

**FISCAL DECENTRALIZATION, OWN SOURCE REVENUE AND THEIR
EFFECT ON HUMAN DEVELOPMENT IN WAJIR COUNTY, KENYA**

ABDIMAJID JIMALE OSMAN

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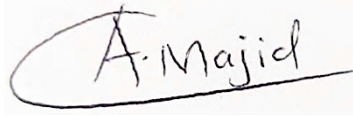
**A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS,
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AWARD OF DEGREE OF MASTER OF ECONOMICS (COOPERATION
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DECLARATION

This project is my original work and has not been presented for a degree in any other University

Signature



Date _____

Abdimajid Jimale Osman (BA-Economics), CPA-K

K101/CTY/PT/27488/2014

I confirm that the project has been submitted for examination with my approval as University Supervisor

Sign _____

Date _____

Dr. James Maingi

Lecturer,

Department of Economic Theory,

Kenyatta University

DEDICATION

To my friends, relatives and beloved Family.

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The project development could not have been possible without the support and direction of numerous people who in one way or another contributed and extended their invaluable aid in the development of this research work, this study would not have been feasible without their input. I owe a debt of gratitude to the Cooperation Development Network and Kenyatta University for providing me with the chance to pursue a Master's degree in Economics (Cooperation and Human Development). I would especially like to express my gratitude to Comitato Internazionale Per Lo Sviluppo Dei Popoli (CISP) and Foundation Assistance International for providing a scholarship for me to pursue the master's degree. Also, I am very grateful to my Supervisor Dr. James Maingi (PhD) for his support and guidance while preparing this research work. I owe special thanks to all my lecturers, family, relatives and friends for their encouragement and support. Finally, I thank the Almighty God for the gift of life, wisdom, and knowledge. All errors and omissions in this work are solely mine.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADF	Augmented Dickey Fuller
ARDL	Autoregressive Distribution Lag
CDIs	County Development Indices
CRA	Commission on Revenue Allocation
DDO	District Development Officer
DFRD	District Focus for Rural Development
ECD	Early Childhood Development
ECDCs	Early Childhood Development Centres
GoK	Government of Kenya
IGFR	Intergovernmental Fiscal Relations
KDHS	Kenya Development Health Survey
KIHBS	Kenya Integrated Health Baseline Survey
OCOB	Office of Controller of Budget
OECD	Organization for Economic Co-operation and Development
PFM	Public Finance Management
RMLF	Road Maintenance Levy Fund
SEBF	Secondary Education Bursary Fund
SRDP	Special Rural Development Program
VECM	Vector Error Correction Model
VIF	Variance Inflation Factor

OPERATIONAL DEFINITION OF TERMS

County Government	It is a local government established by the 2010 Kenyan Constitution to supply a designated geographic area with services like water, sanitation, health care, and education.
Devolution	The transfer of services from national government to sub-national government to aid in service delivery.
Fiscal policy	It is the process, which the government uses to adjust its tax rates in order to influence and monitor the economy in a country.
Fiscal Decentralization	The procedure by which subnational (county) government receives authority to spend money and make revenue from the national government.
Intergovernmental Transfers	The funds disbursed by the national government to the county governments
Human Development	The increase in human well-being sphere in terms of health, education and living standard.
National Government	In the context of this study refers to the central government which is in charge of the overall services delivery with strict adherence to the Constitution of Kenya 2010.

ABSTRACT

One of the most revolutionary developments in Kenyan administration is decentralization, which was envisioned under the 2010 Kenyan Constitution. One objective of decentralization, as stated in the 2010 constitution, is to support and promote socioeconomic progress by providing all Kenyans residing in the 47 neighbouring counties with conveniently accessible services. Fiscal decentralization is one of the best strategies available for redistributing government spending and earnings to lower governmental tiers. Fiscal decentralization and human development are intertwined, and this connection creates an exciting area of research. The eight provinces that preceded the national government as the next sub-national administrative divisions have been reduced to forty-seven counties. The counties can now formulate and carry out plans, policies, and choices that are in line with Kenya's constitution, all for the benefit of the county's citizens. The goal of devolution has not been fulfilled, but fiscal decentralization has become more established as a result of the 2010 approval of a new constitution and the following adoption of county governments. More money are still being transferred to the devolved entities. However, the intended goal of providing services closer to the people has not been fully realized hence the need for the current study to examine the relationship between fiscal decentralization and human development in Wajir County, Kenya, with a focus on two specific objectives. It starts by taking into account how intergovernmental transfer affects human development. Second, it assesses how Wajir County's human development is impacted by county-owned transfers. The objective is to employ Wajir County's quarterly time series data in an explanatory research approach. Subsequently, the study employed a multivariate linear regression model to investigate the impact of Wajir County's fiscal decentralization on human development. Pre- and post-estimating tests were performed before estimation in order to make sure the results obtained were reliable. The study recommended that the national government promptly allocate funds to the county for adequate, timely and quality services to enhance human development in Wajir County and the county should put in place stringent measures to enhance revenue generation, as the findings demonstrated that both intergovernmental and own source revenue have a positive significant effect on human development.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

World Bank report (2009) indicated that the majority of developing nations are confronted with difficulties related to the decentralization concept in the areas of human development, and fiscal, political, and administrative elements in the context of a globalizing world economy. According to Hung and Thanh (2022), fiscal decentralization has a favorable impact on human development but a detrimental influence on economic progress. In terms of identification and sociocultural beliefs across groups and societies, it also aids in promoting regional balance (Omodero, 2022). One of the best methods for transferring government expenditure and generating money at both local and regional levels of government is fiscal decentralization (Faguet, Fox & Poeschl, 2014).

Fiscal decentralization poses a pressing need in a number of countries in Sub-Saharan Africa, in line with demands for a greater voice in the budget-making process and spending by the citizens, (Oates, 2006; Sellers, 2017). Further, it involves the delegation of financial powers and responsibilities to the sub-national government. Capability theorists have recommended fiscal decentralization as the best means of ensuring human development are achieved (Roy, Heuty, & Letouzé, 2012). The theory hypothesized that fiscal decentralization improves allocation and productivity effectiveness, further; it also helps to improve equity in the distribution of resources to the citizen. Yushkov (2015) claimed that the fiscal policy tools help to bring key decision-makers and policy-makers closer to the people which translates to public

participation in the process of policy-making, decision-making and execution of the development projects within each region. For the past two decades, countries across the world have been transforming governance structures in favor of administrative and fiscal decentralization (Freitag & Vatter, 2008). Fiscal delocalization and human well-being are interconnected and this link between the two variables creates a very interesting area of analysis for the current study (Gogoi, 2017). In Kenya, fiscal decentralization is promoted through devolution which was enshrined in the constitution of Kenya following the promulgation in 2010.

Devolution is viewed as a means to bring the national development nearer to the Citizens when it comes to public goods and services. It has also led to an increase in local autonomy of sub-national entities to gain more power enabling the sub-national governments to manage their own finances and able to engineer more rural development in terms of road networks which has made it easy for the citizens especially, the farmers to transport their produce to the market thus, earns income, control their financial resources and subsequently contributes to economic growth (Suri, 2011). Through this, the sub-national governments are able to allocate the available resources efficiently and better respond to the needs of their communities (Bardahan & Mookherjee, 2006).

Fiscal decentralization as a policy tool in respect to monetary growth and its impact on human development has been widely debated and researched on (Kwon, 2013). Economists such as Oates (1972) considered devolution of power as a way of improving the much inefficiency found within the public sector (Sow & Razafimahefa, 2015).

Fiscal decentralization differs from one country to the other. In Pakistan, fiscal decentralization ensures that quality services such as health, education and administration of justice are provided to the people and that they are delivered on time (Faridi, 2011). It is also used to enhance the economic independence of the lower administrative units that are referred to as provinces in Pakistan (Rashid, Sadiq & Khalid, 2010). These create harmony among its four provinces while strengthening the federation government. Pakistan is a centralist state and revenue collection is primarily a central government function, it is also the role of the central government to carry out revenue allocation to the provinces at an agreed revenue sharing ratio (Rashid et al., 2010).

Argentina, which is also under federalism rule, has its sub-national government administrative units divided into 23 provinces and an additional federal district that is independent (Habibi *et al.*, 2003). The country spends about 50 per cent of its public expenditure at the provincial level. Miranda, Murillo & Stewart (2003), holds that Argentina happens to be the most decentralized country in the world. The collapse of communism in the late eighties created a shift from countries that were very centralized to economies that focused on the free-market system and decentralization (Soejoto *et al.*, 2015). While sub-nations in the region enjoy high levels of economic responsibilities, it has not been easy for this shift to be effective since it has been hampered by macroeconomic instability, weak legal structures and a four-decade hangover of planned systems (Rodríguez-Pose and Krøijer, 2009). At the European Union, fiscal decentralization took various dimensions by considering indicators such as the decentralization of public spending, revenue collection and allocation as well as taxation as important factors in the investigation of the effects of economic

development in the long run in the European Union concerning fiscal decentralization (Szarowská, 2015).

In Ghana, fiscal decentralization came into being in order to restructure the allotment of public resources with the hope of providing basic needs for the citizens and to empower the district assemblies to generate internal incomes for the regional government and make informed decisions when it comes to allocation and redistribution of the funds (Dick, 2012; Agyemang, 2018). Similarly, South Africa, power decentralization involves a complete change in the roles of the central government to the sub-national government in regard to raising income and public spending (Ajam, 2014). Constitutionally, South Africa provides for varied features of Intergovernmental Fiscal Relations (IGFR), it is this part of the constitution that addresses the devolution of power and allowing the lower administrative units to take care of the ways to raise their own revenue and be in charge of spending (Moche, Monkam & Aye, 2014).

Fiscal decentralization commenced in Kenya with the promulgation of the Constitution of Kenya 2010 (Republic of Kenya, 2010). The new constitution established the 47 counties by devolving specific functions and resources to these county governments which commenced in 2013 by devolving the system through functions and resources (Republic of Kenya, 2010). The national government has been allocating and disbursing funds to county governments since then and the allocation to Wajir county has been increasing from Kshs. 5.29 billion in 2013/2014 financial year to Kshs. 9.85 billion in 2023/2024 quarter one (OCOB reports 2013-2024) while county governments received Kshs. 190 billion to Kshs. 385 billion. The comparison of equitable share to Wajir County against total counties allocations is shown in Figure 1.1

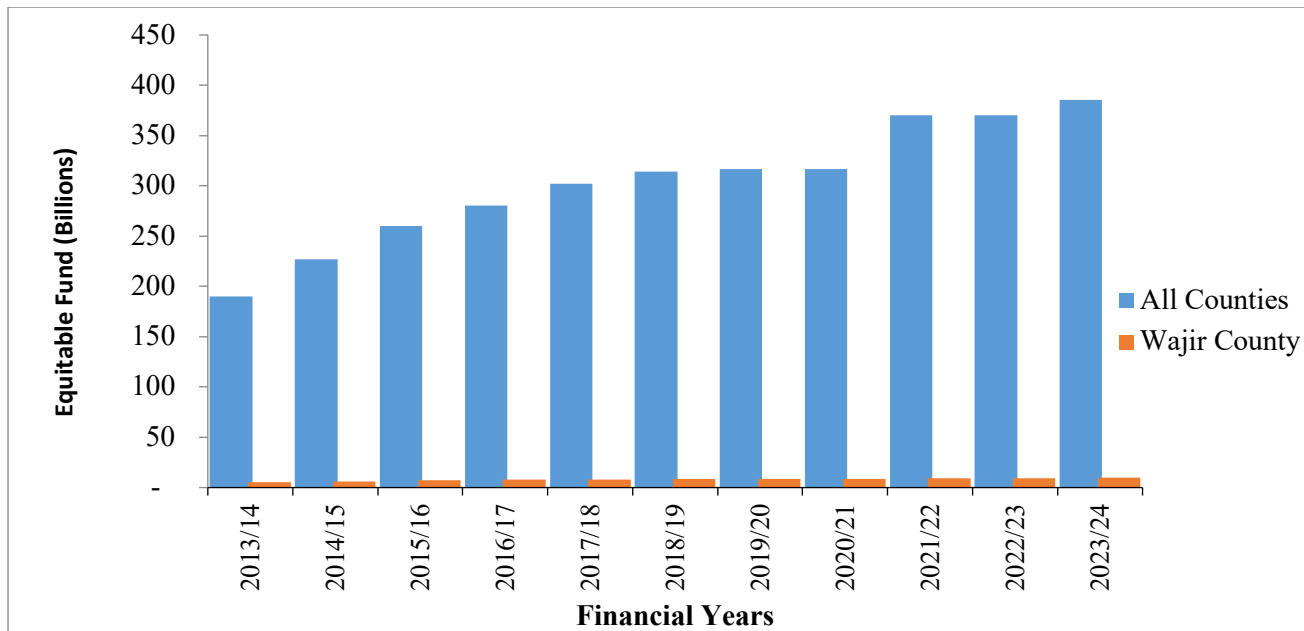


Figure 1. 1: Equitable share allocation trend 2013-2024Q1

Source: OCOB Reports (2014-2024)

The trend in figure 1.1 shows that Wajir County has been receiving less than 3 per cent of the total allocation derailing developments in the county such as construction of hospitals, schools and general infrastructure development which are key contributors to human development in the county. However, this has not been realized fully. The figure shows that the amount has been fairly constant over the years, however, percentage allocation shows that the amount has been declining over the years necessitating investigation of the effect of fiscal decentralization on human development in the county. This is illustrated in Figure 1.2 which show proportionate equitable share fund allocations to county trend.

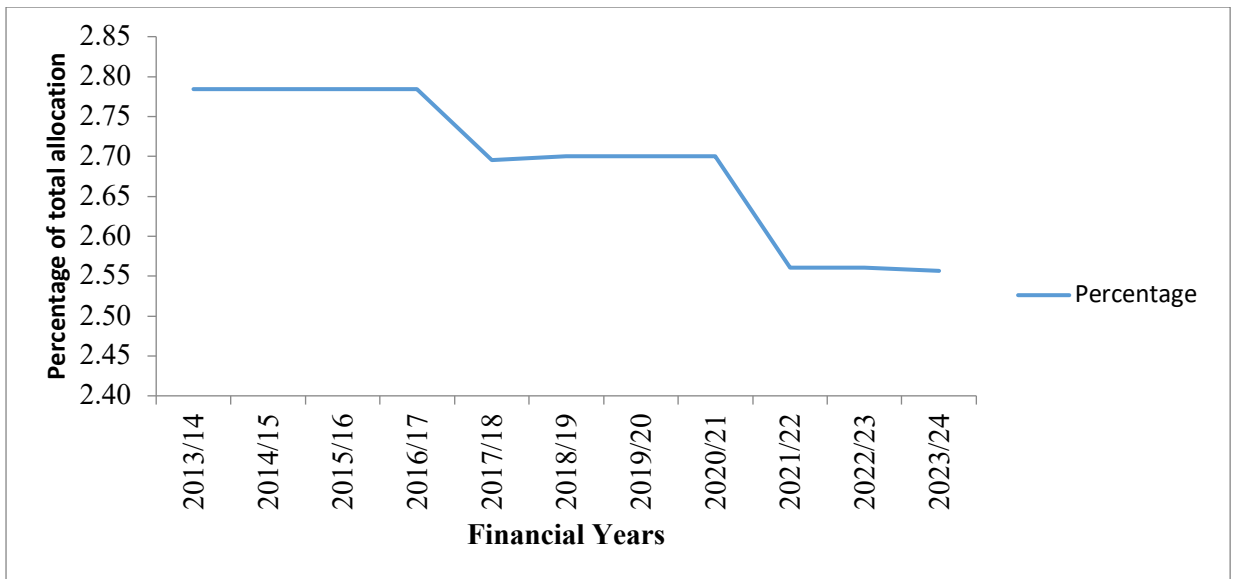


Figure 1. 2: Equitable share percentage allocation trend to Wajir County

Source: Computations from allocation data

The Figure 1.2 shows that the amount Wajir County has been receiving is on a downward trend from 2.78 per cent in 2013/2014 to 2.56 per cent in 2023/2024Q1. In monetary terms the amount has been increasing but in percentage terms the allocation has been declining. It is also important to note that in 2020/2021 the allocation dropped from 2.7 per cent to 2.56 per cent in 2021/2022 within a period of one financial year then the trend flattens to 2023/2024. This explains why the county lags behind in terms of development and services provision to the citizens in the county.

1.1.1 Fiscal Decentralization and Human Development in Kenya

The relationship between fiscal decentralization and human development in Kenya is a critical aspect of understanding the impact of devolution on the well-being of its citizens. Fiscal decentralization facilitates resource allocation, service delivery and generally human development at the county level (World Bank, 2019). Kenyan constitution 2010 has enabled the country to undergo tremendous changes in terms of governance structure, service provision, revenue generation, allocation and incurring

expenditure (Republic of Kenya, 2010). Similarly, many functions have also been devolved, by shifting political, economic and administrative functions from the nation's central government to the lower administrative units, currently named, counties (Bagaka, 2008).

The country is devolved into 47 counties from the previous eight provinces that were the next sub-national administrative units after the central government. The counties have the ability to make plans, strategies and policies in accordance with the Kenyan constitution and implement them for the good of the citizens or local residents (Kibua & Mwabu, 2008). The expectations of Kenyans are that devolution would make significant impacts on human development in terms of access to health, education, administrative services and improved standard of living (Hope (2014); Simiyu , Mweru & Omete, 2014). Fiscal decentralization has been entrenched and that more finances will continue to be decentralized to the devolved units. The devolved system in the country is made up of; a national government, 47 county governments, and 290 constituencies or sub-counties and currently, Kenya is now fully decentralized fiscally, administratively and politically (Simiyu *et al.*, 2014).

Devolved functions such as healthcare and education such as pre-primary schools have enabled counties to take charge of service delivery in key human development sector to address challenges and needs of the community and the society at large (Owino & Olwero, 2018). Similarly, it can also contribute to economic development of the local areas which later influence human development indicators in these areas leading to generation of employment opportunities, improved living standards (Bahl & Martinez-Vazquez, 2006). However, unequal fiscal capacities amongst counties often lead to disparities in the quality of essential services and the manner in which they are accessed

is also affected (World Bank, 2019). Further, for effective fiscal decentralization to occur there is need for the local governments to have capacity to manage resources effectively (Dick-Sagoe, 2012). This can be realized through capacity building of the county staffs to ensure full fund utilization for effective human development.

Prior to the operationalization of the devolved system, fiscal decentralization happened by fiscal shifts from the national government and to the constituencies and then the defunct local authorities (Boex, 2011). Since gaining independence, the Kenyan government has made a point of highlighting the significance of intergovernmental transfers from national government to sub-national government (County government). Fiscal decentralization is one of the strategies for the nation's Vision 2030, which aims to assist county administrations in accomplishing their goals (Republic of Kenya, 2010). Over the past ten years, the national government of Kenya has disbursed approximately 314 billion Kenya shillings annually to county governments, marking a significant increase in income and funds (Republic of Kenya, 2019; Menon, Mutero & Macharia, 2008). But there have been a lot of leaks and corruption in this, and the citizens hardly ever feel the effects directly (Hope, 2014). The amount has been increased to 370 billion Kenya shillings in 2021/2022 budget in order to enhance service delivery at the county level (Republic of Kenya, 2021). Despite this disbursements service deliver in the county is still low.

1.1.2 Service delivery in Wajir County

Wajir County falls in Arid and Semi-Arid Lands (ASALs), the county has faced numerous challenges with regard to access and utilization of human development services. Compounded by a high level of insecurity and vulnerability to natural disasters such as drought and famine. The county has a large portion of the population in the

poverty bracket which is measured by headcount in absolute terms of people living below \$1.9 a day leave alone below \$2.15 adjusted poverty measurement. Figure 1.3 provides the poverty situation of Wajir compared to other counties in the Country.

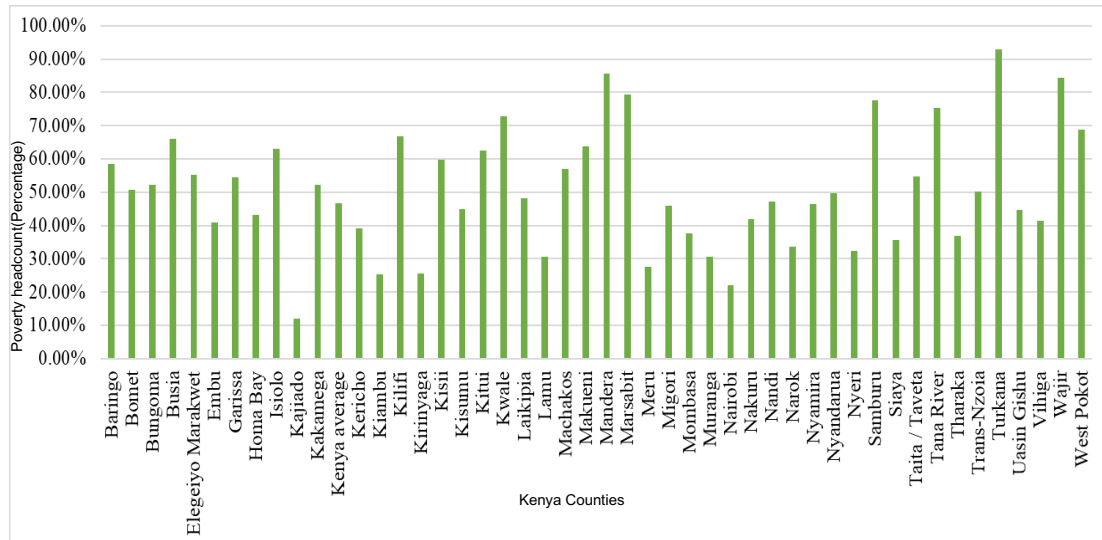


Figure 1. 3: Poverty headcount across the country

Source: Commission on revenue allocation, 2016

Figure 1.3 shows that as of 2013 on the onset of implementation of devolution, Wajir County was the second poorest county in the country, with 84per cent of the population living below \$1.9 a day. This had a direct impact on the demand for human development services ranging from education, health care, food security and essential standards of living conditions such as security.

The inadequate health facilities have an impact on the delivery of healthcare services to the people which was one of the issues devolutions was anchored on. There are 109 medical facilities in the county in total, including 11 level IV hospitals, 28 health centres, 64 dispensaries, 3 nursing homes, and 54 clinics. Compared to the national ratio of 1:5,000, the doctor-patient ratio of 1:70,509 in Wajir County which is quite high (the Republic of Kenya, 2014).

To improve the county's access to healthcare, the government must increase its investment in the health sector. People travel great distances to obtain healthcare services since the facilities are not enough; the average distance to the closest healthcare institution is 30 kilometers. Statistics has shown that about 95.9 per cent of the population must travel more than five kilometers to attend a health facility, while only 4.1 per cent can do so in less than one kilometer, according to the 2005/2006 Kenya Integrated Health Baseline Survey (KIHBS) (Republic of Kenya, 2006). Furthermore, many patients choose to forego treatment since it is difficult for them to get to medical facilities due to the inadequate road network. However, a low nutritional status lowers labor productivity among the people, creating a vicious cycle of food insecurity and reliance on relief food. About 35 per cent of the county's children under five had stunted growth as a result of malnutrition, which is an indication of chronic malnutrition, according to the Kenya Development Health Survey (KDHS) report 2008/2009 Republic of Kenya (2009), it is necessary to make conscious efforts to lower the high percentage of 35 per cent. The prevalence of family planning and contraception is extremely low; barely 4 per cent of married women use contemporary family planning techniques. Family planning's low uptake is ascribed to the community's cultural customs and beliefs.

Additionally, Sow and Razafimahefa, (2015) discovered that 7 per cent of Wajir County's population uses improved sanitation while 7 per cent using unimproved sanitation. Comparing to homes headed by men, which use enhanced sanitation at 6per cent, those headed by women use it at 9per cent. The county's unemployment rate is sixty-three per cent. Periodic droughts, instability, a high rate of illiteracy, and

ineffective county product marketing programs are the main causes of unemployment (Republic of Kenya, 2014).

1.1.3 Fiscal decentralization and Human Development in Wajir County

In recent times, Kenya can attest to the speedy growth in its economy due to devolution, (Government of Kenya, 2018). Devolution has brought a better quality of life to the citizens and has helped to foster an environment that aids political, social, economic, religious and ethnic development for the betterment of the residents of Wajir County (Khaunya & Wawire, 2015). There has never been a definitive answer to the subject on the relationship between devolution and human development. Most of the existing theories and approaches on fiscal decentralization as a policy pointed out that the two are positively integrated (Moche, Monkam & Aye, 2014). The likelihood of positive effects on the people should ensure that the citizens have a right to use excellent public goods and services, and also ensure that the voice of the common citizens reaches the right leadership for problem resolution.

Economically, Wajir County is largely a livestock production region with over 80 per cent of the households deriving their livelihoods from the sub-sector. Crop farming is practiced in small-scale along drainage lines where seasonal crops such as sorghum, maize, beans, cowpeas, green grams and other seasonal food crops and drought resistant produce get cultivated (Luedeling, 2015). Other economic activities are the sale of charcoal and firewood, transport and retail foodstuff and other merchandise. The county is endowed with wild game such as giraffes, cheetahs, lions, ostrich, and gazelles (KNBS, 2023).

In 2013, the Commission on Revenue Allocation (CRA) identified Wajir County as one of the 14 marginalized, based on County Development Indices (CDIs). The four

indicators in CDI are poverty, infrastructure, health and education. According to the statistics, Wajir County was ranked the third lowest CDI after Turkana (0.27) and Mandera (0.31) (KNBS, 2013). Table 1.1 indicates the Wajir County Development index relative to national statistics.

Table 1. 1: Wajir County Development Indices for the year 2013

Index Component	Wajir County	Kenya
Poverty	0.6190	0.8093
Infrastructure	0.3693	0.4143
Health	0.2917	0.5881
Education	0.1760	0.3935
Overall CDI	0.3640	0.5513

Source: Commission on Revenue Allocation, 2013

Table 1.1 shows that Wajir County during the year 2013, the overall development index was 0.33 against the national development index of 0.52 indicating underdevelopment in the county. The poverty index was 0.619, infrastructure was 0.3693, and Health was 0.2917 while education was 0.1760, averaging to 0.3334 showing general underdevelopment in the county in all key sectors of human development.

In terms of revenue allocation, the county received about 60 per cent from the national government being allocated to different sectors (OCOB, 2020). However, the county still records low levels of development.

In terms of actual amount allocated to these development indicators, Figure 1.4 shows the annual allocations.

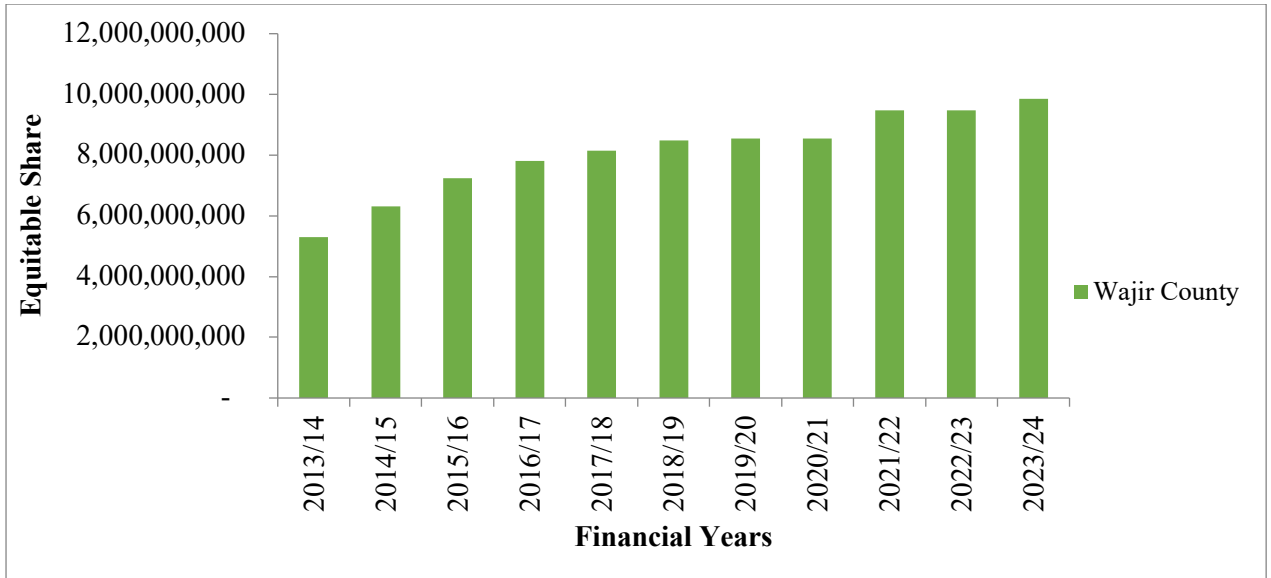


Figure 1. 4: Allocation to Wajir County between 2013/14-2023/24
Source: Revenue Allocation Commission

Figure 1.4 shows that annual allocation of equitable share to Wajir County has been increasing over the years, however, in 2020/2021 financial year, the allocation declined by over Kshs. 1 billion. Despite the increase in the allocation to the county, poverty level in the county is still very high at 84.3 percent coupled with low human development compared to national which 0.41 (KNBS, 2016). The allocation was based on county development index for the financial year, 2012/2013 to 2016/2017. In general, Wajir County receives the eleventh highest allocation during the period but still falls in the category of the poor counties in the country faced with a number of disservices across all sectors of the economy. In 2023/2024Q1 the allocation slightly increased to Kshs. 9.85 billion from Kshs. 9.47 billion in 2022/2023 just by about Kshs. 400 million after the new funding model was adopted by the Kenyan parliament.

The study also notes and appreciates the effort that has been made over the years by the government of Kenya to decentralize services with a lens of reducing poverty and inequalities by increasing access to essential services to the public. This is explained by the central government's crippling bureaucracies and institutional incapacitation, which

make it difficult for local governments to provide effective services (Mwabu *et al.*, 2001). Despite the fact that Kenya's government has implemented a number of decentralized policies since independence, the country's population nevertheless enjoys a poor level of economic and social welfare (Republic of Kenya, 2017). The National government has been allocating funds to the county governments since the inception of devolution system in 2013 (OCOB, 2020). However, the level of development at the county level is still low and delivery of essential services are wanting leading to low living standards and rise of poverty levels. Many Wajir citizens are unable to afford certain aspects of human development, which are crucial in defining the quality of life, such as high-quality universal education, reasonably priced health care, wholesome food, clean water, and sanitary conditions, because of the high percentage of poverty in the area. Kenya adopted a new constitution in August 2010 that included extensive democratization elements, such as the devolution of governance to 47 counties.

One of the key reforms of the 2010 Constitution of Kenya was the provision of mechanisms on how to transform the lives of Kenyans at the grassroots level through sustainable service delivery (Wangari, 2014). Article 174 and 175 envisions a country where people at the lower tier have the ability to participate in development initiatives and programs that have an impact on their socio-economic welfare (Republic of Kenya, 2010). Therefore, the system of devolution carries with it a lot of high hopes of good governance as well as better services in improving the social-economic welfare of people in Wajir County, which for a long time have been marginalized. However, the expectations have been fully made in the county, calling for the need to investigate the effect of fiscal decentralization on human development in county.

1.1.4 Own-Source Revenue and Human Development in Wajir County

Own-Source revenue are the funds that the county governments generate themselves via taxation, fees, fines and other charges at the county level. The fund enables the counties to be autonomous in terms of decision making and minimize overreliance on the national government for the equitable share transfers. Its effect on human development is manifested on the community well-being in several ways (KNBS, 2020).

The fund enhances provision of public services such as education, health and infrastructure development within the jurisdiction of the county (OCOB, 2018). It also enhances county autonomy and ensure accountability by minimizing corruption, government becomes more responsive since the fund is more attuned to the priority of the locals. Lastly, the fund stimulates economic growth of the county by creating job opportunities to youths and other members of the society. It also improves business environment through infrastructure development, reducing bureaucracies of obtaining business permits and licenses. This attracts investors from both local and foreign world hence leading to economic growth (KNBS, 2020).

The study has revealed that own-source revenue plays a key role in ensuring human development in any given nation or region or sub-national government. The generation of the own-source revenue in Wajir County has a cyclical trend. Figure 1.5 shows the trend on own-source revenue generation in Wajir County

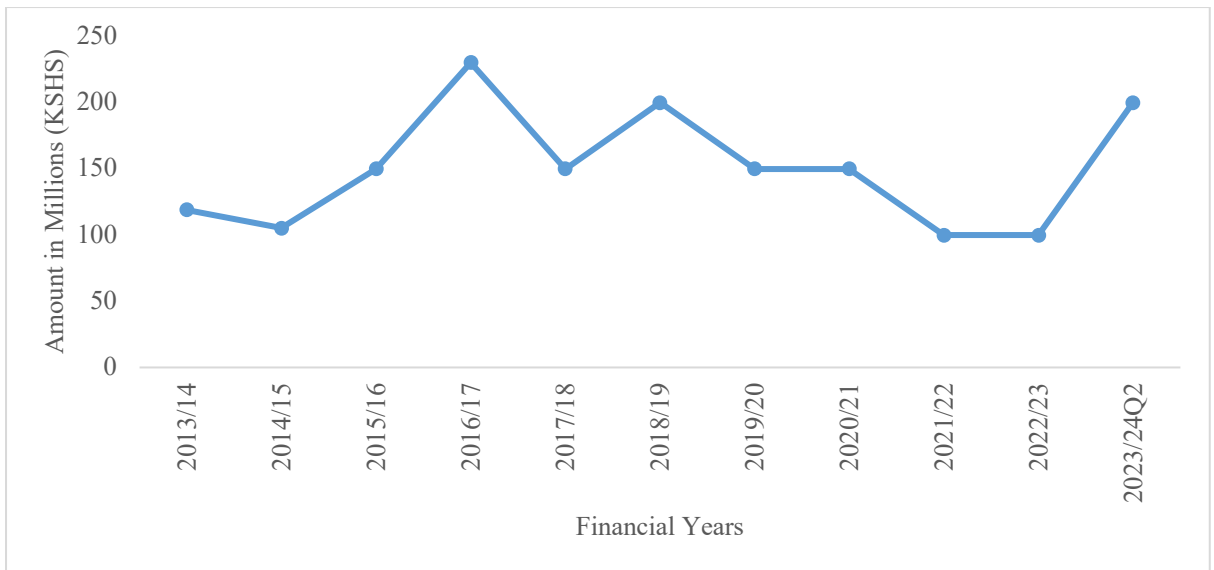


Figure 1. 5: Own-Source Revenue trend in Wajir County
Source: OCOB Reports 2013/14-2023/24Q2

Figure 1.5 shows a cyclical trend in revenue generation in Wajir County over the period of study. On the onset of devolution, the county managed to collect Kshs. 119 million which aided in service provision to the citizens in the county in terms of infrastructure development, upgrading of hospitals and schools just to ensure that the locals have access to these key services in the region. The generation of own-source revenue has been on the cyclical trend over the years and as at 2023/2024 quarter two, the county managed to raise Kshs. 200 million. Despite the huge allocation and collection of funds from the locals in the county service delivery is not in tandem with the expectation of the citizens. The ever-increasing gap between service delivery and generation of own-source revenue has initiated the investigation of the effect of the own-source revenue on human development in the county by the study.

The decline in revenue generation in financial year 2020/21 is due to the slowdown of economic activities in the entire country and world all over due to the outbreak of COVID-19 pandemic that led to the closure of the key sectors of the economy leading to stagnating activities hence decline in revenue generation by the county government.

Despite the allocation from national government and own-source revenue generated, the level of human development in county is still low necessitating investigation this low development and high poverty levels in the county.

1.2 Statement of the Problem

Fiscal decentralization as currently implemented through the devolved system of governance holds the potential to reshape resource allocation and service delivery at the county level. However, concerns have been raised on the effectiveness of fiscal decentralization on impacting human development across the country particularly Wajir county. Despite the supposed benefits, there is need to analyze the level to which fiscal decentralization has influence key indicators of human development in county such as quality of education, healthcare, infrastructure development, employment and living standards in general. Particularly to determine the effect of fiscal decentralization on human development in Wajir County.

Several studies have been done to assess the impact of fiscal decentralization through the devolution system on human development worldwide, despite the fact that the concept is still relatively new. These studies have been extremely helpful in elucidating the successes and failures of the new devolved system as well as the results that have been achieved thus far. Mwiathi, Wawire & Onono (2018) focused on the impact of fiscal decentralization on human development in Kenya's 47 counties, akin to Mwiathi (2017); Rao (2017) concentrated on intergovernmental transfer in India; and Mba, Iraya, Mwangi & Njihia (2019) paid close attention to county performance in essential sectors. The current study aims to ascertain the degree of service delivery and living standards in Wajir County, but not any of the evaluated literature works considered the impact of fiscal decentralization on human development in the County.

1.3 Research Questions

- i) What is the effect of intergovernmental transfers on human development in Wajir County?
- ii) What is the effect of own source revenue on human development in Wajir County?

1.4 Objectives of the Study

The main objective of the study was to determine the effect of fiscal decentralization and own source revenue on human development in Wajir County. The study focused on two specific objectives;

- i) To analyze the effect of intergovernmental transfers on human development in Wajir County.
- ii) To evaluate the effect of own source revenue on human development in Wajir County.

1.5 Significance of the Study

The findings of the study are of help to; the government, through the Ministry of planning and devolution and parliament, to formulate guidelines and laws towards increasing funds allocation, especially marginalized counties in Kenya in order to reduce income inequalities among communities across the nation. It will act as a foundation for future researchers to advance more on the functions and efficiency of devolution towards improving access to services, resources and opportunities to the grass-root populations. Development Partners such as Non-Governmental Organization, can also use it to mitigate income inequalities among communities across the country for the benefit of the citizens.

1.6 Scope of the Study

The central focus of this study was to determine the effect of the fiscal decentralization and own-source revenue on human development in Wajir County. The study used quarterly time series data for a period 2013-2023. The choice of Wajir County was informed by the huge existing inequalities in the marginalized regions. The Northern Kenya region particularly Wajir county has been marginalized that its people's dignity and social justice are among the lowest in the country. Very few people in Wajir can access basic needs, Lack of proper healthcare, economic hardships and poor nutrition are a reality. Therefore, fiscal decentralization brings hope that the problems bedeviling the region, and its inhabitants are tackled with visionary leadership and efficient management of resources.

1.7 Study Organization

There are five chapters in the study. In the first chapter, the problem is stated and decentralization in post-independent Kenya is covered, along with a summary of Wajir County's socioeconomic development. Theoretical and empirical literature is reviewed in Chapter 2. Chapter three covers research design, theoretical framework, empirical model, time series tests, and data source, type, and analysis. Chapter four entails study findings while chapter five contains study conclusions and gives policy implications based on the study findings.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter entails the review of past studies, which presents, theoretical Review, Empirical studies as well as a summary of the related literature review.

2.2 Theoretical Review

The theories that the current study considered are as follows.

2.2.1 The Fiscal Decentralization Theory

Using the principle of fiscal decentralization, this study examines the ways in which fiscal decentralization affects human development. Oates (1972) developed the fiscal decentralization thesis, which Musgrave (1959) first promoted. The theory holds that regional governments should oversee maximizing society welfare, particularly with regard to the distribution of public goods and services (Musgrave, 1959). According to Oates (2005), the theory presented a compelling case for fiscal decentralization, with the goal of better allocating financial resources within the public sector.

Fiscal decentralization theory has four main components namely. Local or regional governments have powers to adopt outputs of public services to their citizens, as compared to solutions that come from the national government (Wilson, 2003). Secondly, in a setting of mobile communities, such households moving from place to place, have the legal framework that provides outputs well suited to their tastes and preferences, thereby raising their potential gains from the decentralized resources on public services Tiebout (1956). Thirdly, in reference to the monopolist character of the national government, devolved units of government face competition from their

neighboring counties and provides pressures for the efficiency in delivering public services to the people. Fourth, fiscal decentralization motivates experiments and innovation, as citizens are free to apply new approaches to fiscal policy. Therefore, decentralization proof to mitigate valuable laboratory for fiscal experiments Paul (1996).

However, this basic theory of fiscal decentralization of the public sector is not very simple as it may appear. Some of the outgoing thoughtful and provocative critique theories of fiscal decentralization and, other new approaches have revealed its dark side, especially in practice Jan (2004). There is an emerging and wider perspective on fiscal decentralization that criticizes the capacity to provide a positive contribution in order to increase performance for the citizens Lockwood (2002). According to Lin & Liu (2000) the theory adopts a production function of Cobb-Douglas form, so that at a time t, production is described as follows.

$$y(t) = A_{(t)}k_{(t)}^{\alpha}\varphi^{1-\alpha}$$

..... 2.1

Where y indicates per capita output, k- per capita capital, A-technological progress, φ - fraction of the total labour force population which assumed to be constant. The model shows that output or development is a function of capital stock in the economy. Therefore, human development depends on the amount of capital disbursed through fiscal decentralization. The theory is critical to the study as it shows how fiscal decentralization of resource aid human development across economies such as Kenya and particularly in Wajir County.

2.2.2 Capability Approach

The theory of the Capability Approach was brought forward by Amartya Sen in the year 1980s. It has been employed mostly in the context of human development. The theory was founded on the background that more information about the good life should be considered while conducting evaluation Sen (1980). The theory specifies the capabilities, which are valuable, for the well-being of the people, namely, beings and doings, which includes people with physical disabilities, may require particular services to achieve their mobility, same as expectant mothers who require a specific diet to achieve good health. Secondly, the capability of adaptive preferences, whereby people who are objective, such as sick persons can believe and declare that they are well. Thirdly, evaluation has to be sensitive to the actual functioning and effective freedom of capability Nussbaum (2011).

However, the theory has been criticized due to its crudeness, since it contains only three components namely, gross national income per capita, longevity and literacy, which are considered equal. Sen's main objective for the capability approach was the crudeness of human development index (HDI), but this was won by Haq's school of thought of a composite index of wellbeing that could compete directly with the growth domestic product, thus human development index doesn't reflect the methodology of capability approach (Mahbub, 1990). Nevertheless, the approach has been employed to prove that capability related information as a credible supplement to econometrics.

The current study will use the capability approach as the Communities living in Wajir County are drawn from aesthetic values and the capability approach is important in assessing the well-being of the people in various dimensions in life.

2.2.3 Sequential Theory of Decentralization

The sequential theory was articulated by Falleti (2004). The theory indicates that devolution is a process that accounts for the interests of the people and what they believe in by incorporating policies and analyzing for their feedback. According to the theory, administrative, political and financial functions of the government are fundamental determinants to the decentralization of power from the central government to sub-national governments (Awortwi, 2011). Further, it expounds that, the process of decentralization only transfers power to actors of the state and not those that do not act in any capacity (Akorsu, 2015).

Importantly, this theory recognizes that the policy-making process is made up of three specific players; the president as head of state, the governors as the head of the counties and the mayors who serve smaller administrative units within the counties (Falleti, 2004). The theory will be useful to the current study as the formation of the policies of decentralization has a major role to play in Wajir County government.

2.3 Empirical Literature

According to Ding, Lu & Ye (2020) while studying the effect of fiscal decentralization on education in China found that fiscal decentralization improve access to education in the country only when disbursed at the right time and in adequate amount to enable the schools meet the budget and demand for the service as well close monitoring by the national government to minimize fund misappropriation. However, increase fiscal decentralization have the effect of reducing teachers' salaries especially those in marginalized regions as the fund crowd-out some funds allocated to the sector like teachers' salaries as the fund coups from this account. The study used panel data from 1998-2011 obtained from ministry of education, health and finance on study variables

such as expenditure per pupil on education as a proxy for fiscal decentralization (dependent variable), number of schools, number of pupils, gross domestic per capita and ratio of revenue to gross domestic product as independent variables. The study recommended for the increased intergovernmental transfer to increase access and also improve quality of public education, this can be enhanced through information access by the beneficiaries as this put them in a higher position to monitor and motivate the provision of the public goods such as education than the leader elected at higher offices. The study was conducted in China while the current study is conducted in Kenya.

According to de Carvalho & Litschig (2020), the long-run effect of an increase in intergovernmental transfer to the sub-national level is that the number of schooling years increases among the school-going age and subsequently lead to a gain in literacy level in the country at large, it also leads to poverty reduction among the citizens. Continuous increasing intergovernmental transfers were also found to improve the quality of education as the class sizes were reduced tremendously as more classrooms were built to accommodate the high number of children demanding the prestigious commodity hence lowering the pupil-teacher ratio. The study employed panel data for the period 1982-1989 and analyzed using the Ordinary Least Square model to estimate the effect of increased intergovernmental transfer on education attainment in Brazil. The study employed panel data while the current employed quarterly time series data.

In order to fund their expenditures in essential services aimed at promoting human development, such as access to health, education, long life expectancy, and sanitation, county governments in Kenya heavily rely on the national government for an equitable share, according to a study conducted by Mbau, Iraya, Mwangi, and Njihia (2019) on the effect of fiscal decentralization on county performance in terms of human

development. At the county level, an increase in intergovernmental transfer has a favorable and considerable impact on human development. The Ordinary Least Square (OLS) model was utilized to evaluate panel data from all 47 county governments for the years 2013 to 2018. Equitable share, local revenue creation (own source revenue), conditional or unconditional grants, and other study factors were the subjects of data collection, with the human development index serving as the dependent variable. The report suggested that laws be passed to guarantee accountability and transparency in the distribution of funds so that the people receive value for their taxes paid to the government for services, particularly those related to national human development. To provide better services in the crucial area for the welfare of the populace, the county government should also increase the generation of its own money. The study ignored county expenditure on health which is a key variable in the current study.

According to Mwiathi, Wawire, and Onono (2018) study, intergovernmental transfers have the potential to lower headcount poverty and poverty incidence, especially in marginalized counties. The study examined the impact of fiscal decentralization on poverty reduction in Kenya. Furthermore, the redistribution of resources across the nation that results from fiscal decentralization has a positive and significant impact on human development, though the exact nature, design, and degree of implementation all play a major role. The study used panel data from 2002 to 2014 from government agencies, World Bank reports, and United Nations Development Program reports. The study variables included poverty headcount as the dependent variable, intergovernmental transfers, expenditure by county as well as own source revenue by counties, education index, fertility rate, population growth, per capita income level, and dependency ratio as the independent variables. The panel regression with fixed effect model was used to analyze the data.

In an analysis of the effects of fiscal decentralization on income inequality, poverty reduction, and human development in Kenya, Silas (2017) discovered that the form and degree of fiscal decentralization had a decentralizing influence on human development. Using panel data, the study used a non-experimental research approach from 2002 to 2014. The study borrows Lorenz curve framework with multivariate regression model to analyze the study with human development index as dependent variable, fiscal decentralization, per capita income, poverty headcount, education outcome and household size as independent variables. The study recommended that government should increase intergovernmental transfer to the counties so as to increase school enrolment capacity hence improving literacy level in the country via education outcomes, similarly, the government should ensure that more budgetary allocation to the marginalized counties to management poverty levels as well as income inequalities across the country.

A study done by Rao (2017) on the effect of intergovernmental transfer on service delivery in the public sector in India found that intergovernmental transfers take resource closer to the people and not people moving closure to the resources hence improves equity among the regions and at the same time reduce regional inequality leading to improvements in human development in terms of increase years of schooling, good health and increase in income level as the people are able to get decent jobs and earn income above the subsistence level. However, the level of human development differs from one region to another due to heterogeneity of regions in terms of human capital endowment and initial inequality level. The funds transferred to the sub-national governments, however, does not depend on the level of services offered but uniform. For instance, a region which is educationally or health wise backward or lags behind

does not receive higher allocation and therefore continue to lag behind in service delivery in these two sectors experiencing low human development indicated by high human development index.

According to Pahlevi (2017) sub-national expenditures on education and good governance significantly influence human development positively while expenditures on health negatively influence human development. Good governance in any region or country increases gross domestic product per capita levels as the economy performs better due to the existence of peace and security as well as human development. Education expenditure improves human well-being as a learned person is most likely to consume health services and becomes fit to work and improve his/her well-being and economic status resulting to sustained human development. The negative relationship between health expenditure and human development was due to the fact different sub-nationals spend differently on health for instance, those with poor or low health status are most likely to spend a larger proportion of their budget on health than those sub-nationals with better health standards. The study employed an explanatory research design with panel data from 33 sub-nationals from 2008 to 2012. The data was collected on the human development index as the dependent variable, governance index proxy for good governance, expenditure on health, expenditure on education, gross domestic product per capita, net enrolment ratio and mortality rate of the infants are the independent variables. The multivariate linear regression model was used to evaluate the data. The study suggested that in order to increase human development in a nation, more money should be spent on health and education in addition to good and efficient governance.

2.4 Overview of the Literature

In summary, foregoing literature studies found out that fiscal decentralization is highly correlated to human development both at the global level and at the national level Musgrave (1959), and later advanced by Oates (1972). However, past literature studies fail to explain how fiscal decentralization can be implemented with zero corruption in a country and how a government can achieve its full implementation Wilson (2003). Thus, it explicitly explained the weakness of past literature studies. Most importantly past literature concluded that more studies should be conducted to determine poor development records in regional government despite fiscal decentralization going on across the nations, in Kenya, fiscal decentralization is through devolution which came into force by promulgation of the 2010 constitution. However, the effect and aim of devolution is still far from being realized as most counties fully depends on national government for finance and therefore delivery of services in the key sectors of the economy which are key dimensions of the measures of human development in marginalized counties is low due to high poverty and inequality levels.

Because results from one location and time cannot be applied to another, the evaluated literatures on the impact of fiscal decentralization on human development offer inadequate and inconclusive answers because they employ diverse models, variables, cross-region data, and times. In addition, it is recommended that suitable actions be taken by all education stakeholders based on the findings to address the issue of widespread corruption in county governments (Jan 2004). Finally, prior research on the effects of fiscal decentralization conducted in Indonesia, India, Pakistan, Nigeria, and Kenya primarily focused on the national government's allocation of funding to sub-national governments. In light of this, there is a need for further study to determine how fiscal decentralization affects human development in Kenya's Wajir County.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research instruments, data collection, data preparation for analysis, data analysis, definition and measurements of variables, study area and target population, sample size and sampling techniques, data type and sources, research design, and ethical issues are all covered in this chapter.

3.2 Research Design

The research design for this study used non-experimental. According to Cooper and Schindler (2013), the non-experimental research design is thought to be the most suitable since the researcher cannot manipulate the data hence uses the data as collected from the sources and it also assesses the strength of correlations as well as the type of functional interaction between various sets of variables. Specifically, the design gives an account of the current state of fiscal decentralization and human development in Wajir County. According to Peck *et al.*, (2013), an explanatory research design allows a researcher to get the most recent results from the study population without changing the independent variables.

3.3 Theoretical Framework

The study applied the fiscal decentralization theory. According to the theory, societal welfare maximization, especially with respect to the allotment of public goods and services, should be the responsibility of the regional governments (Musgrave, 1959).

The model was preferred by the study among others reviewed, as it provides a better framework for analyzing the effect of economic decentralization in regard to human development in Wajir County.

The fiscal decentralization model in equation 2.1 which was stated as

$$y(t) = A_{(t)}k_{(t)}^{\alpha}\varphi^{1-\alpha} \dots\dots\dots 3.1$$

Converting equation 3.1 and taking the first differentiation with respect to time (t), the growth rate per capita output is expressed as follows;

$$g(t) = \dot{y}(t) = \dot{A}(t) + \alpha\dot{k}(t) \dots\dots\dots 3.2$$

Where; \dot{y} , \dot{A} and \dot{k} represents change in output per effective labour overtime, change in technology overtime and change in effective capital overtime respectively.

Equation 3.2 shows that growth rate depends on output per capita and the level of technology. The parameter A does not only measure the level of technology but also the variation in resource allocation measured by the amount of funds devolved(fiscal decentralization) to county government by the national government and other variables within the county.

These variables at the county level are the accountability and relative prices of both farm output and nonfarm output to captures the effect of price in the development, per capital gross domestic output, proportion of rural population, none-state owned output to total output.

3.4 Model Specification

Based on the work of Musgrave (1959), on fiscal decentralization factors that potentially influence regional human development are assumed to be linearly correlated to the county’s human development, due to the additive effect, each factor has on the human development in a region.

By introducing human development index to replace growth rate in equation 3.2 equation 3.3 is stated as follows;

$$HDI = f(COSR, CEPFE, PUP) \dots\dots\dots 3.3$$

Where HDI = Human Development Index,

COSR = Ratio of County Expenditure over Own Source Revenue.

CEPFE = Ratio of County Expenditure over Total Government Expenditure.

PUP = Ratio of Urban population to the total population.

Human Development (HD) is composed of basic wants achievement (B), valuation of non-basic needs (I) and control variable (Z) as shown in equation 3.4

$$HD = f(B, I, Z) \dots\dots\dots 3.4$$

B- Physical and physiological requirements for an individual to meet the terms for the least suitable standard of Human Development. It is made up of food, water, education, sanitation, shelter, health services and public transportation. In a nutshell, it is composed of basic needs.

B is a function of pro-poor goods and services denoted as (g). Thus, poverty and inequity affect human development function through B.

$$B = f(g) \dots\dots\dots 3.5$$

“I”, on the other hand is a function of all other productive investment or private goods (x).

$$I = f(x) \dots\dots\dots 3.6$$

Thus, the household standard of human development function becomes:

$$HD = f\{f(b), f(x), Z\} \dots\dots\dots 3.7$$

Where $f\{f(b), f(x), Z\}$ is continuous and twice differentiable with the first-order condition being greater than zero and the second derivative is less than zero. That is, an increase in basic needs (B) and productive investment (I) increases the standard of human development but at a decreasing rate.

From theoretical framework equation 3.7, all the pro-poor goods and services provided by the county government join the equation through parameter B, therefore, the model is specified as illustrated in equation 3.8

$$HDI_t = \alpha_0 + \beta_1 IGT_t + \beta_2 COSR_t + \beta_3 POP_t + \beta_4 CE_t + \beta_5 INV_t + \varepsilon_t \dots\dots\dots 3.8$$

$t=1, \dots, T$

Where

HDI - Human Development Index, INV-investment level, IGT – Intergovernmental Transfers, COSR - County Own-Source Revenue, CE - County Expenditure on key sectors, POP- population size, ε_t - the idiosyncratic disturbances and t -Time periods (years).

In order to achieve the study objectives, equation 3.8 was estimated and the coefficient of exchequer transfers and county own-source revenue interpreted.

3.5 Definition and Measurement of Variables

The variables that the study intends to use and facilitate in the analysis are presented in Table 3.1 include their definitions and how each variable was measured during the study period.

Table 3. 1: Definitions and Measurements of Variable

Variables	Definition of the variables	Measurement
Own Source Revenue (COSR)	Summation of all local taxes and levies, bills and penalties, asset charges and other revenues raised by the county	Amount of revenue collected quarterly by the county government
Intergovernmental Transfers (IGT)	Equitable share of at least 15 per cent of most-recently audited revenue raised nationally.	Budgetary allocation to Wajir county from national government
Gross County Product (GCP)	Total monetary value of all final goods and services produced in the county	Quarterly GCP. It is a control variable
Population size (POP)	This is the number of people in Wajir County	Quarterly number of people in the county
Investment (IVN)	County investment in pro-poor services and goods	Percentage of county investment to national investment
County expenditure (CE)	Expenditure on health and education	Budgetary allocation on pro-poor services and goods
Human Development Index (HDI)	Refers to the achievements in key human development dimensions such as education, health and living standards	Quarterly human development index for the county

Source: Author (2023)

3.6 Time Series Tests

These tests were conducted as part of the study to make sure that erroneous results are not obtained. The tests include the co-integration, diagnostic, stationary, serial correlation, and normalcy tests.

3.6.1 Stationary Test

To make sure that erroneous findings are not obtained, it was necessary to conduct a unit root test. The test made sure that the mean and variance of the time series data were constant, the Augmented Dickey-Fuller (ADF) was performed on all the variables. The test was done at both level and trend, further, the variables were differentiated at the first difference to ensure non-stationarity and the variables that were not stationary were differentiated twice so as to be stationary (Maina, 2015). The test corrects serial correlation among the variables (Dickey & Fuller, 1979).

3.6.2 Serial Correlation Test

Serial correlation occurs in time series data of 30 years and above (Torres, 2010) when some key variables are omitted from the model or nonlinearity is ignored in the model. Durbin Watson (DW) statistics will be utilized for the test. A general rule of thumb states that if the Durbin-Watson value is two or more, there is negative or no serial correlation between the variables; if the value is less than two, there is a problem with positive serial correlation, and as a result, the results cannot be verified (Bhargava, Franzini & Narendranathan, 1982).

3.6.3 Co-integration Test.

In order to ascertain if dependent and independent variables have a long-term relationship, the Johansen co-integration test was used. The test is required to make sure that a regression analysis does not yield erroneous results. Campell and Yogo (2006) asserted that the absence of co-integrating equations implies no long-run relationship among the study variables.

3.6.4 Correlation Analysis

The test was carried out using Pearson's correlation coefficient or Spearman's correlation coefficient. The test is necessary to ensure that the variables of the study are

not highly correlated since if any two or more variables are highly correlated then there is a high chance of getting spurious results. After the test, highly correlated variables were dropped from the analysis. If the data is evenly distributed then Pearson's correlation coefficient was used and if data is unevenly distributed then Spearman's correlation coefficient was used to check the correlation among the variables. However since unevenly then Spearman's correlation coefficient was used to show the correlation among the study variables (Coffman *et al.*, 2008).

3.7 Diagnostic Test

The study carried out diagnostic tests such as heteroscedasticity, normality test and multicollinearity tests to ensure that the regression results obtained are reliable, verifiable and valid.

3.7.1 Heteroscedasticity Test

To make sure that the residual value of the regression findings is normally distributed, the White test and the Breusch-Pagan test were used. In time series data, the test is required to guarantee that the outcomes are valid and consistent across time ((Breusch & Pagan, 1979).

3.7.2 Normality Test

The test was carried out using the Histogram-normality test and Shapiro-Wilk test to ensure that the sampled data is evenly distributed. The general rule states that if a value at the five per cent significance level is more than 0.05, the data is normally distributed; if it is less than 0.05, the data deviates from a normal distribution (Jarque & Bera, 1980).

3.7.3 Multicollinearity Tests

A multicollinearity problem occurs when some independent variables in a regression are linearly correlated (Montgomery *et al.*, 2012). The problem further occurs when a small change in data causes a big change in the coefficients of the regression results as

well as when the standard error of the coefficients is high at a low significance level and the model is good and fit (Greene, 2003). Variance Inflation Factor (VIF) was used to test for the multi-collinearity.

3.8 Data Analysis

The study employed a multivariate regression model with the method and Autoregressive distribution lags (ARDL) method to estimate the parameters in equation 3.8. Nonetheless, the ARDL estimate technique was used since the variables became stationary at both levels and following the initial difference. Furthermore, the Vector Error Correction Model (VECM) was not utilized to estimate the equation since the variables were not co-integrating and stationary only after the first difference. Equation 3.8 was subjected of a multivariate regression analysis in order to meet the study's two goals. The results were presented along with a discussion of each variable's coefficient and statistical significance. As the study considered into how Wajir County's fiscal decentralization affects human development.

The human development index, Own Source Revenue and Intergovernmental Transfers will form the main set of variables under analysis in the regression equation. Therefore, regressing equation 3.8 results will be used by the study to answer the two research questions. The study findings were presented in tables and figure.

CHAPTER FOUR
EMPIRICAL FINDINGS

4.1 Introduction

The section contains descriptive statistics, unit root test, correlation analysis, diagnostic tests and regression estimation output.

4.2 Descriptive Analysis

The study made use of measures of central tendencies, minimum and maximum to describe the study variables. The results are shown in Table 4.1

Table 4. 1: Descriptive Statistics

Variables	Obs	Mean	Std. Deviation	Min	Max	Jarque Bera	Probability
Own Source Revenue	44	40.29	22.92	9.9	107.7	3.348	0.1875
Intergovernmental transfer	44	3860.42	2543.06	143.6	9470	2.660	0.0264
County Expenditure (CE)	44	340.99	449.37	26.7	2941.8	1189.7	0.000
Investment (INV)	44	100.37	81.57	0.04	365.14	14.22	0.0008
Gross County Product	44	8182.39	3159.19	4522.8	12451.8	5.843	0.0539
HDI	44	0.53	0.066	0.403	0.59	7.584	0.0225

Source: Computations from Data

The results in Table 4.1 shows summary descriptive statistics for the dataset which is composed of allocation from the intergovernmental transfers, own source revenue, and expenditures on health, education and water provision in Wajir County. There are 44 quarterly observations from 2013-2023. The measures of central tendencies used were mean which measures the average value for each variable across the dataset and standard deviation is the measure of deviation from the mean. A larger deviation implies greater variability in the dataset; however, the results show low variability implying no variation in the dataset collected. Further, the mean value measures the average values of the dataset.

Additionally, the value of Jarque-Bera which is used to test the normal distribution of the data, shows a low value indicating less deviation from a normal distribution. Similarly, the null hypothesis of a normal distribution is rejected since the probability linked to the Jarque-Bera test, which determines whether the data is normally distributed or not, is less than 0.05 at a 5 per cent significance level.

Own source revenue generated by the county has a mean of Ksh. 40.29 million with a standard deviation of Kshs. 22.92 million implying that the revenue collected across the years was low. During the period of the study, the minimum revenue county collected was Kshs. 9.9 and a maximum of Kshs. 107.7 million. The total allocation to the county by the national government had a mean value of Kshs. 3,860.42 million with a standard deviation of Kshs. 2,543.06. During the period, the county received a minimum of Kshs. 143.6 million and a maximum of Kshs. 9,470 million. This means that the county receives a substantial amount yearly from the national government to enhance service delivery to the people of Wajir County.

The expenditure on health by the county had a mean value of Kshs. 340.99 million with a standard deviation of Kshs. 449.37 million implying a large deviation during the

period on health expenditure by the county. Over the years, the county allocated a minimum of Kshs. 26.7 million and a maximum of Kshs. 2,941.8 million. During the period of analysis, investment in education was the least with a minimum of Kshs. 0.04 million while the health sector incurred the highest expenditure with a maximum value of Kshs. 2,941.8 million.

Gross county product which is a measure of income for the county has a mean value of Kshs. 8,182.39 million with a standard deviation of Kshs. 3,159.19, however, the total monetary value of all goods and services produced by the county has a minimum of Kshs. 4,522.8 million and a maximum value of Kshs. 12,451.8 million implying that the county has a high gross county product which is equivalent to gross domestic product. The human development index for the county has a mean value of 0.53 with a standard deviation of 0.066 implying low deviation in human development across the county and that the county enjoys an average human development in terms of health, education and living standards. This means that the county focuses on life expectancy at birth, average mean years of schooling and average living standards measured by gross county product.

4.3 Diagnostic Tests

The study conducted a number of pre-estimation and post-estimation tests. These tests include stationary test, correlation test, co-integration test, heteroscedasticity, serial correlation, normality, stability and multicollinearity.

4.3.1 Stationary Test

The test was carried out using Augmented Dickey-Fuller, the results are presented in Table 4.2

Table 4. 2: Stationary Test results

Variables	Level	t-Statistics	P-Value	Remarks
Human Development Index (I1)	Intercept	-6.511	0.0000	Stationary
	Trend and Intercept	-6.496	0.0000	Stationary
Log Investment (I1)	Intercept	-7.552	0.0000	Stationary
	Trend and Intercept	-7.446	0.0000	Stationary
Log Intergovernmental transfer(I1)	Intercept	-1.058	0.0001	Stationary
	Trend and Intercept	-1.791	0.0000	Stationary
Log Gross County Product (I1)	Intercept	-6.750	0.0000	Stationary
	Trend and Intercept	-6.665	0.0000	Stationary
Log County Expenditure (I0)	Intercept	-5.177	0.0001	Stationary
	Trend and Intercept	-5.142	0.0007	Stationary
Log Own Source Revenue (I1)	Intercept	-2.882	0.0001	Stationary
	Trend and Intercept	-2.782	0.0000	Stationary

Source: Computation from study data

Augmented Dickey-Fuller (ADF), which is frequently employed with time series data, was used in the test. If the time series' characteristics are independent of the time at which it is seen, it is said to be stationary. This might be a crucial characteristic for some kinds of statistical studies. A unit root suggests that the time series is non-stationary and might have a random trend. Before conducting any analysis or running the risk of obtaining spurious results, the test was designed to make sure that all of the variables were stationary. The test is used to test the null hypothesis that there is a presence of a unit root in the time series data. Table 4.2 shows the results of a unit root test.

The test was conducted at both intercept and trend and intercept, similarly, it was conducted at both levels and after the first difference. The variables were found to be stationary at different levels. Variables such as human development index, log education expenditure, log national government allocation, log gross county product and log own source revenue were stationary after the first difference while log health expenditure and log water expenditure were stationary at level. The unit root test also

aids in selecting the model for estimation and since the variables are stationary at different levels, then the model for estimation is Autoregressive Distribution Lags (ARDL).

4.3.2 Correlation Analysis

The test was carried out using the Spearman Moment of correlation to determine the magnitude and direction of the relationship among the variables. The study revealed that the coefficients of all the variables were less than or equals to 0.8 and according to the rule of the thumb, a coefficient correlation less than or equals to 0.8 implies that the variable were not highly correlated hence chances of getting spurious results were minimal during analysis. The results are presented in Table 4.3

Table 4. 3: Correlation Analysis Results

	HDI	Log OSR	Log GCP	Log intergovernmental transfer	Log County Expenditure	Log Investment
HDI	1					
Log OSR	0.2513	1				
Log GCP	0.059	-0.376	1			
Log intergovernmental transfer	-0.077	0.699	-0.454	1		
Log County Expenditure	-0.228	0.340	-0.123	0.36	1	
Log Investment	-0.197	0.224	-0.012	0.383	0.232	1

Source: Computations from Study Data

From the findings, the study concluded that since the variables were not highly correlated, then all were used in the determination of the effect of fiscal decentralization on human development in Wajir County.

4.3.3 Co-integration Test

The test was carried out using Johansen Co-integration, the test was necessary to determine whether there is a long-run relationship among the study variables. The rule of thumb states that if there are co-integration equations at 5 per cent significance level

then there is a long-run relationship among the study variables. The results are presented in Table 4.4

Table 4. 4: Johansen Co-integration Test results

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.680254	115.5048**	95.75366	0.001
At most 1	0.500962	67.61514	69.81889	0.074
At most 2	0.406499	38.4221	47.85613	0.284
At most 3	0.229376	16.51002	29.79707	0.676
At most 4	0.107556	5.566727	15.49471	0.746
At most 5	0.018575	0.787484	3.841466	0.375

Source: Computations from data

The results show that there are 5 equations and amongst the five none of them is co-integrating with one another. Further, at 5 per cent level of significance, there are no co-integrating equations because the value of trace statistics is greater than the critical value hence the study concluded that there is no long-run relationship among the study variables.

4.3.4 Heteroscedasticity Test

The test was carried out using white's test and the results are presented in Table 4.5

Table 4. 5: Heteroscedasticity test results

Source	Chi-Square	df	P-value
Heteroscedasticity	39.00	35	0.2946
Skewness	8.80	7	0.2676
Kurtosis	1.19	1	0.2749
Total	48.99	43	0.2454

Source: Computations from study data

The test was done to ensure that the error term is not homogenous. From the results the P-value of all the possible sources of homoscedasticity was more than 0.05 at a 5 per

cent level of significance therefore, the variance of the error term is constant hence the study concluded that there is no heteroscedasticity of the error term.

4.3.5 Serial Correlation Test

The test was run using the Breusch-Godfrey approach. Finding the correlation between the independent variables and the model's error term required the test. Table 4.6 presents the findings.

Table 4. 6: Serial Correlation LM Test

F-Statistics	2.1197	Probability F-Statistics (2,19)	0.1476
Observed R-Squared	7.6618	Probability Chi-Square	0.2107

Source: Computations from data

The findings show that the likelihood of the Chi-square is 0.2107 and the F-statistics value is 2.1197 with a probability of 0.1476, suggesting a strong indication of the lack of serial correlation or autocorrelation of the error term and the independent variables. The alternative hypothesis is that the error term has serial correlation, whereas the null hypothesis is that there is no serial correlation. Based on the findings, the study is unable to reject the null hypothesis because the P-value is greater than 0.05 at a five per cent significance level. This suggests that the model was adequately specified and that it can be used to assess how fiscal decentralization affects human development in Wajir County.

4.3.6 Normality Test

The test was conducted using the Histogram-Normality test. The test was necessary to establish whether the residuals were evenly distributed across all observation. The results are shown in Figure 4.1

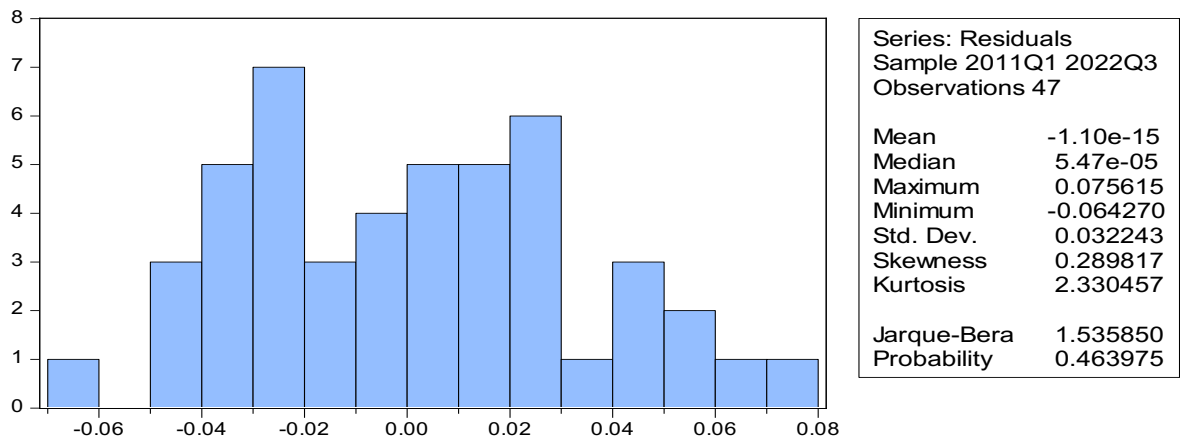


Figure 4. 1: Histogram-Normality test
Source: Computation from data

The results in Figure 4.1 show that the value of Jarque-Bera statistics is 0.4640 which is greater than 0.05 at 5 per cent level of significance indicating the residuals are evenly distributed across the data set and chances of getting spurious results are minimal during the coefficient estimation. The mean value is -1.10×10^{-15} very close to zero and according to the rule of the thumb a mean value of close to zero is a good indication that the mean residuals in the model are well fitted confirming even distribution of the residuals in the estimation.

4.3.7 Stability Test

The test was carried out using the Ramsey RESET test. The test was necessary to establish the specificity of the model. The results are shown in Table 4.7

Table 4. 7: Ramsey RESET Test

Statistics	Value	df	Probability
t-Statistics	1.1654	20	0.2576
F-Statistics	1.3582	(1, 20)	0.2576

Source: Computations from data

The results indicate that the probability of both t-statistics and F-statistics are greater than 0.05 at 5 per cent statistical and according to the rule of the thumb if P-value of t-

statistics and F-statistics are greater than 0.05 at 5 percent significant level, then the model is well specified and can be used in the estimation process.

4.3.8 Multicollinearity Test

Variance Inflation Factor (VIF) was used to run the test. The test was necessary to establish the relationship among the independent variables. The results are shown in Table 4.8

Table 4. 8: Multicollinearity test

Variable	VIF	1/VIF
Log intergovernmental transfer	2.82	0.3545
Log own source revenue	2.59	0.3867
Log County expenditure	1.58	0.6310
Log gross county product	1.49	0.6734
Log Investment	1.37	0.7317
Human development index	1.35	0.7432
Mean VIF		1.97

Source: Computation from data

According to the rule of the thumb, a coefficient less than or equal to 10 indicates the absence of multicollinearity, while a coefficient greater than 10 indicates the presence of multicollinearity among the independent variables. Based on the results in the table, it can be concluded that there was little chance of obtaining spurious results from the estimation because all of the coefficients are less than 10.

4.4 Regression Results

The sought to determine the effect of fiscal decentralization and own source revenue on human development in Wajir County and specifically to analyze the effect of intergovernmental transfers on human development in Wajir County and to evaluate the effect of own source revenue on human development in Wajir County. In order to achieve the two objectives, the study carried out regression analysis using quarterly time series data from 2013 to 2023. The study estimated an ARDL regression model to

meet the two objectives, the study analyzed and explained the coefficient of each variable measuring the aim. The outcomes are shown in Table 4.9.

Table 4. 9: Regression Results

Dependent Variable: Human Development Index (HDI)				
Independent Variables	Coefficient	Standard Error	t	P> t
HDI (L1)	0.8454	0.08408	10.06	0.000
Log own source revenue	0.02395	0.01289	1.86	0.013
Log gross county product	-0.01688	0.06086	-0.28	0.783
Log intergovernmental transfer	0.06491	0.09047	0.72	0.0418
Log County expenditure	0.81762	0.7512	1.09	0.0258
Log Investment	0.5558	0.3927	1.42	0.0088
Constant term	0.02788	0.23429	1.19	0.0244
Log Likelihood	84.89	F (7, 31)		23.66
Probability >F-statistics	0.0000	R-Squared		0.8423
Durbin-Watson	2.11	Adjusted R-Squared		0.8067

Source: Computation from data

The results in Table 4.10 show that the value of the adjusted R-squared is 0.8067 meaning that about 80.67 per cent of the changes in human development is determined by the level of health standard, education level achieved, standard of living measured by the gross county product, sanitation level or clean and safe water at 5 per cent level of significant. The remaining 19.33 per cent are the only changes in human development that is determined by other factors that are beyond the scope of this study. The value of Durbin-Watson was found to be 2.11 which is above the threshold of 1.8 and according to the rule of thumb, a Durbin-Watson value greater than 1.8 is good enough to show that there is no autocorrelation among the explanatory variables. Further, the value of F-statistics is 23.66 and statistically significant at a 5 per cent

significance level meaning that the model was good and fit to estimate the effect of fiscal decentralization on human development in Wajir County. It is also important to note that the constant term 0.02788 is significant at a 5 per cent level implying that human development would be very low in Wajir County in the absence of the factors the study did consider, therefore, this confirms that for human development to be attained, then the standard of living, education level, and health status of the populace are key hence a lot of focus is needed to enhance them.

4.4.1 Effect of Intergovernmental Transfers on Human Development

The study was supported by two specific objectives. Objective one was to analyze the effect of intergovernmental transfer on human development in Wajir County. To achieve the objective, the coefficient of intergovernmental transfer was estimated and interpreted. The study revealed that the coefficient of log intergovernmental transfer is positive (0.06491) and statistically significant at a 5 per cent level implying that an increase in national government allocation to the county governments by one percentage point leads to an improvement in human development by 6.49 percentage points. The finding confirms Ding *et al.*, (2020) that enhanced intergovernmental transfers improve access to education in marginalized areas but only if done in good time, however, it also results in reduced salaries for teachers in these areas if the funds are diverted from teachers' salaries kitty to fund these projects. A similar result was also found by Carvalho and Litschig (2020) that intergovernmental transfer to sub-national government increases the number of schooling years for the school-going age hence leading to a gain in literacy level in Wajir County.

4.4.2 Effect of Own-Source Revenue on Human Development

Objective two was to evaluate the effect of own source revenue on human development in Wajir County was the study's second goal. The coefficient was estimated and interpreted in order to accomplish the goal. The regression estimation results show that the coefficient of the log own source revenue is positive (0.02395) and statistically significant at a 5 per cent level, implying that an increase in revenue generated and channelling the same to the development of projects that improve human development leads to an improvement in human development by 2.4 percentage. The finding agrees with Ding, Lu and Ye (2020) that enhancing revenue collection and using the income appropriately improves human development in China. However, it has the effect of lowering the provision of other basic needs for the citizen, especially in marginalized areas.

The study also gives the interpretation of other key variables of the study as follows; the study also shows that the human development index's coefficient in lag one is positive and statistically significant at both 1 and 5 per cent, suggesting that the county's future level of human development is determined by its historical values. The finding corroborates Mbau *et al.*, (2019) that found a continuous effort to enhance human development has a future effect on further improvement of the level of human development. For instance, if the county government fails to implement or enact policies that are geared to human development then it is most likely that in future, the level of human development will deteriorate.

The coefficient of log gross county product which is a measure of GNI at the county level is negative (-0.01688) and statistically insignificant at a 5 per cent level, implying that gross county product does not determine the level of human development. The

current finding negates Silas (2017) who revealed the rise in GNI which enhances human development but agrees with Pahlevi (2017) who found an insignificant relationship between GNI and human development. This is because an increase in GNI does not mean an increase in the standard of living in any given region due to its inability to measure the welfare and well-being of the citizens. GNI is a statistical figure that indicates the economic improvement of a country or a region as opposed to welfare which is a measure of human development.

The analysis also found that the coefficient of log county expenditure is positive (0.81762) and statistically significant at the 5 per cent level. This means that increasing expenditure on healthcare services which enhances access to quality health leads to improvement in human development in the county. This is because quality health ensures a reduction in infant mortality rate and increased life expectancy leads to better quality of life hence improvement in welfare of the citizens. Similar results were found Mwiathi *et al.*, (2018) that enhance access to quality healthcare improvement human development in Kenya.

The coefficient of log investment by the county government of Wajir was positive (0.5558) and significant at a 5 per cent level of significance, indicating that a one per cent point change in expenditure on education improves human development by 55.58 percentage points. This is because the number of schooling years for the school-going age would be more and therefore, raise literacy level in the county and an educated person is more knowledgeable and knows when to consume healthcare services. The finding agrees with Silas (2017) that developing more schools increases enrolment capacity hence improving literacy level which ultimately leads to improvement in human development in the region.

CHAPTER FIVE

SUMMARY, CONCLUSION AND POLICY IMPLICATIONS

5.1 Introduction

The chapter presents a study summary, conclusions from study findings, policy recommendations and areas for further studies based on the study's strengths or weaknesses.

5.2 Study Summary

Fiscal decentralization is a macroeconomic problem facing most developing countries worldwide. The vice has affected the development especially human development in these countries. Most studies have shown that fiscal decentralization has an impact on human development. In Sub-Saharan Africa, a lot of pressure has been put on budget-making to ensure that adequate funds are allocated to the lower-tier government. It improves the distribution of resources to the citizens by allowing the citizens to actively participate in the decision-making table on how resources need to be shared and through this governance structure is transformed to favor the less fortunate. Fiscal decentralization and human well-being are interconnected and this link between the two variables creates a very interesting area of analysis for the current study (Gogoi, 2017). In Kenya, fiscal decentralization is promoted through devolution which was enshrined in the constitution of Kenya following the promulgation in 2010.

Devolution is viewed as a means to bring national development nearer to the Citizens when it comes to public goods and services. It has also, increased the local autonomy of sub-national entities to gain more power enabling the sub-national governments to manage their own finances and able to engineer more rural development in terms of road networks which has made it easy for the citizens especially, the farmers to

transport their produce to the market thus, earns income, control their financial resources and subsequently contributes to economic growth. The process kicked off in Kenya in 2013 by devolving some functions and resources. From 2013 to date the national government has been disbursing funds to the county governments, for instance, Wajir County in the financial year 2023/2024 received Kshs. 9 billion to provide services to the people (OCOB, 2024).

Economically, Wajir County is largely a livestock production region with over 80 per cent of the households deriving their livelihoods from the sub-sector. Crop farming is practiced on a small-scale along drainage lines where seasonal crops such as sorghum, maize, beans, cowpeas, green grams and other seasonal food crops and drought resistant produce get cultivated (KNBS, 2020). Despite the fact that Kenya's government has implemented a number of decentralized policies since independence, the country's population nevertheless enjoys a poor level of economic and social welfare. The National government has been allocating to funds to the county governments since the inception of the devolution system in 2013 OCOB (2014), however, the level of development at the county level is still low and delivery of essential services is wanting leading to low living standards and rise of poverty levels. Many Wajir people are unable to afford certain aspects of human development, which are crucial in defining the quality of life, such as high-quality universal education, reasonably priced health care, wholesome food, clean water, and sanitary conditions, because of the high percentage of poverty in the area.

The Own Source Revenue collected has enhanced the provision of public services such as education, health and infrastructure development within the jurisdiction of the county. It also enhances county autonomy and ensures accountability of the devolved funds and funds from own sources, government becomes more responsive since the

fund is channeled to the priority of the people since the government is for the people, by the people and of the people. Lastly, the fund stimulates economic growth of the county by creating job opportunities to youths and other members of the society. It also improves the business environment through infrastructure development, reducing bureaucracies of obtaining business permits and licenses. This attracts investors from both local and foreign world hence leading to economic growth. Wajir County is currently enjoying the fruits of fiscal decentralization through the allocation of funds from the national government in order to enhance service delivery to the people. However, there are concerns about the effectiveness of fiscal decentralization in the county since the level of healthcare services, education standards and living standards of the people is below average compared to the national average. The level of service delivery in the county has raised questions and since the key goal for devolution was to uplift the living standards of the minority or people living in marginalized counties or regions has called for the investigation of the effect of intergovernmental transfer and local resource on human development in Wajir County in Wajir County.

The study was supported by two key objectives, the first objective is to analyze the effect of intergovernmental transfer on human development in Wajir County and secondly to evaluate the effect of own source revenue on human development in Wajir County. These two objectives were achieved by analyzing data for the period 2013-2023 on fiscal transformations in the county (OCOB reports, 2024; KNBS reports, 2024 & CBK reports).

The study was anchored on fiscal decentralization theory as developed by Musgrave in 1959 and improved by Oats in 1972. Most works of literatures reviewed have shown that fiscal decentralization enhance service delivery at the lower tier government and also the development of projects geared towards the enhancement of human

development such as hospitals, schools and other pro-poor recreational facilities. It also aids in poverty reduction in regions which are deemed to be marginalized. Further, the studies have shown that fiscal decentralization uplift poverty levels in any given region. A non-experimental study design was utilized with quarterly time series data for the period 2013-2023. The data was analyzed using the ARDL estimation technique. This is because the variables became stationary at both level and after the first difference. Before regression was carried out both pre-estimation and diagnostic tests were done to ensure that spurious results were not achieved.

The findings of the study indicate that the coefficient human development in Wajir County is positively and considerably impacted by both own source revenue and intergovernmental transfers. Improvements in the delivery of other services, like healthcare and education, likewise have a major positive impact on the county's human development. On the other hand, the county's gross county product has a negligible negative impact on human development, whereas spending on sanitation and water services has a negligible beneficial impact.

5.3 Study Conclusions

The study was guided by two objectives namely, to analyze the effect of intergovernmental transfer on human development in Wajir County and to evaluate the effect of own source revenue on human development in Wajir County.

The study findings reveal that the coefficient of intergovernmental transfers has a positive significant effect on human development. This is because the county is capable of providing essential services to the citizens that are geared towards the well-being of the people. Similarly, funds generated from own-source revenue also positively and significantly influence human development, this is because the coefficient of own-

source revenue is positive and significant. This is due to the fact that the county's ability to become autonomous in its decision-making on what services to prioritize and improve to benefit the citizens. The funds can be used to construct classrooms for the Early Childhood Development Centres (ECDCs) as well as other classrooms for primary and secondary and also to pay school fees in terms of bursaries. These activities prolong the number of schooling days for school-going age hence increasing their literacy level and also become more knowledgeable hence improving their wellbeing. The funds from intergovernmental transfers are also used to construct hospitals, dig wells, construct roads and other essential services meant to improve the welfare of the citizens. Similarly, the coefficient of county expenditure on healthcare services development was found to have a positive significant effect on human development. This is because availability and access to quality healthcare services prolong life expectancy and also reduce the number of infant mortalities in the county hence a healthy county. Lastly, the study revealed that the coefficient of investment is significant meaning that investment in education significantly affects human development. This is so because an educated individual knows when to consume healthcare services and become healthy, a healthy person is more productive and able to earn more income hence having better living standards

5.4 Policy Implications

The study has shown that intergovernmental transfers and own source revenue positively and significantly affect human development, therefore there is need for strong policies to be enacted and implemented to ensure timely reimbursement of funds to counties for timely provision of services and absorption of funds. Further, the government should ensure that Public Finance management (PFM) act of 2012 and

2015 is adhered to, in order to minimize misuse of funds and stringent measures are taken against the offenders or violators of the act.

Additionally, expenditure on health and investment on education also have a positive significant effect on human development. Therefore, laws should be put in place to ensure that fund allocated for such purposes are not diverted to other uses to ensure the achievement of the goal or intended purpose as this goes a long way in the realization of human development in the region. Lastly, since intergovernmental transfers play a key role in service provision at the county level, then more funds need to be allocated for better, quality and guaranteed services at the county level by enacting laws that ensure timely disbursement of funds to the county governments.

5.5 Suggestion for Further Studies

The study has shown that intergovernmental transfers improve human development at the county level, however, a close check on the amount of funds allocated *vis a vis* services provided are not correlated hence further research should be carried out to establish the relationship between intergovernmental transfers and services delivery at the county level to the common citizens.

Additionally, the study has revealed that gross county product which is a measure of GNI for the county insignificantly affect human development, yet theories have shown that an increase in GNI leads to an improvement in human development since more services are provided to the people. Therefore, further study needs to be carried out to establish the insignificant effect.

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