ANALYZING THE INFLUENCE OF INFRASTRUCTURE DEVELOPMENT ON COMMUNITY LIVELIHOOD IN URBAN TANZANIA: CASE OF ROADS PROJECTS IN DODOMA CITY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF MONITORING AND EVALUATION OF THE OPEN UNIVERSITY OF TANZANIA

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation titled. ñInfluence of Roads Infrastructure Development on Community Livelihood in Dodoma Cityò in partial fulfillment of requirement for the degree of Master degree of Arts in Monitoring and Evaluation of the Open University of Tanzania

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Date

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DECLARATION

I, Justin Mathew Lyatuu, do hereby declare that this dissertation/thesis is my own original work and that it has not been submitted for a similar degree in any other University.

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Signature

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Date

DEDICATION

I would like to dedicate this thesis to my beloved wife, Patricia Ayoub, daughterôs Jane Justin, Happiness Justin and son Mathew Justin whose love and patient encourages and support throughout the research period.

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ABSTRACT

This study, which pondered on establishing presence of influences brought up by the development of road infrastructure to the community livelihood in the City of Dodoma, focused on establishing community livelihood baseline status in the City of Dodoma, examine influence that roads network development has had on the community livelihood in the City of Dodoma and to assess strategies for sustainable funding of roads network in Dodoma City. The study intends to examine the influence that roads infrastructure development has on community Livelihood and targeted 99 respondents from roads users and Government officials from Dodoma City and TARURA. The study applies Primary and Secondary data collection whereby questionnaires were used during survey in collecting Primary data and Secondary data were obtained from readings documents in the City Council, internet and past reports. The data collected was sorted, cleared, edited and coded using ñStatistical Packages for Social Sciences. The research found that majority of the people interviewed agrees that roads improvement and development enhance community livelihood development and that the baseline indicator for livelihood development is justified by how communities earn income in terms of wage, salary and those who utilized the opportunities for investing and lastly engagement of labour based works as one of the strategies for funding sustainability as payment for labour are not much and roads remain in a good state. Having scientific monitoring system for roads works reduces maintenance backlogs which according to the findings relieve cost of road maintenance in the long run and then enhance funds sustainability. The government should continue injecting sufficient funds for roads improvement/development so as to enhance the livelihood of its citizens.

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LIST OF ABBREVIATIONS

APA	Annual Performance Agreement
DfID	Department for International Development
ECA	Export Credit Agency
EU	European Union
GDP	Gross Domestic Product
JICA	Japan International Cooperation Agency
LGAs	Local Government Authorities
MKUKUTA	National Strategy for Growth and Reduction of Poverty
MoWTC	Ministry of Works Transport and Communication
RFB	Road Fund Board
RFTA	Road and Fuel Tolls Act
SANRAL	South African National Roads Agency Limited
SPSS	Statistical Packages of Social Sciences
SSA	Sub Saharan Africa
TANROADS	Tanzania National Road Agency
TARURA	Tanzania Rural and Urban Roads Agency
TASAF	Tanzania Social Action Fund
TSCP	Tanzania Strategic Cities Projects
USAID	United States Agency for International Development
WB	World Bank

CHAPTER ONE

INTRODUCTION

1.1 Background of the Problem

Simply, stated by Chambers and Conway (1991), a livelihood ñis a meansò where a human being gains his living. Development of a road network enables a presence of a good transportation system. The latter, according to Chambers and Conway (1991), is one of a form of services which offers access to a human being to earn a living. It is hence clear that when there is minimal development level of a road network, or absence of the same, like a case of Dodoma when it was not a capital city of Tanzania, there existed a low level of livelihoods for the people living in the vicinity of the now City Council of Dodoma.

Poor livelihoods were prominent in all Dodoma Cityôs wards such as Mapinduzi, Ihumwa, Nala, Changôombe, Ntyuka, Nkuhungu, Nzuguni, Makulu, Hombolo, Ipagala, Iyumbu, Kikuyu, Majengo. Currently, there is progressive roads infrastructure development in the City of Dodoma that shows the brighter future in development of the City and possible livelihoods improvement to the communities in all the wards. All the wards aforementioned are efficiently accessed through a well-developed network of roads. Locals can now easily access various services such as schools and hospitals, water, food, fodder for their domestic animals, medicine, shelter and other amenities.

A network of well-developed roads infrastructure plays a vital role in a countryôs development as it offers access and connection to important amenity locations which are vital to the local peopleôs livelihoodôs improvement, and at an international level

it connects different regions of a country and also connects country to country leveraging on international businesses and development (Cuciureanu, 2012). According to Ivanova & Masarova (2013), road infrastructure constitutes ñall types of roads in a given area, including various structures and generally serves to transport passengers and goods. It further comprises of all road categories, facilities, structures, signage, markings and electrical systems needed for safe, trouble free and efficient trafficò.

Arguably, as Gannon & Liu (1997) put it, a well-developed road network infrastructure is of importance towards lifting up the mass of people out from their dire poverty bondage and brings about the means to expand horizons of better and sustainable livelihoods. Attaining a sustainable livelihood, on the other hand, as put forward by Perkins (2010), entails the integration of economic infrastructures that support other forms of services such as transport to bring about meaningful and sustainable livelihoods of people. Economic infrastructures will uplift the productivity of such other physical capital inputs such as transport, as mentioned earlier, but also other infrastructures such as power systems, water distributions systems and supply as well as communication systems.

Not only that economic infrastructure is of profound importance but also social infrastructures are undeniably important in uplifting the livelihoods of the people. Social infrastructures which entails investments in the human capital through uplifted and well planned education system that addresses the needs of the people and a well stitched up health system cannot be overstated. Notwithstanding, as Bayes (2014) stated it, public expenditure and investments into road network infrastructure

may stimulate other investment flows from the private sector which may be in the form of trade and business, provision of transport services business and increased industrial production for production of goods. Despite, towards the end, it is then clear that moves to invest in the road network infrastructure pays off well in rural setup as for example in Tanzania, rural areas is where the production of agricultural raw materials that are basic inputs into production industries are produced and hence needs transportation to the production industries. Shschtebeck & Mbuya (2006) also supports the fact that pay offs are easily seen the rural setups, and this is highly evidenced in the former rural setups of the aforementioned wards in the now City of Dodoma.

Well maintained road networks can provide access to many primary services such as education, employment, healthcare facilities and livelihood strategies. Livelihood strategies entails on how people combine their income generating activities, the way in which they use their assets, which assets they chose to invest in and how they manage to preserve existing assets and income. Most African governments, for example Tanzania have come to underscore the importance of committing investments in road network infrastructure that leverage on the social and economic development of the communities and are devoted towards implementation of these road network infrastructure development.

The roads improvement largely attracts finance which account for investment in the Country (Heggie & Vickers, 1998). Sustainable livelihood largely can be attained through various means as noted by Roe (1998), which could minimize the complexities in life by having essential and minimum standard of life. Accordingly,

the World Bank stipulated that Sustainable livelihood framework; livelihood improvement entails income, wellbeing and vulnerability.

The United Republic of Tanzania enacted an act for collection of tolls namely Road Toll Act in 1985. This act guided all collection on the use of roads and its related gadgets, This led to establishment of Road Fund Board which was vested with the duties of keeping and managing the collected funds to be used for roads maintenance and development. These funds are collected from various fines related to misuse of roads and overload which deteriorate the roads. The use of the funds is specifically for roads improvement and attending unforeseen contingents related to roads which normally emanated from heavy rains as roads are vulnerable to rains. As part of Funds programme the funds are distributed to the two Implementing Agencies, where TANROADS and TARURA receive 70% and 30% of the collected funds, respectively. TANROADS manage trunk roads and regional roads while TARURA manage rural and urban Roads.

The financing of roads in Tanzania is largely dependent on the funds collected by the Road Fund as the main financial body followed by other sources of funds mainly from Development Partners i.e. JICA, USAID, EU, and the World Bank, African Development Bank. The sources includes also collection own sources from Councils, and TASAF. All these are aimed at managing the delivery of the goal of developing its infrastructures. The demand for infrastructure development is huge as compared to the available resource fund this makes adoption of prioritization of some roads which are maintained in the fiscal year. This situation make various countries in the world to strive looking for further sources of financing roads

infrastructures in order to enhance sustainable livelihood development of the communities. As noted by Potter (1997) that in the future there might be a situation where by countries will fail to raise fuel levy and other related road taxes for the purpose of raising funds for roads improvement and development as in that situation those rates could be so high for practical implementation in terms of bringing hard ships to the communities thus hinder livelihood improvement. Dodoma City has a network of 1,085km which is categorized as follows:

i. Paved roads 133.27km (12.27%)
ii. Gravel roads 159.85km (14.72%)
iii. Earth roads 792.67km (73.01)

Generally the roads condition in Dodoma city roads is fair and most of the roads are passable throughout the year.

1.2 Research Problem Statement

According to Wiggins (2018), improved roads have been mentioned as a driver towards livelihood change and that improved roads brought up more public transport, and easier access to towns and other localities of importance to the community livelihoods of the people. Roads are enabling access between producers and consumers in the market, smoothening access to schools and hospitals. This is a potential achievement towards development agenda as supported by the World Bank which by the year 2002 it has managed to construct 260,000km of roads (Selod, 2015). Despite such achievements, road construction activities has their downside as far as the environment is concerned and hence proper mitigation measures were put in place to ensure protection of the environment.

Communities once attained best social services are on the best position of having sustainable livelihood. Livelihood entails having means of managing their material as well as social requirements (Chambers & Conway, 1992). Attaining means of living through various efforts or means entail Livelihood development. Communities strive to have better life through various means including engaging in various legal activities which in one way or the other enables communities to have resource money for sustaining living these activities includes engaging themselves in roads works and other social and economic activities.

Currently there are lot of roads infrastructures development in Dodoma City as a result of it been the Capita City. Roads infrastructures are seen around the City the researches want to find out community livelihood improvement as a result of this investment. This means that the funds for roads improvement in Dodoma City Council has shown development of physical infrastructures but reflection to Community livelihood improvement is difficult to be established. It is therefore the researcherôs intention to check the influence of roads infrastructure development to community livelihood development sitting the City of Dodoma.

1.3 Study Objectives

1.3.1 General Objectives

The objectives of the research is to determine the influence of roads infrastructure development towards livelihood development in the City of Dodoma as Case study.

1.3.2 Specific Objectives

The study has the following specific objectives:

i. Identifying baseline status of community livelihood in Dodoma City;
ii. To examine influence that roadsô network development has had on the community livelihood in Dodoma City;
iii. To assess strategies for sustainable funding of the roads network in Dodoma City.

1.4 Research Question

This study is guided by the following research Questions:

i. What are base line status of community livelihood prevailed in the City of Dodoma.
ii. What influence does road network development have on the Community Livelihood in Dodoma City?
iii. What are strategies for sustainable funding of the roads in Dodoma City?

1.5 Significance of the Study

Earmarked research outcomes of this research will address information on a practical way on how roads infrastructure development enhance livelihood of Communities in the City of Dodoma. The knowledge found would be useful to planners, administrators and policy makers including stakeholders in the transport sector for budgeting sufficient funds for roads infrastructure development. To the research institutions the findings enabled further research on roads benefits of having improved roads for social ,political and economic development.

CHAPTER TWO

LITERATURE REVIEW

2.1 Definitions of the Core Concepts

2.1.1 Community Livelihood

A livelihood illustrates the way of attaining basic needs by engaging in various activities. This entails communities accessing income for livelihood development. Sustainable living enables people to manage shock and manage their surrounding environment (IFRC, 2017). A livelihood means communities are in a position of managing their surrounding environment thus reducing hardships, shocks and stress and maintaining the status for future population.(Krantz 2001).

Livelihood strategies entails communities managing resource fund obtained from various activities in solving basic needs in life. This shows peoples engaging themselves in investing in productive activities which will generate additional income for the livelihood development. The results of this investment enable lives changes of the communities as they are capable of achieving basic needs in life which includes food, shelter and social services. (Barret & Beardmor, 2002).

2.1.2 Roads Development

Roads development is a sustainable investment which is done on repetitive phases in each year. Countries invest heavily in road infrastructures development for social and economic purposes of their Nations. Investment in roads infrastructures involves various phases of which there are short term investment where by structures are invested in a period of one year or less, Medium term here the investment covers a period of one to three years and Long-term investment this covers projects which

takes more than three years (Gralich, 1994 and Munell, 1992). The longer the period in implementing roads works lead to some structures develop poor status and develop bottlenecks which either makes difficulties in accessing social and economic services and thus disrupt livelihood of the communities. Urban roads infrastructure strategies development involve substantial smoothening transportation/travel back the needy environment (Singh & Gilman,1999).

2.1.3 Fund Sustainability

Sustainability refers to adequacy and reliability of funding to meet current and future needs of the roads infrastructure. Sustainability requires that the fund must meet all costs for Maintenance of current needs of network, extension/quality improvement and asset replacement. The costs for maintenance must be recovered fully from road users with no subvention from central government and there must be good governance supported by financial and procurement law. Having sustainable plans for resource funds mobilization is the key for Institutionôs development and failure to accomplish its mission and vision. According to (PPRS PARIS, 2015) there was low expenditure on roads and road network condition deteriorated heavily with most roads becoming impassable in Africa.

Most African countries have established independent source of funding for roads maintenance based on road-user principles where by funds have been fenced off from the general government budget administered by separate institutions. Road Fund was established purposely for keeping fund for Road Financing and Management of roads and the Government remained with oversight role of policy setting, of specifications standards and monitoring.

2.2 Theoretical Literature Review

The Theory of Transportation by Cooley (1894), was an economic theory which stated that ñtowns and cities tend to be located at the confluence of transportation routes the so called break in transportationò. Sustainable livelihood by Stephen Morse (2009), has since become dominant approach to the implementation of development interventions by a number of major international agencies. It is defined in terms of the ability of social unit to enhance its assets and capabilities in the face of shocks and stresses over time.

Sustainable Livelihood first seeks to identify the important assets in livelihood, their trends over time and space as well as the nature and impact of shocks and stresses (environmental, economic and social) upon these assets. Following this and after taking cognizance of the wider context (e.g political, legal, economic, institutions, infrastructure etc), interventions are designed to address any vulnerability of enhance livelihoods perhaps by diversification of income streams. Theoretically Sustainability could be said to be a practical framework for evidence based intervention and has much logic resting behind it, especially in a world undergoing rapid change and where resources to support development interventions are inevitably limited.

he theoretical review enables to show the status of already existed theory concepts and to what extent they intermingle and at the same time studies which have been done on them in developing new proofs. Transportation entails movement from one area to the other for social and economic factors. According to World Vision Tanzania, Livelihood is sustainable when the capabilities and assets and all activities

which are required for life survive are well enhanced and maintained and which cope with time and enabled communities to relieve themselves from shocks and stress in life. It is anticipated that the presence of better livelihood entails future development.

According to Chambers and Conway (1992), a livelihood comprises of abilities for the communities to possess assets, store, resources and access and having the required activities which enable live existence and relieve from shocks and stress situations and this is for the betterment of the incoming generation. According to DFID (2001), Sustainable Livelihood is characterized by capabilities in managing assets including both social sources and material wellbeing which entails performance duties. Livelihood is anticipated to be influenced externally by Human capital, natural capital, financial capital, social capital and physical capital.

2.3 Empirical Literature Review

Projects emanate from individuals undertakings in having good strategies and plans which are sustainably implementable entails community lives revolution Reiss (1993). The planning and other stages of road development projects should be people centered. This means that proper planning need to be put in place in order to come up with realistic estimates of the intervention and projecting the outcome changes to the community served by the network. African Countries, SANRAL (1998), the South African National Roads Agency Limited the agency succeeded the former South African Roads Board is solely independent and its functions are in two fold that is collecting toll from the roads under its jurisdictions which are under self-funding mechanism and non-toll which are regarded as funding from transfers under the department of Transport. It is estimated that roads in South Africa above 80%

fall under toll roads and possessed by the Government, at least 10% of the roads are mainly under the control and managed by SANRAL.

Toping up its capital SANRAL engaged in foreign investment and adapting loans and exports. The other portion of road toll is under private investors whose main role is to construct roads, management of those roads and routinely maintenance of the same roads as per contract terms. The funding for sources for SANRAL emanated from investment in capital and loans, taxes revenue, revenue emanated from selling of assets, tolls and fines from the misuse of roads and other funds from grants. SANRAL managed and already developed over 11% of the available over 19,000km of the entire national roads which is largely financed through various revenues and borrowings. The principle for raising finance is by cost reduction for borrowings for generating sufficient fund for improving roads. The other aspect is by issuing bonds to the government.

In Sub Saharan Africa (SSA) roads transportation save as a conjecture and mode of accessibility in the areas of social and economic blocks. This is evidenced due to the fact that roads make access to social services, productive zones of which mining and Tourism are among and dominates. Roads smoothening the easy movement and facilitate connection linking land-locked Nations to Coastal ports thus enhance trade between the regions. In Latin America, five years ago a report from World Bank noted that infrastructure in most Latin America and the Caribbean had improved over the previous ten years thus enhanced livelihood development. It is also noted that sharp fall in investment in the sector was hindering economic growth, poverty reduction and the regionôs ability to compete with China and other dynamic Asian

economies. According to Asof Faiz (2012), R

ural access and sustainable Livelihood is central to the alleviation of rural poverty and has a close synergy with rural livelihood outcomes such as increased incomes (e.g tradable agricultural surplus, material goods and cash),increased social well-being (e.g non material goods, like self-esteem, health and nutrition status, access to education and other services, sense of inclusion), reduced vulnerability (e.g better resilience through increased in asset status, access to emergency services), improved food security (e.g from drought proofing, access to markets, and increased income. Thus by providing access to opportunity, rural roads contribute to making a livelihood sustainable, so that it resilient in the face of external shocks and stresses, it is not dependent upon external support, it can maintain or enhance its capabilities and assets both now and in the future, it is able to assure the long-term productivity of natural resources, and it does not undermine the livelihood opportunities.

2.4 Policy Review

According to Tanzania National Policy (2003), Tanzania's is characterized huge costs and substantial low quality services which are attributed to by unmanaged roads network due to insufficient funds to cutter for maintenance needs. Infrastructures development is the Country facilitated access to commercial centers and boost trade both domestically and international. This is by developing trunk roads connecting nations, developing roads which connect Regions and other Infrastructures for social and economic development. Through roads improvement access to sources of energy is enabled thus enhance easy availability of power for Industrial production purposes.

To support the efforts from the Government the World Bank in Year 2017 approved a top up funds for infrastructure development to the tune of US$ 130 million via Tanzania Strategic Cities Development (TSCP) of which cities in Tanga, Dodoma, Mwanza, Arusha, Kigoma and Dar es Salaam benefited from the funds in developing roads in the respective Cities. The funding also cutter for drainage works and streets lights. Roads Act, (2007) states the responsibilities of the Ministry of Transport part II of road management as formulating road policy, to cause to be prepared and coordinate the implementation of roads investment and development programs, preparing guidelines standard and specifications for road works and monitoring the performance of the road network, promoting and fostering capacity building in road sector including promoting maintenance management in roads.

Annual Performance Agreement (APA,2019) between Road Fund Board and TARURA put emphasis on the following policy conditions for accessing road fund that all works financed by road fund must be executed by local contractors (to stimulate local economy). At least 20% of works executed must be through labour-based technologies. This will reduce income-based poverty and provide stable income to laborers and it is also a cost effective.

Women should be given priority to employment in labour-based contracts to assist vulnerable group. Allocation of funds for intervention is always based on the inventory of condition survey done to the specific roads prior to budget allocation and Priority should be given to allocating funds to routine and periodic maintenance of the existing network, as benefits are immense.

2.5 Roads Financing Strategies in Tanzania

Roads Maintenance and Development in Tanzania is financed by the Central Government through Road Fund Board. The Boardôs mandate is to manage the Roads Fund by ensuring that there is full collection of revenue, timely disbursement of funds and monitoring utilization of the same to implementing agencies, which are MoWTC, TARURA, and TANROADS (RFB 2015/16) Annual Report. Provision of sufficient funds for road maintenance is critical for sustainable roads, safer road network around the country, and protection of road asset against deterioration. The performance of the Fund is therefore assessed based on the extent to which it achieves its objective in terms of providing sufficient funds for financing road maintenance.

2.6 Percentage of Revenue Collection to Annual Budget

According to Road Fund Board Annual, reports it shows that in FY 2015/16, a total annual estimate budget was TZS 727.97billion compared to actual collection of TZS 722.66billion thus recording a deficit of TZS 5.31 billion equivalents to 1% as shown under in table 1.1

Table 1.1: Revenue collected against Annual Budget (TZS Bill)

Source	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**
Fuel levy	391.00	434.47	626.02	623.18	705.09
Transit Charges	5.77	5.41	6.52	7.9	9.49
Overloading fees	10.00	7.94	8.69	11.34	8.05
Annual revenue collection(a)	406.77	447.82	641.23	642.42	722.66
Annual Budget (b)	316.55	429.66	504.30	541.9	727.97
Surplus/deficit (a-b)	90.22	18.16	136.93	100.52	-5.31
% of Annual Budget	**29.0%**	**4.0%**	**27.0%**	**18.6%**	**(1.0%)**

Source: Roads Fund Board Annual report 2015/16

2.7 Percentage of Disbursement to Annual Budget

The distribution of maintenance funds is as shown below. The percentage of disbursement over annual budget has been 77.3% reflecting the Government commitment to ring-fencing resources earmarked for road maintenance.

Table 1.2: Annual Disbursed Funds against Approved Budgets (TZS Bill)

Source	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**
Annual Budget (a)	316.55	429.66	503.30	541.90	727.97
Annual collection (b)	406.77	447.82	641.20	642.42	722.66
Disbursement (c)	335.99	429.66	503.30	541.90	562.72
% (c/a)	**106%**	**100%**	**100%**	**100%**	**77.3%S**

Source: Roads Fund Board Annual Report 2015/16

2.8 Road Infrastructure Development on Community Livelihood

Dodoma City is located in the Centre of the region totally surrounded by Chamwino and Bahi Districts. It is 486km West of Dar es Salaam and 441km South of Arusha. Dodoma City covers an area of 2,769km^2 of which 625km^2 are urbanized. Roads are arteries for accessing connectivityôs in social and economic services thus performing the catalyst between production areas to the market centers. Roads open up business centerôs as it attracts investment people benefits from roads improvement through employment and some benefits from the developed infrastructures by investing around roads infrastructures, opening up shops, workshops and markets. It is through roads improvement where livelihood of the communities is improved thus reducing poverty to the communities.

Roads improvement reduces transport costs in terms of congestions traffic jams and fuel efficiency. Students arrives in schools on time and well back home the same to

parents they get into work on time and back home on time these in the long run contributes saving to the communities and enables the communities to practice small investments which in turn enable them top-up income for future development.

2.8.1 Road Network in the City of Dodoma

Dodoma City has a road network according to data from District Roads Management System (DROMAS, 2018) of 1,085.79km which has been categorized as:

Paved roads 133.27km equivalent to 12.27%%

Gravel roads 159.85km equivalent to 14.72%

Earth roads 792.67km equivalent to 73.01%

District roads (collector roads) 413.74km and feeder roads 555.70 km and Community roads 116.35km.Of the above mentioned network regular maintenance is done to its maximum standard as per released funds in each year. It is an ideal to mobilize sufficient funds resources to cutter for roads improvement and development so as to enhance sustainable livelihood development of the communities. Developing Countries continue to be in poor condition despite multiple interventions (Fukubayashi &Kimura, 2017).

Huge investment in roads infrastructure development is done Countrywide, and there are no study which has shown the improvement of the community livelihood as a result of this investment. This means that we need to find out the contribution of roads improvement towards Community livelihood development. A case of Tanzania citing Dodoma City Council for the period of five years FY 2014/15 to 2018/19 has received a Total of Tshs: 19,794,000,000.00 from Road Fund Board for roads and its

related structures maintenance, World Bank through Tanzania Strategic Cities Project has injected Tshs.85,438,708,960.75 for roads Development for the period from FY 2014/15 to 2018/19 (*Source: Dodoma City Council Annual Budgets*)

The best approach for examining the contribution of roads infrastructures development to the communityôs wellbeing is by looking on the contributions of the roads infrastructure toward income of the people who were engaged in roads works and those who invested along the developed roads. Having a picture by looking on how the infrastructures developments have contributed towards lifestyle change and income generation to the community. The examination can base on the total prevailing road network available its connectivity to social and economic areas and the disbursed funds per year.

2.8.2 Fund flow for Roads Maintenance from Road Fund Board

Dodoma City Council for the period of five years has been receiving funds for roads Maintenance which was fully utilized for roads development as Table 1.3.

Table 1.3: Dodoma City Council Maintenance Budget FY 2014/15 – 2018/19

S/n	Financial Year	Description/Scope	Improvement(Km)	Total Fund
1	FY 2014/15	Routine Maintenance	203.05	243,670,000.00
		Spot Improvement	16.25	97,470,000.00
		Periodic Maintenance	28.46	1,069,870,000.00
		Bridges and Culverts	9lines culverts,2drifts,3box culverts	194,930,000.00
		Total	**247.76**	**1,605,940,000.00**
2	FY 2015/16	Routine	196.00	248,300,000.00

S/n	Financial Year	Description/Scope	Improvement(Km)	Total Fund
		Maintenance		
		Spot Improvement	92.00	331,200,000.00
		Periodic Maintenance	18.80	3,230,000,000.00
		Bridges and Culverts	4lines culverts,3drifts,1box culvert	101,600,000.00
		Total	**306.8**	**3,911,100,000.00**
3	FY 2016/17	Routine Maintenance	340.02	918,710,000.00
		Spot Improvement	80.90	384,040,000.00
		Periodic Maintenance	20.40	2,521,980,000.00
		Bridges and Culverts	2box culverts,21lines culverts,6drifts	866,270,000.00
		Total	**441.32**	**4,691,000,000.00**
4	FY 2017/18	Routine Maintenance	331.62	785,110,000.00
		Spot Improvement	94.9	365,450,000.00
		Periodic Maintenance	11.5	2,825,020,000.00
		Bridges and Culverts	2box culverts,22lines cuverts,2storm drains,1foot bridge	810,620,000.00
		Total	**438.02**	**4,786,200,000.00**
5	FY 2018/19	Routine Maintenance	97.47	453,500,000.00
		Spot Improvement	58.85	225,000,000.00
		Periodic Maintenance	63.73	3,359,000,000.00
		Bridges and Culverts	19bridges repair,7bridge prevention	762,260,000.00
		Total	**220.05**	**4,799,760,000.00**
	GRAND TOTAL			**19,794,000,000.00**

Source: Dodoma City Council Annual Budgets (FY 2014/15 ï 2018/19)

From the table above, the received funds were to cutter for four scope of Maintenance. According to Annual Performance Agreement (APA 2018), between Road Fund Board and TARURA the funds should be distributed for maintenance and development roads under the following scope; Routine Maintenance, Spot Improvement, Periodic Maintenance, Bridges and Culverts including drainage system. Routine works cover maintenance on roads on continue basis for making the roads passable throughout the year. Bridges and Culverts maintenance and repair are aim at restoring the structures to its original status.

Spot Improvement is done in short sections of the road roughly 1km stretch or less and is done to restore roads with bad sections which hinder smooth movement of vehicles and people. Periodic Maintenance this is a kind of roads intervention where by maintenance work that is carried out for prevention in a couple of years. From the study the analysis of the released budget and implementation was done as illustrated on figures below:

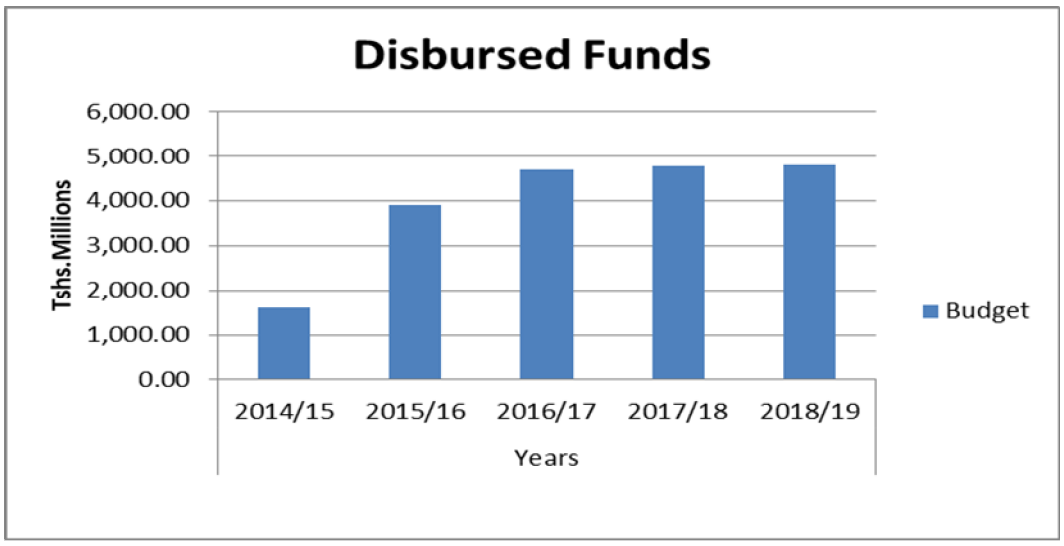

Figure 1.1: Roads maintenance

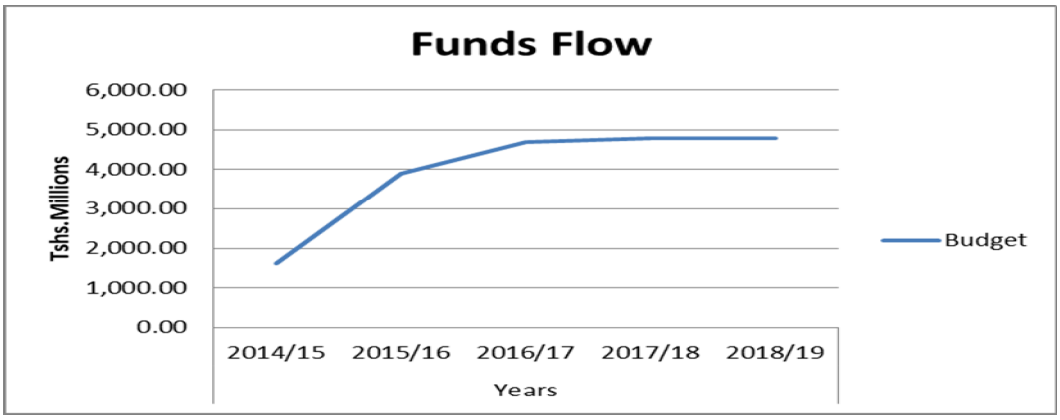

Figure 1.2: Funds Flow

Sources: Dodoma City Council Annual Budgets

2.8.3 Roads Development Funds from World Bank (TSCP)

World Bank through Tanzania Strategic Cities (TSCP) disbursed funds for Dodoma City roads Construction which had made changed the physical appearance of the City including access and investments. Table 4.1 indicated the funds disbursed and interventions.

Table 1.4: Funds Disbursement and Interventions from World Bank for the period from 2014/15 to 2018/19 for Dodoma City Council

S/n	Description	Funds received
1	Rehabilitation of 15.17km Tarmac roads	11,043,656,640.00
2	Upgrading of Kisasa and Chang'ombe Roads 15.65km	9,901,101,741.20
3	Upgrading of Area "A" and Kikuyu Roads 11.47km	8,578,922,994.80
4	Construction of Nkuhungu and Mwangaza Storm Water Drains 7.64km	6,341,657,802.40
5	Additional Works for improvement to Kisasa, Chang'ombe, Area "A", and Kikuyu Roads and Additional Storm Water Drains	8,401,189,503.12
6	Additional works Upgrading/Rehabilitation of Ndovu, Swala, Zuzu, Boma, Biringi Avenue-	18,343,862,318.20

S/n	Description	Funds received
	Furahani, Ilazo-Ipagala and Central Business Park Roads	
7	Additional Works, Upgrading/Rehabilitation of Ring road from Kisasa to Mapinduzi/UDOM & Njedengwa, Six footbridges, Transit Lorry Packing including access road, Chang'ombe/DMC Road-Great North road link, Service roads linking Kinyambwa, Kikuyu, Chidachi and Itega Communities with Kikuyu Junction (Great North Road) and Ipagala Community Ilazo Communities-Hombolo reservoir Storm Water Drain	22,828,317,961.03
	GRAND TOTAL	**85,438,708,960.75**

Source: Dodoma City Council Annual Budgets.

From the table above it shows that about Tshs.85,438,708,960.75 have been disbursed for roads Development and its associated infrastructures improvement in Dodoma City Council. Analyzed data shows that the funds made tremendous changes in the City of Dodoma as shown below.

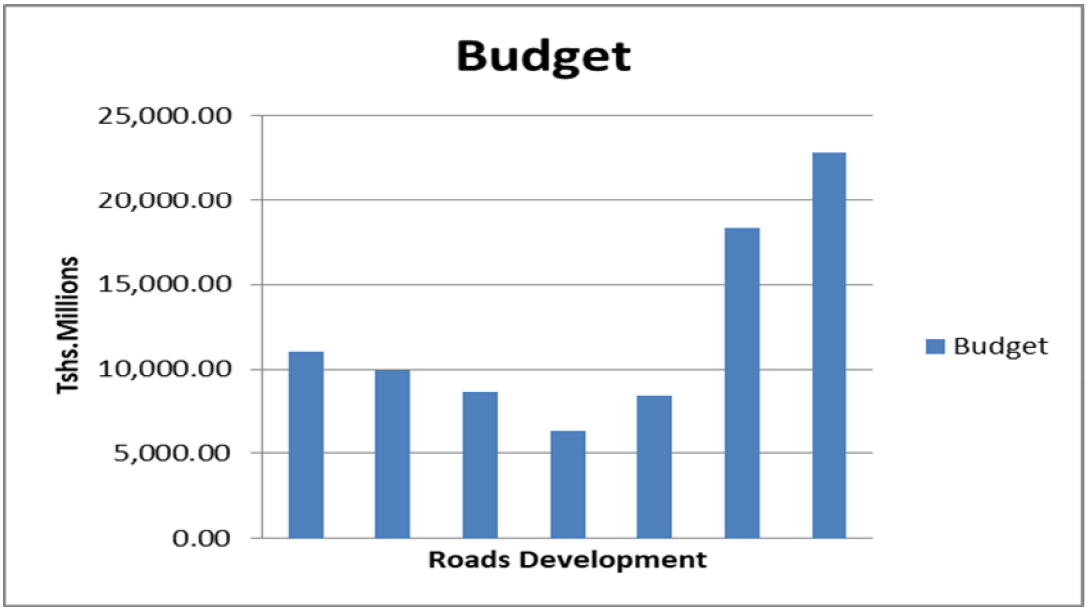

Figure 1.3: Disbursement Funds from World Bank

Source: Dodoma City Council Annual Budgets

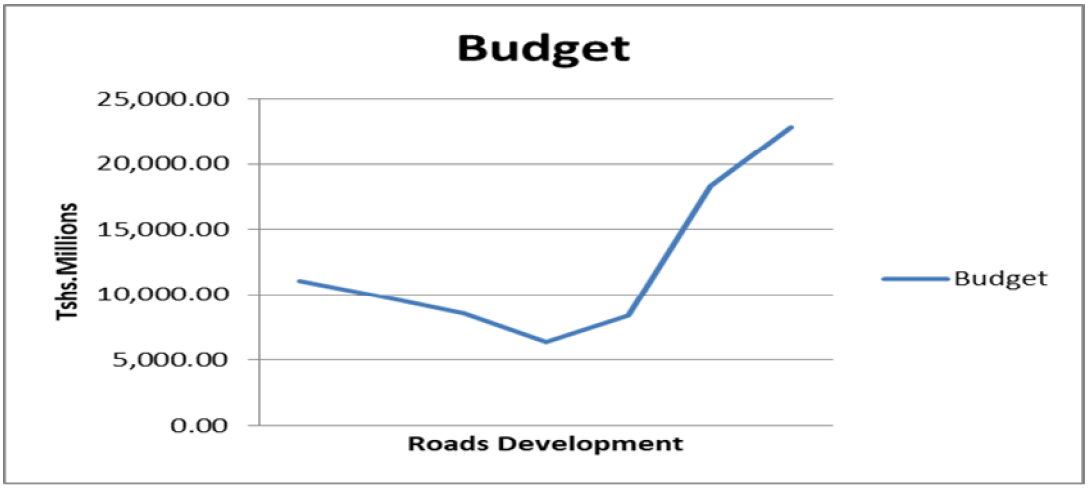

Figure 1.4: Disbursed Flow of Funds from World Bank
Source: Dodoma City Council Annual Budgets

The flow of funds was keeping on increasing including additional works for improving the Dodoma City.

2.9 Research Gap

Despite huge investment in roads infrastructure development in the country and various studies conducted on roads financing for economic and social development still there is no evidence on the improvement of community livelihood. Funds for roads improvement in Dodoma City Council have significant great value to the community. The livelihood improvement of communities in the city depends on various parameters including access to roads. It is the aim of this study to access roads infrastructure development towards livelihood development of the community Citing Dodoma City.

2.10 Conceptual Framework

Conceptual Framework is a tool for analyzing contexts variations which are applied in different categories of work. It aid researchers in describing various phenomenon and it indicates the actions needed in the study through knowledge from former

researchers and researches discoveries on the study.The Framework is a logical model that underlines the programs major activities and their expected results. Therefore it highlights the casual and effect relationship of the program (Gorgens, 2012). According to Patrick (2015), Conceptual framework shows the researcherôs concepts on explaining the study issue. It shows actions to be undertaken during the study having in mind on the previous knowledge from other scholars.

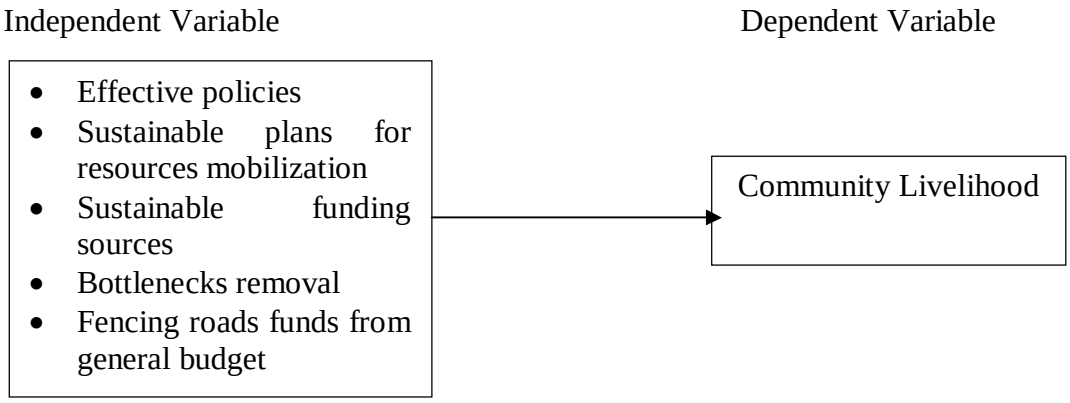

Figure 1.5: Roads infrastructures Development

Dependent and Independent variables are two variables which are used in the experiment. Dependent variable been the variable being tested and measured in the experiment and is entirely dependent on the independent variable. Independent variable is the variable the experimenter changes or controls and is assumed to have direct effect on the dependent variable. As the experimenter changes the independent variable, the effect on the dependent variable is observed and recorded (Helmenstine, 2018). According to the Conceptual framework presented in Figure 6 above, two sides have been pictured showing dependent and independent variables. Dependent variables are affected by Independent variables in the sense that livelihood of the community is influenced by having effective policies which guide roads

development, having sustainable plans for resource funds mobilization, sustainable funding sources, removal of roads bottlenecks which affect roads to be impassable, fencing funds for roads development from general budget so that the funds can be utilized for roads development only. Looking on the conceptual framework, it shows that Independent variables effective policies guide roads development thus enhance Community Livelihood , having sustainable plans for resource funds mobilization entails having good roads which at the ends enhance community livelihood and lastly having sustainable funding for roads entails continuous roads development and sustain Community Livelihood.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

The chapter describes the research methods and procedures employed by the researcher, in the whole process of the research in collecting, analyzing, interpreting and presenting data for the research problem. It also justifies techniques that the researcher deployed and its sustainability to be clear for practical purpose. This chapter includes: type of study, study area, unit of analysis, sample size and sampling techniques, type and sources of data, data collection methods and data analysis methods. Kothari,(2004) defines Research methodology as a way to systematically solve the research problem. The authors continue to conceptualize that it may be under stood as a science of studying how research is done scientifically.

3.2 Research Design

According to Kothari (2004), Research design represents a framework of methods and techniques chosen by the researcher in combining components of research in a reasonable and logical manner to the extent that problems under study are properly discussed. Research design enables identification of research questions and answers in achieving the stated objectives of the study. Survey research designs are procedures in quantitative research in which investigators administer a survey to a sample or to the entire population of people to describe the attitudes, opinions, behaviors, or characteristics of the population. In this procedure, survey researchers collect quantitative, numbered data using questionnaires and statistically analyze the

data to describe trends about responses to questions and to test research questions. Survey research allows gathering large volumes of data that can be analyzed for frequencies, averages and patterns.

Descriptive research aim to accurately and systematically describe a population, situation or phenomenon. It answers what, when, where, when and how questions but not why questions. Descriptive research is an appropriate choice when the research aim is to identify frequencies and categories. The rationale for selecting Dodoma City is because is the Capital City of Tanzania and it has received various funds for roads improvement from Central Government as well as Development Partners. There will be application of descriptive design through qualitative and quantitative methods.

3.2.1 Population of the Study Area

Population under study represents individuals taken from the general population who are having the common characteristics and it is within the group where a sample under study is drawn in the case of Dodoma city is 410,956 (NBS, 2018). In this study, population under study comprises of Road users, Ministry Officials, TARURA Officials and Council Managers in the City of Dodoma.

3.2.2 Area of the Study

City of Dodoma was selected due to its positive impact as being the Capital City of Tanzania. The implementation of roads works has a great influence on the changing livelihood of residents of the City of Dodoma through its utilization. Dodoma being the Capital it should be taken as a mirror towards the rest of the Regions in the entire

Country. Dodoma City is the Capital of the United Republic of Tanzania and the substantive seat of the Union Parliament. It is one of the seven administrative districts that make up Dodoma Region. Dodoma City is located in the centre of the region, totally surrounded by Chamwino and Bahi Districts and lying between latitudes 6.00^0 and6.30^0 South and Longitudes35.30^0 and 36.02^0 East. It is 486km West of Dar es Salaam, Tanzania Private port and commercial and industrial City and 441km South of Arusha, the Headquarters of the defunct East African Community now the East Africa Co-operation and the leading tourist centre.

Dodoma City occupies a total of 2,769 square km, of which 625square km are urbanized. A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household. In Dodoma City after shifting the Government to Dodoma the livelihood of its residents dramatically changed as because of developing infrastructures which not only changed the physical appearance of the City but also Communities gained income through employment as labourers in the infrastructure development such as roads and buildings. The surrounding communities along roads improvement areas not only benefited from employment but even investing along the tarmac improved roads; roads simplified travel time and reduced costs of transport, students get on school on timely manner. It is easy now to move raw crops from the neighboring villages to the City Centre for trading purposes.

3.2.3 Climate

Dodoma region, which is now the major city of the Country, is located entirely at the

Centre of Tanzania. While Dodoma is characterized as a semi-arid having a single and short rain season which spans from late November to late April with average annual rainfall of about 550mm to 600mm. The dry season starts from late April to late November. Dodoma has July and November as coldest and hottest months of the year experiencing about 10^0C and 20^0 C respectively.

3.2.4 Administrative Organization

Dodoma City is one of seven administrative districts that make up Dodoma Region. Administratively Dodoma City is divided in to 4 divisions, 41 wards and 18 villages and 170 streets.

3.2.5 Social-Economic Activities

Dodomaós Socio-economic development is strongly based on agriculture which counts for about 75% of the earned income. Industrial contribution to the socio-economic development is highly concentrated in the urban areas where most industries engage into winery. There is also a Mattress factory and meat processing factory. It is estimated that per capital income falls close to about 470,000.00Tanzanian Shillings.

3.3 Sampling Technique

The study is to be carried in Dodoma City Council - Dodoma Region. Purposive and simple random sampling design is to be used in selection of respondents. Purposive is to be applied in the selection of key informants from ministry officials, TARURA Officials and Council Managers this is according to their importance in this research work. Simple random sampling method is to be applied in the selection of sample

from population of roads users. This technique is appropriate where the population under study significantly is large and attainable (White, 2002). It is important as the population is made up of members with similar characteristics, as the size of a random sample depends on the homogeneity of the population (Shaughnessy *et al*, 2000).

3.3.1 Sample Size

A sample size constitutes the number of individualôs samples which is observed in a survey. Sampling is a process used in statistical analysis in which a predetermined number of observations are taken from a larger population. The methodology used to sample from a larger population depends on the type of analysis being performed. A Sampling is a compromise between the accuracy of findings and the amount of time and money invested in collecting, checking and analyzing the data (Saunders *et al*. 2000).

In this study the sample size will be obtained through the following formula. $n=N/1+N\ (e)^2$; of which N = represent population of road users from Dodoma City which are 410,956, n = sample size and e = level of significance (90%) =0.10. The study has a sample size $n = 410,956/1+410,956(0.10)^2 =$ 99 The sample of road users 99 is to be taken which will comprise road uses in Dodoma city town. Government officials were approached to give their views as influential staff towards the study, they were to give the historical background of the Dodoma City and the trends of changes towards the current status of development achieved through roads development and Livelihood improvement.

3.4 Data Collection Methodology

The data from the field were obtained through two sources which are primary and secondary source of data. Secondary data sources according to Kothari (2004) secondary data means data that are already presented, means data that have already been collected previously and analyzed by someone else before and therefore documented in books, journals, newspapers and magazines. Primary sources according to Kothari (2004) are information collected during the course of doing a research and they are the origin data due to that they are explored first by the researcher. In this study the following methods of collecting data were employed by the researcher. Questionnaire method and documentation method.

The questionnaires, according to (Kothari 1993), is a set of questions administered through questions distributed into written forms in papers, hence distributed to the key respondents so that they might answer and fill required information concerning the persisted problem. Through this study, questionnaires were the best technique that guaranteed privacy and confidentiality. In this study, the questionnaires were distributed to road users in Dodoma City. During the field work of this study, the researcher opted to use different documents in order to verify the information given by respondents. Budget reports, quarterly and annual reports from Dodoma City were consulted. Eventually, the researcher did not neglect other reports from other roads stakeholders which in one way or another played an important role in obtaining the information about livelihood improvement in Dodoma City.

3.5 Data Processing and Analysis

Data obtained from the field (primary data and secondary data) were presented and

analyzed by using the quantitative and qualitative data presentation methods. Through this study, the quantitative and qualitative methods of presenting data were applied. In quantitative and qualitative data presentation, texts (explanations), tables (figures) are commonly used. Text alone did not be applied to justify the findings therefore sets of numerical results were presented on the tables as frequencies and percentages. Processing of Data entailed steps carried out to extract information from raw data. Analyzing data entailed collecting, transforming, cleaning, and interpreting data with the goal of discovering the required information. The results so obtained are communicated, suggesting conclusions, and supporting decision-making. The data, often collection has to be processed and analyzed in accordance with the outline laid down for the purpose at that time of developing the research design.

Processing of data entails verification, listing, undertaking classification and drawing various analyzed tables for data interpretation (Kothari, 2009). The collected data are to be edited for detecting errors and any omissions and thereafter the edited data are to be coded prior to analysis. Statistical Package for Social Sciences (SPSS) was used to analyze data collected. According to Ben Foley (2018) SPSS is used by various kinds of researchers for complex statistical data analysis. It provides basic statistical functions some of which includes frequencies, cross tabulation and bivariate statistics. It provides solutions for data management, which allows researchers to perform case selection, creates derive data and perform file reshaping.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Chapter Overview

This chapter is furnishing and discussing the findings on ñInfluence of Roads Infrastructure Development on Community Livelihood the case conducted in Dodoma City. It is in this chapter where research objectives which were identified during proposal development are responded. These are: (i) To identify baseline status of community livelihood in Dodoma City (ii) To examine influence that roads network development has had on the community livelihood in Dodoma City (iii) To assess strategies for sustainable funding of the roads network in Dodoma City.

4.2 Sample Description

99 respondents represented the sample size to be studied and only 89 respondents participated thus resulted to 89.8% responses which enabled the researcher to proceed with analysis. The respondentôs population was described with the intention of knowing whom the researcher surveyed with. The respondents were characterized by their age, sex and their level of education.

4.2.1 Age of Respondents

Table 4.1: The respondent's Age distribution as Given out by the SPSS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 20	4	4.5	4.5	4.5
	Between 21 - 30	32	36.0	36.0	40.4
	Between 31 - 40	21	23.6	23.6	64.0
	Between 41 - 50	22	24.7	24.7	88.8
	Between 51 - 60	8	9.0	9.0	97.8
	Above 60	2	2.2	2.2	100.0
	Total	89	100.0	100.0	

Source: researcher, 2019

Questionnaire requested respondentôs age distribution as roads users where by the majority of road users were aged ranging from 21-30 were 32(36.0%), 31-40 were21(23.6%), 41-50 were 22(24.7%), 51-60 were 8(9.0%), above 60 were 2(2.2%) and below 20 years were 4(4.5%) (Table 4.1)

4.2.2 Level of Education

The study intends to know the education level of the respondents for the matter of professional competence. Table 4.2 shows that 51(57.3%) of the respondents have attained University degree, 20(22.5%) of the respondents have attained Secondary Education, 9(10.1%) of the respondents have attained Diploma and 9(10.1%) of respondents have attained Primary Education. This finding shows that all age groups participated.

Table 4.2 Education Level of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary	9	10.1	10.1	10.1
	Secondary	20	22.5	22.5	32.6
	Diploma	9	10.1	10.1	42.7
	Degree	51	57.3	57.3	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.2.3 Sex of Respondents

The study considers Sex for the respondent as a way of having gender representation in the sample of road users who were the targeted group in Dodoma City. 60(67.4%) were male and 29(32.6%) were female (Table 4.3).

Table 4.3: Gender Distribution of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	60	67.4	67.4	67.4
	Female	29	32.6	32.6	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.3 Baseline Status of Community Livelihood in Dodoma City

This objective aimed at looking for the indicators which guide baseline status of Community Livelihood in Dodoma City from the following results.

4.3.1 Contribution of Road Construction in Income Generation

The study indicated that 42 respondents (47.2%) acknowledge that one of the base line indicators for livelihood improvement is the way community earns income. This is because those communities who are engaged in the road works earn income for their livelihood improvement and development. The truth of these findings is supported by 27(30.3%) of respondents who strongly agree that the various ways of earning income signifies livelihood improvement, 14(15.7%) respondents remained neutral, 5(5.6%) respondents disagreed and 1(1.1%) of the strongly disagreed. (Table 4.4).

Table 4.4: Contribution on Community Income from Roads Construction in Dodoma

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strong Disagree	1	1.1	1.1	1.1
	Disagree	5	5.6	5.6	6.7
	Neutral	14	15.7	15.7	22.5
	Agree	42	47.2	47.2	69.7
	Strongly Agree	27	30.3	30.3	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.3.2 Means of securing Necessities of Life

The study indicated that majority 51(57.3%) of the respondents agreed that one of the base line indictor of livelihood development is attributed by means of securing necessities of life which includes food, water, medicine, shelter and clothing followed by 25(28.1%) of respondents strongly agree that food, water, medicine, shelter and clothing signify livelihood development, 11(12.4%) were neutral, 1(1.1%) disagreed and 1(1.1%) strongly disagreed (Table 4.5).

Table 4.5: Whether Road Constructions in the City is an Important means of securing Necessities of Life

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.1	1.1	1.1
	Disagree	1	1.1	1.1	2.2
	Neutral	11	12.4	12.4	14.6
	Agree	51	57.3	57.3	71.9
	Strongly Agree	25	28.1	28.1	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.3.3 Capability, Resources and Opportunities for pursuing Individual and household Economic Goals

Table 4.6: Contribution of Road Projects on Community's Capability, Resources and Opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.1	1.1	1.1
	Disagree	1	1.1	1.1	2.2
	Neutral	26	29.2	29.2	31.5
	Agree	50	56.2	56.2	87.6
	Strongly Agree	11	12.4	12.4	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

The study indicated that 50 (56.2%) of the respondents agreed that capability resources and opportunities for pursuing individual and household economic goals emanate from having improved livelihood status followed by 26 (29.2%) of who remained neutral, 11 (12.4%) strongly agreed,1 (1.1%) disagreed and 1 (1.1%) of strongly disagreed as shown in Table 4.6

4.3.4 Increased Possessions of Assets a Person has

The study indicated that majority 41 (46.1%) of the respondents agreed that having assets to which a person possess enhanced livelihood development of the community, 32 (36.0%) remained neutral, 11 (12.4%) strongly agreed,4 (4.5%) disagreed and 191.1%) strongly disagreed (Table 4.7).

Table 4.7: Increased Possessions of Assets a Person has

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.1	1.1	1.1
	Disagree	4	4.5	4.5	5.6
	Neutral	32	36.0	36.0	41.6
	Agree	41	46.1	46.1	87.6
	Strongly Agree	11	12.4	12.4	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.3.5 Increasing Peoples Control of their Natural Resources and building Reliable and Fair Access to Food

The study indicated that 36 (40.4%) of the respondents agree that peoples controls of their natural resources and fair access to food entails having livelihood development, 38 (42.7%) remained neutral, 10 (11.2%) strongly agreed, 3 (3.4%) disagreed and 2 (2.2%) strongly disagreed (Table 4.8).

Table 4.8: Increase People Control of their Natural Resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	2.2	2.2	2.2
	Disagree	3	3.4	3.4	5.6
	Neutral	38	42.7	42.7	48.3
	Agree	36	40.4	40.4	88.8
	Strongly Agree	10	11.2	11.2	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.3.6 Meeting the Requirements of the Individual on a Sustainable Basis

The findings from the study indicated that 39 (43.8%) of the respondents agreed that Individuals meeting their requirements on a sustainable basis is one of the indicator which signify the attainment of livelihood of the Community,28(31.5%) were neutral,12 (13.5%) strongly agreed, 8 (9.0%) disagreed and 2 respondents equivalent to (2.2%) strongly disagreed as shown in Table 4.9

Table 4.9: Meeting the Requirements of the Individual on Sustainable Basis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	2.2	2.2	2.2
	Disagree	8	9.0	9.0	11.2
	Neutral	28	31.5	31.5	42.7
	Agree	39	43.8	43.8	86.5
	Strongly Agree	12	13.5	13.5	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.3.7 Recovering from the Stress and Shocks and Maintain or Enhance its Capabilities and Assets

The findings showed majority 35 (39.3%) of the respondents agreed that recovering from stress and shocks proved as an indicator for having developed livelihood to the

community, 10 (11.2%) respondents strongly agreed, 28 (31.5%) were neutral, 8 (9.0%) of the respondents disagreed and 2 respondents equivalent to (2.2%) strongly disagreed (Table 4.10).

Table 4.10: Recovering from the Stress and Shock

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	6.7	6.7	6.7
	Disagree	10	11.2	11.2	18.0
	Neutral	28	31.5	31.5	49.4
	Agree	35	39.3	39.3	88.8
	Strongly Agree	10	11.2	11.2	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.4 Influence of Roads Network Development on Community Livelihood in Dodoma City

This aimed to assess on how improvement of the roads network enhance livelihood development to the community in Dodoma City.

4.4.1 Promotion of Access to Social Services

Table 4.11: Whether Access to Roads has Increased Access to Social Services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.1	1.1	1.1
	Disagree	2	2.2	2.2	3.4
	Neutral	8	9.0	9.0	12.4
	Agree	42	47.2	47.2	59.6
	Strongly Agree	36	40.4	40.4	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

From the findings, majority of the respondents, 42 (47.2%) of the respondents agreed that roads network improvement enhance access to social services, 36 (40.4%)

strongly agreed, 8 (9.0%) remained neutral, 2 (2.2%) disagreed and 1 (1.1%) strongly disagreed. The results indicated that the more Government improves its roads enables access and connectivity thus enhance livelihood to the Community (Table 4.5).

4.4.2 Enhanced Labour based Employment and improves Access

Study findings shows that 46 (51.7%) of the respondents agreed that improvement of roads infrastructures enhances livelihood development through labour engagement of labour base. Labour base is the technology in which labour, supported by light equipment is used as cost-effective method of constructing and maintaining infrastructure of a required standard. Labour based technology is very appropriate for participative approaches.

Communities can construct and maintain infrastructure themselves, using local labour and resources, with limited technical assistance and through that skills are created for maintenance. 36(40.4%) of the respondent strongly agree that roads improvement through labour based method enhance livelihood development of the surrounding communities, 8 respondents equivalent to 9.0% remained neutral, 2 (2.2%) of the respondent disagreed and 1 (1.1%) strongly disagreed. (Table 4.12)

Table 4.12: Enhance Labour based Employment and Improved Access

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	4	4.5	4.5	4.5
	Neutral	15	16.9	16.9	21.3
	Agree	46	51.7	51.7	73.0
	Strongly Agree	24	27.0	27.0	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.4.3 Establishment of New Enterprises Including Shops, Tea Rooms and Workshops

The results from Table 4.13 indicated that 48 (53.9%) of the respondents agreed that roads improvement and development enhance establishment of new enterprises and shops along the constructed roads something which improved the livelihood of the communities, 24 (27.0%) strongly agree, 10 (11.2%) remain neutral, 6 respondents equivalent to 6.7% disagree and 1 (1.1%) strongly disagree (Table 4.13).

Table 4.13: Establishment of New Enterprises Including Shops, Tea Rooms, and Workshops

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.1	1.1	1.1
	Disagree	6	6.7	6.7	7.9
	Neutral	10	11.2	11.2	19.1
	Agree	48	53.9	53.9	73.0
	Strongly Agree	24	27.0	27.0	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.4.4 Retail Outlets have become Wholesalers supplying Goods to New Shops along the Roads

Table 4.14: Retail Outlet has Become Wholesalers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	3.4	3.4	3.4
	Disagree	15	16.9	16.9	20.2
	Neutral	37	41.6	41.6	61.8
	Agree	22	24.7	24.7	86.5
	Strongly Agree	12	13.5	13.5	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

The study aimed to know whether along the roads, if established shops have prospered to become wholesale in supplying good to other shops, 22 (24.7%) of the respondents agreed, 37 (41.6%) remained neutral, 12 (13.5%) strongly agreed, 15 (16.9%) of respondents shows disagreement and 3 (3.4%) 27.0 strongly disagreed (Table 5.3).

4.4.5 Labourer's Engaged in Road Works have Earned Good Livelihood after Road Construction

The study aimed at knowing the status of labourerôs who engaged in roads works their status after project completion. 32 (36.0%) of the respondents agrees that the livelihood status of labourerôs were improved after project completion, 12 (13.5%) of the respondents strongly agreed that status of the labourerôs are improved, 22 (24.7%) of the respondents were neutral, 14 (15.7%) of the respondent disagree and 9 (10.1%) of the respondent strongly disagreed. The finding indicated that livelihood of the laboures who were engaged in roads works have improved after completion of the project (Table 4.15)

Table 4.15: Labourers Engaged in Road Works have Earned Good Livelihood

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	10.1	10.1	10.1
	Disagree	14	15.7	15.7	25.8
	Neutral	22	24.7	24.7	50.6
	Agree	32	36.0	36.0	86.5
	Strongly Agree	12	13.5	13.5	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.4.6 Great Improved Indicators Concerning Income, Housing Quality, School Attendance and Sanitation

From the findings, 34 (38.2%) of the respondents agree that income, housing quality, schools attendance and improved sanitation are one of the indicators of livelihood improvement, 15 (16.9%) strongly agreed, 27 (30.3%) respondent were neutral, 5 (5.6%) of the respondents disagree and 8 (9.0%) strongly disagree. The finding indicated shows income generation, quality house, improved school attendance and sanitation are one of the indicators of livelihood improvement due to improved roads network (Table 4.16).

Table 4.16: Great Improved Indicators Concerning Income, Housing Quality, School Attendance and Sanitation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	9.0	9.0	9.0
	Disagree	5	5.6	5.6	14.6
	Neutral	27	30.3	30.3	44.9
	Agree	34	38.2	38.2	83.1
	Strongly Agree	15	16.9	16.9	100.0
	Total	89	100.0	100.0	

4.4.7 Enhanced use of Local Resources

The study aimed to explore the use of local resources during roads improvement and 44 (49.4%) of respondents agreed to the use of locally available resources in roads improvement, 14 (15.7%) strongly agreed, 26 (29.2%) remained neutral, 4 (4.5%) disagreed and 1 (1.1%) strongly disagreed. The finding indicated that implementation of roads works in the community enhance the use of locally available resources these includes stones, course aggregates, labourerôs etc (Table 4.17).

Table 4.17: Enhance use of Local Resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.1	1.1	1.1
	Disagree	4	4.5	4.5	5.6
	Neutral	26	29.2	29.2	34.8
	Agree	44	49.4	49.4	84.3
	Strongly Agree	14	15.7	15.7	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.4.8 Traffic Jams reduce the Attractiveness of Cities and Worsen the Effectiveness of Transport System

The study aimed at exploring the benefits of having good constructed and maintained roads, 42 (47.2%) of the respondents shows that well-constructed and maintained roads reduce traffic jams make cities attractive, reduce travel time and reduce fuel consumption costs, 21 (23.6%) strongly agree, 15 (16.9%) were neutral, 8 (9.0%) of respondents disagreed and 3 (3.4%) strongly disagree.

Table 4.18: Traffic Jams Reduced the Attractiveness of Cities and Worsen the Effectiveness of Transport System

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	3.4	3.4	3.4
	Disagree	8	9.0	9.0	12.4
	Neutral	15	16.9	16.9	29.2
	Agree	42	47.2	47.2	76.4
	Strongly Agree	21	23.6	23.6	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

The finding shows that road make a crucial contribution to economic development and growth and bring important social benefits. It provides access to employment, social, health and education services and lastly it open up more areas and stimulate economic and social development (Table 4.18).

4.5 To Assess Strategies for Sustainable Funding of the Roads Network in Dodoma City

This aimed at examining the strategies for roads funding sustainability in Dodoma City

4.5.1 Enhance the Engagement of Labour based Works

The study aimed at exploring the strategies for roads funding sustainability the results shows that, 43 (48.3%) of the respondents agreed that engagement of labour based works whereby communities surrounding the project are to be given priority to engage into road network routine maintenance as source of near decent type of employment to help fight poverty and increase roads maintenance sustainability, 27 (30.3%) of the respondents strongly agreed, 16 (18.0%) of the respondents were neutral, 1 (1.1%) of the respondent disagree and 2 (2.2%) of the respondents strongly disagreed.

Table 4.19: Enhance the Engagement of Labour based Works

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	2.2	2.2	2.2
	Disagree	1	1.1	1.1	3.4
	Neutral	16	18.0	18.0	21.3
	Agree	43	48.3	48.3	69.7
	Strongly Agree	27	30.3	30.3	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

The finding indicated that the use of labour based methods for road construction is now widely practiced in many developing countries. There is strongest support on the use of such methods, where appropriate, and there are numerous benefits where

these methods have been applied successfully, it provides temporary employment for a large number of unskilled labour, Savings in costs, transfer of new skills and alleviation of poverty (Table 4.19).

4.5.2 Enhancing Scientifically Monitoring of Roads Effects on Sustainability Overtime once it is built

The study aimed at enhancing scientific monitoring methods for roads sustainability and the study shows that 48 (53.9%) of the respondents agree that application of modern monitoring system on constructed roads will enhance its funding sustainability as little money will be used for repair and the rest of the funds to add more networks, 26 (29.2%) of the respondents strongly agreed, 14 (15.7%) of the respondents were neutral and 1 (1.1%) of the respondent disagreed. The finding indicated that, sometimes detect underlying problems through monitoring before they have an adverse effect are of beneficial because it reduces unforeseen costs for future development (Table 4.20).

Table 4.20: Scientific Monitoring of Roads Effects on Sustainability Overtime once it is built

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.1	1.1	1.1
	Neutral	14	15.7	15.7	16.9
	Agree	48	53.9	53.9	70.8
	Strongly Agree	26	29.2	29.2	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.5.3 Incorporating Land use Planning and Public Transport Planning in Roads Development Decisions

The study aimed at exploring incorporation of land use planners and public transport planners in decision for roads development and the finding shows that 40(44.9%) of the respondents agreed to incorporate land planners and transport planners during roads development planning process. This will enable proper network plan and avoid future infrastructure demolition in case of utilities installation, 25 (28.1%) strongly agreed, 22 (24.7%) were neutral and 2 (2.2%) disagreed. The finding indicated that incorporating Land-use planning and transport planners enabled regulating the use of land in an effort to promote more desirable social and environmental outcomes as well as a more efficient use of resources (Table 4.21).

Table 4.21: Incorporating Land use Planning and Public Transport Planning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	2.2	2.2	2.2
	Neutral	22	24.7	24.7	27.0
	Agree	40	44.9	44.9	71.9
	Strongly Agree	25	28.1	28.1	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.5.4 Setting Policy Objectives that are clearer and which guide Roads Development Programme

The study aimed at strategically setting objectives which will guide roads development programmes, 37 (41.6%) of the respondents agrees that there is a need of having policy objectives which are clearer and will guide the roads development processes, 27 (30.3%) of the respondents strongly agreed, 17 (19.1%) were neutral, 5

(5.6%) disagree and 3 respondents equivalent to 3.4% strongly disagree as shown in Table 4.22.

Table 4.22: Setting Policy Objectives that are clearer and which guide Roads Development Programme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	3.4	3.4	3.4
	Disagree	5	5.6	5.6	9.0
	Neutral	17	19.1	19.1	28.1
	Agree	37	41.6	41.6	69.7
	Strongly Agree	27	30.3	30.3	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

4.5.5 Provision of Appropriate Resources both Internal Mobilization and External Sources for Roads Development and Maintenance

Table 4.23: Provision of Appropriate Resources both Internal Mobilization and External Sources for Development and Maintenance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	2.2	2.2	2.2
	Disagree	9	10.1	10.1	12.4
	Neutral	22	24.7	24.7	37.1
	Agree	31	34.8	34.8	71.9
	Strongly Agree	25	28.1	28.1	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

The study aimed at exploring funding mobilization for roads sustainability development as one of the strategy, 31 (34.8%) of the respondents agrees that mobilization of resource fund both internal sources and external sources are one of the strategy for sustainable road funding, 25 (28.1%) strongly agreed, 22 (24.7%) were neutral, 9 (10.1%) disagreed and 2 (2.2%) strongly disagree. The finding

indicated that mobilization of resource funds from internal and external, for roads improvement and development then this will be a good strategy towards realizing sufficient funds for roads funding sustainability (Table 4.23).

4.5.6 Development of Comprehensive Maintenance System that Supports Roads Assets Prevention

The study aim at developing a comprehensive roads maintenance system that will support roads assets from deteriorations. 48 (53.9%) of the respondents agree that developing a comprehensive maintenance strategy will enable roads to be sustainable for longtime and last long, 21 (23.6%) strongly agreed, 18 (20.2%) were neutral and 2 (2.2%) disagree. The finding indicated that having a comprehensive maintenance strategy of roads enhance its sustainability thus reduce huge maintenance costs (Table 4.24).

Table 4.24: Development of Comprehensive Maintenance System that Supports Roads Assets Prevention

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	2.2	2.2	2.2
	Neutral	18	20.2	20.2	22.5
	Agree	48	53.9	53.9	76.4
	Strongly Agree	21	23.6	23.6	100.0
	Total	89	100.0	100.0	

Source: Field Data, 2019

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Chapter Overview

This chapter shows the summarized report studied, draw conclusion from the results and suggesting further future studies. It is in this chapter where the researcher findings are concluded and way forward is given.

5.2 Summary of Findings

The study analyzed the influence of infrastructure development on community livelihood in Urban Tanzania case of Roads Projects in Dodoma City. This study was facilitated by the following objectives identification of baseline status of community livelihood, examining the influence that roads network development has had on the community livelihood and strategies for sustainable funding of the roads network.

5.2.2 The Baseline Status of Community Livelihood in Dodoma City

The finding indicated that the base line indicator for livelihood development is justified by how communities earn income. This is because communities who are engaged in the roads works and those surround project areas earn income in terms of wage, salary and those utilized the opportunity for investing. This finding reflected expression of Abeyrathne (2010), on his presentation that Livelihood development improve the quality of life for people by providing them with access to health care, livelihood opportunities and protection there by giving them hope to constructively contribute to their communities. Strengthening community capacity to respond to issues of poverty and supporting the environment. Contributing towards setting

strategic directions, policies, plans and expected outcomes. Working towards strengthening communication and working relationships with other partners to provide services, education and livelihood to targeted population. World Bank (2018), noted that the objective of the Sustainable Livelihood Program is to reduce poverty and inequality by generating employment among poor households and by moving highly vulnerable households into sustainable livelihoods and toward economic stability.

5.2.2 The influence that Roads Network Development has had on the Community Livelihood in Dodoma City

The findings indicated that, roads network improvement enhance access to social services create employment through engagement of labour base technology, enabling establishment of new enterprises which includes shops, tea rooms and workshops along the projects areas this at the end improves the life status of the community thus by earning income, constructing quality and good houses, improves students school attendance as means of transport are available and roads are in good status. Local available materials are used for roads improvement which enhances income to the surrounding communities. Having good and well maintained roads reduce traffic jams and attracts cities growth thus reduce travel times and vehicles operating costs.

The findings are relevant to other empirical proofs like Cambridge Systematics (1998) which shows that improved roads and enhanced transportation trough out a year enabled economic growth both nationally and individual as there are smooth movement of communities towards their working stations and at the productive areas which in turn facilitates the communities objectives of having good life. It is through

infrastructure development where communities who engage in road works or invest in the areas along well developed roads earn income, get employed, expansion of business and in totality enhance investment which in turn communities pay various taxes for social and economic development of the Nation. Social Services can only be accessed if roads infrastructures are purely developed on sustainable manner. It is easy to reach Hospitals, Schools, Markets, farms the big relief comes from reduced costs for travel times and costs saving. Linkage between cities and regions are only possible is roads network are well maintained linking facilitates smoothening business linkage and improves efficiency.

5.2.3 Strategies for Sustainable Funding of the Roads Network in Dodoma City

The study revealed that, engagement of labour based works is one of the strategies for funding stability as payment for labour are not much and roads remain in a good state for long as the surrounding communities are routinely undertaking maintenance. Findings also indicated that having scientific monitoring system for roads works reduces maintenance backlog which relieve cost of road maintenance in the long run. Engagement of land use planners and transport planners were observed in the study as among strategies for lengthening the life of the roads as once it is planned and constructed no interference of further investment of utilities which destruct already developed roads.

The study revealed that the Government need to have clearer policies guiding the roads development and strive to have sufficient fund resources mobilized from within the Country and outside from Donor Partners for supporting roads sustainable development. The findings are revealed by Svarpliene (2016), sustainable funding

strategies for roads enabled reduction of prevailing traffic jams in the cities, travel time, reduce fuel consumptions, costs of transportation and bring back the attractiveness of the cities. Having poor roads which are not passable throughout the year causes hazardous to the communities via accidents and environmental pollution. For future infrastructure development there is a need of having sustainable strategies for funding roads development for enhancement of socio and economic development.

5.3 Conclusion

Objective one was identification of baseline status of community livelihood in Dodoma City. The study shows that income generation, attainment of basic requirements i.e food, water, shelter and clothing, pursuing economic goals, assets possession and managing environmental surroundings are some of the indicators for livelihood development due to the engagement of communities in roads works for employment and those benefit out of the developed infrastructures. Roads enabled smoothening economic development through connectivity, jobs creation, earning income, easy reach to schools and hospitals (Berg. 2015).

Second research objective examine the influence that roads network development has had on the community livelihood in Dodoma City. The study revealed improvement of roads access to social services, employment creation through labour based works, establishment of enterprises, traffic jams reduction and reducing travel times and operating costs. Third research objective aimed at assessing strategies for sustainable roads improvement funding in Dodoma City. The findings shows that engagement of labour based works, adopting scientific monitoring method for roads

works, incorporating Town and transport planners during roads works planning, plan and enforcing policy objectives which are clearer on roads works, soliciting financial resources from within and outside and developing a comprehensive roads maintenance system enhance strategies for sustainable funding improvement of roads.

5.4 Recommendations

The Central government needs to inject resource funds sufficiently enough for roads improvement and development for better network access and livelihood improvement of its communities. Roads plays a big role in economic development of an Nation as it has been seen that roads makes access possible and thus enhance economic growth creation of employment, reduce travel time and costs, reduce environmental pollution, makes access to social service. Individuals, household, community, local Government are supposed to provide security to roads furnitureôs and maintain sustainable roads maintenance for the lifelong of the roads in Dodoma this will reduce costs for maintenance as we have seen in the study that funds for roads development are keeping on increasing and more roads are maintained thus attributes income to the community for better livelihood improvement.

Communities are encouraged to form groups who will perform routine maintenance of roads as labour based groups for earning income. Private sector in Dodoma needs to engage them in supporting the Government efforts to develop and maintain roads by contributing materials and financial resources towards the efforts. The Development Partners and NGOôs needs to extend their support towards roads improvement and development in Dodoma as the City are growing after the shifting

of the Government to Dodoma City. There is a huge demand of roads infrastructure development to make the City attractive.

5.5 Suggestions for Further Study

Researcher proposed that in future there is a need of conducting study on influence of improved and developed roads network on Communities Safety versus Economic importance by interviewing the communities.

REFERENCES

Abeyrathne, E. M. (2010). Livelihood Development, Global Nature Fund. Retrieved on 30th March, 2019 from; www.globalnature.org.

Asian Development Bank, (2007). Improvement of Rural Access Roads and Livelihood Development for the poor, Grant Report. Metro Manila, Philippines.

Asof, F. (2012). Sustainable rural roads for Livelihood and Livability, *Social and Behavioural Science,* 35, 1-8.

Barret, C. B. (2002*). Food security and food assistance Programme*, Handbook of Agriculture Economics. 2nd Ed., Paperback: Elsevier.

Bayes (2014).Transport infrastructure Investment and Transport Sector Productivity on Economic Growth. South Africa, 1975 ï 2011. Mediterranean Journal of Social Sciences, 4(13):761-772 ·

Ben, F. (2018). What is SPSS and how does it benefit Survey data Analysis, retrieved on 21st June, 2019 from; www.surveygizmo.com.

Berg, C. U., Deichmann, Y., & Selod, H. (2015). Transport Policies and Development, World Bank Policy Research Working Paper 7366.

Cambridge, S. (1998). Economic Impact Analysis of Transit Investment, Guide book for practitioners, report 35, TCRP, Transportation Research Board.

Carlo, M. (1997). The Institutional and Financial Framework of Rural Transport Infrastructure, Sub ï Saharan Transport Policy Programmed Working Paper No.17. World Bank, Washington.

Chambers, R. & Conway, R. (1991). Sustainable rural livelihood, practical Concepts for the 21st Century. Imperial College London, UK.

Cooley, C. H. (1894). *The theory of Transportation,* Publication of the American Economic Association*,* Volume 9, USA.

Cuciureanu (2012).Transport infrastructure vital, Annual southern African Transport Conference, Pretoria South Africa.

Fukubayashi, Y. & Kimura, M. (2017). *Spot Improvement of Rural Roads using Local Resources - Base approach*. Asia and Africa.

Glavan, A. (2008). New roads infrastructures, Annual Southern African Transport Conference. Pretoria, South Africa.

Gralich, E. M. (1994). Infrastructure Investment, A review essay. *Journal of Economic Literature,* 32(3), 1176-96.

Heggie, I. G. & Vickers, P. (1998). *Commercial Management and Financing of Roads.World* Bank, Technical Paper No. 409.

IFAC, (2012). Conceptual Framework, International Federation of Accountants. Annual Report, New York, IFAC.

Khumalo, O. (2013). Assessing the potential benefits of rods infrastructure development for poverty alleviation, unpublished masters dissertation, University of Johannesburg. South Africa.

Kothari, C. R (2009). *Research Methodology Methods and Techniques*. 02nd Ed., Delhi: New International (P) Ltd..

Krantz, L. (2001). *The sustainable livelihood approach to poverty reduction*. Swedish International Development Cooperation Agency. Division for Policy and Social ï Economic Analysis. Stockholm, Sweden.

Krishnaswani, O. R. (1993). *Methodology of Research in Social Sciences*. Delhi: Himalaya Publishing House.

Kumar, A. (2002). *A review of Road Sector Reforms*, URT.

Leyden, K., Healy, D., Douthwaite, R., Lumley, I., Gibbons, M., Murray, A., Farell, K., Guckian B. & Johnston, P. (2007). A sustainability assessment process for road-building and other development. Ireland.

Majale, M. (2002). Regulatory Guidelines for Urban Upgrading towards effecting pro-Poor change. Intermediate Technology Development Group (ITDG). United Kingdom.

Mugenda, M. G. (2003). *Research methods, Revised edition, Quantitative and Qualitative Approaches*, Nairobi: Nairobi Act Press.

Nelson, J. (2017). Advantages of roads development in Community. Retrieved on 21st March, 2019 from; http://www.quora.com/what-are-advantages-of-roads.

Reiss, B. (1993). *Project Management demystified,* 3rd Edition, USA & Canada.

Roe, M. (1998). Sustainable livelihood, International Journal of Tourism Research. Shachtebeck, C. &Mbuya, J. M. (2006). *The potential benefits of roads Infrastructure development for poverty alleviation.* University of Johannesburg.

Singh, P. (2015). *Livelihood Concept and Approach*. Global Communities. India.

Singh, R. & Gilman, D. (1999). Making Livelihood more Sustainable, *International Social Science Journal*, 51(162), 539-545.

Stephen, M., Nora, M & Moses, A. (2009). Sustainable Livelihood Approach, University of Reading, UK Department of Geography, Paper No. 189.

Svarpliene, A. (2016). Measure of sustainable development of roads network, *Europe. Transport Research Procedia,* 14, 965-972·

TARURA, (2018/19). Annual Performance Agreement for District Roads, Tanzania Rural and Urban Roads Agency, Dodoma, Tanzania.

Wiggins, S. (2018). Changes to livelihoods in rural Tanzania since the late 1980s. Growth Research Programme: DEGRP.

APPENDICES

Appendix 1: Study Questionnaire

Dear respondents,

I am a student at the Open University of Tanzania pursuing Master programme in Monitoring and Evaluation and currently collecting data for my dissertation for the study titled **"Influence of road infrastructure development on community livelihood": A case of roads projects in the City of Dodoma"**.

Responses from you will be treated as confidential and been used for academic purpose.

SECTION A: PERSONAL INFORMATION

1. **Please provide your personal information (Please tick the appropriate)**
    1. Please select your age:
        ( ) Below 20
        ( ) Between 21 and 30
        ( ) Between 31 and 40
        ( ) Between 41 and 50
        ( ) Between 51 and 60
        ( ) Above 60
    2. Please select your Sex:
        ( ) Male
        ( ) Female
    3. Please select your Marital Status:
        ( ) Single

( ) Married

( ) Separated

( ) Widow/Widower

4. Please select your education level:

( ) Primary

( ) Secondary

( ) Diploma

( ) Degree

( ) Other (Please Specify)é é é é é é é é é é é é ..

5. What are the contributions of roads development

( ) Employment

( ) Income generation

( ) Accessibility

SECTION B: COMMUNITY LIVELIHOOD IN DODOMA CITY

1. Please indicate your level of agreement/disagreement by ticking (ã) the most appropriate box on the Community livelihood improvement.

   (1) Strong Disagree (SD), (2) Disagree (D), (3) Neutral (N), (4) Agree (A), (5) Strongly Agree (SA)

S/n	Community Livelihood	SD	D	N	A	SA
	Livelihood attainment / indicators					
1	Contribution of road construction in income generation					
2	Means of securing necessities of life					
3	Capability, resources and opportunities for pursuing individual and household economic goals					
4	Increased possessions of assets a person has.					
5	Increased peoples control of their natural resources and building reliable and fair access to food.					
6	Meeting the requirements of the individual on a sustainable basis					
7	Recovering from the stress and shocks and maintain or enhance its capabilities and assets					

SECTION C: ROADS NETWORK IMPROVEMENT ON COMMUNITY LIVELIHOOD DEVELOPMENT.

1. Please indicate your level of disagreement/agreement by ticking (ã) the most appropriate box in roads network improvement on community livelihood development

S/n	Roads network improvement on community livelihood development	SD	D	N	A	SA
1	Promotion of access to social services					
2	Enhanced labour based employment and improved access					
3	Establishment of new enterprises including shops, tea rooms and workshops					
4	Retail outlets have become wholesalers supplying goods to new shops along the roads					
5	Labourerôs engaged in road works have earned good livelihoods after road construction					
6	Great improved indicators concerning income, housing quality, school attendance and sanitation.					
7	Enhanced use of local resources					
8	Traffic jams reduce the attractiveness of cities and worsen the effectiveness of transport system					

2. Otheré é
é é

SECTION D: STRATEGIES FOR SUSTAINABILITY OF ROADS FUNDING DEVELOPMENT IN DODOMA CITY

1. Please indicate your level of disagreement/agreement by ticking (ã) the most appropriate box on sustainable strategies for roads development.

S/n	Sustainable strategies for roads development	SD	D	N	A	SA
1	Enhance the engagement of labour based works					
2	Enhancing scientifically monitoring of roads effects on sustainability overtime once it is built.					
3	Incorporating land use planning and public transport planning in roads development decisions					
4	Setting policy objectives that are clearer and which guide roads development programme					
5	Provision of appropriate resources both internal mobilization and external sources for roads development and maintenance					
6	Development of comprehensive maintenance system that supports roads assets prevention					