guaranteed that they will be implemented. Sometimes the implementation of projects becomes difficult; sometimes implementation tends to be based on which party leads the ward in relation to the Municipality. Well, as an opposition party we have accepted that sometimes we will be frustrated and that projects will be sabotaged” (Councilor, Ward 27, 4 October 2017).

On the basis of the above excerpts, findings of the study seemed to indicate power contest between traditional authorities and ward councilors. Moreover, findings of the study also showed that there were political dynamics in the implementation of NLTSF related development projects. It also appeared that the role of traditional authorities was being undermined by ward councilors. The study also established that traditional leaders had an issue with who got employed in the road development projects. A traditional leader pointed out that “even worse, the people working here are not from the community”.

In terms of awareness, the overall findings of the study on NLTSF projects revealed that most of the research participants were aware of such projects. These projects included construction of walking paths, storm water drainage, electricity installations, water connections, and road maintenance and construction. However, there were research participants, specifically traditional leaders, who indicated that they were not aware of projects.

4.2.2 NLTsf Based Projects: Job Creation and Income Generation Potential

The responses of participants had painted an unclear picture about the perception and the role of NLTsf in terms of income generation and job creation potential. Findings revealed that some research participants were critical of the criteria used to identify and select people to work on various NLTsf projects such as walking paths, road maintenance and storm water drainage. Research participants argued that processes are not transparent. Furthermore, people who worked on projects were identified and selected on the basis of connections with decision makers.

Probing participants uncovered one other issue which had to do with the limited number of people required for projects. The argument by some of the participants showed that the number of people required for projects was not proportional to the population demographics of the area. There was also a concern about corruption:

“South Africa is corrupt so are politicians. They make empty promises to the people. Nowadays for you to be successful or benefit you need connections. Even in our area, we have seen such a tendency of people benefitting not because they deserve but they are known by certain individuals” (Traditional Authority, Habeni area, 8 October 2017).

However, some councilors noted the constraints of limited resources within which they have to work:

“It is really hard to satisfy all the people because we work with a lot of people. We are often attacked in community meetings regarding the way people who participate in various projects are selected” (Councilor, Ward 27, 4 October 2017).

“We actually need to come up with other means of helping our people to generate income, at the moment the projects cannot employ everyone and there has been a serious outcry around the issue of who benefits” (Councilor, Ward 24, 6 October 2017).

From the above, it appeared that fair practices were not followed in the selection of people to work on NLTsf related projects. Traditional officials tended to be critical of the processes of NLTsf.

They held a view that people who were to work on the projects were not selected on the basis of merit. They believed that people were selected based on connections, something which ward councilors would dispute.

Based on the excerpts provided, it appears that NLSF had created job opportunities though it showed that the jobs are limited to satisfy the population demographics of the study area. It appears that over a period of 10 years, road construction projects managed to create job opportunities that assisted in boosting rural households' incomes. Moreover, findings of the study showed that NLTSF had played some role in stimulating job creation and income generation potential. Most of the jobs seemed to have benefitted mostly people who work on road construction, construction of walking paths and on road maintenance.

The study also discovered that construction of roads had in some places stimulated small business establishments which resulted employing people from the rural communities. The study found businesses that established as a result of roads built through NLTSF projects, and these businesses includes amongst others brick production, car wash outlets and tuck-shops. These were notable initiatives of local businesses in Ndlangubo and Habeni villages:

“The projects have created jobs but they cannot be entirely praised in as much as they help some households because they are not sustainable. On top of that, they only employ people with Grade 12, people who do not have any specific skills. This I should think informs the money people receive as wages which I consider to be too small. If a person gets R1000.00 a month, that money is not sufficient to sustain large families in rural areas while others spend such an amount only on cosmetics” (Councilor, Ward 24, 3 October 2017).

A further response on the deliberations with participants was:

“As far as I know, the employment statistics in the area have completely changed over the years and they are showing good progress though at a steady pace. The IDP report shows a number of projects implemented since 2006 to current. These statistics shows a growing trend of job creation through road construction and road maintenance. According to the

2016 Municipal IDP report, the period of 2006 to 2011, the projects created 1267 rural jobs through rural infrastructure projects such as road construction and road maintenance. From 2011 to 2017, 2 481 rural jobs were created through road construction projects. Given the high employment rate and poverty in rural areas, these projects have seriously assisted in providing household income in rural households” (Councilor, Ward 24, 6 October 2017).

“We have been visited by business financial institutions such as SEDA who interact with small emerging businesses in the area on business development and access to business funding. I know of a couple whose businesses have been funded by SEDA. There’s one which deals with brick production and the other one produces eggs” (Councilor, Ward 10, 7 October 2017).

Given the above responses, findings showed that infrastructural development, roads in particular, did play a role in business development and job creation. It also appeared as if the role of roads did not only end on promoting mobility, but also extended to other aspects such as business development and job creation. From these findings, one could assume that there was a relationship between road development, business development and job creation.

The study also discovered that there were issues about the duration of the jobs created by NLTsf. Findings revealed that these jobs were on temporary basis and were attached to the duration of the project. Similarly, the wages in these NLTsf based jobs were one other area that some research participants were concerned about. The conclusion is that wages failed to make meaningful contribution towards household income. The study discovered that most of these projects lasted for a short period of time and people earn between R1 500.00 to R2 500.00 a month, which some respondents considered to be little. Hence, the study concluded that these NLTsf jobs did not lead to significant reduction in poverty levels:

“The projects cannot be praised in as much as they help some households because they are not sustainable” (Councilor, Ward 24, 3 October 2017).

Moreover, other participants responded like this:

“Rural households have big families. If a person gets paid somewhere around R750 to R2 500.00 a month depending on the nature of the job, that money cannot do anything. You have to buy groceries for more than seven people, just imagine because people have to eat in the morning, afternoon and in the evening. So it’s a sad situation in as much as they help many households, sustainable jobs are needed. Even more painful, in these projects one is sometimes told out of the blue that the project will be put on hold or either there is not money to pay people. So it’s a sad reality we are faced with” (Councilor, Ward 24, 6 October 2017).

“There is nothing to celebrate about these projects because they are on short term basis and there is no guarantee that one will be permanently employed; hence, in some instances, you get contractors coming with people from outside the area to work in the projects” (Traditional Authority, Maqhwakaza area, 3 October, 2017).

While other people of the study area praise the positive contribution of NLTsf towards creation of the jobs and other income generation opportunities such as businesses, the study also discovered that some amongst the research participants felt that NLTsf had not changed the living conditions of the people. The significance of roads towards creation of employment had been questioned and criticized:

“I have been in the area for years now, I do not see any difference in the living standards in the area. People remain poor. The roads do not help us because even now we do not have water and electricity hence there are high levels of poverty and unemployment especially amongst the youth. Our people are hungry and they cannot eat roads. Why don’t they give people jobs instead of roads?” (Traditional Authority, Mtilombo area, 5 October 2017).

There were contradictions on the positive impact of NLTsf related projects in terms of whether they changed living conditions or not. This showed that there was no agreement on the significance and positive impact of NLTsf projects. However, there seemed to be an impression that those who benefitted from NLTsf would argue for NLTsf, while those who had not benefitted would argue

against NLTsf. The conclusion is that perceptions differed with regards to the contribution of NLTsf related development projects.

The study discovered socioeconomic issues in the study area. Amongst a variety of these socioeconomic issues included amongst other the lack of business ownership by local people, unsustainable jobs created by projects and insufficient money paid to people working in the road construction projects. The local people of the study area were concerned about informal business ownership around the area. Findings revealed that majority of local businesses such as shops and other businesses, both formal and informal were owned by foreign nationals such as the Chinese, Somalis and Pakistanis. Although these businesses sold products such as bread and other grocery items in close proximity to communities, there was a concern as well that these foreign nationals were impregnating women of the surrounding villages where they operated:

“Our people are very lazy. You have many foreign nationals such as Chinese owning businesses. Here at Ndlangubo (a village, 20km west of Empangeni Town) we have a big wholesale shop along the road owned by Chinese. In other areas Pakistanians are taking over, they are busy buying old shops and they are making money. Of late, Zimbabweans are slowly starting to be dominant; they sell these various household products such as electrical buckets for warming water. My main worry is the young teenage girls that love money. They are dating these foreign nationals. Many cases are reported in the Traditional Council about girls who got impregnated by these foreign nationals” (Traditional Authority, Maqhwakaza area, 3 October, 2017).

Responses from other participants were:

“Yes there are some business opportunities that began to show up shortly after the roads were built, ever since, the businesses have shown good signs of growth. Although these are not formal and professional jobs but people are now owning taxis since the volume of people travelling to town and other areas requiring public transport. Young people have set up car wash services which are normally located close to salons” (Councilor, 6 October 2017).

“Yes the roads have created temporary jobs, it is better than nothing because people are able to put bread on the table” (Councilor, Ward 10, 7 October 2017).

Apart from the dynamics of business ownership in rural villages, the study also found that some communities still had the orientation of traditional ways of doing things. In the interviews, the study discovered that there was arable land around the study area, a traditional leader pointed out that people had to farm in order to have food rather than depend on the government. Moreover, the land appeared to be a valuable asset to traditional leaders. Men had to have cattle and work the land instead of going looking for jobs elsewhere (Johannesburg):

“Due to lack of job opportunities, I think we should encourage and orientate our young generation to use what we used to do when we were growing up. Our forefathers had cattle and back then a wealth of a man was defined by livestock. We were milking cows and working the land for crops. We did not know anything called poverty back in the days. We have a lot of arable land in our various communities; it is high time we went back to farming instead of being depended on government” (Traditional Authority, Mtilombo area, 5 October 2017).

Overall findings of the study with regards to job creation and income generation opportunities in relation to NLTSF showed that, NLTSF has managed to create job opportunities for local people which majority of them came through the road construction projects. Findings of the study also pointed out the unsustainability of these jobs in their nature but affirmed that regardless of this challenge, NLTSF created job opportunities. Moreover, NLTSF has also stimulated the establishment of informal and formal business which assisted people to generate income apart from NLTSF related jobs.

The study also discovered that there were differences in the manner in which people in the study area viewed life. There were those that subscribed to modern ways of living, while on the other hand, there were also those who subscribes to the traditional ways of living. The findings of the study showed that there was an emerging view based on the above excerpts that crop and livestock farming had to be revisited as a means of ensuring survival of households.

4.2.3 Living Conditions and Household Income Before and After NLTSF

The findings of the study showed that prior to the introduction of NLTSF in the study area, socioeconomic challenges such as poverty and unemployment were prevalent. The scarcity of job opportunities propelled other people to relocate while other households depended on social grant to meet their basic needs:

“Before the roads were built, especially the one cutting through Ndlangubo village to the town of Empangeni, poverty and unemployment was prevalent. The scarcity of jobs forced some people moved to Johannesburg to look for jobs because they wanted to support their families. Scarcity of jobs is an old issue. Poverty was prevalent even before the roads were built. There is no woman that wants an unemployed man, what is she going to do with you if you are unemployed?” (Traditional Authority, Habeni area, 8 October 2017).

The probing of research participants resulted to other responses as reflected below:

“Honestly speaking, to me we still have many people going to bed without food. We are in rural areas here and life is a bit difficult. It has been like this for years now although there are a few individuals who make it in life but majority of our people are still impoverished and unemployed. Yes, the situation has been like this for a very long time, but we should not exaggerate things” (Traditional Authority, Mtilombo area, 5 October 2017).

“It is difficult so say, but people have been poor for years now, all I know is that numerous households have survived on social grants and this money has never been enough to do all household needs” (Councilor, Ward 27, 4 October 2017).

Based on the evidence from the excerpts, the study discovered that prior to the introduction of NLTSF, rural villages in the study area experienced socioeconomic challenges such as poverty and unemployment. As a result of these socioeconomic challenges, some people from the rural villages were forced to relocate in an attempt of getting better living conditions, while some households relied on social grant for survival. Therefore, a conclusion can be drawn that apart

from both social and economic contribution made by NLTSF, more still needs to be done to eradicate the socioeconomic challenges in the study area.

On the other hand, since the introduction of NLTSF, it appeared that the living conditions in the study area showed improvements. The improvements were noticeable in terms of improved household income as a result of NLTSF related jobs as well small business developments. Moreover, other improvements in the living conditions were noticeable in mobility since rural residents were able to easily access public transport conveniently than before NLTSF:

“As far as I know, the employment statistics in the area have completely changed over the years and they are showing good progress though at a steady pace. The IDP report shows a number of projects implemented since 2006 to current. These statistics shows a growing trend of job creation through road construction and road maintenance as well as other initiatives by the Municipality. According to the 2016 Municipal IDP reports, the period of 2006 to 2011, the projects created 1267 rural jobs through rural infrastructure projects such as road construction and road maintenance. From 2011 to 2017, 2 481 rural jobs were created through road construction projects. Given the high employment rate and poverty in rural areas, these projects have seriously assisted in providing household income in rural households” (Councilor, Ward 24, 6 October 2017).

A further response was:

“In our Traditional Councils, we do report about community development projects such as road construction, electrification and water connection. The most common are road construction projects which last a bit longer than other projects. We have seen in the recent past that these projects have employed people since project managers come directly to us requesting names of people to be employed in these projects. As community leaders, we usually know the plight of many households’, especially those that do not have any source of income. We then prioritize such households’ including those that are child headed households’. So through these projects, many households have been assisted to generate income. Even the easy access of transport, it has encouraged people to travel to town to look

for jobs, now we are seeing people from various households waking up in the morning going to work” (Traditional Authority, Maqhwakaza area, 3 October, 2017).

“The government of the governing party, the people’s movement the ANC has improved and continues to improve the lives of the people in various communities including this area of Mtilombo. Roads have been built, electricity provided, houses built and water provided although there are a few areas which still face challenges, but they will get water connections soon. Mind you, in all these infrastructural projects whether its electrification or water connections, we ensure that local people are employed as part of short term relief measures towards poverty eradication. Each project brought to the community regardless of how small the project is, but will be made to benefit our people” (Councilor, Ward 24, 3 October 2017).

The overall findings of the study as informed by the excerpts showed that, there were socioeconomic challenges in the study area which included amongst other things lack of employment opportunities, poverty and difficulty in terms of mobility. However, the study area is still faced with socioeconomic challenges such as unemployment and poverty. Since the construction of rural roads through NLTsf, findings of the study revealed improving living conditions. Findings pointed out that such improvements were informed by income generation opportunities which came through jobs created by NLTsf. Moreover, the construction of adequate rural roads enhanced and stimulated the establishment of local businesses which helped people to generate income. Road improvements have been pointed in the findings of the study as one of the reasons mobility and access to public transport became much easier.

4.2.4 NLTsf and Alternative Sources of Income

The study discovered that NLTsf had managed to stimulate alternative sources of income. The establishment of small informal business development had been a success as a result of NLTsf. Areas such as Ndlangubo and Maqhwakaza had seen the establishment of small informal businesses that sold grocery items and other related household items. Moreover, the construction of roads through NLTsf has been an advantage to other neighboring rural areas (villages) such as Qhilika and Nqamuzana. The roads had been convenient to an extent that Lafarge established a

quarry which produces concrete stones in these rural villages. In all these establishments, as mentioned, local people had been able to generate income:

“The area has a lot of potential in terms of business. People have established business since these roads were constructed. We now have many businesses both formal and informal which did not exist before this road was built. Even towards the boundary of uMhlathuze and uMlalazi, the excavation that produces concrete has grown ever the road has been built around Qhilika and Nqamuzana” (Councilor, Ward 27, 4 October 2017).

Other respondents said:

“Since construction of the Ndlangubo road, the one along the Mgitshwa Secondary School (a local high school) has not only helped us in terms of public transport but also in the establishment of the shops especially along the road. People run their small businesses such as salons, some are producing bricks. Even those women who wake up in the morning to go work, their pieces of land have now got an opportunity to sell their indigenous food along the road because it is busy, some people are going Empangeni and some are going to Eshowe” (Councilor, Ward 24, 6 October 2017).

In the same notion, the study discovered that NLTsf had stimulated the establishment and expansion of orange farms along the R66 Nkweleni road (refer to satellite image in Figure 4.14 showing citrus farms). These farms produced oranges and employed several people from the local households; however, these jobs are seasonal in nature. Moreover, NLTsf has played a role in the accessibility of the Shakaland Hotel and Zulu Cultural Village (which is popularly known as Shakaland) which provides accommodation and cultural activities along the R66 Nkweleni road. This is another example of an alternative source of income that has been largely influenced by NLTsf in terms of accessibility and benefit of the local households:

“As people of ward 10, we are really fortunate to be along the R66 road. There are some economic activities that this road has stimulated. When you drive towards Nkweleni, we have orange farms established along the R66 road. These farms have expanded rapidly and

double their harvest since the establishment and expansion of the R66 road. Many people from the surrounding local communities have benefitted from job opportunities. Our location has helped people to access opportunities easy because we are in-between two small towns which are Eshowe and Melmoth. If you look closely, this ward connects these two towns, even some of the economic activities happening in the outskirts of these two towns are working to our benefit. Apart from agricultural activities, the very same road has the Shakaland Hotel and Cultural Village. This place is now accessible and many people across the world visit the place. We have people from the surrounding villages working as cleaners and cooking in the hotel, some are responsible for narrating the cultural heritage of the Zulu Nation to the tourists. The cultural activities taking place at Shakaland continue to showcase our cultural heritage to other nations. There are jobs that are created through this cultural centre” (Councilor, Ward 10, 7 October 2017).

Other responses from interviewees were:

“The conditions of the R66 road before it was expanded, was characterized by inaccessible such that trucks collecting oranges were often stacked in the mud. Only tractors were able to move around the farms. But the expansions ensured easy access to the citrus farms by small and heavy vehicles such as trucks. Since the road was stretched and tarred, we have seen the extension of the citrus farms to the other side of the road because previously, only the right-hand side of the road towards Melmoth was used to plant oranges. The other side used to have pine trees, which were cleared and the space was prepared to plant oranges. From what I have been in this area for a long time and I have seen the changes over time, that is why even the access roads to the Shakaland Hotel and Cultural Village were properly developed for easy access by tourists” (Traditional Authority, Maqhwakaza area, 3 October, 2017).

“As part of poverty eradication, preservation and promotion of cultural heritage, the accessibility of Shakaland has helped our Ingoma groups to generate income when they perform for tourists. Previously, it was difficult to access the Shakaland Hotel and Cultural Village because it was a gravel road but the road now has made life simple. Since the construction of the R66 road, we have seen a continuous development of the Shakaland Hotel

and Cultural Village which has created jobs for some of the local people” (Traditional Authority, Mtilombo area, 5 October 2017).

Briefly, based on the evidence presented through the excerpts above, the overall findings of the study with regards to the creation of alternative sources of income discovered that NLTSF has played an important role. Through expansion of access roads, citrus farms were expanded due to the supply and demand, resulting in the creation of other job opportunities. Improved road accessibility has also stimulated the number of tourists visiting the Shakaland Hotel and Cultural Hotel. Through selling of art and craft to visiting tourists as well as live traditional performances, people from surrounding villages managed to generate income. Moreover, through formal services offered by the Shakaland Hotel and Cultural Village, it appears that there were local villagers that were employed for housekeeping, catering services and tour guides.

4.2.5 NLTSF and Sustainable Livelihoods

The outcomes of the study revealed that NLTSF had played a role in improving the living conditions of the people both economically and socially. It appeared from the findings of the study that NLTSF had managed to provide better livelihoods to the people of the study area. Apart from NLTSF related jobs being unsustainable, NLTSF had succeeded in stimulating other income sources such as business development. The establishment of both formal and informal business had provided people with better socioeconomic livelihoods instead of relying solely on NLTSF related jobs:

“If we compare life before the roads were built and life after the roads were built, I can say without any hesitation that life has changed both economically and socially. Yes it is true that some of the jobs (of NLTSF) are not sustainable, but the roads have brought other opportunities such as businesses. People are now able to survive with the money they get from their businesses. Some businesses have employed local people, so the nature of the jobs in the business last longer and people get to benefit with income for a longer period than when they are working in the projects” (Councilor, Ward 24, 3 October 2017).

Further responses were:

“The income people earn from operating businesses, some from being employed in some local businesses has really helped people with stable and sustainable incomes. Since the establishment of the Ndlangubo road to the town of Empangeni, we have seen the establishment of a couple of businesses, both formal and informal. People are making decent incomes from these businesses and their businesses have customers since the road is very busy. (Councilor, Ward 24, 6 October 2017).

“Apart from economic benefits, even access to public transport has become much easier since the roads were built. People are now travelling easily to town and other destinations of their choice. The transport industry has also blossomed very well since we had these roads. Other people have bought taxis and bakkies to transport commuters which gives them sustainable and decent incomes. Transport is always on demand, so the nature of this business is sustainable as well as the income”: (Traditional Authority, Maqhwakaza area, 3 October, 2017).

In overall, findings of the study show that though it appears that more still needs to be done, NLTsf has brought sustainable livelihoods in the study area especially through business since NLTsf related jobs are not sustainable. The sustainable livelihoods of NLTsf are largely pinned on the establishment of both formal and informal businesses, which provided rural villagers with income generation opportunities. Moreover, NLTsf has managed to contribute socially by stimulating mobility of rural villagers to an extent that some got income generation opportunities outside the villages.

4.2.6 NLTsf and Heritage Tourism

Although tourism was not the focus of the study, the significance of tourism towards bringing sustainable livelihoods came out during the interviews with research participants. It appeared from the findings of the study that some areas in the study area boasted with numerous heritage tourist sites. There was an emerging view that if these tourist attractions could be utilized to their full potential, they could contribute towards bringing sustainable livelihoods in the study area:

“Why don’t we use what we have already to create jobs? Along the road that connects Empangeni and Eshowe towns, we have various cultural heritage sites that symbolizes our reach cultural heritage. These sites could add value to the tourism sector and also create sustainable jobs for the local people. You see, we have the KwaBulawayo Cultural Centre, you cannot tell me that we do not even have a small B&B in close proximity to the Cultural Centre. If this area could be well maintained and well-advertised, even tourists from outside South Africa could come to visit. Many people from abroad read about our rich cultural heritage. They are willing to come and see some of the areas they read about in the history books about history of the Zulu nation” (Traditional Authority, Habeni area, 8 October 2017).

Further responses were:

“Tourism is not given the attention it deserves. Many areas around are written about in the history books of the Zulu’s but it is a disgrace that even our own kids have never been to some of these areas. King Shaka fought battles in some of these areas but nothing is done towards developing tourism. We could use all these places and the history that these places narrate to create better living conditions and creation of job opportunities for our people” (Councilor, Ward 24, 3 October 2017).

The overall picture that emerges from the findings of the study is that, in the study NLTsf has stimulated income generation opportunities through tourism. Through the existence of the Shakaland Hotel and Cultural Village, rural dwellers managed to generate income through selling of art and craft, performing traditional dance for tourists as well as being employed to render formal services such as catering, housekeeping and tour guides.

4.2.7 NLTsf and Development Opportunities

Using the excerpts as a source of evidence, findings of the study showed that NLTsf brought improvement in mobility of people and goods; as a result, people from rural villages were able to easily access services such as health care facilities and other opportunities. It also appeared from

the study that the establishment of roads in the study area had brought other infrastructural developments such as water and electricity:

“Yes through these roads we have seen rapid establishment of businesses in the area. But apart from these businesses, through the road projects, people were given exposure in the construction field” (Councilor, Ward 10, 7 October 2017).

Further responses from research participants were:

“The provision of roads has brought other infrastructural developments such as water connections and electrification. The electricity connections in the villages have stimulated the development of businesses in the area. We have seen the establishment of car washes and salons which we did not have before we had access to electricity” (Councilor, Ward 10, 7 October 2017).

“The roads have really assisted us a lot. We used to travel to Eshowe town just to buy some grocery items, but now we have shops that are selling these items at a close proximity. We no longer have to travel to town. So the businesses that have been established around are helping us to save money on travelling to town” (Councilor, Ward 24, 6 October 2017).

“Having accessible roads has made our lives simple. It is now easy to get public transport. We use to wait for long hours waiting for a bus or taxi. Since these roads were built, it is now easier and cheaper to travel”. (Councilor, Ward 27, 4 October 2017).

From the findings of the study above, it can be concluded based on the overall findings of the study revealed that NLTsf has brought development opportunities in the study area that are basic needs. Through NLTsf, the findings of the study pointed out that villagers started to access easily health services. As a result of NLTsf, other basic services such as electrification and water connections were realized.

The above section presented the results of the research study based on the interviews conducted with traditional leaders and ward councilors. The next section below presents a unit of data analysis which focused on the results of the research study on a survey that was conducted.

4.3 Results of Study on Income Levels

4.3.1 Income Levels of the Study Area

Due to the need to establish the trends and patterns of households' income over a certain period of time, the study focused on the 2001 to 2016 period due to the availability of reliable data for this period from reliable and credible data sources. Using households' income data obtained from StatsSA of Census 2001, Census 2011 and 2016 Community Survey, Figure 4.1 below shows annual household income of a 16-year period, that is, from 2001 to 2016 in the study area.

According to the data from StatsSA, the first category (households without income) in Figure 4.1 below which illustrate households without any form of income which shows that in 2001, 9 855 households did not have income. The figure decreased in 2011 to a total number of 5 677 households without income. While in 2016, the Community Survey illustrates that 4 721 households did not have any source of income. The trends show that since 2001 up until 2016, the number of households without income has been shrinking in the study area.

Looking into the StatsSA data of Census 2001, Census 2011 and the 2016 Community Survey, it appeared that many rural households in the study area did not have access to basic needs such as food, housing, electricity, water and sanitation. The prevalence of the HIV/AIDS pandemic is also believed to have been a factor in eliminating breadwinners from various households. As a result, these were the challenges that were pointed as contributing factors in the poor living standards in the study area as categorized by no income households.

The second category (R1- R 4 800 per annum) as illustrated in Figure 4.1 shows a huge total number of households between the (R1- R 4 800 per annum) income margin in the 2001 period. In 2011, it appears that the number has shrunk from 6229 to 2282, hence in 2016 the figure

continued to regress. The trends from Figure 4.1 shows a continuous decline in the number of households belonging to the (R1- R 4 800 per annum) income margin.

The trend begins to change in the (R4801-R9600 per annum) income margin. Figure 4.1 illustrates that 2001 and 2011 recorded a decline in the number of households within this income margin. However, looking at the 2016 period, we are noticing an increase in the number of households within this income margin. The 2016 Community Survey revealed that improved socioeconomic intervention measures by government such as access social grants, access to basic services such as food, housing, electricity, water and sanitation has stimulated income generation opportunities and a better life.

Now looking closer at Figure 4.1 across all income margins, it is clear that between the income margin of R9601-R19 600 to R1 228 801 or more per annum, the illustrations on the 2016 Community Survey shows a continuous appreciation in terms of households' incomes. The Census data from StatsSA 2016 Community Survey pointed out that agriculture, commercial businesses, industries, construction and tourism were the main sources of income in the study area which boosted the increase of households' incomes. The contribution of construction as a sector towards households' incomes affirms the possibility that jobs created through NLTSF are also contributing towards households' incomes in the study area. Thus also affirming that NLTSF through construction of rural road projects under the construction sector does play a role in stimulating income generation opportunities.

Apart from the mentioned sectors that are sources of income, the 2016 Community Survey also indicated that improved services delivery on basic services such as housing, roads, electricity, water and sanitation played a significant role in stimulating better living conditions in the study area. Thus enabling people to begin their own self-realization utilizing the availability of basic services within their various vicinities.

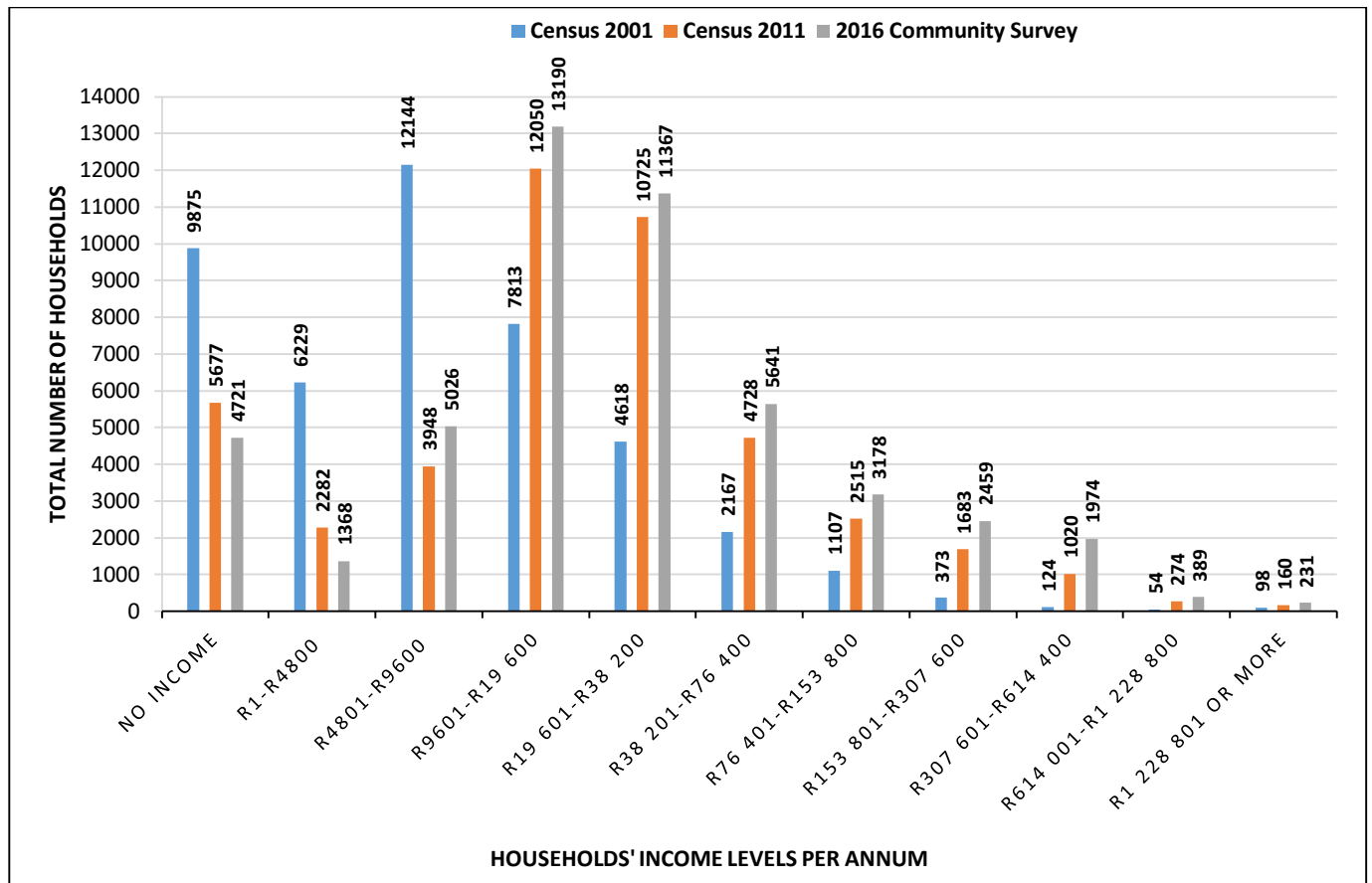


Figure 4.1 Households' income levels of the study area (data from StatsSA)

Umlalazi Local Municipality started recording the number of jobs created by the Municipality in the year 2006 after establishing a system used to record and keep records on job creation. From the data obtained from the uMlalazi Local Municipality archives, the study discovered that through various Municipal job creation programmes such as LED initiatives, road maintenance, road construction and poverty alleviation programmes, the Municipality managed to create job opportunities for local people. Figure 4.2 below illustrates the total number of jobs created by the Municipality through various programmes as reflected in Figure 4.2 from 2006 to 2017.

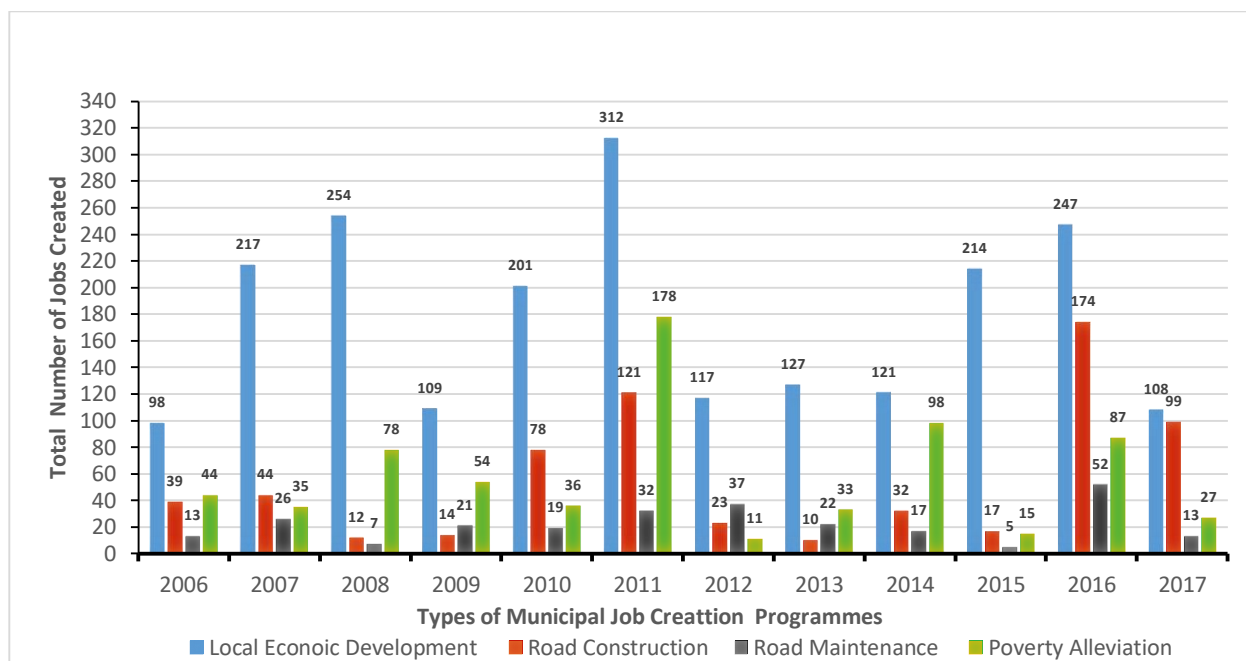


Figure 4.2 Municipal Job Creation Programmes (data from uMlalazi Local Municipality)

From Figure 4.2 above, the Municipality has managed over the years has managed to create 2008 jobs opportunities through various LED initiatives from 2006 to 2017. The illustration of Figure 4.2 shows the fluctuating figures of jobs created by the Municipality through LED initiatives. From the records of the Municipality, it appeared that these jobs were created through LED funded projects which included manufacturing (furniture and bricks), agro-processing (jam production) and agriculture (poultry farming and egg production). Community projects such as cooperatives were other LED initiatives which created sewing, arts and craft jobs for people in the Municipality.

The Municipality also managed to create 1 127 jobs since 2006 to 2017 through road construction and road maintenance of rural road infrastructure. Figure 4.2 above illustrates that the Municipality created jobs in these two categories over the years. These jobs included construction of access roads, road marking, fixing of potholes and installation of road signs. On the other hand, Figure 4.2 further illustrates that 696 jobs were created by the Municipality through the poverty alleviation initiatives which are in line with the Extended Public Work Programme (EPWP). Through Sizabonke, War Against Poverty, Food for Waste which are poverty alleviation programmes under EPWP in the Municipality, jobs were created from 2006 to 2017 as reflected in Figure 4.2 above.

In overall, the illustrations from Figure 4.1 and Figure 4.2 reveals that there many factors influencing income generation opportunities in the study area which appears to be coming from various sources of income. It also appears that from 2006 to 2017, uMlalazi Local Municipality has managed to created 3 831 jobs through various Municipal job creation programmes consisting of LED initiatives, road construction and maintenance as well as poverty alleviation initiatives.

4.4. Results of the Study Survey

The study conducted a survey which included a total number 20 participants from a parent population of 223 140. The intention was to establish the employment situation and income status quantify demographic variables such as income sources, level of income and employment status in the study area. Figure 4.3 below illustrates employment amongst the survey participants in the study area. From a total number of 20 participants, it appears that 3 out of 20 are unemployed, 9 out of 20 are employed, while a total of 8 out of 20 are self-employed. From this illustrations, it can be concluded that the survey reflects the actual demographics of the entire population and affirming that within the entire population there are those that are unemployed, some are employed and other are self-employed

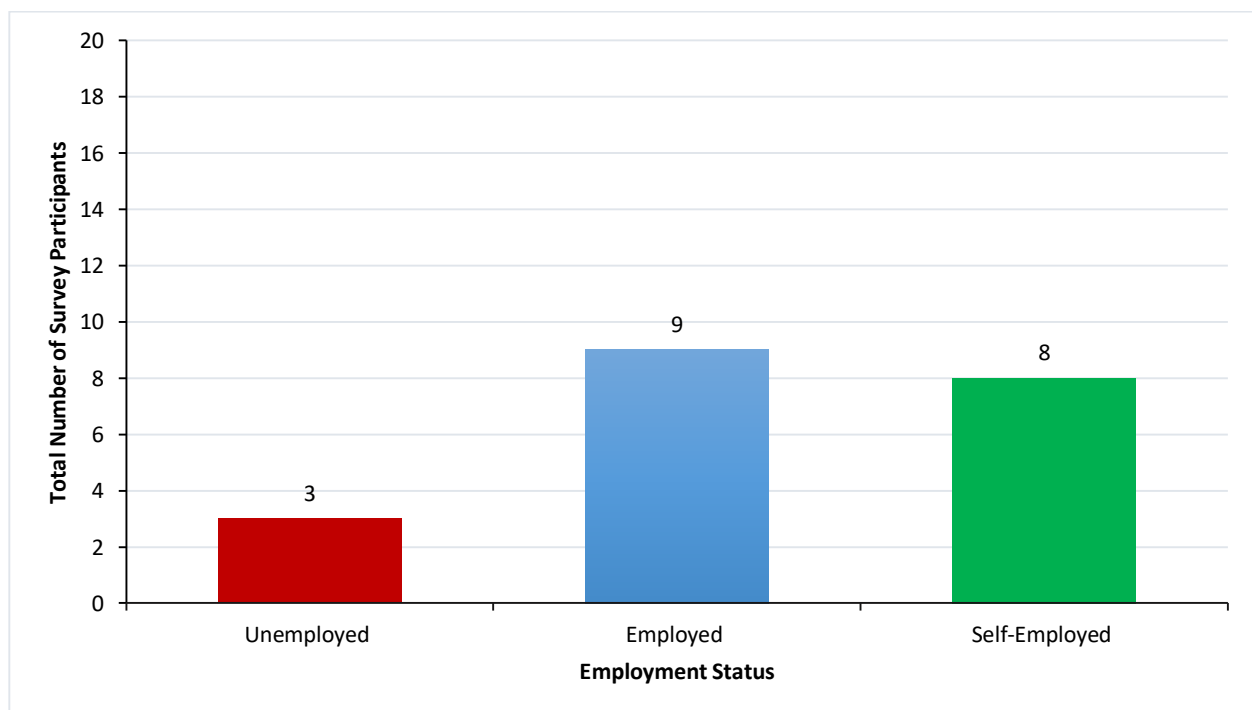


Figure 4.3 Employment status of Survey participants

Again, Figure 4.4 below presents the findings of the survey conducted with 20 participants on the sources of income in the study area. Figure 4.4 illustrates that 9 out of 20 survey participants indicated that they receive income through employment, while 3 out of 20 survey participants indicated that they get income through social grant and 8 out of 20 participants revealed that their income comes from self-employment. From the findings of the survey, it can be concluded that in the study area, there are people relying on social grant, employment and self-employment for income, but also, they reveal that there are those that are without any source of income.

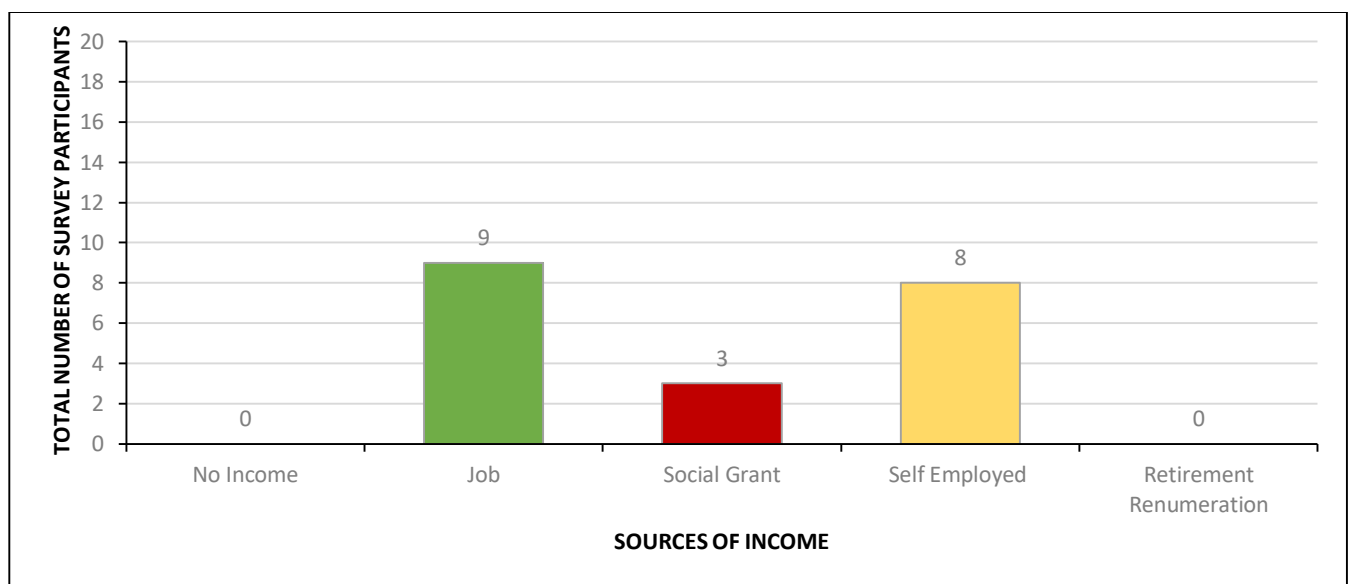


Figure 4.4 Sources of income of Survey participants

Findings of the survey conducted with 20 participants in relation to income levels, Figure 4.5 below illustrates different income categories as per the indication of the survey participants. The illustrations from Figure 4.5 reveals that the income levels are generally low, which could be a direct translation of the actual situation across the whole population of the study area. Based on the responses of the survey participants, there were no people without income, 4 out of 20 participants indicated that they have income that is less than R500, while 6 out of the 20 participants indicated that their income range is within R500- R1000, 8 out of the 20 indicated that they have income that is between R1000-R1500, lastly, 2 out of the 20 participants indicated that their income range is from R1500 and above.

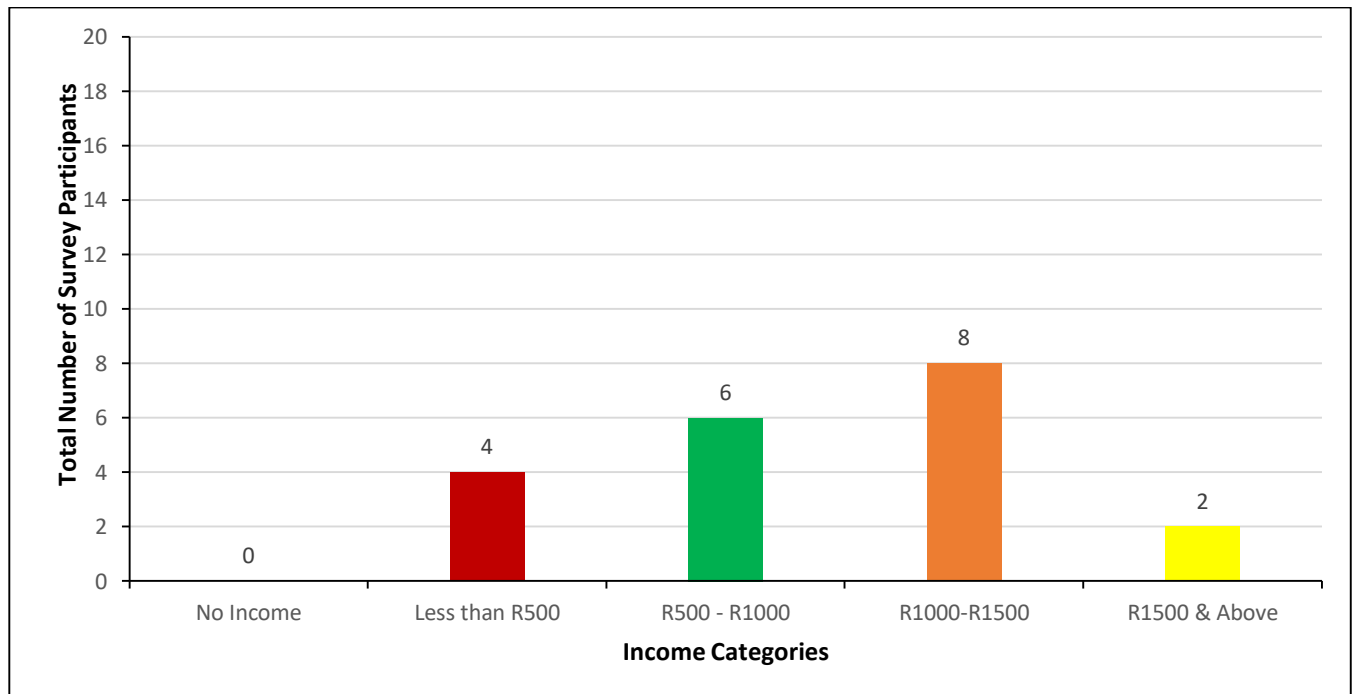


Figure 4.5 Income categories of survey participants

From the survey that was conducted, demographic variables on gender and income categories were quantified. Table 4.1 below illustrates the breakdown in terms of how many of the participants were females and from all the participants, how many males and females are employed respectively. Table 4.1 shows that from the 20 survey participants, in the employment category, only 2 males are employed, while there are 0 women employed. On the unemployed category, Table 4.1 below shows that there are only 2 males unemployed as opposed to 6 females that are employed. While on self-employment, Table 4.1 reveals that there are 2 males that are self-employed and 8 females that are self-employed. All these breakdown was based on a survey that was conducted with 20 survey participants.

The reading that can be made from the survey breakdown in terms of the correlation of employment and gender is that, the findings of the survey again could be revealing the actual situation in the study area whereby males are the ones that have access to income opportunities as opposed to their female counterparts.

Table 4.1 Employment status, gender and age of Survey participants

EMPLOYMENT STATUS AND GENDER			
	Males	Females	
Employed	2	0	
Unemployed	2	6	
Self-Employed	2	8	
AGE AND EMPLOYMENT STATUS			
	Employed	Unemployed	Self-Employed
Less than 20 years	0	0	0
21 years-30 years	0	8	0
31 years-40 years	0	0	10
41 years-50 years	2	0	0
61 years & Above	0	0	0

The overall findings of the survey show that, in the study area, there are people who are unemployed, employed and self-employed. The survey has also pointed the various sources of income including the income categories. Furthermore, judging by the responses of the survey participants, there is a huge possibility that youth unemployment is prevalent.

4.5 Spatial Analysis of the Study

Figure 4.6 below shows a satellite image of the P230 road. This satellite image shows the condition of the P230 road before it was improved. The P230 road connects the Eshowe and Empangeni towns and plays a significant role in the mobility of people and goods between these two towns.

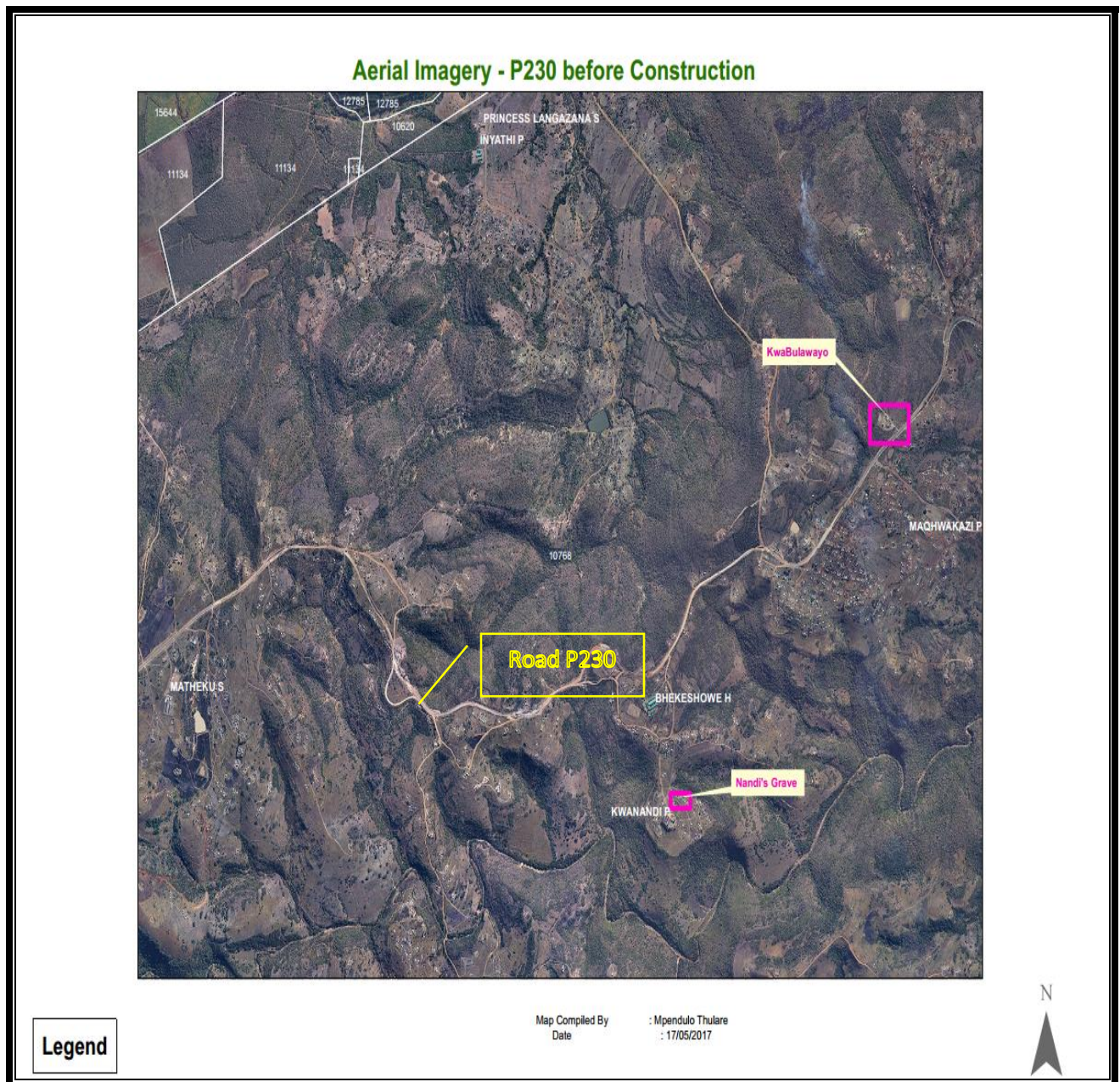


Figure 4.6 Satellite Image showing road P230 before construction (source: National Geographic Institute. Extracted: 17.05.2017)

Figure 4.7 below, shows the condition of the P230 road after it has been developed. The development of P230 which came as a result of the implementation of NLTsf. Since then, the P230 road had become a significant factor of influence in the socioeconomic livelihoods of people in the study area. The improvement of the P230 road stimulated the establishment of both formal and informal business along the road. These businesses have been part of the sources of income to

some villages. Amongst other things, the P230 has enhanced the mobility of people to other areas of economic influence such as the Eshowe, Empangeni and Richards Bay town.

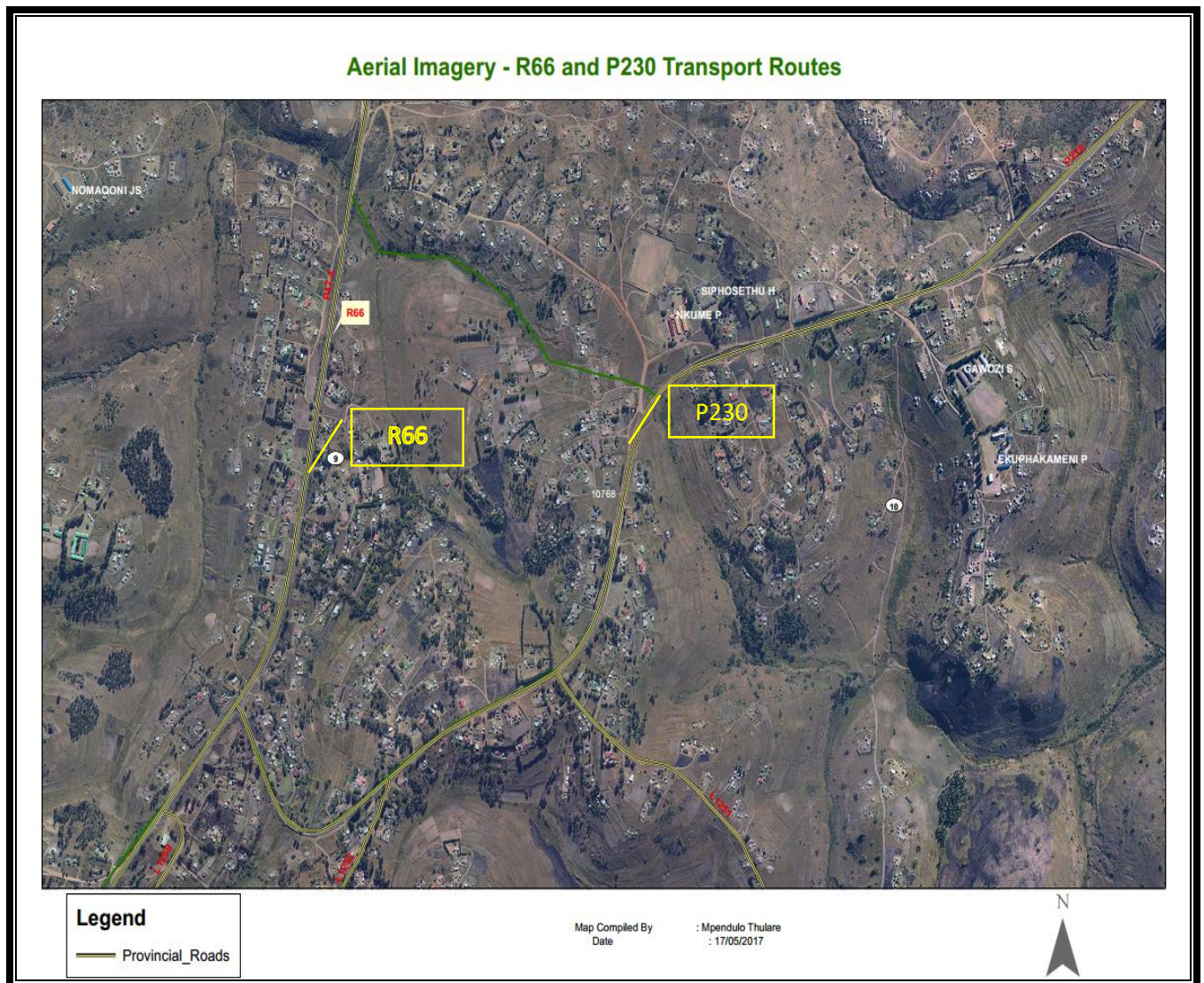


Figure 4.7 P230 road after improvement (source: National Geographic Institute. Extracted: 17.05.2017)

Figure 4.8 below shows the structure of the road networks in the study area constituted by National road, Provincial roads and District roads. From Figure 4.8, there are three towns namely Mtunzini, Gingindlovu and Eshowe. These three towns are the hub of job creation areas boasting the creation of jobs in the commercial, industrial, manufacturing and agriculture sector. Apart from the towns

as illustrated in Figure 4.8, the roads have also been factors of influence in as far as the stimulation of businesses and other sources of income in the study area.

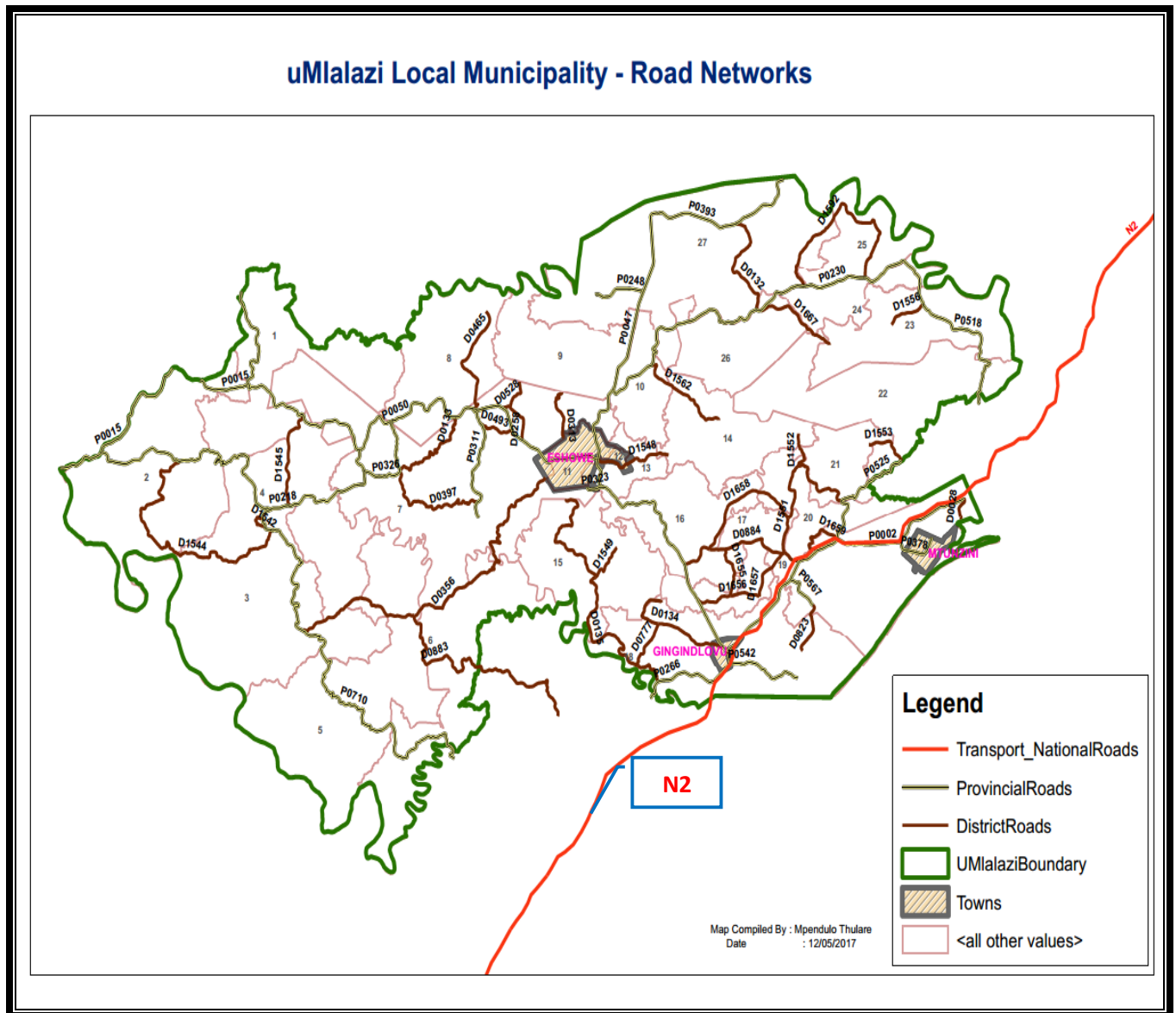


Figure 4.8 Road networks of the study area

Figure 4.9 below shows the nodes and corridors within the study area. Looking at Figure 4.9, the primary corridor illustrates the transport route that carries key economic activities including areas in a form of towns that drive key economic activities. This corridor links areas of economic activities from various sectors. The primary corridor is the heart and nucleus of that facilitates the movements and exchange of good and services that drive economic activities. Most of the job

opportunities and job creation areas, such as industries and other commercial activities, fall within this corridor. The primary corridor as illustrated in Figure 4.9 includes some of the parts that were expanded by NLTsf which resulted in the creation of job opportunities along the R66 road.

Furthermore, the primary corridor did not exist in isolation. Figure 4.9 also shows the secondary corridor which links with the primary corridor. This corridor is another transport route that has areas of economic activities that feed into the primary corridor as the main transport route that drives a larger portion of economic activities. This includes the movement of goods, people and services.

Like the other two corridors mentioned above, Figure 4.9 also illustrates a tertiary corridor. Within this corridor, there are other economic activities and services that are less dense when compared to the economic activities and services forming part of the primary and secondary corridors. All these three corridors symbolize transport routes that drive various economic activities in the study area. From Figure 4.9, it is easy to see areas that were economically viable and those that were not economically viable. Again, Figure 4.9 could also show the areas within the study area that were creating job opportunities.

On another side, Figure 4.9 illustrates various nodes in the study area where various services are offered. All these nodes are connected by road transport infrastructure which ensured that surrounding households have access to these services and activities. The nodes signify the importance of access to road transport infrastructure in the context of social upliftment and development.

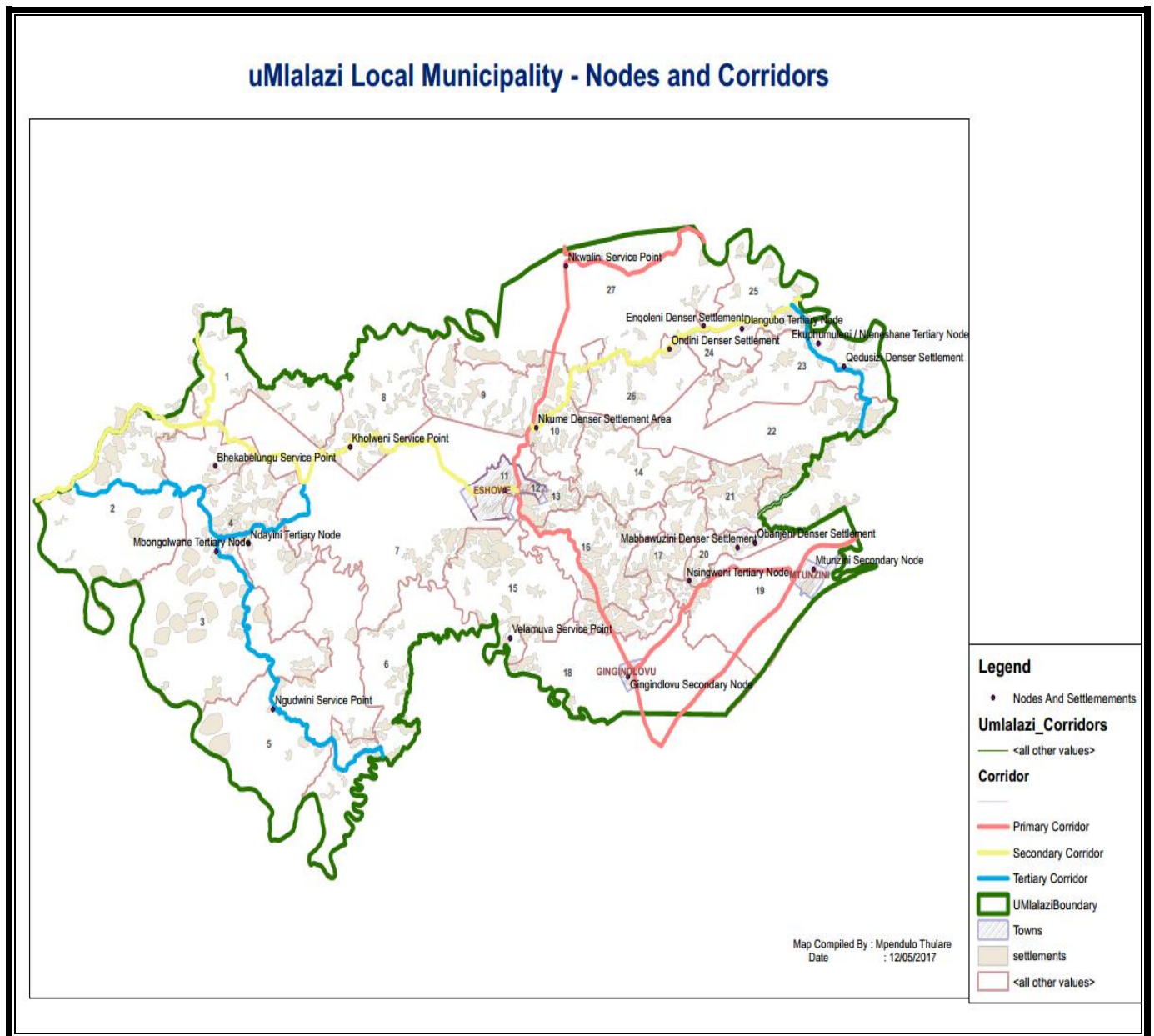


Figure 4.9 Nodes and Corridors in the study area

Using GIS spatial statistics tool to plot job creation statistics by sector, a map showing sectors of job creation was created. Using the job creation data by sectors which was obtained from StatsSA on job creation areas, job creation statistics by sector were inserted into GIS and through the use of the GIS spatial statistics tool, the job creation areas were mapped. Figure 4.10 below illustrates job creation areas in the study area. Umlalazi Local Municipality, which is where the study was conducted, is largely rural. Hence from Figure 4.10, the agricultural sector appears to be the sector

that creates more employment. This could be as a result of the vast availability of arable land in the study area.

Although tourism was not the main focus of the study, as reported in other parts of the study, some research participants were of the view that if tourism could be given enough attention, it could play a meaningful role in job creation. Looking at Figure 4.10, tourism appears to be the second biggest sector that created jobs which affirms the views shared by research participants in other sections of the study.

Mining appears to be another sector in the study area that created job opportunities. Moreover, from Figure 4.10, it appears that there were few job opportunities created in the commercial and industrial sector such as manufacturing. Interestingly, from Figure 4.10, it was clear that the three towns in the study area were dominated by one specific sector each. The town of Eshowe however, appears to have a mixture of both commercial and industrial jobs, while Mtunzini has only commercial and Gingindlovu industrial. This shows that the majority of the workforce was involved in the agricultural sector, thus making agriculture a major employer. But of interest is the analysis of Figure 4.10 in relation to the Wards where the study was conducted. When zooming at wards 10, 24 and 26, one notices that they do not fall under any job creation areas in terms of the sector shown in Figure 4.10, ward 27 only has agriculture as the only sector that creates jobs. This could mean that there is a need to spread job creation areas to all wards. Also there is a need to diversify sources of job creation.

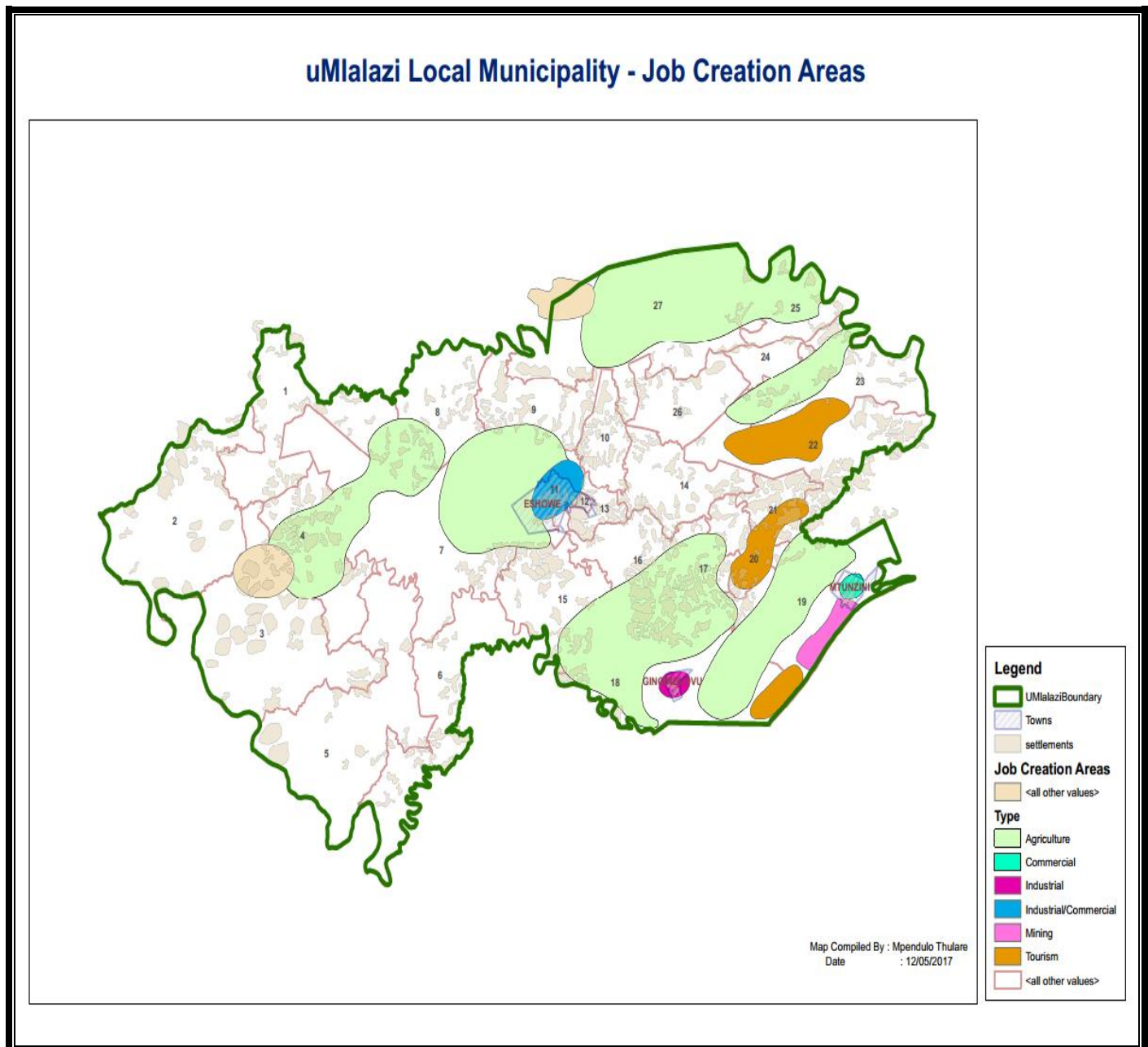


Figure 4.10 Job creation areas in the study area

As mentioned by research participants in other sections of this Chapter, Figure 4.11 below show tourism areas that could play a meaningful role in creating jobs in the study area. Through NLTsf, access roads to the tourism sites had been improved, this ensured that these areas became accessible to local people and tourist from other areas. The areas demarcated with pink are the local tourism areas that symbolizes the cultural heritage of the Zulu Kingdom.

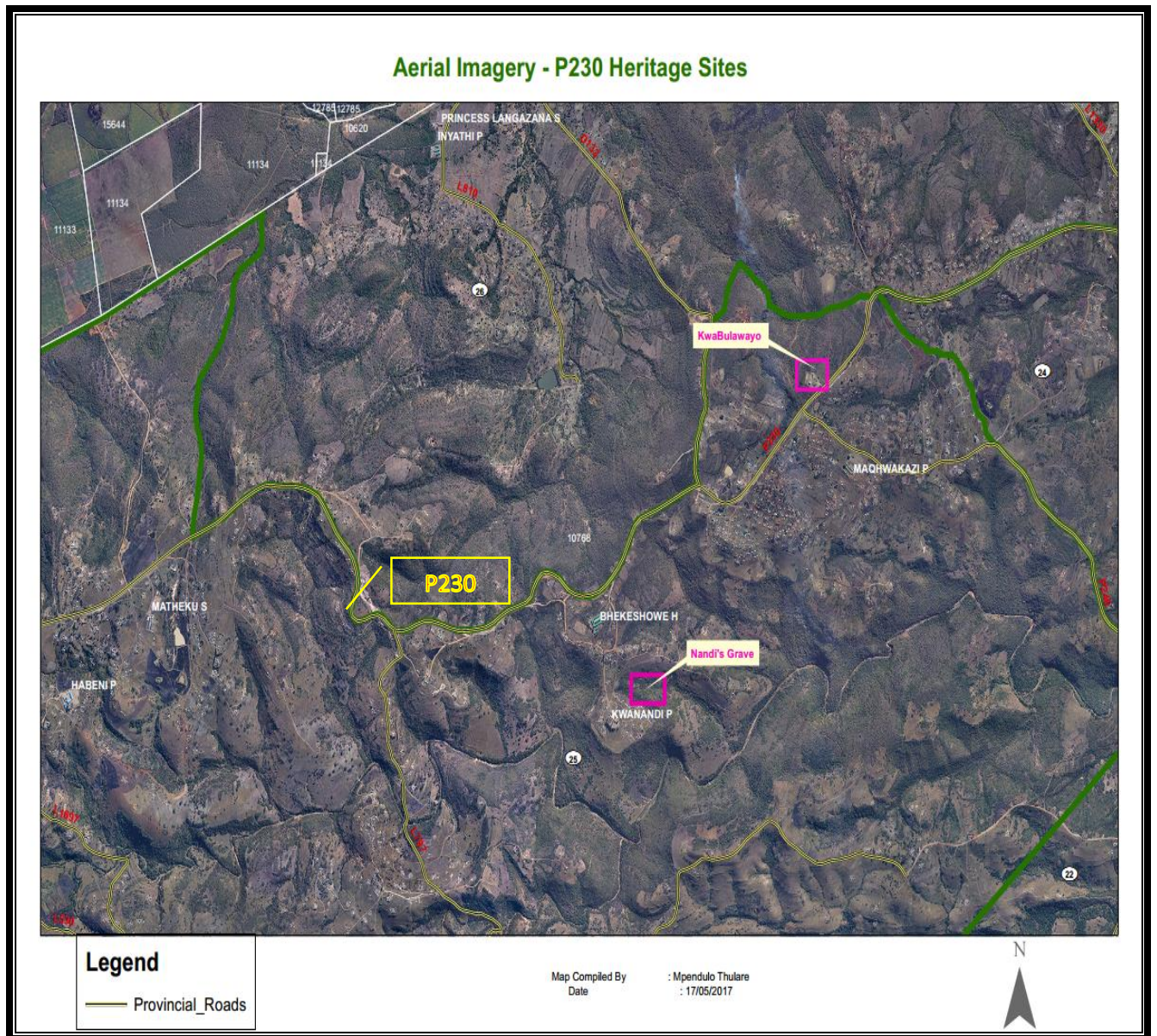


Figure 4.11 Tourism sites in the study area

Figure 4.12 below also shows another tourist attraction that continues to attract people into the study areas. The Ongoye Forest is one of the well renowned forest which boasts a variety of animal and plant species. This forms part of the areas mentioned by research participants that could play a meaningful role towards job creation opportunities. Since the establishment of NLTSF, this area had also benefitted in road expansion and improvement of access roads to the forest.

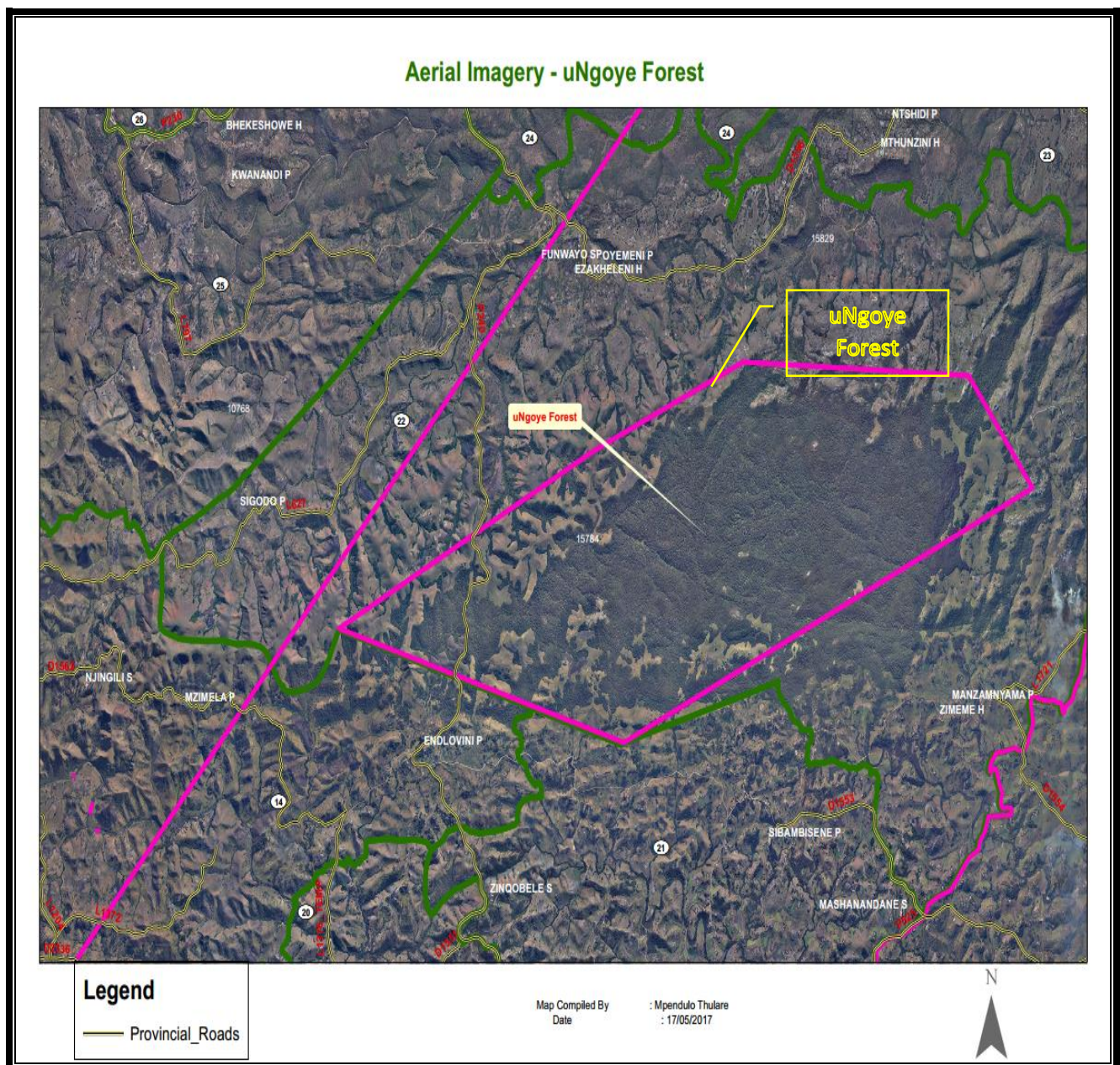


Figure 4.12 Ongoye Forest

Figure 4.13 below shows one of the developments that came as a result of NLTsf. The demarcated area on this aerial imagery shows the Lafarge quarry along the P230 road towards the town of Empangeni. The area produced and supplied concrete stones to local people and other commercial areas in the neighboring towns. This was one of the areas that benefitted the people of the surrounding communities and villages of Qhilika and Maqhwakaza in terms of jobs.

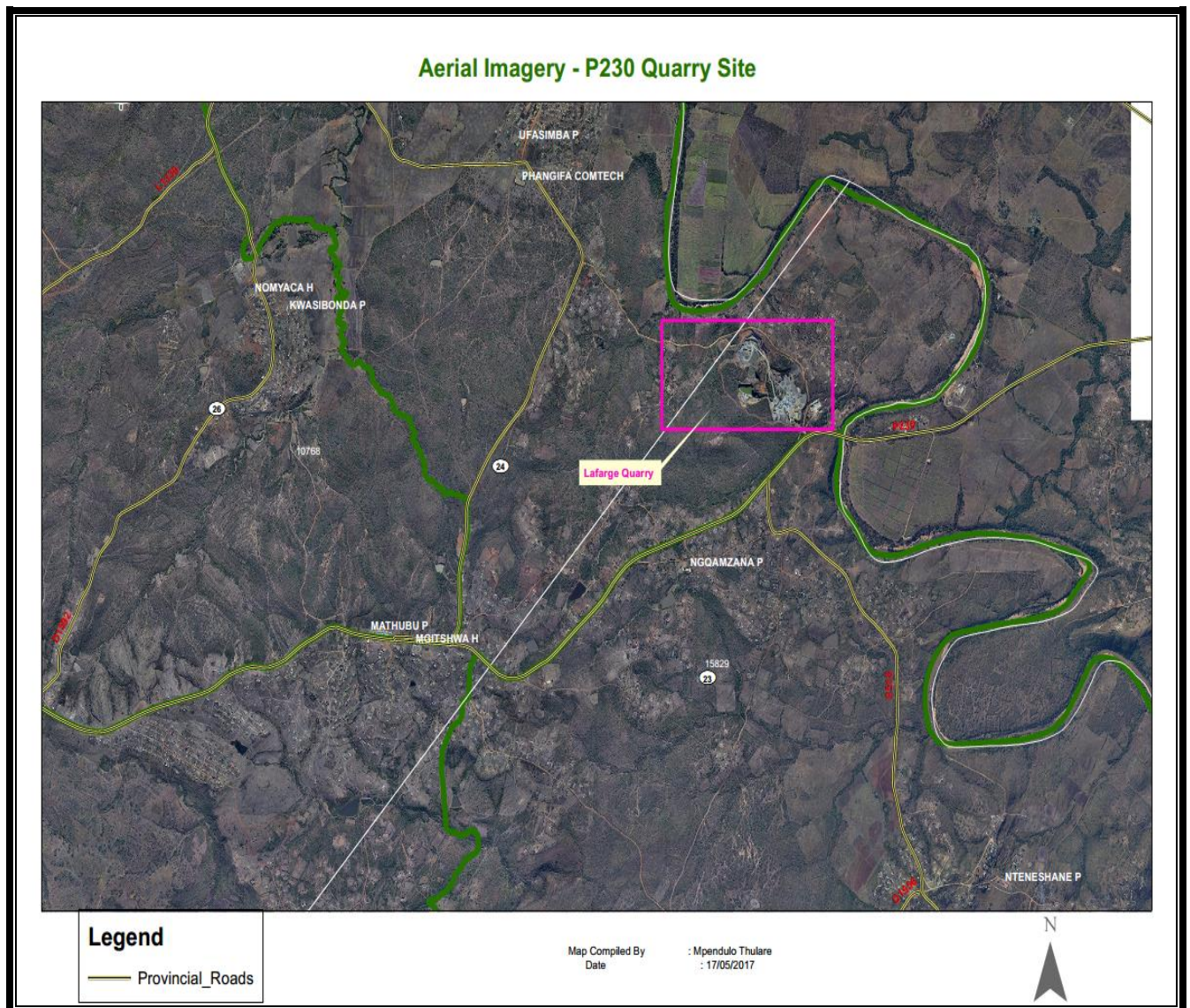


Figure 4.13 Lafarge Quarry venture in the study area

Below is Figure 4.14 which shows the agricultural activities, prominently the citrus plantation along the R66 road. The big area demarcated with a pink color shows some of the citrus plantation areas. From other sections of the study, it appeared that NLTSF has led to the expansion of the R66 road which culminated into the eventual expansion of the citrus plantations. These citrus farms form part of the areas of job creation for local people.

Again, Figure 4.14 below shows the Shakaland Hotel and Cultural Village which is located adjacent to the R66 road. This is another area that had benefited local people with jobs but also

with opportunities to generate income through showcasing the cultural heritage of the Zulu nation through traditional dance. NLTsf had played a role in expanding and improving the R66 road and road accessibility to this area. As a result, people have had easy access to this area over the years.

From Figure 4.14 below, there is a demarcation of citrus farms. The area demarcated with a yellow square shows the size of the citrus farms before the R66 road was improved and expanded. The other area demarcated with a big pink square shows the size of the citrus farms after the R66 road was expanded and improved.

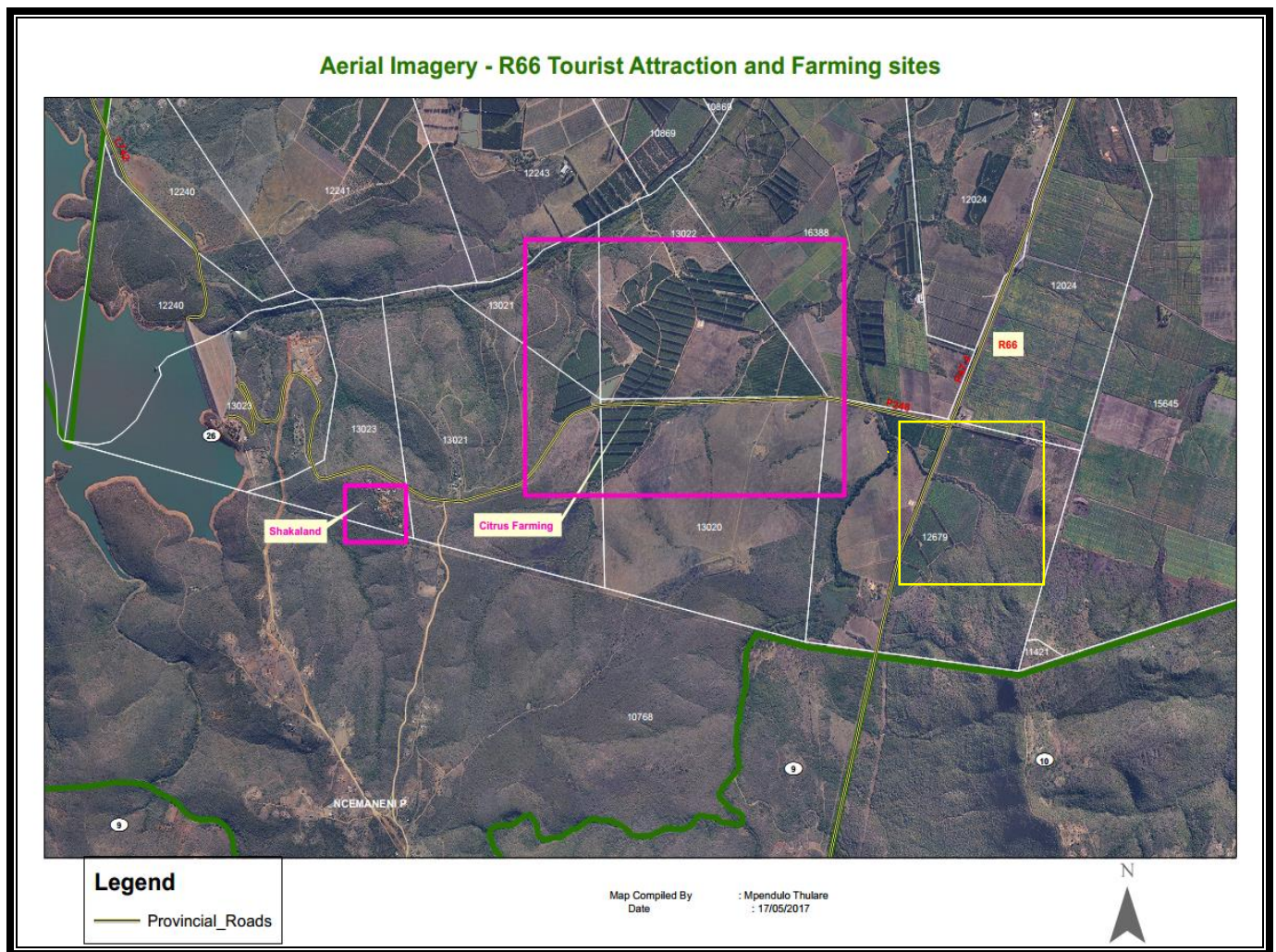


Figure 4.14 Tourist Attraction and Farming Sites

The section above presented a spatial analysis on the conditions of rural road infrastructure before and after NLTsf, therefore, showed how NLTsf has brought changes in the structure and

conditions of rural road transport infrastructure. Focus was on R66 and P230 as the key roads that NLTSF has largely influenced in terms of mobility of goods, mobility of people and orchestrating economic activities in the study area. The aerial photographs also showed the connectivity of corridors and nodes as a result of adequate rural road transport infrastructure. Moreover, it showed the road networks and their influence on corridors which are essential to economic development, job creation and mobility of goods and people.

4.5 Summary

This Chapter has presented research findings of the study from the interviews conducted with traditional leaders and councilors as well as survey conducted in the study area and the spatial analysis of the study area. The next Chapter presents discussion of the results of the study in relation to the research objectives. It provides a conclusion and recommendations of the study.

CHAPTER FIVE

DISCUSSIONS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

This Chapter discusses the findings of the study (which involve comparing and contrasting results of the study in relation to the theory of the study). Moreover, the Chapter presents recommendations which are based on the findings of the study. The Chapter ends with a comprehensive conclusion.

5.2 Discussion of Research Objectives

The evaluation of the research objectives is provided below. These are the research objectives of the study as presented in Chapter One:

- 5.2.1 To examine the effects of the NLTSF on the living standards at uMlalazi Local Municipality.
- 5.2.2 To establish if the NLTSF has led to sustainable improvements in the lives of the people of the study area.
- 5.2.3 To assess if the NLTSF has helped enhance income generation capability of the people at uMlalazi Local Municipality
- 5.2.4 To identify opportunities NLTSF has created to empower the local communities.

The section that follows discusses findings of the study in relation to the objectives in detail.

Objective 5.2.1: To examine the effects of the NLTSF on the living standards at uMlalazi Local Municipality

The findings of the study show that the picture was mixed with regards to understanding the effects of NLTSF on living standards of the people in the study area. The study found that most people believed that NLTSF had not improved the living conditions in the study area, while there were few people who believed that NLTSF had brought better living conditions.

From the findings of the study, it appears that there are numerous challenges that could have hindered the implementation of NLTSF to the level that better living standards could be realized

in the study area. The study discovered power contest between traditional leaders and councilors in some parts of the study area. The differences between traditional leaders and councilors on the implementation of NLTSF related projects could be part of the reasons that the picture was mixed with regards to the effects of NLTSF on the living conditions of the people in the study area.

The working relations between these two parties were sometimes hostile to an extent that in some instances, the implementation of NLTSF projects had to be put on hold. Thus, lack of mutual respect between traditional leaders and councilors could have impacted negatively the realization of better living conditions in the study area. Furthermore, the findings also identified sabotage and sidelining of individuals based on their political affiliation. Because of these issues, implementation of NLTSF projects was compromised.

Matas *et al.* (2015) conducted a similar study on the impact of transport infrastructure on access and income of the people. Matas *et al.* (2015) found that transport made a positive contribution towards improving the living conditions of the people by promoting access to areas of production such as farms and other services. Nevertheless, there are differences in the findings of the study and Matas *et al.* (2015). The findings of the present study do not conclusively show whether NLTSF contributed positively towards bettering the living conditions of the people in the study area. Hence, the findings show that there is no clarity about the effects of NLTSF on the living standards of the people in the study area.

Similarly, Boateng *et al.* (2015) assessed the socioeconomic impact of rural roads improvements. Boateng's *et al.* (2015) findings revealed that road improvements in the rural areas of Ghana played a meaningful role in reviving rural economies and in the alleviation of poverty. There were, however, similarities between the findings of the present study and Boateng *et al.* (2015). The present study discovered that roads that were built through NLTSF stimulated and enhanced small business developments in some parts of the study area which contributed towards rural economy. As a result, rural households' income improved due to business developments and other economic activities that were influenced by the availability of adequate road transport infrastructure.

Stastna and Vaishar (2017) investigated the relationship between road accessibility and rural development. The findings (Stastna & Vaishar, 2017) showed that road accessibility and connectivity had influenced rural tourism, prevented social exclusion of rural dwellers and stimulated rural development socially and economically. There were also similarities between the findings of the present study and Stastna and Vaishar (2017). The present study discovered that rural road transport infrastructure had promoted social integration by improving mobility of people to destinations of their choice and stimulated economic development through local business developments.

Iacono and Levinson (2016) investigated the relationship between the growth of roads and economic development; that is, if there was mutual causality between the growth of road networks and economic development. Findings revealed that there was no evidence of a causal relationship between roads and economic development. This showed weak influence of road networks on economic development. There were contradictions and inconsistencies between the findings of the present study and the one by Iacono and Levinson (2016). It appeared in the findings of the present study that rural road transport infrastructure, roads in particular, had played a role in the development of local small businesses. The present study discovered that since the construction of roads through NLTSF, business development in the study area showed growth which could be interpreted as a sign of economic development.

Objective 5.2.2: To establish if the NLTSF has led to sustainable improvements in the lives of the people of the study area

The findings show a mixed picture on whether NLTSF has brought living better living conditions in the study area or not. There are different views held by the people of the study area about NLTSF, specifically about its contribution in bettering the living standards of the people. There are those who believe NLTSF has not changed the living standards in the area, while others believe that NLTSF has changed the living standards in the study area. From the findings of the study, it prevails that NLTSF jobs are unsustainable which does not help people to be able to survive upon completion of NLTSF projects.

The study discovered that criticism of NLTsf projects emanated from the duration of NLTsf created jobs. Respondents hold the view that NLTsf initiated jobs are too short-lived. Research participants also raised issues about wages paid for working on projects; the view was that money paid to people in the projects was insufficient, and also that projects lacked transparency.

However, the study discovered a contrary view which recognizes the positive contributions of NLTsf, while acknowledging that more still need to be done to eradicate the socioeconomic challenges. Findings of the study pointed out that regardless of the nature of NLTsf jobs of being unsustainable; there are sustainable socioeconomic improvements that are brought by NLTsf in the study area. Findings show that since the introduction of NLTsf in the study area, there is an improvement in terms of households' incomes. The study discovered that these improvements are informed by the income generated through business developments that NLTsf stimulated and enhanced in the communities.

Findings show that NLTsf contributed towards sustainable socioeconomic livelihoods even during the expansion of roads such as the R66 which unlocked income generation opportunities in agriculture. The expansion of the R66 road contributed towards improving households' income in the surrounding communities. Though it was not in the focus of the study, findings pointed out that tourism could play a role towards contributing in achieving sustainable socioeconomic livelihoods.

Tanga *et al.* (2014) examined the impact of improved road infrastructure on the livelihoods of the rural people in Phamong, Lesotho. The findings of the study discovered that the total neglect of these improved roads had failed to enhance sustainable living standards in terms of access to opportunities and social services. Tanga *et al.* (2014) shared some similarities in terms of findings with the present study. The present study discovered that the provision of rural road transport infrastructure has painted an unclear picture with regards to improving the living standards of the people in the study area. This made it difficult to draw a bold conclusion on whether the provision of rural road transport infrastructure through NLTsf had changed or had not changed the living conditions of the people.

Qin and Zhang (2016) investigated the influence of rural roads on access to markets and rural livelihoods. The findings showed that most of the rural dwellers in particular the poor, lived in remote areas that were far away from markets. This isolation limited the development in terms of livelihoods. These two studies have something in common with regards to their findings. The similarities on both studies were pinned on the limitations of rural road transport infrastructure to address spatial inequalities within rural dwellings. The findings of these two studies could mean that development within rural vicinities was not uniform; there were those that were ahead of others in terms of resources such as access to roads, housing and water connections. The similarities from both research findings were centered on the inconsistencies of the effects of roads within various areas within the rural dwellings.

Laird and Mackie (2014) investigated road transport and rural remoteness in relation to access to markets. The findings of this study show that there is a need to expand and widen the scope of transport infrastructure so that it does not underestimate the socioeconomic benefits of the people. The findings of the study had similarities with the findings of the study on the basis of the need to expand the scope of rural road transport infrastructure so that it benefits a number of people.

Finally, Faiza *et al.* (2012) and Olsson (2009) conducted studies that focused on poor transport conditions and poor accessibility to major markets. These studies found that the benefits of road improvements were considerable and benefited a great majority of the rural populace. These findings are contrary to what the present study has discovered. The inconsistencies between the findings of these studies and the present study are based on the fact that findings of the present study revealed that the establishment and construction of rural road transport infrastructure has benefitted few individuals in the study. This resulted in complains about the lack of transparency and fair practices in the selection process of participants for road construction projects.

Objective 5.2.3: To assess if the NLTSF has helped to enhance income generation capability of the people at uMlalazi Local Municipality

Findings of the study revealed that NLTSF had played a role in stimulating and enhancing income generation capabilities of the people of the study area. It appears that NLTSF had enhanced income generation potential through jobs creation, and through the promotion of alternative sources of

income and the development of small local businesses. The jobs that were created through NLTsf related projects largely benefitted unskilled people.

However, there are subtle issues that prevail in the findings of the study. These issues include amongst other things, complaints on the criteria used to identify participants for NLTsf projects. The study also discovered a lack of transparency and fair practices in the identification process of participants of NLTsf related projects. Moreover, findings of the study showed that in order for people to get NLTsf jobs, they needed to be politically connected and selections were not based on merit.

Furthermore, another issue which the study discovered was around the limited number of people employed through NLTsf created jobs. Also, there were problems with the duration and wages paid to people employed in the NLTsf related jobs. It appears from the findings of the study that NLTsf jobs did not last for a long time and the money paid to people in these jobs was not enough. Similarly, the study discovered dissatisfaction on the part of the local communities about small business ownership. Local communities voiced unhappiness about the majority of local small businesses being owned by foreign nationals. The local communities also held the view that foreign nationals impregnated local women. The study found that there was growing hostility directed to the foreign nationals.

Furthermore, the study identified a clash of value systems between traditional and modern ways of doing things. The study found traditional leaders to be critical of the dependence of local communities on jobs elsewhere instead of being self-reliant. Traditional leaders believed that crop and livestock farming presented opportunities to local communities to make their living.

Herranz and Ruiz (2012) investigated the economic impact of the measures set out in strategic transport infrastructure plan. Herranz and Ruiz (2012) found that the implementation of transport plans became important in giving direction towards the economic path and development of a region both economically and spatially. There are similarities between the findings of the present study and Herranz and Ruiz's (2012) in terms of the outcomes of implementing strategic transport infrastructure plans. The findings of the present study show that the implementation of NLTsf

facilitated the mobility of people and goods as well as stimulated of economic development through small local businesses.

Similarly, Ikioda (2016) investigated the impact of road construction on market and street trading in Lagos. The study explored the impact of such displacements arising from road construction activities on the livelihoods. The findings of the study revealed that road development in Lagos caused displacements of street vendors which impacted negatively on the socioeconomic conditions of the people. However, there were contradictions between the present study and Ikioda (2016) in terms of the road expansion and development towards socioeconomic livelihoods. The present study discovered that development and expansion of roads had stimulated income generation by rural dwellers who became hawkers along the newly constructed roads in the study area.

Law *et al.* (2017) evaluated how road infrastructure promoted economic development and other commercial activities. The study showed that road expansion and improvements promoted mobility of goods which resulted in economic development. There are similarities between Law *et al.* (2017) and the findings of the present study. These similarities are on the basis that findings of both studies revealed the role of transport in stimulating economic development and promotion of goods and people mobility.

Rolfe and Flint (2017) assessed the impact and values of investing in road infrastructure and the findings of the study showed that road infrastructure investments contributed towards unlocking economic development opportunities and income generation. The present study also discovered that road transport infrastructure developments through NLTsf unlocked economic opportunities through local small business developments, thus, uplifting households' income.

Objective 5.2.4: To identify opportunities NLTsf has created to empower the local communities

The findings of the study revealed that NLTsf played a role in empowering local people by creating conducive environment for business development. The study discovered that since the introduction of NLTsf in the study area, local business development had shown growth. Through

local businesses, local people managed to generate income which contributed towards increasing households' income.

The analysis of spatial data of the study showed that since the introduction of NLTSF, the road networks had become more dynamic and improved mobility of goods and people. The study discovered that some rural dwellers had become informal business operators, for example, hawkers along the newly constructed roads managed to generate income. Findings of the study further revealed that NLTSF also triggered the growth of the local taxi industry in the study area.

Moreover, connectivity of roads as reflected in the findings of the spatial analysis, that road networks improved accessibility of nodes of services in the study area, which further influenced the travelling and mobility patterns as a result of easy access to modes of transport. Apart from economic opportunities, the findings of the spatial analysis showed that the implementation of NLTSF improved the state of rural road transport infrastructure which brought other infrastructural development opportunities such electrification projects and housing projects.

A similar study by Charlery *et al.* (2015) analyzed the effects of rural road construction on household income and income inequalities. Charlery *et al.* (2015) discovered that most rural households in Nepal, especially the poorest households had gained a lot in terms of income from the road construction projects, which made it a pro-poor development intervention. The findings of the present study affirmed the findings of Charlery *et al.* (2015). The present study also discovered that through rural road transport infrastructure, economic development played a role towards improving households' income and provision of other income generation.

Meersman and Nazemzadeh (2017) investigated the role of the expansion of transport infrastructure in stimulating economic growth in developed countries. The findings of the study contradicted findings of some of the studies reviewed above. Meersman and Nazemzadeh (2017) discovered that it was hard to generalize the impact of transport infrastructure on the potential of economic development, hence, impact of transport infrastructure on economic development varied from one region to another. The findings of the present study tend to contradict Meersman and Nazemzadeh (2017). From the findings of the present study, it was discovered that rural road

transport infrastructure stimulated business development both formal and informal businesses which could contribute towards economic development.

Finally, Fan and Chan-Kang (2008) undertook a study which estimated the impact of road infrastructure investments on economic development and business establishments. Findings of the study show that road infrastructure investments yielded highest economic on economic development and business establishments in central regions of China. The similarities between the present study and the one undertaken by Fan and Chan-Kang (2008) are on the basis that rural road transport infrastructure contributed towards the development of local businesses, economic development and income generation.

5.3 Recommendations of the Study

The recommendations of the study are divided into two and they are set according to competencies of different stakeholders in government. Recommendations emanated from the objectives of the study and the subsequent findings. This section opens with recommendations to the Provincial Government, which is followed by recommendations to the Local Government and the related stakeholders.

5.3.1 Recommendations to Provincial Government

The study recommends that the Municipality and Provincial Department of Transport should review the implementation of projects as there were concerns that they were done on the basis of political affiliations. It is further recommended that more initiatives and focus should be put on monitoring and evaluating the impact of rural road transport infrastructure towards improving the living conditions of the people. Secondly, since the study uncovered some concerns about number of people required during the construction of road transport infrastructure, this study recommends that the recruitment process of people to work on projects need to be reviewed. Moreover, the study recommends that the duration of projects be extended and monitored. It is further recommended to increment the wages given to those working in the road construction projects. Thirdly, it is recommended that high dynamic roads be constructed so that they could facilitate rapid economic development in terms of business development, diversifying income generation sources and stimulating more income generation capabilities of rural people.

5.3.2 Recommendations to uMlalazi Local Municipality

The study recommends that Municipal officials and ward councilors adhere to transparency and fair practices when running the selection processes of NLTSF projects participants. Moreover, the Municipality should intensify cooperative governance between traditional leaders and councilors to avoid tensions that result in projects being put on hold. Secondly, it is also recommended to these stakeholders that they should strive to ensure that communities are able to survive and generate income post-road construction projects. Thirdly, the study recommends that the Municipality support the establishment of small local businesses so that local people could benefit on economic development opportunities to be the key socioeconomic challenges in the study area. Moreover, it is recommended that the Municipality pay more attention to local tourism in order to help local people generate income through tourism. Finally, the study recommends that the Municipality form community partnership with tourist attraction areas such as Shakaland Hotel and Cultural Village and KwaBulawayo Cultural Centre. These partnerships would help rural dwellers doing craftwork to exhibit their work in tourist attractions visited by domestic and international tourists within and outside the study area.

5.4 Areas for Future Research

The study triggered areas for future research on role of adequate rural road transport infrastructure and tourism in promoting sustainable socioeconomic livelihoods in rural areas. Future research should investigate how rural road transport infrastructure and tourism can stimulate sustainable socioeconomic livelihoods in rural communities.

5.5 Conclusion

The study has contributed in the body of knowledge on the ongoing discourse about the causality of road transport to human development. Literature revealed divergent views about whether road transport plays a role in human development. It appears from the findings of the study that there is causality between adequate rural road transport infrastructure and its role in enhancing human development, specifically income generation. Examining the role of NLTSF in enhancing human development, specifically income generation, the study revealed that rural road transport infrastructure remains one of the key pillars and enablers of income generation. As a result,

provision of adequate rural road transport infrastructure increases chances of income generation capabilities.

REFERENCES

- Aardt, C. 2011. "The changing income demographics of South Africa, 1996–2006", *Southern African Journal of Demography*, Vol 12(1), P 5-36.
- Achour, H. & Belloumi, M. 2016. "Investigating the causal relationship between transport infrastructure, transport energy consumption and economic growth in Tunisia", *Renewable and Sustainable Energy Reviews*, Vol 56 (3), P 988–998.
- Agenor, P. & Ganuto, 2015. "Gender equality and economic growth in Brazil: A long-run analysis" *Journal of Macroeconomics*, Vol 43 (4), P 155–172.
- Albrechts, L. & Balducci, A. 2013, "Practicing strategic planning: In search of critical features to explain the strategic character of plans" *The Planning Review*, Vol 49 (3), P 16-27.
- Alexander, E. 2010. "Planning, policy and the public interest: Planning regimes and planners' ethics and practices", *International Planning Studies*, Vol 15 (2), P 143-162.
- Ali, D. Bowen, D. Deininger, K. & Duponchel, M. 2016. "Investigating the gender gap in agricultural productivity: evidence from Uganda", *World Development*, Vol 87 (11), P 152–170.
- Alizadeh, T. & Farid, R. 2017. "Political economy of telecommunication infrastructure: an investigation of the national broadband network early rollout and pork barrel politics in Australia", *Telecommunications Policy*, Vol 41 (3), P 242–252.
- Alonso, N. & Trillo, D. 2014. "Women, rural environment and entrepreneurship", *Social and Behavioral Sciences*, Vol 161 (10), P 149 – 155.
- Amann, E. Baer, W. Trebat, T. & Lora, J. 2016. "Infrastructure and its role in Brazil's development process", *The Quarterly Review of Economics and Finance*, Vol 62 (3), P 66–73.
- Amoa, J. 2016. "Emerging economies, emerging challenges: mobilizing and capturing value from big data", *Technological Forecasting & Social Change*, Vol 110 (3), P 167–174.
- Amoateng, A. & Setlalentoa, B. 2015. "Family Structure, Race, Gender and Poverty: The Case of Food Deprivation in South Africa", *African Sociological Review*, Vol.19 (1), P 16-33.
- Anthopoulou, T. 2010. "Rural women in local agro-food production: between entrepreneurial initiatives and family strategies. A case study in Greece", *Journal of Rural Studies* Vol 26 (1), P 394-403.

- Aphane, M , Dzivakwi, R & Jacobs, J.2010. “Livelihood strategies of rural women in Eastern Cape and Limpopo”, *Agenda*, Vol 24 (84), P 66-74.
- Aslund, O. Blind, I. & Dahlberg, M. 2017. “All aboard? Commuter train access and labor market outcomes”, *Regional Science and Urban Economics* 67 (2017) 90–107.
- Ataguba, J. & Alaba, O. 2012. “Explaining health inequalities in South Africa: A political economy perspective”, *Development Southern Africa*, Vol 29 (5), P 756-764.
- Balakrishnan, P. Das, M. & Parameswaran, M. 2017. “The internal dynamic of Indian economic growth”, *Journal of Asian Economics*, Vol 16 (1), P 1-23.
- Bangura, K. Lynch, K. & Anthony, J. 2013. “Coping with the impacts of weather changes in rural Sierra Leone”, *International Journal of Sustainable Development & World Ecology*, Vol 20 (1), P 20-31.
- Barbier, E. 2016. “Is green growth relevant for poor economies?” *Resource and Energy Economics* , Vol 45 (12), P 178–191.
- Beattie, R. Hay, G. Munro, P. & Livingstone, R. 2002. “The methodological and ethical issues of conducting management research in the voluntary sector” *Public Management Review*, Vol. 4 (1), P 119-127.
- Beihammer, E. Simpson, R. & Syrjala, L. 2013. “Issues of responsibility when conducting research in a northern rural school”, *International Journal of Qualitative Studies in Education*, Vol. 26 (8), P 1062-1078.
- Beja, E. 2014. “Yet, two more revisions to the Human Development Index”, *Forum for Social Economics*, 43 (1), P 27-39.
- Bennie, A. 2011. “Questions for labour on land, livelihoods and jobs: A case study of the proposed mining at Xolobeni, Wild Coast”, *South African Review of Sociology*, Vol 42 (3), P 41-59.
- Berg, C. Blankespoor, B. & Selod, H. 2018. “Roads and Rural Development in Sub-Saharan Africa”, *The Journal of Development Studies*, Vol 54 (5), P 856-874.
- Bhana, D. 2010. "Here in the rural areas they don't say that men and women are equal!"- Contesting gender inequalities in the early years”, *Gender & Rurality*, , Vol 84, P 9-18.
- Boateng, A. Fricano, R. & Adarkwa, F. 2015. “Assessing the socio-economic impacts of rural road improvements in Ghana: A case study of Transport Sector Program Support”, *Case Studies on Transport Policy*, Vol. 3 (1), P 355–366.

- Bollman, R. & Reimer, W. 2009. "Demographics, Employment, Income, and Networks: Differential Characteristics of Rural Populations", *Journal of Agromedicine*, Vol 14 (2), P 132-141.
- Borochowitz, D. 2004. "Reflections on the researcher–participant relationship and the ethics of dialogue", *Ethics & Behavior*, Vol. 14 (2), P 175–186.
- Boucher, K. & Convery, N. 2011. "Storing Information in the cloud – a research project", *Journal of the Society of Archivists*, Vol. 32 (2), P 221-239.
- Bower, C. 2014. "The Plight of Women and Children: Advancing South Africa's Least Privileged", *The Annals of the American Academy of Political and Social Science*, Vol 652, P 106-126.
- Broni, A. Aikins, I. Asibey, O. & Duah, P. 2014. The contribution of transport (road) in health care delivery", *British Journals of Marketing Studies*, Vol.2 (4), P 30-51.
- Bruess, C. & Greenberg, S. 2008. "Resolving ethical issues when conducting sexuality education", *American Journal of Sexuality Education*, Vol. 3 (4), P 313-322.
- Bryceson, D. & MacKinnon, D. 2012. "Eureka and beyond: mining's impact on African urbanization", *Journal of Contemporary African Studies*, Vol 30 (4), P 513-537.
- Carson, D. & Carson, A. 2014. "Local economies of mobility in sparsely populated areas: cases from Australia's spine", *Journal of Rural Studies*, Vol 36 (3), P 340- 349.
- Burns, J. Tomita, A. & Lund, C. 2017. "Income inequality widens the existing income-related disparity in depression risk in post-apartheid South Africa: Evidence from a nationally representative panel study" , *Health & Place*, Vol 45, P 10–16.
- Cejas, R. 2015. "The environmental impact caused by road access to Timanfaya Natural Park on Lanzarote Island", *Transportation Research*, Vol 3 (1), P 457-466.
- Chaminuka, P. Senyolo, G. Makhura, M. & Balete, A. 2008. "A factor analysis of access to and use of service infrastructure amongst emerging farmers in South Africa", *Agrekon*, Vol 47 (3), P 365-378.
- Charlery, L. Qaim, M. & Hall, C. 2015. "Impact of infrastructure on rural household income and inequality in Nepal", *Journal of Development Effectiveness*", Vol 8 (2), P 266-286.
- Chatiga, M. Mabugu, R. & Maisonnave, H. 2016. "Analyzing job creation effects of scaling up infrastructure spending in South Africa", *Development Southern Africa*, Vol 33 (2), P 186-202.

- Chen, C., 2012, “Reshaping Chinese space-economy through high-speed trains: opportunities and challenges”, *Journal of Transport Geography*, Vol 22 (3), P 312–316.
- Childs, S. & McLeod, J. 2004. “Sharing research records and research data: findings from a research project in higher education” *New Review of Information Networking*, Vol. 10 (2), P 131-145.
- Coffe, H. & Bolzendahl, C. 2011. “Gender Gaps in Political Participation Across Sub-Saharan African Nations”, *Social Indicators Research*, Vol 102 (2), P 245-264.
- Crabtree, A. 2012. “A legitimate freedom approach to Sustainability: Sen, Scanlon and the Inadequacy of the Human Development Index”, *The International Journal of Social Quality*, Vol 2 (1), P 24-40.
- Crawford, I. 2016. “The long-term scientific benefits of a space economy”, *Space Policy*, Vol 37 (3), P 58-61.
- Damania, R. Russ, J. Wheeler, D. & Barra, A. 2018. “The Road to growth: Measuring the tradeoffs between economic growth and ecological destruction” *World Development*, Vol 101, P 351–376.
- Davis, B. Giuseppe, S. Zezza, A. 2017. “Are African households (not) leaving agriculture? Patterns of households’ income sources in rural Sub-Saharan Africa”, *Food Policy*, Vol 67 (13), P 153–174.
- Debowicz, D. & Golan, J. 2014. “The impact of *Oportunidades* on human capital and income distribution in Mexico: A top-down/bottom-up approach”, *Journal of Policy Modeling*, Vol 36 (1), P 24–42.
- Deng, T. 2013. “Impacts of Transport Infrastructure on Productivity and Economic Growth: Recent Advances and Research Challenges”, *Transport Reviews Journal*, Vol. 33 (6), P 686-699.
- Department of Transport, 2015. “*National Land Transport Strategic Framework 2015-2020*”, Department of Transport, South Africa: Pretoria.
- Dev, S. & Ravi, C. 2003. “Macroeconomic scene: Performance and policies”, *Economic and Political Weekly*, Vol 38 (12), P 1143-1157.
- Dervis, K. & Klugman, J. 2011. “Measuring human progress: the contribution of the Human Development Index and related indices”, *Journal of Political Economy*, Vol 121 (1), P 73-92.

- Devers, K. & Frankel, R. 2000. "Study design in qualitative research: sampling and data collection strategies", *Education for health*, Vol. 13 (2), P 263-271.
- Dholakia, R. 2003. "Regional disparity in economic and human development in India", *Economic and Political Weekly*, Vol 38 (39), P 4166-4172.
- Djurfelft, A. Djurfelft, R. & Lodin, J. 2013. "Geography of gender gaps: regional patterns of income and farm–Nonfarm interaction among male- and female-headed households in eight African countries", *World Development*, Vol 48 (10), P32–47.
- Dobes, L. & Leung, J. 2015. "Wider economic impacts in transport infrastructure cost-benefit analysis, a bridge too far?", *Journal of Policy Analysis and Reform*, Vol 22 (1), P 75-95.
- Donaldson, R. Ferreira, S. Didier, S. Rodary, E. & Swanepoel, J. 2016. "Access to the urban national park in Cape Town: Where urban and natural environment meet", *Habitat International*, Vol 57, P 132-142.
- Dutt, K. & Dondov, H. 2017. "Informal mining in Mongolia: livelihood change and continuity in the rangelands", *Local Environment*, Vol 22 (1), P 126-139.
- Elbanna, S. 2013. "Processes and impacts of strategic management: Evidence from the public sector in the United Arab Emirates", *International Journal of Public Administration*, Vol 36 (6), P426-439.
- Emran, S. & Shilpi, S. 2015. "Gender, geography, and generations: Intergenerational educational mobility in post-reform India", *World Development*, Vol 72 (13), P 362–380.
- Endacott, R. & Botti, M. 2007. "Sampling methods in nursing science", *Accident and Emergency Nursing*, Vol. 15 (2), P 234–238.
- Engineer, M.; Roy, N. & Fink, S. 2010. "Healthy human development indices", *Social Indicators Research*, Vol 99 (1), P 61-80.
- Esson, J. Gough, K. Simon, D. Amankwaa, E. Ninot, O. & Yankson, P. 2016. "Livelihoods in motion: Linking transport, mobility and income-generating activities", *Journal of Transport Geography*, Vol 55 (10), P 182–188.
- Faiza, A. Wanga, W. & Bennet, C. 2012. "Sustainable rural roads for livelihoods and livability", *Social and Behavioral Sciences*, Vol 53 (2), P1-8.
- Fan, S. & Chan-Kang, C. 2008. "Regional road development, rural and urban poverty: Evidence from China", *Transport policy*, Vol 15 (3), P 305-314.

- Farhadi, M. 2015. "Transport infrastructure and long-run economic growth in OECD countries", *Transportation Research*, Vol 74 (3), P 73–90.
- Feng, C. Wang, M. Liur, G. & Huang, J. 2017. "Sources of economic growth in China from 2000–2013 and its further sustainable growth path: A three-hierarchy meta-frontier data envelopment analysis", *Economic Modelling*, Vol 64 (3), P 334–348.
- Fenwick, J. & McMillan, J. 2012. "Public participation and public service modernization: Learning from new labor", *International Journal of Public Administration*, Vol 35 (6), P 367-378.
- Fetzer, S. 2017. "Considering the Sample", *Journal of Peri Anesthesia Nursing*, Vol. 32 (4), P 379-381.
- Foster, W. Anriquez, G. Melo, O. Yupangui, D. & Ortega, J. 2016. "Geographic disparities in rural land appreciation in a transforming economy: Chile, 1980 to 2007", *Land Use Policy*, Vol 57 (3), P 655–668.
- Gachasin, M. Najman. B. & Raballand. G. 2015. "Roads and diversification of activities in rural areas: A Cameroon case study", *Development Policy Review*, Vol 33 (3), P 355-377.
- Gao, Q. Ying, Q. & Luo, D. 2015. "Hidden income and occupational background: evidence from Guangzhou", *Journal of Contemporary China*, Vol 24:(94), P 721-741.
- Ge, Y. Li, H. & Zhang, J. 2011. "Gender earnings gaps in Hong Kong: Empirical evidence from across the earnings distribution in 2006", *China Economic Review*, Vol 22 (3), P 151–164.
- Ghosh, M. 2006. "Economic growth and human development in Indian States", *Economic and Political Weekly*, Vol 41 (30), P 3321-3327.
- Giorgini, V. Mecca, J. Gibson, C. Medeiros, K. Mumford, D. Connelly, S. & Devenport, L. 2015. "Researcher perceptions of ethical guidelines and codes of conduct", *Accountability in Research*, Vol. 22 (3), P 123-138.
- Gilberthorpe, E, Agol, D & Gegg, T. 2016. "Sustainable Mining? Corporate Social Responsibility, Migration and Livelihood Choices in Zambia", *The Journal of Development Studies*, Vol 52 (11), P 1517-1532.
- Glapska, H. 2013. "The employment and income benefits of airport operation on the country in transition", *Journal of Economics*, Vol 9 (1), P 27-34.
- Gonzalez, J. & Martinez, R. 2017. "Endogenous categorization of the human development", *Applied Economics Letters*, Vol 24 (40), P 243-246.

- Gopalakrishna, B. & Jayaprakash, R. 2012. "Economic growth & human Development: The experience of Indian States", *Indian Journal of Industrial Relations*, Vol 47 (4), P 634-644.
- Grant, B. & Giddings, S. 2002. "Making sense of methodologies: A paradigm framework for the novice researcher", *Contemporary Nurse*, Vol. 13 (1), P10-28.
- Gresh, S. d'Haese, M. & Anseeuw, W. 2012. "Demythifying contract farming: Evidence from rural South Africa", *Agrekon*, Vol 51 (3), P 24-51.
- Groener, Z. 2013. "Skills development and structural change: Possibilities for and limitations of redressing structural racial inequalities in South Africa", *Revue Internationale in Education*, Vol 59 (6), P 723-749.
- Gustav, R. Frances, S. Emma, S. 2006. "A Multi-Disciplinary Journal for People-Centered Development: Human Development: Beyond the Human Development Index Journal of Human Development", *Human Development Journal*, Vol. 7 (3), P 10-22.
- Gutierrez, M. & Rey, S. 2013. "Space-time income distribution dynamics in Mexico", *Annals of GIS*, Vol 19 (3), P 195-207.
- Hakim, M. & Merkert, R. 2016. "The causal relationship between air transport and economic growth: Empirical evidence from South Asia", *Journal of Transport Geography*, Vol 56 (2) P 120–127.
- Hardin, C. 2014. "Finding the 'Neo' in Neoliberalism", *Cultural Studies*, Vol 28 (2), P199-221.
- Hart, T. 2008. "The ignorance of gender in agrarian livelihoods in rural South Africa", *Agenda*, Vol 22 (78), P 144-155.
- Hartmann, D. Guevara, M. Figueroa, C. Aristara, M. & Hidalgo, C. 2017. "Linking Economic complexity, institutions, and income inequality" *World Development*, Vol. 93 (5), P75–93.
- Harttgen, K. & Klasen, S. 2012. "A household-based Human Development Index", *World Development*, Vol 40 (5), P878–899.
- He, L. & Duchin, F. 2009. "Regional development in China: interregional transportation infrastructure and regional comparative advantage", *Economic Systems Research*, Vol. 21 (1), P 3-22.
- Henley, P. Elango, V. Horstick, O. Ahmad, R. Maure, C. Launois, P, Merle, C. Nabieva, J., & Mahendradhata, J. 2017. "Development of the Good Health Research Practice course: ensuring quality across all health research in humans", *Health Research Policy and Systems*, Vol. 15 (28), P 34-51.

- Herath, D. 2009., “The discourse of development: Has it reached maturity?” *Third World Quarterly*, Vol 30 (8), P 1449-1464.
- Herranz, A. & Ruiz, M. 2012. “Evaluating the economic and regional impact on national transport and infrastructure policies with accessibility variables”, *Transport Journal*, Vol. 27 (4), P 414-427.
- Herrero, C. Martinez, R. & Villar, A. 2012. “A Newer Human Development Index”, *Journal of Human Development and Capabilities*, Vol. 13 (2), P 247-268.
- Hilson, G. & Banchirigah, S.2009. “Are alternative livelihood projects alleviating poverty in mining communities? Experiences from Ghana”, *The Journal of Development Studies*, Vol 45 (2), P 172-196.
- Hilson, g. & Bockstael, S. 2012. “Poverty and Livelihood Diversification in Rural Liberia: Exploring the Linkages between Artisanal Diamond Mining and Smallholder Rice Production”, *Journal of Development Studies*, Vol 48 (3), P 413-428.
- Hilson, G. 2016. “Farming, small-scale mining and rural livelihoods in Sub-Saharan Africa: A critical overview” , *The Extractive Industries and Society* (3), P 547–563.
- Hoff, G. 2011. “Quality assurance in gastroenterology: QA in research, and research in QA”, *Best Practice & Research Clinical Gastroenterology*, Vol. 25 (2), P 427–434.
- Hof, B. Heyma, A. & Hoom, T. 2012. “Comparing the performance of models for wider economic benefits of transport infrastructure: results of a Dutch case stud”, *Journal of Transportation*, Vol 39 (3), P 1241–1258.
- Hogarth, N. Belcher, B. Campbell, B. & Stagey, N. 2013. “The Role of forest-related income in household economies and rural livelihoods in the border-region of Southern China”, *World Development*, Vol 43 (2), P 111–123.
- Hong, J. & Wang, Q. 2011. “Transport infrastructure and regional economic growth: evidence from china”. *Journal of Transportation*, Vol.38, P 737-752.
- Hou, J. Walsh, P. & Zhang, J. 2015. “The dynamics of Human Development Index” *The Social Science Journal*, Vol 52 (10), P 331–347.
- Hull, E. 2014. “The Social Dynamics of Labor Shortage in South African Small-Scale Agriculture”, *World Development* Vol 59, P 451–460.
- Iacono, M. & Levinson, D. 2016. “Mutual causality in road network growth and economic development”, *Transport Policy*, Vol 45 (5), P 209-217.

- Ikeanyibe, O. 2016. New public management and administrative reforms in Nigeria”, *International Journal of Public Administration*, Vol 39 (7), P 563-576.
- Ikioda, F. 2016. “The impact of road construction on market and street trading in Lagos”, *Journal of Transport Geography*, Vol 55 (3), P 175–181.
- Incera, C. & Fernandez, M. 2015. “Tourism and income distribution: Evidence from a developed regional economy”, *Tourism Management*, Vol 48 (2), P 11-20.
- Israel, A. & Wynberg, R. 2018. “Multifunctional landscapes in a rural, developing country context: conflicts and synergies in Tshidzivhe, South Africa”, *Landscape Research*, Vol 13 (3), P 34-46).
- Jan, I.; Hayat, S. & Khan, M. 2011. “Analysis of rural household employment structure in northwest Pakistan”, *Spanish Journal of Rural Development*, Vol.2 (4), P 51-60.
- Johansen, B. & Hansen, W. 2016. “Predicting market allocations, user benefits and wider economic impacts of large infrastructure investments for freight transportation”, *Transportation Research Procedia* , Vol 16 (1), P 146 – 157.
- Jimenez, M. 2009. “Household development in Tlapanalá: A comparative study between households receiving remittances and households not receiving remittances”, *Journal of Poverty*, Vol 13 (3), P 331-349.
- Kalimullah, Z. Alam, K. & Nour, M. 2012. “New Public Management: Emergence and principles”, *BUP Journal*, Vol 1 (1), P 1-12.
- Kateja, A. 2012. “Building infrastructure: Private participation in emerging economies” , *Social and Behavioral Sciences* 37 (2012) P 368 – 378.
- Kayode, O.; Babatunde, O. & Abiodun, F. 2013. “An empirical analysis of transport infrastructure investment and economic growth in Nigeria”, *Social Sciences Journal*, Vol.2 (6), P 179-188.
- Kelle, U. 2006. “Combining qualitative and quantitative methods in research practice: purposes and advantages”, *Qualitative Research in Psychology*, Vol. 3 (4), P 293-311.
- Kemmerling, A. & Stephan, A. 2015. “Comparative political economy of regional transport infrastructure investment in Europe” *Journal of Comparative Economics*, Vol 43 (2), P 227–239.
- Kepe, T. 2016. “Rural geography research in post-apartheid South Africa: patterns and opportunities”, *South African Geographical Journal*, Vol 98 (3), P 495–504.

- Khayat, M. & Kempler, S. 2015. "Life cycle management considerations of remotely sensed geospatial data and documentation for long term preservation", *Journal of Map & Geography Libraries*, Vol. 11 (3), P271-288.
- Kimbu, A. & Ngoasong, M. 2016. "Women as vectors of social entrepreneurship" *Annals of Tourism Research*, Vol 60 (2), P 63–79.
- King, R. & Vullnetari.. 2016. "From shortage economy to second economy: an historical ethnography of rural life in communist Albania", *Journal of Rural Studies*, Vol 44 (17), P 198-207.
- Knafo, S. Dutta, S. Lane, R. & Jones, S. 2018. "The Managerial Lineages of Neoliberalism" *The Managerial Lineages of Neoliberalism, New Political Economy*, Vol 3 (1).
- Kodongo, O. & Ojah, K. 2016. "Does infrastructure really explain economic growth in Sub-Saharan Africa?", *Review of Development Finance*, Vol 6 (2), P105–125.
- Kohlbacher, F. 2006. "The use of qualitative content analysis in case study research", *The Qualitative Report Journal*, Vol 7(1), P 21-33.
- Krugell, W. 2014. "The spatial persistence of population and wealth during apartheid: comparing the 1911 and 2011 censuses", *Economic History of Developing Regions*, Vol 29 (2), P 336–352.
- Laird, J. & Mackie, P. 2014. "Wider economic benefits of transport schemes in remote rural areas", *Research in Transportation Economics* , Vol 47 (5), P 92-102.
- Laird, J. & Venables, A. 2017. "Transport investment and economic performance: A framework for project appraisal", *Transport Policy*, Vol 56 (4), P 1–11.
- Larsson, S. 2009. "A pluralist view of generalization in qualitative research", *International Journal of Research & Method in Education*, Vol. 32 (1), P 25-38.
- Law, T.; Ng, C. & Wong, S. 2017. "Relative improvements in road mobility as compared to improvements in road accessibility and economic growth: A cross-country analysis", *Transport Policy*, Vol 60 (4), P24–33.
- Lecoutere, E. 2017. "The impact of agricultural co-operatives on women's empowerment: Evidence from Uganda", *Journal of Co-operative Organization and Management*, Vol 3 (1), P 11-23.
- Lepenies, P. 2008. "An inquiry into the roots of the modern concept of development", *Contributions to the History of Concepts*, Vol 4 (2), P 202-225.

- Leppink, J. 2017. "Revisiting the quantitative, qualitative and mixed methods labels: Research questions, developments, and the need for replication", *Journal of Taibah*, (2017) Vol. 12(2), P 97 -101.
- Li, K. & Lin, B. 2017. "Economic growth model, structural transformation, and green productivity in China", *Applied Energy*, Vol 187 (7), P 489–500.
- Limani, Y. 2016. "Applied Relationship between Transport and Economy" *IFAC-Papers Online* , Vol 49 (29), P 123–128.
- Liu, S. Dong, Y. Chenga, F. Zhanga, Y. Houa, Y. Donga, S. & Coxixo, A. 2017. "Effects of road network on Asian elephant habitat and connectivity between the nature reserves in Xishuangbanna, Southwest China", *Journal for Nature Conservation*, Vol 38, P11–20.
- Loo, P. & Banister, D. 2016. "Decoupling transport from economic growth: Extending the debate to include environmental and social externalities", *Journal of Transport Geography*, Vol 57 (2), P 134–144.
- Lyons, G. 2005. "Transport and society", *Transport Reviews*, P 24 (4), P 485-509.
- Madra, Y. & Adaman, F. 2010. "Public economics after neoliberalism: a theoretical–historical perspective" *The European Journal of the History of Economic Thought*, Vol 17 (4), P 1079-1106.
- Madhavan, S. Myroniuk, T. Kuhn, R. & Collinson, M. 2017. "Household structure vs. composition Understanding gendered effects on educational progress in rural South Africa", *Demographic Research*, Vol 37, P 1891-1916.
- Magidimisha, H. & Gordon, S. 2015. "Profiling South African gender inequality in informal self-employment" , *Journal of Gender Studies*, Vol 24 (3), P 275-292.
- Mansfeld, R. Ordonez, L. Pez, H. Quick, J. Quiroga, D. & Williams, J. 2017. "Conflicts, territories, and the institutionalization of post-agrarian economies on an expanding tourist frontier in Quilotoa, Ecuador", *World Development*, Vol 2 (1), P 29-39.
- Masqood, F. & Ullah, S. 2014. "Foreign Aid volatility and socio-economic dimensions of Human Development Index: A case study of Pakistan" *Pakistan Journal of Social Sciences*, Vol 34 (1), P 59-67.
- Maree, K. 2013. *First steps in research*. Pretoria: Van Schaik Publishers.

- Mårtensson, P. Fors, U. Wallin, S. Zander, U. & Nilsson, G. 2016. "Evaluating research: A multidisciplinary approach to assessing research practice and quality", *Research Policy*, Vol. 45 (1), P 593- 603.
- Martens, C. Bruun, T., Schmidt, D. He, J. Neergaard, A. 2015 "Rural wood consumption patterns of local and immigrant households with differentiated access to resources in Xishuangbanna, Yunnan, China" , *Energy Policy*, Vol 80, P 112–121.
- Martin, C. & Thelen, K. 2007. "The state and coordinated capitalism: Contributions of the public sector to social solidarity in post-industrial societies", *World Politics*, Vol 60 (1), P1-36.
- Martinez, A. Western, M. Haynes, M. Tomaszewski, W. & Macarayan, E. 2014. "Multiple job holding and income mobility in Indonesia", *Research in Social Stratification and Mobility*, Vol 37 (4) P 91–104.
- Matas, A.; Raymond, J. & Roig, J. 2015. "Wages and accessibility: The impact of transport infrastructure", *Regional Studies*, Vol 49 (7), P 1236-1254.
- Matsuda, Y. Brooks, J. & Beeber, L. 2016. "Guidelines for research recruitment of underserved populations", *Applied Nursing Research*, Vol. 32 (1), P 164–170.
- Mazumdar, K. 2003. "A new Approach to Human Development Index", *Review of Social Economy*, Vol 61 (4), P 535-549.
- McCullough, E. 2017. "Labor productivity and employment gaps in Sub-Saharan Africa, *Food Policy*, Vol 67 (5), P 133–152.
- McLennan, D. Noble, M. & Wright, G. 2016. "Developing a spatial measure of exposure to socioeconomic inequality in South Africa", *South African Geographical Journal*, Vol 98 (2), P 254-274.
- Meersman, H. Nazemzadeh, M. 2016. "The contribution of transport infrastructure to economic activity: The case of Belgium", *Case Studies on Transport Policy*, Vol 15 (2), P 34-51).
- Meersman, H. Nazemzadeh, M. 2017. "The contribution of transport infrastructure to economic activity: The case of Belgium", *Case Studies on Transport Policy*, Vol 5 (2), P 316-3. 24.
- Mendoza, O. 2016. "Preferential policies and income inequality: evidence from special economic zones and open cities in China", *China Economic Review*, Vol 40 (7), P 228–240.
- Mertens, D. 2010, "Philosophy in mixed methods teaching: The transformative paradigm as illustration", *International Journal of Multiple Research Approaches*, Vol. 4 (1), P 9-18.

- Modell, S. 2010. “Bridging the paradigm divide in management accounting research: The role of mixed methods approaches”, *Management Accounting Research*, Vol. 21 (1), P124-129.
- Mohino, I. Urena, J. & Solis, E. 2016. “Transport infrastructure and territorial cohesion in rural metro-adjacent regions: A multimodal accessibility approach. The case of Castilla-La Mancha in the context of Madrid (Spain)”, *Journal of Transport Geography* Vol 57 (13), P 115–133.
- Moletsane, R. & Ntombela, S. 2010. “Gender and Rurality in southern African contexts: An introduction”, *Agenda*, Vol 24 (84), P 4-8.
- Morphet, J. 2009. “Local integrated spatial planning: The changing role in England”, *Planning Journal*, Vol.80 (8), P 40–58.
- Moore, J. 2012. “A personal insight into researcher positionality”, *Nurse Researcher*, Vol. 19 (4), P11-14.
- Mulder, J. & Brent, A. 2006. “Selection of Sustainable Rural Agriculture Projects in South Africa: Case Studies in the Land Care Programme”, *Journal of Sustainable Agriculture*, Vol 28 (2), P 55-84.
- Mullen, C. & Marsden, G. 2015. “Transport, economic competitiveness and competition: A city perspective”, *Journal of Transport Geography* , Vol 49 (2), P 1–8.
- Mulley, C. & Weisbrod, G. 2016. “The wider economic, social and environmental impacts of public transport investment”, *Research in Transportation Economics*, Vol 59 (3), P 397-400.
- Musekene. E. 2013. “The impact of a labour-intensive road construction programme in the Vhembe District, Limpopo Province”, *The Development Southern African Journal*, Vol 30 (3), P 332–346.
- Musekene, E. 2015. “Design and implementation of the Expanded Public Works Programme: Lessons from the Gundo Lashu labour intensive programme”, *Development Southern Africa*, Vol 32 (6), P 745-757.
- Musvoto, G. 2014. “The historical evolution of settlement patterns and trends in South Africa: Unlocking the log-jam of the unsustainable settlements impasse”, *International Journal of African Renaissance Studies*, Vol. 9 (2), P 154–172.
- Naz, M. Ehsan, J. 2003. “Origin, ideas and practice of new public management: lessons for developing countries”, *Asian Affairs*, Vol 25 (3), P 30-48.

- Nel, V. 2016. “A better zoning system for South Africa”, *Land Use Policy*, Vol 55 (4), P 257–264.
- Nel, E. & Rogerson, M., 2009. “Re-thinking Spatial inequalities in South Africa: Lessons from International Experience”, *Urban Forum* Vol 20, P 141–155.
- Nelson, J. Wright, S. Thomas, R. & Canning, S. 2016. “The social and economic benefits of community transport in Scotland”, *Case Studies on Transport Policy*, Vol 12 (1), P 13-23.
- Niavis, S. Papatheochari, T. Kyriatsoulis, T. & Coccossis, H. 2016. “Revealing the potential of maritime transport for blue economy in the Adriatic Ionian Region”, *Transport Policy*, Vol 7 (2), P 23-34.
- Noble, M. & Wright, G. 2013. “Using indicators of multiple deprivation to demonstrate the spatial legacy of apartheid in South Africa, *Social Research*, Vol 112 (10), P 187–201.
- Olale, E. & Henson, S. 2013. “The impact of income diversification among fishing communities in Western Kenya”, *Food Policy*, Vol 43, P 90–99.
- Olson, J. 2009. “Improved road accessibility and indirect development effects: Evidence from rural Philippines”, *Journal of Transport Geography*, Vol 17 (2), P 476–483.
- Olsson, J. 2010. “Road investment as enabling local economic development? Evidence from a rural Philippine fishing village”, *Singapore Journal of Tropical Geography* Vol 31 (1) P 343–356.
- Olivetti, C. & Petrongolo, B. 2014. “Gender gaps across countries and skills: demand, supply and the industry structure”, *Review of Economic Dynamics*, Vol 17 (2), P 842–859.
- Omoyefa, P. 2008. “Public sector reforms in Africa: A philosophical re-thinking”, *Africa Development*, Vol 33 (4), P 15- 30.
- Otsuka, K. Higuchi, Y. & Sonobe, T. 2017. “Middle-income traps in East Asia: An inquiry into causes for slowdown in income growth”, *China Economic Review*, Vol 34 (3), P11-34.
- Papagiannakis, A. Baraklianos, I. & Spyridonidou, A. 2016. “Urban travel behavior and household income in times of economic crisis: Challenges and perspectives for sustainable mobility”, *Transport Policy*, Vol 23 (2), P 23-40.
- Park, J. & Seo, Y. 2016. “The impact of seaports on the regional economies in South Korea: Panel evidence from the augmented Solow model”, *Transportation Research*, Vol 85 (3), P107–119.

- Peck, J. 2013. "Explaining (with) Neoliberalism", *Politics & Governance*, Vol 1 (2), P 132-157.
- Pereira, H.; Schwanen, T. & Banister, D. 2017. "Distributive justice and equity in transportation", *Transport Reviews*, Vol 37 (2), P 170-191.
- Perez, K. Olabarria, M. Rueda, D. Rubio, E. Borrel, C. & Nieuwenhuijsen, M. 2017. "The health and economic benefits of active transport policies in Barcelona", *Journal of Transport & Health*, Vol 34 (3), P56-67.
- Peters, J. 2017. "Infrastructure and poverty in Sub-Saharan Africa", *The Journal of Development Studies*, Vol 53 (3), P 460-462.
- Phiri, M. 2017. "Comparative Perspectives on South Africa's and Brazil's Institutional Inequalities under Progressive Social Policies", *Journal of Southern African Studies*, 43:5, 961-978.
- Pijpers, R. 2016. "Mining, expectations and turbulent times: locating accelerated change in rural Sierra Leone", *History and Anthropology*, Vol 27 (5), P 504-520.
- Plant, T. 2009. "Holistic strategic planning in the public sector", *International Society for Performance Improvement Journal*, Vol.48 (20), P 33-44.
- Plummer, P. Tonts, M. & Argent. N. 2017. "Sustainable rural economies, evolutionary dynamics and regional policy", *Applied Geography*, Vol 3 (1), P 1-13.
- Polit, D. & Beck, C. 2010. "Generalization in quantitative and qualitative research: myths and strategies", *International Journal of Nursing Studies*, Vol. 47 (2), P 1451–1458.
- Pollitt, M. & Steer, S. 2012. "Economies of scale and scope in network industries: lessons for the UK water and sewerage sectors", *Utilities Policy*, Vol 21 (3), P 17-31.
- Poon, J.; Thai, D. & Naybor, D. 2012. "Social capital and female entrepreneurship in rural regions: Evidence from Vietnam", *Applied Geography*, Vol 35 (7), P 308-315.
- Popova, Y. 2017. "Relations between wellbeing and transport infrastructure of the country", *Engineering*, Vol 178 (23), P 579 – 588.
- Porter, G. 2007. "Transport planning in sub-Saharan Africa", *Progress in Development Studies Journal*, Vol. 7 (3), P 251–57.
- Porter. G. 2014. "Transport services and their impact on poverty and growth in rural Sub-Saharan Africa: A review of recent research and future research needs", *Transport Reviews Journal*, Vol. 34 (1), P 25–45.

- Pucher, J.; Peng, Z.; Mittal, N. Zhu, Y. & Korattyswaroopam, N. 2007. “Urban transport trends and policies in China and India: Impacts of rapid economic growth”, *Transport Reviews Journal*, Vol. 27 (4), P 379-410.
- Qin, Y. & Zhang, X. 2016. “ The road to specialization in agricultural production: Evidence from rural China”, *World Development*, Vol 77 (7), P 1–16.
- Qin, X.; Wang, T. & Zhuang, C. 2016. “Intergenerational transfer of human capital and its impact on income mobility: Evidence from China”, *China Economic Review*, Vol 38 (6), P 306–321.
- Radnor, Z. & Osborne, S. 2013. “Lean: A failed theory for public services?”, *Public Management Review*, Vol 15 (2), P 265-287.
- Rahman, S. 2014. “Impact of rural infrastructure on farm and non-farm enterprise choice and income in Bangladesh”, *Journal of Developing Areas*, Vol 48 (1), P 275-290.
- Rahut, D.; Behera, B. & Ali, A. 2016. “Do forest resources help increase rural household income and alleviate rural poverty? Empirical evidence from Bhutan”, *Trees and Livelihoods*, Vol 25 (3), P 187-198.
- Rao, J. & Qaim, M. 2013. “Supermarkets and agricultural labor demand in Kenya: A gendered perspective”, *Food Policy*, Vol 38 (3), P 165–176.
- Ramessur, S.; Seetanah, B. & Rojid, S. 2010. “Roads and poverty: New evidences from Africa”, *Journal of Poverty*, Vol 14 (2), P 166-182.
- Rende, S. & Donduran, M. 2013. “Neighborhoods in development: Human Development Index and Self-organizing maps”, *Social Indicators Research*, Vol 110 (2), P 721-734.
- Ray, M. 2014. “Redefining the Human Development Index to account for sustainability, *Atlantic Economic Journal*, Vol 35 (5), P 14-23.
- Rijkers, B. & Costa, R. 2012. “Gender and rural non-farm entrepreneurship”, *World Development*, Vol 40 (12), P 2411–2426.
- Roberts, L. 2015. “Ethical issues in conducting qualitative research in online communities”, *Qualitative Research in Psychology*, Vol. 12 (3), P 314-325.
- Robinson, M. 2015. “From old Public administration to the new public service implications for public sector reform in developing countries”, *UNDP*, Global Centre for Public Service Excellence. New York City.

- Rock, S.; Ahern, A. & Caulfield, B. 2016. "The economic boom, bust and transport inequity in suburban Dublin, Ireland", *Research in Transportation Economics*, Vol 57 (3), P 32- 43.
- Rogan, M. 2016. "Gender and Multidimensional Poverty in South Africa: Applying the Global Multidimensional Poverty Index (MPI)", *Social Research*, Vol 126, P 987–1006.
- Rolfe, J. & Flint, N. 2017. "Assessing the economic benefits of a tourist access road: A case study in regional coastal Australia", *Economic Analysis and Policy*, 2017, Vol 4 (1), P 123-136.
- Rosenthal, M. 2016. "Qualitative research methods: Why, when, and how to conduct interviews and focus groups in pharmacy research", *Currents in Pharmacy Teaching and Learning*, Vol. 8 (1), P 509–516.
- Ryan, P. 2015. "Positivism: paradigm or culture?" *Policy Studies*, Vol. 36 (4), P 417-433.
- Saari, M.; Dietzenbaccher, E. & Los, B. 2015. "Sources of income growth and inequality across ethnic groups in Malaysia, 1970–2000", *World Development*, Vol 76 (11), P 311–328.
- Sabandar, W. 2007. "Transport and the rural economy: Institutions and institutional change in Ambeso Village, Indonesia", *Asia Pacific Viewpoint Journal*, Vol. 48 (2), P200–218.
- Sachs, I. 2009. "Revisiting development in the twenty-first century", *International Journal of Political Economy*, Vol 38 (3), P 5-21.
- Saha, J. 2009. "Comparability over time of the Human Development Index: A Shapley value approach", *Canadian Journal of Development Studies*, Vol 28 (4), P 475-487.
- Salisbury, T. 2016. "Education and inequality in South Africa: Returns to schooling in the post-apartheid era", *International Journal of Educational Development*, Vol 46, P 43–52.
- Sanni, O. & Hashim, M. 2014. "Building infrastructure through public private partnerships in sub-Saharan Africa: Lessons from South Africa", *Social and Behavioral Sciences*, Vol 143 (23), P133 – 138.
- Sanusi, A. 2008. "Application of human development index to measurement of deprivations among urban households in Minna, Nigeria", *Habitat International*, Vol 32 (4), P 384–398.
- Schmucki, B. 2012. "Gendered spaces and urban transport in 20th century Britain", *Research in Transportation Economics*, Vol 34 (2), P 74-85.
- Scotland, J. 2012. "Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms", *Science Journal*, Vol. 5 (9), P 12-22.

- Seedhouse, A.; Johnson, R. & Newbery, R. 2016. “Potholes and pitfalls: The impact of rural transport on female entrepreneurs in Nigeria”, *Journal of Transport Geography*, Vol 54 (3), P 140–147.
- Seita, M. 2017. “Methodology series module: qualitative health research”, *Education for health*, Vol. 7 (1), P 177-187.
- Seth, S. 2009. “Inequality, Interactions, and Human Development”, *Journal of Human Development and Capabilities*, Vol 10 (3), P 375-396.
- Shahidur, R. Bakht, Z. & Koolwal, B. 2009. “The poverty impact of rural roads: Evidence from Bangladesh”, *Journal of Economic Development and Cultural Change*, Vol 57 (4), P 685-722.
- Shahidur, R. & Koolwal, G. 2010. “How infrastructure and financial institutions affect rural income and poverty: evidence from Bangladesh”, *Journal of Development Studies*, Vol 46 (6), P 1109–1137.
- Shi, Y. Guob, S. & Sunc, P. 2017. “The role of infrastructure in China’s regional economic growth”, *Journal of Asian Economics*, Vol 49 (2), P 26–41.
- Sievers, B. & Urbatsch, R. 2018. “Endogenous borders and access to the sea”, *Political Geography*, Vol 63, P 43-53.
- Skorobogatova, O. & Merlino, I. 2017. “Transport infrastructure development performance”, *Procedia Engineering*, Vol 178 (2), (2017) P 319 – 329.
- Sleszynski, J. 2016. “Human development index revisited”, *Journal of Human and Ecosystem Well-being*, Vol 15 (3), P 33-46).
- Smith, H.; Maes, F.; Stojanovic, T. & Ballinger, R. 2011. “The integration of land and marine spatial planning”, *Journal of Coastal Conservation*, Vol 15 (2), P 291-303.
- Sseguya, H. Mazur, R. & Masinde, D. 2009. “Harnessing Community Capitals for Livelihood Enhancement: Experiences From a Livelihood Program in Rural Uganda”, *Community Development*, Vol 40 (2), P 123-138.
- Statistics South Africa. 2011. *Census 2011*, South Africa, Pretoria.
- Stastna, M. & Vaishar, A. 2017. “The relationship between public transport and the progressive development of rural areas”, *Land Use Policy*, Vol 67 (4), P 107-114.

- Tangat, P.; Monaheng, L.; Matobo, T. & Abie, S. 2014. "The impact of improved road infrastructure on the livelihoods of rural residents in Lesotho: A case study of Phamong", *Studies of Tribes and Tribals*, Vol 12 (4), P 209-218.
- Tibesigwa, B. & Visser, M. 2016. "Assessing Gender Inequality in Food Security among Smallholder Farm Households in urban and rural South Africa", *World Development*, Vol 88, P 33–49.
- Tirado, D.; Minguela, A. & Galarraga, J. 2016. "Regional inequality and economic development in Spain, 1860-2010", *Journal of Historical Geography*, Vol 54 (10), P 87-98.
- Toews, I.; Booth, A.; Berg, R.; Lewin, S.; Glenton, C.; Munthe-Kaas, C.; Noyese, J.; Schroter, S. & Meerpohl, J. 2017. "Further exploration of dissemination bias in qualitative research required to facilitate assessment within qualitative evidence syntheses" *Journal of Clinical Epidemiology*, Vol. 3 (1), P 1-13.
- Tokunova, G. 2017. "Transport infrastructure as a factor of spatial development of agglomerations: case study of Saint Petersburg agglomeration", *Transportation Research*, Vol 20 (2), P 649 – 652.
- Tonts, M.; Plummer, P. & Argent, N. 2014. "Path dependence, resilience and the evolution of new rural economies: perspectives from rural Western Australia", *Journal of Rural Studies*, Vol 36 (19), P 362-375.
- Travers, T. 2009. "Transport infrastructure in London", *Oxford Review of Economic Policy*, Vol 25 (3), P 451-468.
- Tselios, V. 2009. "Growth and convergence in income per capita and income inequality in the regions of the EU", *Spatial Economic Analysis*, Vol 4 (3), P 343-370.
- Twining, P.; Heller, G.; Rachelle, S.; Nussbaum, C.; Miguel, Y. & Chin-Chung, T. 2016. "Some guidance on conducting and reporting qualitative studies", *Computers & Education*, Vol. 106 (10), P 1-9.
- Umlalazi Local Municipality. 2016. *Integrated Development Plan (IDP)*, South Africa, Pretoria.
- Vaishar, A. Milada, S. & Stonawska, K. 2015. "Integrated Transport System of the South-Moravian region and its impact on rural development", *Transportation Research* Vol 36 (3), P 53–64.
- Vandenabeele, W. 2007. "Toward a public administration theory of public service motivation", *Public Management Review*, Vol 9 (4), P 545-556.

- Venugopal, R. 2015. "Neoliberalism as concept", *Economy and Society*, Vol 44 (2), P 165-187.
- Vijayabaskar, M.; Swaminathan, P.; Anandhi, S. & Balagopal, G. 2004. "Human development in Tamil Nadu: Examining linkages", *Economic and Political Weekly*, Vol 39 (8), P 797-802.
- Verd, J. & Porcel, S. 2012. "An application of qualitative GIS in the field of urban sociology: uses and reflections", *Qualitative social research*, Vol. 13 (2), P 34- 45.
- Walters, J. 2013. "Overview of public transport policy developments in South Africa", *Research in Transportation Economics*, Vol 39 (1), P 34- 45.
- Wang, Y. 2005. "Low-income communities and urban poverty in China", *Urban Geography*, Vol 26 (3), P 222-242.
- Wang, X. 2013. "The construction of researcher–researched relationships in school ethnography: doing research, participating in the field and reflecting on ethical dilemmas", *International Journal of Qualitative Studies in Education*, Vol. 26 (7), P 763-779.
- Ward, C. 2018. "Changing governance, changing inequalities: Protected area co-management and access to forest ecosystem services: a Madagascar case study", *Ecosystem Services* 30, P 137–148.
- Wasserman, R. 2013. "Ethical issues and guidelines for conducting data analysis in psychological research", *Ethics & Behavior*, Vol. 23 (1), P 3-15.
- Weimann, A.; Dai, D. & Oni, T. 2016. "A cross-sectional and spatial analysis of the prevalence of multi-morbidity and its association with socioeconomic disadvantage in South Africa: A comparison between 2008 and 2012", *Social Science & Medicine*, Vol 163 (17), P 144-156.
- Wetengere, K. 2010. "The Actual Valuation of Fish Ponds: The Case Of Selected Villages In Morogoro And Dar Es Salaam Regions, Tanzania", *African Journal of Food Agriculture, Nutrition and Development*, Vol 10 (10), P 24-36.
- Wetengere, K. & Kihongo, V. 2012. "Constraints in Accessing Credit Facilities for Rural Areas: The Case of Fish Farmers in Rural Morogoro" *Tanzania Journal of Applied Aquaculture*, Vol 24, P107–117.
- Whitacre, B.; Gallardo, R. & Strove, S. 2014. "Broadband contribution to economic growth in rural areas: moving towards a causal relationship" *Telecommunications Policy*, Vol 38 (9), P 1011–1023.

- Widner, J. 2015. "Human development in Africa in 2015", *Perspectives on Politics*, Vol 3 (3), P 572-575.
- Wijeweera, A. & Manwa, F. 2016. "Trade liberalisation and economic growth link: The case of Southern African custom Union countries", *Economic Analysis and Policy*, Vol 51(10), P 12–21.
- Willis, G. 2015. "Income distribution and income shares: Wealth and income distributions explained using generalised Lotka-Volterra SFC ABM models", *International Review of Applied Economics*, Vol 29 (6), P 816-842.
- Withanaarchchi, J. & Setunge, S. 2014. "Decision making on transport network planning and the impact on community, economy and the environment", *Economics and Finance*, Vol 18 (3), P 882 – 891.
- Wong, M. 2016. "Globalization, spending and income inequality in Asia Pacific", *Journal of Comparative Asian Development*, Vol 15 (1), P 1-18.
- Xie, Y.; Zhang, X.; Xu, Q. & Zhang, C. 2015. "Short-term trends in China's income inequality and poverty: Evidence from a longitudinal household survey", *China Economic Journal*, Vol 8 (3), P235-251.
- Xu, X. & Zhu, J. 2016. "Flexible sampling large-scale social networks by self-adjustable random walk", *Physics*, Vol. 3 (1), P 356–365.
- Yan, B. 2007. "International trade as determined by income and income distribution, *International Economic Journal*, Vol 21 (4), P 633-651.
- Yang, J. Wang, W. & Wang, K. 2018. "Capital intensity, natural resources, and institutional risk preferences in Chinese Outward Foreign Direct Investment", *International Review of Economics and Finance*, Vol 55, P 259–272.
- Yu, K. 2011. "Exploring the nature of the researcher–practitioner relationship in qualitative educational research publications" *International Journal of Qualitative Studies in Education*, Vol. 24 (7), P 785-804.
- Zhang, X. 2013. "Has transport infrastructure promoted regional economic growth?: with an analysis of the spatial spillover effects of transport infrastructure", *Social Sciences in China*, Vol. 34 (2), P 24-47.
- Zhang, L. & Watson, E. 2017. "Measuring the impact of gold and green open access", *The Journal of Academic Librarianship*, Vol 43, P 337-345.

- Zhang, X.; Wu, Y.; Skitmore, M. & Jiang. S. 2015. "Sustainable infrastructure projects in balancing urbane rural development: towards the goal of efficiency and equity", *Journal of Cleaner Production*, Vol 107 (10), P 445-454.
- Zhu, T. 2013. "Policy entrepreneurship, institutional constraints, and local policy innovation in China", *China Review*, Vol 13 (2), P97-122.