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ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT MANAGEMENT

PUBLIC MANAGEMENT AND POLICY

**EVALUATING OF URBAN LAND USE POLICY IMPLEMENTATION: A CASE OF
STUDY OF COBBLESTONE INFRASTRUCTURE IN KIRKOS SUB CITY**

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June, 2024

Addis Ababa, Ethiopia

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STUDY OF COBBLESTONE INFRASTRUCTURE IN KIRKOS SUB CITY**

BY: TEWODROS CHERE

TO

ADVISOR:

CHALLA AMDISSA (PHD)

**A THESIS SUBMITTED TO DEPARTMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT
MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF PUBLIC MANAGEMENT AND POLICY**

**May, 2024
ADDIS ABABA, ETHIOPIA**

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DECLARATION

I, Tewodros Cherie, hereby declared that this work entitled “*Evaluating urban land use policy implementation: A case Study of cobblestone infrastructure in kirkos sub city,*” has not been carried out by me under the guidance and supervision of Challa Amdissa (PhD). The thesis is original and has not been submitted for the award of any Master degree or degree to any university or institutions.

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Signature: _____

Date of Submission: June, 2024

Statement of certificate

This is to certify that **Tewodros Cherie** accomplished his thesis entitled “*Evaluating urban land use policy implementation: A case Study of cobblestone infrastructure in kirkos sub city*”. Is his original work and is submitted for examination with my approval as a thesis.

Challa Amdissa (PhD)

25/06/2024

Name of Advisor

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APPROVAL SHEET

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Tewodros Cherie June, 2024

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Acronyms

AACRA:	Addis Ababa City Roads Authority
AA :	Aviation Authority
CPCO:	Cobblestone Project Coordination Office
CPDA:	Community Participation Development Agency
CPDO:	Community Participation Development Office
CSCBP:	Construction Sector Capacity Building Program
DDCRA:	Dire Dawa Construction road Authority
DTTS:	Department of Transport, Tourism and Sport
ERA:	Ethiopian Roads Authority
ERF:	Ethiopia Road Fund
ERF:	European Union Road Federation
FDRE:	Federal Democratic Republic Ethiopia
GIZ:	Gesellschaft für International Zusammenarbeit
LDC:	Local Development Committee
LUSUP:	Leveraging Urban Spending to Maximize Benefits of the Urban Poor
MSEs:	Micro and Small Enterprise
MUDC:	Ministry of Urban Development and Construction
RRA:	Railway Regulatory Authority
RTA:	Road Transport Authority
SRID:	sustainable road infrastructure development
SDG:	sustainable development goal
UTA:	Urban Transport Authority
UIIDP:	Urban Institutional and Infrastructure Development Program
ULGS:	Urban Local Governments
ULDMPS:	Urban Land Development and Management Policy and Strategy
ULGDP:	Urban Local Government Development Project
UN:	United Nations
UNCDF:	United Nations Capital Development Fund

ABSTRACT

The study has been carried out to Evaluating urban land use policy implementation: A case Study of cobblestone infrastructure in kirkos sub city”. The specific objectives of the study were to identify the challenges in the practical implementation of the policy on cobble stone infrastructure, evaluate the benefit of cobble stone infrastructure to the community and local government from the urban land use policy evaluate in line with its effect on economic impact for infrastructure development. For the sake of achieving the purposes of this study descriptive method were employed and, questionnaires were analyzed by using table, percentage and average. The results of the data are presented in qualitative and quantitative forms. The information collected through questionnaire from 399 sample respondents out of 203,008 total populations. The respondents were selected using simple random sampling technique. The study was focused on assessing the Evaluating urban land use policy implementation: A case Study of cobblestone infrastructure in kirkos sub city. Foundation on the results, the main recommendations made such as, kirkos sub city administration should take lesson and share the experience of similar well- functioning and land use policy system implemented countries in cobblestone infrastructure global level.

The major findings which the researcher point out were, most respondents agreed upon evaluating urban land use policy implementation: A case Study of cobblestone infrastructure (consisting four dimensions indicated above) on cobblestone infrastructure. The research has tried to give conclusion, recommendation and possible solutions for the problems and supporting ideas for positive said on the issue.

Key words: *Urban Land use Policy, implementation, cobble stone*

CHAPTER ONE

INTRODUCTION

In this chapter, the author introduced the chosen research topic that consists of background of the study, statement of the problem and objective of the study. It also dealt with research questions, significance of the study and research hypothesis of the study. In addition, it provided scope and limitation of the study and how the author organized the whole thesis in the end.

1.1 Background of the Study

Urban Land policy is a comprehensive framework of laws, regulations, and practices employed by governments to manage, govern, and regulate land use within urban areas. It encompasses a range of strategies and measures aiming to achieve sustainable, equitable, and efficient use of urban land resources. Urban land policy also plays a crucial role in addressing housing affordability and ensuring equitable access to land (World Bank, 2011).

“Land policy lies at the heart of economic and social life and environmental issues in all countries.”

The first aspect of land policy involves land governance and administration. This includes establishing systems for land registration, titling, and land tenure security to ensure clear and enforceable rights to land. Effective land governance helps prevent disputes, fosters investment, and encourages responsible land management. It also involves creating institutions and mechanisms for land administration and dispute resolution (World Bank, 2011).

Since the 1990s, Ethiopia has had an officially enforced Urban Land Tenancy Law to provide citizens with benefits in exchange for their contributions to development. In 1993, the government adopted the initial Tenancy Declaration, amended in 2002 and then again in 2011. This study focuses on the new infrastructure development of light road cobblestone in Woreda Local District No. 721/2011, which was designed to expand development opportunities.

(Swinburne, Goga, S & Murphy, F. (2006) found that communities possess the capital to contribute to local economic growth, as well as their own cultural and behavioral resources that interact with their respective environments and upbringing.

Addis Ababa, the capital city of Ethiopia, has experienced rapid urbanization and population growth in recent decades, leading to various land use and infrastructure challenges.

The city has faced issues such as informal settlements, inadequate public services, and a need for sustainable urban development strategies.

The Ethiopian government has implemented a range of urban land use policies and programs to address the challenges of urbanization, including the development of cobblestone infrastructure.

These policies aim to promote sustainable urban development, improve infrastructure, and enhance the livability of cities.

The cobblestone infrastructure initiative has been a significant focus of urban development efforts in Addis Ababa, with the goal of improving road networks, pedestrian walkways, and public spaces.

The cobblestone projects have been implemented across various sub-cities, including Kirkos, with the aim of enhancing accessibility, connectivity, and the aesthetic appeal of the urban environment.

Despite the policy focus on cobblestone infrastructure development, the implementation process has faced various challenges, including coordination among stakeholders, resource allocation, community engagement, and maintenance concerns.

These challenges have led to uneven outcomes and have raised questions about the effectiveness of the policy implementation process.

To address the implementation challenges and improve the effectiveness of urban land use policies, there is a need to systematically evaluate the implementation process and outcomes of the cobblestone infrastructure projects.

This evaluation can provide valuable insights into the factors that enable or hinder successful policy implementation, and help inform future policy refinements and implementation strategies.

As mentioned earlier, Kirkos sub-city was selected as the case study due to its prominent role in the cobblestone infrastructure development, the observed implementation challenges, and the potential for data availability and transferability of findings. The "critical assessment" approach suggests the researchers will analyze both the successes and challenges encountered in implementing the cobblestone program.

As mentioned in the introduction, cobblestone infrastructure development is a relatively new phenomenon in Ethiopia's urban areas.

Additionally, there have been very few studies conducted on this topic, especially within the specific context of the Kirkos sub-city.

This makes the current research an important contribution to understanding how these emerging urban policies are being put into practice.

Research, some of the key challenges that may have been identified in the implementation of the cobblestone infrastructure policy in the Kirkos sub-city include:

Institutional Capacity Constraints: the study may have found limitations in the technical expertise, staffing, resource availability, and inter-agency coordination within the local government agencies responsible for executing the cobblestone program.

These institutional capacity gaps could have hindered effective policy implementation.

Community Engagement and Acceptance Issues: the research may have uncovered challenges in garnering widespread public support and participation from Kirkos sub-city residents and businesses.

Factors like lack of awareness, concerns about disruptions, or resistance to the new cobblestone infrastructure could have impeded implementation.

Technical and Logistical Difficulties: the study may have revealed practical challenges in areas like site selection, construction methods, project management, and maintenance of the cobblestone roads.

Navigating these technical aspects in the local context might have posed implementation hurdles.

Political and Budgetary Constraints: the research could have found that the cobblestone policy faced competing urban development priorities or inadequate funding allocations at the municipal or regional levels.

These political-economic factors may have limited the resources and support available for effective implementation.

Contextual Barriers: the study may have identified specific contextual factors within the Kirkos sub-city, such as existing land use patterns, socioeconomic conditions, or physical geography, which created barriers to the smooth implementation of the cobblestone infrastructure program.

1.2 Statement of the Problem

The Problem Statement of the durable construction of cobblestone infrastructure is a relatively new urban development policy initiative in Ethiopia. However, there is a lack of empirical research examining the implementation and outcomes of this policy, especially in the context of the Kirkos sub-city administration.

The key elements of the problem statement are the novelty of the Cobblestone Infrastructure Policy an emerging approach to urban development in Ethiopia.

There is limited experience and evidence on how these policies are being implemented on the ground.

Given the newness of this policy domain, there is a need to critically evaluate and assess the process of implementing the cobblestone infrastructure program.

This involves examining the factors shaping the translation of the policy into practical outcomes.

The research focused on the Kirkos sub-city, which represents a specific local context within the broader Ethiopian urban landscape.

Examining the implementation of the cobblestone policy in this particular sub-city setting can provide valuable insights.

Lack of Prior Research: there is a dearth of existing research and empirical evidence on the implementation of cobblestone infrastructure policies, especially within the Kirkos sub-city.

The main challenges and barriers encountered in the implementation of the cobblestone infrastructure policy in the Kirkos sub-city likely include.

Institutional Capacity Constraints: limitations in the technical expertise, staffing, and resources within the local government agencies responsible for executing the cobblestone program.

Coordination issues between different departments and agencies involved in the policy implementation.

Community Engagement and Acceptance Challenges: lack of widespread public awareness and understanding of the cobblestone infrastructure program of resistance from residents and businesses due to concerns about disruptions, inconveniences, or the need for land acquisition.

The major problems to solve in garnering to an active community participation and support for the policy implementation.

Technical and Logistical Difficulties: Challenges in site selection, construction methods, project management, and maintenance of the cobblestone roads of the navigated form of the complexities of implement community itself for the technical aspects of the program in the local Kirkos sub-city context.

Political and Budgetary Constraints: Competing urban development priorities at the municipal or regional levels limited the resources and attention devoted to the cobblestone policy.

Inadequate budget allocations and funding for the productive implementation affected the cobblestone infrastructure program.

Contextual Barriers: Existing land use patterns, socioeconomic conditions, and physical geography within the Kirkos sub-city created obstacles to the smooth implementation of the cobblestone policy to difficulty in adapt the cobblestone infrastructure program to the specific contextual realities of the sub-city.

1.3 Objective of the Study

1.3.1 General objectives

The key elements of the general objective are:

Evaluation of Policy Implementation: the study focuses on evaluating the implementation of the cobblestone infrastructure development policy, rather than simply analyzing the policy itself.

The emphasis is on examining how the policy is being put into practice on the ground.

- The specific policy under evaluation is the cobblestone infrastructure development program, which involves the construction of cobblestone-paved roads and related infrastructure.
- The evaluation is situated within the Kirkos sub-city, a specific geographical and administrative setting within the broader urban context of Ethiopia.
- Examining the implementation of the cobblestone policy in this particular sub-city is a central aspect of the study.
- The objective is to gain a comprehensive understanding of the various factors, processes, and outcomes associated with the implementation of the cobblestone infrastructure policy in the Kirkos sub-city.

- This includes identifying the key drivers, barriers, stakeholder roles, and tangible results of the policy implementation.

1.3.2 Specific Objectives:

The specific objectives of the study are given as follows:

- ✓ To assess the institutional and organizational capacity of the local government agencies responsible for implementing the cobblestone infrastructure policy in the Kirkos sub-city.
This objective focuses on evaluating the technical expertise, staffing, resources, and coordination mechanisms within the implementing agencies.
- ✓ To examine the community engagement and acceptance processes involved in the cobblestone infrastructure development program.
This objective aims to understand the level of public awareness, participation, and support (or resistance) from Kirkos sub-city residents and businesses.
- ✓ To identify the technical and logistical challenges encountered in the planning, construction, and maintenance of the cobblestone infrastructure projects.
This objective delves into the practical, operational, and management-related difficulties faced in executing the cobblestone program on the ground.
- ✓ To analyze the political and budgetary constraints that influenced the implementation of the cobblestone infrastructure policy.
This objective explores the role of broader urban development priorities, funding allocations, and political factors in shaping the execution of the cobblestone program.
- ✓ To understand the contextual factors within the Kirkos sub-city that created unique barriers or facilitated the implementation of the cobblestone infrastructure policy.
This objective focuses on identifying the specific local conditions, such as land use patterns, socioeconomic dynamics, and physical geography, that either supported or hindered the policy implementation.
- ✓ To examine the level of community engagement and participation in decision making process for cobblestone infrastructure development.

1.4 Research Question

What are the main research questions addressed by this study?

1. What are the institutional and organizational capacity constraints that have influenced the implementation of the cobblestone infrastructure policy in the Kirkos sub-city?

This question focuses on understanding the challenges related to the technical expertise, staffing, resources, and inter-agency coordination within the local government agencies responsible for the cobblestone program.

2. How have community engagement and acceptance processes affected the implementation of the cobblestone infrastructure development program in the Kirkos sub-city?

This question explores the role of public awareness, participation, and support (or resistance) from Kirkos sub-city residents and businesses in shaping the policy implementation.

3. What technical and logistical challenges have been encountered in the planning, construction, and maintenance of the cobblestone infrastructure projects in the Kirkos sub-city?

This question delves into the practical, operational, and management-related difficulties faced in executing the cobblestone program on the ground.

4. To what extent have political and budgetary constraints influenced the implementation of the cobblestone infrastructure policy in the Kirkos sub-city?

This question examines the role of broader urban development priorities, funding allocations, and political factors in shaping the execution of the cobblestone program.

5. How have the contextual factors within the Kirkos sub-city created unique barriers or facilitated the implementation of the cobblestone infrastructure policy?

This question focuses on identifying the specific local conditions, such as land use patterns, socioeconomic dynamics, and physical geography, which either supported or hindered the policy implementation.

1.5 Significance of the research

Contribution to Understanding Policy Implementation Challenges:

The study objectives to provide a detailed evaluation of the challenges and factors that influence the implementation of an urban land use policy, namely the cobblestone infrastructure development program in the Kirkos sub-city.

By examined the institutional, organizational, community, technical, political, and contextual factors that shape the policy implementation, the study can contribute to a broader understanding of the complexities involved in translating urban development policies into practice.

Informing Future Policy Refinement and Program Design: the in-depth analysis of the cobblestone infrastructure policy implementation in the Kirkos sub-city can generate valuable insights that can inform the refinement of this specific policy, as well as the design and implementation of similar urban development programs in the future.

The Bridged the Gap between Policy and Practice: to the study recognized the importance of bridge for the gap between urban land use policies and their actual implementation on the ground.

By focused on the evaluation of policy implementation, rather than just the policy analysis, the study can provide critical insights into the translation of urban development aspirations into tangible results.

Enhanced Local Governance and Community Participation: The study's examination of community engagement and acceptance processes can shed light on the role of local stakeholders in shaping the implementation of urban development policies.

Contribution to the Body of Knowledge on Urban Development Policy Implementation: As a case study focused on the implementation of the cobblestone infrastructure policy in the Kirkos sub-city, this research can contribute to the broader academic and professional knowledge on the challenges and best practices in the implementation of urban development policies.

The insights gained from this study can be valuable for researchers, policymakers, and urban development practitioners working in similar contexts or grappling with the complexities of translating land use policies into on-the-ground realities.

1.6 Scope of the research

The study was limited focused on a manageable size is essential for a thorough investigation of the problem. Taken into account that the Addis Ababa City Administration is divided into 10 sub-cities, the study purposefully chosen Kirkos sub-city, as it, in turn, is classified into 10 woredas. Thus, the study geographically limited to cobblestone road sites in the Kirkos sub-city. The purpose of the study conducted a practical investigation and detailed analysis of the Evaluated and prospects of the urban land policy implementation on the development of cobblestone road infrastructure in the Kirkos sub-city.

1.7 Limitation of the research

The study was limited by a small sample size in comparison to the region and population. Additionally, some respondents who completed the questionnaire were reluctant to respond and were ambiguous in their responses, further limiting the scope of this paper.

1.8 Organization of the study

The organization of this thesis paper was enclosed in six main Chapters. The first chapter contains the background information needed to give the reader a clear understanding of the Performance and Challenges of Core Area Urban Land Management for infrastructure cobble road Research and to identify critical issues and fill gaps. The second chapter draws upon various theories and practices from around the world to present different arguments in support of the selected areas, with a focus on how urban land is used for infrastructure work in countries where the land is state-owned. Chapter 3 outlines the methodology used to solve the problem, which included the distribution of key persons. We then compare different practices related to existing conditions in the city. Chapters 4 and 5 present the results of the collected data. These results address the problem of relations between citizens and perceptions of job creation, cobblestone mining preparation, and resource usage. The last section draws a conclusion, pointing out the problems mentioned in the previous chapter. It is concluded with a summary that includes the scope of future research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

In Ethiopia, the Constitution states that land ownership in both rural and urban areas belongs exclusively to the state and its citizens. This allows the land to be acquired through the leasehold system. To ensure the successful implementation of land use policies, several declarations and ordinances have been established to evaluate the worth of urban land and promote the development of infrastructure for employment, housing, and other purposes. Thus, this section focuses on the concept of land use policy implementation, the current status of cobblestone infrastructure development policy, and its execution.

2.1 Theoretical Review on land use policy implementation

2.1.1 Nature of land use policy Means of implementation for construction of Cobblestone

The UN Report (1994) proposed a more holistic definition of land, one which takes into account not only its physical entity in terms of its topography and spatial nature but also its socioeconomic resources and associated economic value, expressed in price per hectare at ownership transfer.

Land policy: A set of principles that govern the ownership, use, and management of land resources to boost their productivity and facilitate socio-economic, political, and environmental development and poverty reduction.

Land reform: A process that involves the restructuring or redesign of at least three components of the land system; namely its property structure, use, and production structure, and the support services infrastructure.

Lease: A legal, binding contract outlining the terms under which one party agrees to rent property owned by another party.

Urban Land lease policy: A policy based on population size during the urban planning process to tackle issues related to sustainable urban development by increasing the densities of urban areas.

City Administration: Refers to the governing authority of a city, such as the Addis Ababa City Administration or Dire Dawa City Administration.

Appropriate Body: A body of a Region or City Administration responsible for the management and maintenance of local authority or other public body registers and information that are covered by Forms.

Land Information System: A set of principles and data sets governing the collection, processing, storage, and use of data relating to land ownership, usage, quality, location, and change over time, to be used in decision-making.

Land Governance: Refers to the political and administrative structures and processes through which decisions concerning access to and use of land resources are made and implemented, including the manner in which disputes over land are resolved.

Urban Plan: A form of spatial planning encompassing ways in which land, land use, spatial morphologies, resource distribution, and economic and social interactions may be planned and managed.

Compensation: The financial or non-financial benefits provided by the government or relevant authorities to individuals or entities affected by land lease arrangements.

Region: refers to any geographic region mentioned in the Constitution, including the Addis Ababa and Dire Dawa city administrations;

Landholder: an individual, government, private organization, or any other entity with a lawful possession over the land to be expropriated and legal ownership of property;

Urban administration: an organ to which urban administrative powers and duties have been given by law or delegated by the concerned government body;

Public purpose: actions, policies, or programs undertaken by government entities, institutions, or organizations to promote collective welfare, enhance public services, or address common societal needs;

Land administration: structure and processes for the determination, archiving, and delivery of land rights, and systems for the general oversight of the land sector;

Infrastructure: leasing land for the construction of public infrastructure such as roads, bridges, schools, hospitals, or utilities, which are essential for the development of the urban area and the well-being of its residents;

Infrastructure work: construction, development, maintenance, or improvement of physical structures and facilities that are essential for the functioning of a society or economy, including the planning, design, and implementation of various projects aimed at creating or enhancing the necessary infrastructure.

Proclamation 721/2011, Proclamation No. 272/2002, and Proclamation No. 857/2014 all concern Urban Land Policy.

Encyclopedia Britannica (Tiwari, 2011) states that cobblestones are stones that are often used in the pavement of early streets. Treskon (2006) defines cobblestone as a rounded, water-worn stone used for paving streets and belonging to a larger family of paving stones or the mental construct of stone blocks. Kalimba (2007) explains that cobblestones are a type of concrete block used to pave streets to address urban road problems in slum areas. The Ethiopian Roads Authority (ERA, 2011) defines cobblestones (or dressed stones) as cubic pieces of stone larger than sets, usually shaped by hand and built into a road surface layer or surface protection.

2.2. Meaning and scope of land use policy

The implementation of urban land use is defined in a variety of ways. It is a function that encompasses both the resulting land use effect and the resources consumed in order to achieve it (Auzins et al., 2013).

Huang et al. (2016) suggest that urban land use implementation, which involves a degree of interaction between human economic activities and natural subsystems, can be expressed in terms of how optimally a piece of urban land is used after conversion and/or transfer to a third party. According to Liu et al. (2019), urban land use implementation can be defined as the ratio of urban area growth to population growth (Corbane et al., 2017; Zhang et al., 2020; Zitti et al., 2015). Auzins et al. (2013) suggest that land use implementation analysis can be used to evaluate the optimal use of land for different purposes. Moreover, low-density development, which can be attributed to land hoarding/fencing, land banking, urban sprawl, land use fragmentation, and land

oversupply, can negatively affect the optimal use of urban land. As per the UNSD (1997), informal settlements have two main characteristics.

Informal settlements can be identified through physical, socio-economic, and legal criteria. Physical criteria include irregular shapes, lack of infrastructure, and lack of public spaces, while socioeconomic criteria include low income, poor-quality living, and housing conditions. Legal criteria include illegal land occupation, informal subdivision, informal farmland conversion, and violating urban and building regulations. These settlements represent areas where groups of housing units have been constructed without legal claim, or illegally occupied, and unplanned settlements and areas where housing is not in compliance with current planning and building regulations slum area (Fernandes,2011).

Different scholars have studied urban land use efficiency, with a focus on topics such as agricultural productivity, farmland protection, land management, land use intensity, and more. Additionally, the effectiveness of land policy - particularly in areas of lease policy enforcement, land management, and zoning plan implementation - is another determinant of urban land use efficiency will lead to successful economic development.(Auzins et al., 2013; Storch and Schmidt, 2008; Wei et al., 2018; Yang et al., 2017).

The Classical and Modern theories support the founding of Micro and Small Enterprises (MSEs) and their involvement in the development process. Classical theory suggests that poverty and the importance of MSE development have a positive correlation and that MSEs can help reduce poverty by creating jobs such as cobblestone paving, chiseling, and others. Modern theory posits that economic development can be achieved through a high level of commutative innovation, cooperation, flexibility, and specialization, rather than cobblestone projects. Both theories are relevant to highly populated countries, especially in light of recent technological advances such as cobblestone. (Tambunan,2006).

In the nineteenth century, cobblestone pavement technology was theorized to have been used in Western Europe and North America. As a result of this theory, cobblestone can be found in the form of unrefined, squared blocks and as trim, polished tiles. Specifically, blue or flagstone, marble, slate, and granite blocks are all widely used for street paving (Jim Gibbons, 1999). Cobblestone was chosen as the best option for urban roads in both North America and Europe due to its ability to improve access, reliability, and safety, and reduce the impact of transport on people and the environment. (Treskon,2006).

2.2.1 Evolution of Urban Land Policies in Ethiopia:

Trace the historical development of urban land policies and legislation in Ethiopia, from the pre-1974 period to the present.

Highlight the major policy shifts, such as the nationalization of urban land and extra-houses in 1975, and the subsequent policy reforms in the 1990s and 2000s of the socio-political and economic drivers behind the changes in urban land policies over time.

Examine the institutional structures and administrative processes responsible for the implementation of urban land policies in Ethiopia, including the roles of federal, regional, and local government agencies.

The key laws to regulations the guidelines that govern the allocation, utilization, and management of urban land in the country by a coherence and coordination between the different institutional and legal frameworks influencing urban land use and development.

Decentralization and Urban Land Governance: decentralization policies on the implementation of urban land policies, particularly the transfer of land management responsibilities to local governments. For the challenges and opportunities associated with the decentralized approach to urban land governance, such as variations in capacity, resources, and decision-making processes across different localities.

Explore the efforts to harmonize urban land policy implementation at the national, regional, and local levels.

Urban Land Tenure Systems and Security: the evolution of urban land tenure systems in Ethiopia, including the shift from private ownership to state ownership and the introduction of leasehold systems.

The implications of different tenure systems on the rights, responsibilities, and perceived security of urban land users, and their influence on investment and development decisions best to the initiatives and challenges related to improving urban land tenure security and its impact on urban development and land use planning.

Experiences and Lessons from Urban Land Policy Implementation: the most literature and empirical studies on the implementation of specific urban land policies and programs in Ethiopia, such as the cobblestone infrastructure development in Kirkos sub-city.

By identify the key factors that have contributed to the successes or failures of urban land policy implementation, including the roles of stakeholder engagement, resource allocation, institutional capacity, and contextual factors which synthesize the lessons learned and best practices that can inform the design and implementation of future urban land policies in Ethiopia.

The land issue was one of the earliest actions taken as the initial steps in the nation's shift to a market economy, although the constitution divided ownership and use rights of urban land. The nine regional states and the two chartered cities, which constitute the local governments, claimed to own the land while creating a tradable claim on urban land use rights. This set the stage for the launching of the land market and other important undertakings such as formulating legislation for urban planning, expropriation, and remuneration of urban land, urban leasehold property rights, registration of urban property, and property transactions.

Exploring the urban land tenure systems of Ethiopia's three different political regimes - Imperial, Dreg, and EPRDF - can help evaluate the extent to which each system has granted objective tenure security to urban landholders and ascertain if there has been any improvement in their ability to ensure this security with a change in political regime. This analysis focuses solely on the statutorily defined land tenure systems. Under Emperor Haile Selassie's regime, the urban land tenure system followed Emperor Menelik II's endorsement of private landownership rights of individuals, which guaranteed that landholders would not be deprived of any of their movable or landed property unless it was for public purposes and just compensation was provided. (The Constitution of Ethiopia, 1931).

In 1974, the Imperial regime of Haile Selassie was overthrown by the Soviet-backed Provisional Military Administrative Council (PMAC), commonly known as the Derg (Bodurtha, 2011; Teklu, 2005). Following this, a number of initiatives have been made since the early 1990s to improve land service delivery and the urban land policy adopted by the Ethiopian Government. This policy, known as the Urban Land Lease Holding System, enables the government to transfer land use rights and benefits from the state to the private sector (Urban Land Lease Holding First Proclamation No, 80/1993, Art, 5-7). According to the Ethiopian Constitution, article 40 sub-

articles 3, the land is a common property of the Nations, Nationalities, and Peoples of Ethiopia and cannot be sold or exchanged. However, the government is expected to ensure the right of private investors to use land on the basis of payment arrangements established by law, as stated in the same article sub-article 6. These proclamations were implemented with the aim of achieving social and economic goals, such as improving efficiency, responsiveness, and equity in the land market.

It is a well-acknowledged fact that Ethiopia has implemented a series of proclamations concerning urban land administration and policies, beginning with Proclamation No. 80/1993. Following this, Proclamation No. 271/2002 and Proclamation No. 721/2011 were enacted. These proclamations are aimed at achieving social and economic goals through their effective implementation. Meanwhile, the proclamations emphasize that an efficient and responsive land administration system is necessary for the country's rapid and sustainable economic growth. As such, the lease policy stipulates that the right to use urban land (through lease) should be utilized to accomplish the common interest and development of the people, taking into account equity as a primary consideration.

According to FDRE Proclamation No. 857/2014, infrastructure works are related to the capital usage, sustainability, and accessibility of infrastructure, as well as the evaluation and payment of compensation for the expropriation of land holdings and removal of properties. Service delays and environmental pollution brought about by damage to infrastructure during construction have sometimes caused serious economic and social issues for the government and the beneficiaries. To address these issues, the Federal Integrated Infrastructure Development Coordinating Agency Establishment Proclamation No. 857/2014 was established, providing a legal entity with the duty of coordinating and regulating the integrated execution of infrastructure works. According to the World Bank, the root causes of developmental issues in urban Ethiopia are land management, governance, and municipal finance (World Bank, 2016).

2.2.2 Historical background infrastructure for Cobblestone

Adequate infrastructure is essential for a country, region, or organization to function properly. Cobblestone Infrastructure provides the basic equipment and structures, such as roads and bridges that are needed to support economic development. By increasing productivity and providing services that enhance the quality of life, it contributes to an increase in aggregate output. Examples include improved roads that lead to increased agriculture output from farmers,

the creation of a seaport, rail links, electrical generation, transmission and distribution, water and irrigation projects, an increase in quality of life, and urbanization of different areas. (Akinyosoye, 2010).

In Europe, there are still a few genuine cobblestone streets, yet in general, what numerous individuals consider cobblestone streets are really pitched surface roads. Pitched surface roads utilize level stones that have a thin edge, and are set on their edges rather than level on the ground. However, these roads were made a long time after cobblestone streets and 1,000 years before man-made setts. Sub-Saharan Africa remains the poorest region of the World, despite the fact that there has been a significant expansion in the per capita income growth rates of numerous countries in the area lately.

Decades of financial stagnation, poor standard of living, ethnic cleansing and tribal wars, political instability, and environmental catastrophes have left infrastructure advancement uncared for. Infrastructure alludes to open products and services that enter the production procedure as Complementary inputs for traditional factors of production such as capital, labor, and entrepreneurship. They help to increase returns on investment by reducing production costs and improving transition efficiency. (BELLO & OSINUBI, n.d, 2010).

Situated in the Horn of Africa, Ethiopia is bordered by Djibouti to the west, the Gulf of Aden to the north, the Indian Ocean to the east, and Kenya to the southwest. With the longest coastline on Africa's mainland, Ethiopia's terrain mainly consists of plateaus, plains, and highlands. Unfortunately, the destruction of the country has devastated roads, water, transportation, education, communication, electricity, hospitals, and other aspects that contribute to the development of social infrastructure, consequently leading to a lack of infrastructure and a retarding of economic development.

While there is no previous research that examines the relationship between lack of infrastructure and economic development, this current study seeks to explore the impact of such a lack. Historically, these countries have used building cobblestone houses as their comparative advantage over building frame houses due to the lower labor costs and reduced inflationary labor markets that followed the civil war. Moreover, cobblestone houses provide a greater level of insulation and a decrease in energy costs when compared to frame houses.

Although there is a lack of related literature, a thorough review of cobblestone road infrastructure in Ethiopia was conducted under this title. It was noted in the literature review that

cobblestone pavement is not a novel concept in Ethiopia, as it has been used there for more than a century. (Azeb, 2011).

Over the past eight years, the cost of one-kilo meter of cobblestone has significantly increased to 3.4 million Br and that of asphalt to 13 million Br per kilometer. In 2005, the Ethiopian government, with the help of the African Association for Regional Cooperation (AARA), began implementing a feasibility study for constructing cobblestone streets in Dire Dawa, the country's second-largest city. As the population and urban activities of Dire Dawa increased, so did the demand for infrastructural development, which in turn, boosted the economy.

Mekele was then the second city to train local masons and pavers in the processes of cobble making and paving. Following that, Adama, Hawassa, and Bahir Dar were also included in the program. The World Bank-funded Urban and Local Government Development Project (ULGDP) provided \$300 million to promote the use of cobblestones and their impact on local development. By the time the Ethiopian government took over the project in late 2009, over 2,000 small and medium enterprises (SMEs) had been established, employing close to 84,000 masons and 4,700 pavers. In 2011/12, the program had been rolled out in 120 cities across the nation, and about 2.2 million square meters of cobblestones had been laid. This venture has created over 130,000 jobs, with women accounting for 45 percent of the employees. Currently, six cities, including Hawassa, Bahir Dar, Mekele, Dire Dawa, Harar, and Addis Ababa, are setting up their own training centers. In Addis Ababa, the Addis Ababa Municipal Roads Authority (AACRA) has built 500 km of cobblestone streets, employing more than 2,500 people. Altogether, the project has created 40,000 career opportunities and has contributed 35 percent of the total cost of the avenue to the local community without charge.

According to the expert, many parameters influence the quality and durability of a cobbled street that was constructed. They stress that it essential for basic materials and labor quality assurance measured to be implemented and for institutions to monitor their implementation.(ASCHALEW,2013).

The history of cobblestone infrastructure in Ethiopia dates back to the introduction of cobblestones by French experts during the construction of the Ethio-Djibouti railway about 100 years ago. However, progress on cobblestone construction was limited for a long period of time. It was not until recent years that cobblestone projects received renewed attention and implementation in Ethiopia. The Cobblestone Project, initiated in 2005 by the Construction

Sector Capacity Building Program (CSCBP), aimed to create job opportunities for youth and provide durable road pavement in Ethiopian cities. This project was carried out in collaboration with the German Technical Cooperation's Engineering Capacity Building program.

The pilot phase of the project started in Adama town in 2008, supported by the World Bank. The success of the pilot project led to its expansion to 19 World Bank-supported cities and eventually to 140 regional cities and towns across Ethiopia. Between 2008 and 2012/13, over 2,202 kilometers of cobblestone roads, taxi terminals, feeder roads, and public squares were constructed. Addis Ababa, the capital city, has been one of the key locations for cobblestone road construction, with many of its earthed roads being covered with cobblestones.

The reintroduction of cobblestone infrastructure in Ethiopia has brought numerous socio-economic and political benefits to local communities. It has created employment opportunities for youth and women, contributed to urban development, and provided long-lasting road pavement. However, despite the positive impacts, challenges related to stakeholder awareness, management, and maintenance have been observed. Adequate management and maintenance practices are crucial for ensuring the longevity and quality of cobblestone infrastructure in Ethiopia. (Jose Guillen, et al., 2010).

In Medieval and Renaissance Europe, cobblestone streets were highly popular due to their durability and stability.

Industrial Revolution: Paul M. Hohenberg and Lynn Hollen Lees delve into the consequences of the Industrial Revolution on the expansion of cities and the necessary infrastructure in their book, 'The Making of Urban Europe, 1000-1994'. This period saw a rapid rise in urbanization and a requirement for improved roads and streets.

Modern Urban Planning: The late 19th and early 20th centuries saw a pivotal period in urban planning, significantly impacting land policies and infrastructure choices. Jane Jacobs' renowned work, 'The Death and Life of Great American Cities,' provides a detailed exploration of urban planning theories and practices that continue to shape modern cities, including decisions concerning infrastructure.

Cobblestone infrastructure in Ethiopia has a relatively recent history, but it has significantly transformed urban landscapes and transportation systems. Here is an overview of the history of cobblestone infrastructure in Ethiopia:

1. Origins and Early Development:

The introduction of cobblestone infrastructure in Ethiopia can be traced back to the early 2000s, as the need to improve connectivity across the country was the driving force behind the initiative.

2. City-Level Initiatives:

- Addis Ababa, the capital of Ethiopia, was among the pioneers in introducing cobblestone infrastructure projects.
- In 2004, the Addis Ababa Road and Transport Bureau initiated a pilot project to evaluate the practicability and success of cobblestone roads in chosen residential areas.
- The success of the pilot project led to the expansion of cobblestone infrastructure across various parts of the city.

3. National Scale Implementation:

- In 2007, the Ethiopian government began the Cobblestone Project, a national program, in order to acknowledge the substantial effect cobblestone infrastructure had on the country.
- The project aimed to expand the use of cobblestone roads to other cities and towns across the country.
- It involved training local communities in road construction techniques, providing employment opportunities, and improving transportation access in urban areas.

4. Rural Roads and Beyond:

- While cobblestone infrastructure initially focused on urban areas, the scope has expanded to rural roads as well.
- The Rural Roads Construction and Maintenance Program (RRCMP), initiated in 2011, aimed to improve the rural road network using cobblestone technology.
- This program has helped enhance connectivity, stimulate economic activities, and improve access to services in rural areas.

5. Impact and Benefits:

- Cobblestone infrastructure projects have had significant positive impacts in Ethiopia.
- They have contributed to job creation, improved road safety, enhanced transportation access, and reduced dust and pollution.

- Cobblestone streets provide smoother surfaces compared to traditional unpaved roads, enabling better mobility and reducing vehicle operating costs

2.3. Empirical frame work

This empirical assessment seeks to evaluate the implementation of urban land policies related to cobblestone infrastructure in urban areas. A comprehensive literature review will be conducted to identify key theories and concepts, surrounding urban land policies and cobblestone infrastructure. The review will delve into the challenges faced during policy implementation, including issues related to design, funding, maintenance, and community engagement. Additionally, the review will explore the benefits and drawbacks of cobblestone infrastructure, considering factors such as its impact on transportation, aesthetics, and cultural heritage. The findings from the literature review will provide a foundation for the subsequent empirical research.

2.3.1. Land policies of Urban

Urban land policies should be designed to ensure equitable access to land resources and promote sustainable development. Ethiopia is striving to encourage economic growth and bring about infrastructure investments through its urban land policy. (FDRE, 2002).

In Ethiopia, urban land has been transferred to individuals, companies, and public enterprises, in order to incentivize investment and generate municipal revenue to finance urban infrastructure building (Peterson, 2006; World Bank, 2015). Furthermore, sizable urban and peri-urban land has been utilized for this purpose.

It is essential to briefly discuss urban land policy, as its property rights are critical in determining the mode of its management and administration. Deininger et al (2003) argued that well-defined and secure land rights are necessary to provide incentives for investment and sustainable resource management, as well as to facilitate the low-cost transfer of land and credit access in the development of rural non-farm economies.

2.3.2 The objective and role of urban land use policy implementation

Evaluating the Implementation Process:

The study aims to examine the process of implementing urban land use policies, specifically in the context of the cobblestone infrastructure development project in Kirkos sub-city.

This involves understanding the various stages of the implementation process, such as policy formulation, stakeholder engagement, resource allocation, and monitoring and evaluation.

By evaluating the implementation process, the researchers can identify the strengths, weaknesses, and areas for improvement in translating urban land use policies into practical actions.

Assessing Policy Outcomes and Impacts: the research study also seeks to evaluate the outcomes and impacts of the urban land use policy implementation, as manifested in the cobblestone infrastructure development project.

This includes analyzing the physical, social, economic, and environmental outcomes of the project, and how they align with the intended objectives of the urban land use policies.

Assessing the actual outcomes and impacts can help determine the overall effectiveness and efficacy of the policy implementation efforts.

Identifying Influencing Factors: A key objective of the study is to identify and analyze the various factors that influence the implementation of urban land use policies in the specific context of Kirkos sub-city therefore the factors may include institutional arrangements, resource availability, stakeholder participation, governance structures, and contextual conditions.

Understanding the factors that enable or hinder effective policy implementation can provide valuable insights for improving future policy design and execution.

Informing Policy Refinement and Adaptation: By evaluating the implementation process and outcomes, the research study aims to generate insights and lessons that can inform the refinement and adaptation of urban land use policies in Ethiopia.

Enhancing Urban Governance and Development: Ultimately, the role of urban land use policy implementation is to contribute to the overall enhancement of urban governance and sustainable urban development.

from a costless resource into a formally exchangeable commodity, to generate revenue for the government, to make customers aware of the cost of urban land and encourage efficient use, to give a clear signal for efficient land use and to enable the land recycling of prime lands, to provide secure land holdings to investors, to control the undesired expansion of cities, to provide infrastructure, and to combat speculation and the non-transparent system of plot allocation.

2.4 Policy and Strategies of Urban Land Use

1. Ethiopia Urban Development Policy:

In Ethiopia's urban development policy serves as a guiding framework for urban land use implementation. It emphasizes the need for integrated planning, sustainable development, and equitable resource allocation. The policy establishes standards for the assignment of land to various uses, including residential, commercial, industrial, and recreational.

In addition, it advocates for the incorporation of disadvantaged groups, safeguards the environment, and supplies necessary amenities to cities.

2. Urban Master Plans:

Urban master plans are key instruments for urban land use implementation in Ethiopia. These plans provide a roadmap for urban development, identifying land use patterns, infrastructure requirements, and zoning regulations. They consider factors such as population growth, economic activities, and social needs to guide land allocation and ensure sustainable urban growth. Urban master plans also outline guidelines for infrastructure development, transportation networks, and the preservation of cultural heritage.

3. Land Information System:

Creating a comprehensive Land Information System (LIS) is essential for the successful implementation of urban land use. This system allows for the collection, storage, and assessment of data concerning land parcels, ownership, and land use planning. It optimizes land administration processes, increases transparency, and reduces the risk of disputes over land rights. Moreover, the

data generated by an LIS is invaluable for decision-making, infrastructure construction, and the oversight of land use regulations.

4. Participatory Approaches and Stakeholder Engagement:

Inclusive and participatory approaches are vital for successful urban land use implementation in Ethiopia. Incorporating input from stakeholders such as local residents, civil society organizations, and private sector entities is a critical component of formulating an effective policy. fosters collaboration, consensus-building, and social cohesion. Involving stakeholders enhances the decision-making process, aligns land use policies with community needs, and promotes sustainable land management practices. Various participatory mechanisms, such as public consultations and multi-stakeholder forums, should be employed to encourage active involvement and feedback.

5. The process of monitoring and evaluating:

Assessing the effectiveness of a project requires the implementation of monitoring and evaluation mechanisms of urban land use policies and strategies in Ethiopia. Regular monitoring helps identify gaps, challenges, and successes in land use implementation, enabling appropriate adjustments and interventions. Evaluation processes should assess policy compliance, infrastructure development, the impact on communities, and environmental sustainability. By monitoring and evaluating urban land use implementation, authorities can ensure accountability, measure progress, and inform future policy decisions. Overall, the critical the implementation of urban land use policy in Ethiopia is being evaluate. Focused on cobblestone infrastructure should analyze the compatibility and effectiveness of existing policies, the level of stakeholder engagement, and the adequacy of implementation and monitoring mechanisms.

2.4.1 Urban Land use policy in Kirkos sub - city

In the Kirkos sub-city, the land lease allocation processes are hindered due to a number of issues, such as financial and skilled manpower inadequacy, as well as a lack of comprehensive parcel data to implement policy.

2.4.2. Process of Construction the Cobblestones

The preparation of Cobblestone roads, such as cleaning and avoiding the upper soil, size, types of stone, status, paving quality, side drainages position of laying the stones, and fulfill other materials, greatly affects the nature of the road. If one Cobblestone is removed from its proper position, it is likely that all will be displaced. Its nature enables The low standard/low volume roads that act as a connection or joint to the edge or end of roads can have a detrimental effect on development in Ethiopia (Zaid, 2011), as the stability of one Cobblestone relies on the stability of the other if it is not constructed with sufficient quality.

Azeb N. (2011) noted that other research proposers had also come to recognize the positive consequences of the cobblestone project, which included job creation for the youth and women, as well as improvements to food security.

2.4.3 The infrastructure of a Quality and Status of the Cobblestone

In developing countries, access, quality, quantity, and other issues can cause problems with infrastructure. When building roads, it is important to ensure that the quality is up to standard, as this can reduce unemployment and improve the rural road network. However, people may not be aware of the benefits of cobblestone roads and their potential to create wealth. For this reason, the government should ensure that people are aware of their responsibilities. The research investigated human-related factors that may affect the quality of cobblestone roads in urban areas. These factors included traffic control, construction workers, the type of rocks used, and other findings collected from data and field observations.

The quality of cobblestone used in infrastructure projects can be impacted by several factors. Here are some components to take into account when assessing the quality of cobblestone:

1. **Material Selection:** The type of stone used for cobblestone infrastructure can impact its quality. Different types of rocks, such as granite, basalt, or limestone, have varying durability, strength, and resistance to wear. High-quality cobblestones are typically selected based on their hardness, density, and ability to withstand weathering and heavy traffic.
2. **Size and Shape:** The size and shape of cobblestones are important factors in determining their quality. Ideally, cobblestones should have consistent dimensions, ensuring ease of installation and

creating a smooth and even surface. Stones that are too small or irregular in shape may result in unstable or uneven infrastructure.

3. **Surface Texture:** The texture of cobblestones affects not only their aesthetic appeal but also their functionality. Cobblestones with a non-slip surface texture are preferable to ensure safety, especially in areas where the infrastructure may be wet or exposed to other slippery conditions.

4. **Durability:** Cobblestones should have the ability to withstand heavy loads, repetitive traffic, and adverse weather conditions without significant deterioration. High-quality cobblestones are resistant to cracking, chipping, or crumbling, ensuring a longer lifespan for the infrastructure.

5. **Color Fastness:** Cobblestones may come in a variety of colors. It is important that the color of the cobblestone remains stable over time to maintain the desired aesthetic appearance of the infrastructure. Colors that fade or change significantly due to weathering or exposure to sunlight may negatively impact its visual appeal.

2.4.4. The contribution of cobblestone road for urban development

Cobblestone paving is a labor-intensive process which provides job opportunities for local construction entrepreneurs; it uses natural and local materials and does not require imported machinery, thus avoiding dependence on imported oil, as is the case with asphalt. Furthermore, it is more cost-effective than concrete or asphalt, as well as being easier to maintain, and having a much longer lifespan than asphalt roads (Tiwari, 2011). Not only does this type of road make towns and cities more beautiful, but it also benefits residents and encourages tourism. In contrast, asphalt road projects often give the majority of jobs to foreign companies, as they are based on imported technology; for instance, in Ethiopia, only Chinese companies are constructing asphalted roads.

2.5. The Community Participation of Cobblestone

Community participation can be broadly defined as the engagement of individuals within a community in projects to address their issues. There is no compulsion for people to be involved in projects that affect their lives, but they should have the opportunity to do so as it is a fundamental right and an integral part of democracy. This is especially significant in emergency sanitation programs where people are unfamiliar with their environment and sanitation facilities.

Outside the community, community participation is often viewed as a tool to bring about change, particularly in low-income settlements. A major drawback of this perspective is its focus on organizing external interventions to 'mobilize' the poor for achieving plans and programs that have been conceived externally, which ignores the empowerment of community members to decide the type, degree, and direction of change they need and want - an essential principle of democracy. From the communities' point of view, the issue is not one of increasing their capacity to take part in public sector programming, but of seeking public and private sector support for their development objectives. (UNCHS (Habitat, 2003).

The aim of participation is to incorporate local knowledge and preferences into the decision-making processes of governments, businesses, and donor organizations. This is accomplished by establishing voluntary connections between various players, such as private businesses, non-profit organizations, community-based organizations, government entities, and individual infrastructure users. Participation is further enhanced when potential beneficiaries have the power to make their own decisions, referred to as the "exercise of voice and choice" or "empowerment." Ultimately, such participation is expected to lead to improved development project designs, more efficient service delivery, and better benefit targeting (IBRD, 2013).

To maximize the potential of road infrastructure development, it is essential to ensure that the public and private sectors prioritize the needs of local communities and promote their active involvement in the decision-making process. This will help to ensure that the communities are equipped with the necessary skills and resources to effectively manage the urban road infrastructure development process. Additionally, it is important to provide the necessary support and resources to the local communities for them to be able to effectively engage in the urban development process.

The World Bank (1994) additionally, they may be engaged in local development initiatives, such as urban renewal, poverty alleviation, and environmental protection. Through meaningful community participation, stakeholders can ensure that development initiatives are designed with their best interests in mind.

Participation is defined as a process through which stakeholders have the opportunity to influence and share control over decisions, initiatives, and resources that affect them. This concept stresses the significance of involving and empowering stakeholders, such as local communities, in decision-

making processes related to development projects. Whether it pertains to infrastructure development or other local development initiatives, community participation is critical in making certain that projects meet the needs and desires of the people they are meant to benefit from by actively participating in the planning, execution, and evaluation stages, the results of development initiatives can be more sustainable, equitable, and in line with the shared interests of the community. Communities can be involved in the creation, management, implementation, and maintenance of public infrastructure, as well as local development initiatives, such as urban renewal, poverty reduction, and environmental protection. Through meaningful community participation, stakeholders can guarantee that development initiatives are tailored to their needs.

Van Esch and Fransen (1997) described how communities can get involved in various aspects of public infrastructure, such as planning, building, and maintenance. They can choose to take on the whole process or focus on one particular area. Community-managed projects have the added advantage of creating a sense of ownership, driving people to take care of the results. Paul (1987) in his World Bank paper on Community Participation in Development Projects argued that participation must be an active process, whereby those affected by the project are able to shape it, rather than just receiving its benefits. This idea is further explored in *Participation in Practice*. The Inter-American Development Bank's Resource Book on Participation echoes Reitbergen-McCracken's (1996) definition of Community Participation as a process through which stakeholders influence and share control over development initiatives, decisions, and resources that affect them.' This key concept highlights the importance of stakeholders having an influence and sharing control in order to achieve quality project implementation. The quality of project implementation is determined by factors such as efficiency, effectiveness, timeliness, responsiveness, and accountability of the mechanisms set up to implement a project.

2.6. Management and Maintenance of Cobblestone road

Mohamed (2005) stated that road maintenance is carried out in order to maintain each type of roadway, roadside, and structure in its original condition or condition improved subsequently. Moreover, the purpose of highway facilities and services is to provide secure and satisfactory transportation. If the condition of the roads continues to deteriorate, the nation will suffer the loss of

major assets that have taken a huge amount of money, time, and effort to construct (Velmurugan & Dhingra, 2015).

The British Standards Institution (BSI, 2010) defines maintenance management as all activities of the management that determine the maintenance objectives, strategies, and responsibilities. According to Mkilania (2006) and Enofe (2009), maintenance management is concerned with the proper control of the maintenance function and its related areas in order to best support the objectives and goals of the entire organization. Define road maintenance under two subdivisions as physical maintenance and traffic services. Physical maintenance is the preservation and upkeep of a highway in its constructed condition.

The condition of the road can be improved by carrying out corrective maintenance activities. Repairs are made to the road surface and shoulder, the drainage system and the other physical road structures. The improved road condition generally results in lower travel times and travel costs, and a decrease in the speed of road deterioration as the deterioration process starts from scratch.

2.7 Sources for failure of urban land policy implementation

A. Lack of comprehensive land related information

Dowall and Clarke (1996) found that public land management organizations often experience difficulty in raising awareness about land-related information. Zimmermann (2007) pointed out that the emphasis is not on how the accessible, precise, dependable, and pertinent information is used for planning and decision-making, but rather on where such information is located within a complex organizational structure. To enhance public sector effectiveness, Dowall and Clarke (1996) asserted that having a universal government land policy that makes the land market more open is essential. In addition, in order to improve government efficacy, comprehensive land-related information must be provided, which includes raising the level of transparency in data regarding land markets and eliminating market mistakes, shortcomings, and externalities.

B. Lack of serviced land

Dowall and Ellis (2009) suggest that the system of local resource mobilization is inadequate to generate enough income to fund essential urban infrastructure, leading to limited availability of

serviced land. Furthermore, the cash available for infrastructure investment is highly restricted, leaving it inadequate to fulfill the rising demand, given the subsidized services and financial incapability of local governments.

C. land use policy Procedural delay in allocation

Procedural Delays in Land Allocation:

The city administration appears to be facing difficulties in providing serviced land in a timely manner for the infrastructure developers and investors involved in the cobblestone projects.

The lack of coordination and alignment among different working processes in the land office has led to delays in the land allocation procedures.

The absence of well-defined principles, rules, and regulations governing the land allocation process has contributed to the procedural delays.

Impacts on Cobblestone Infrastructure Projects: the procedural delays in land allocation have hindered the smooth implementation and progress of the cobblestone infrastructure projects in the sub-city therefore the inability to timely secure the necessary land has likely caused disruptions and bottlenecks in the overall project execution.

The delays in land allocation may have resulted in increased costs, project delays, and a mismatch between infrastructure development and community needs.

Streamline and standardize the land allocation procedures by establishing clear guidelines, responsibilities, and timelines among the various departments and agencies involved.

Enhance the coordination and information-sharing mechanisms between the land office, infrastructure development authorities, and community representatives to ensure alignment and responsiveness.

Empower the city administration to expedite the provision of serviced land for the cobblestone infrastructure projects, in line with the community's needs and the project implementation timelines.

Involve community stakeholders in the development of land allocation principles, rules, and regulations to ensure transparency and address local concerns.

Monitor and regularly report on the land allocation process and its impact on the cobblestone infrastructure projects to identify and address any bottlenecks access to formal land.

D. The standards of spatial plans

According to Dowall and Ellis (2009), planning for urban land use and development regulations are inhibiting cities from progressing their infrastructure. Assessing the legal framework for managing urban land in terms of physical and spatial planning as well as urban governance is essential in order to consider the wider public context (Payne, Durand-Lasserve, et al., 2009).

Spatial Planning Standards:

The spatial plans developed for the cobblestone infrastructure projects may not have adhered to the necessary standards and guidelines.

The lack of well-defined and comprehensive spatial planning principles, rules, and regulations could have led to inconsistencies and gaps in the plans.

The spatial plans may not have adequately considered the community's needs, accessibility requirements, and long-term sustainability of the infrastructure.

Impacts on Project Implementation: the suboptimal spatial plans could have resulted in inefficient land use, poor integration with the existing urban fabric, and challenges in the implementation of the cobblestone infrastructure.

The mismatch between the spatial plans and community needs may have led to resistance or lack of ownership from the local residents.

The absence of comprehensive spatial planning could have resulted in increased costs, project delays, and the need for rework or retrofitting of the infrastructure.

Develop comprehensive spatial planning guidelines and standards for the cobblestone infrastructure projects, in consultation with urban planners, community representatives, and other relevant stakeholders.

Ensure the spatial plans align with the broader urban development objectives, land use policies, and transportation networks to achieve seamless integration.

Incorporate principles of inclusive and participatory spatial planning, giving due consideration to the needs and concerns of diverse community groups, including marginalized populations.

Conduct thorough feasibility assessments and community consultations during the spatial planning process to optimize the layout, design, and accessibility of the cobblestone infrastructure.

Establish mechanisms for regular monitoring, evaluation, and adaptation of the spatial plans to address changing community needs and emerging urban dynamics.

E. Inadequate capacity and synchronization

There is an increasing number of literature regarding coordination and integration in public administration and public policies, featuring various concepts and terms. Two of the main approaches are the governance-centered approach, which emphasizes policy processes and implementation, and the government-centered approach, which centers on coordination and the institutional and organizational facets. (Tosun & Lang, 2017; Trein, Meyer, & Magetti, 2018). The ability to coordinate administratively is essentially about mediating and uniting disparate administrative units and actors in order to execute collective actions (Governance Report, 2014). The lack of capacity resulting in poor coordination, inadequate enforcement, delayed document summarization, and resumed document delays restricts public access to urban land use allocation procedures. This has led to corrupt practices that promote the construction of inferior infrastructure and encourage the exploitation of land for speculation.

2.8. Factor that damaging to the cobble stone road infrastructure

Several factors can cause damage to cobblestone road infrastructure. Here are some common factors:

1. **Heavy Traffic Loads:** Frequent and heavy traffic, especially from large vehicles or heavy machinery, can lead to excessive wear and tear on cobblestone roads. Over time, this can cause the stones to shift, crack, or break, damaging the road's integrity.

2. **Water and Moisture:** Water is one of the main culprits of cobblestone road damage. If the road's drainage system is inadequate or improperly maintained, water can seep into the roadbed and cause erosion or saturation of the underlying layers. This weakening of the foundation can lead to the displacement or instability of cobblestones.

3. **Freezing and Thawing Cycles:** In regions with cold climates, freezing and thawing cycles can be detrimental to cobblestone roads. The expansion and contraction of water during freeze-thaw cycles can push stones apart, causing them to loosen or crack. This process is known as frost heave and can result in uneven surfaces and subsequent damage.

4. **Inadequate Maintenance:** Neglecting regular maintenance, such as cleaning debris, repairing damaged stones, or filling gaps, can accelerate the deterioration of cobblestone roads. Without proper upkeep, small issues can worsen, and the road's overall condition can deteriorate rapidly.

5. **Poor Construction Practices:** Improper construction techniques, such as inadequate compaction of the roadbed or insufficient foundation preparation, can compromise the durability of cobblestone roads. Substandard workmanship during installation or repair can lead to premature damage and the need for frequent repairs.

6. **Natural Disasters:** Cobblestone roads are at risk due to natural disasters such as earthquakes, floods, or landslides. These occurrences can cause considerable harm by moving the cobblestones, compromising the road's steadiness, or even completely destroying parts of the road.

7. **Urban Expansion and Excavation:** When cities expand or undergo construction projects, cobblestone roads might be subject to excavation or alterations. Improper excavation practices or disturbances to the road's structure can lead to damage or displacement of cobblestones.

Addressing these factors requires proper planning, design, construction, and maintenance practices. Regular inspections prompt repairs, and implementing appropriate drainage systems are crucial to preserving the integrity and longevity of cobblestone road infrastructure.

During the implementation of cobblestone infrastructure, several challenges can arise. These challenges may vary depending on the specific context and location. Here are some common challenges that can be encountered during cobblestone infrastructure projects:

2.9 Challenges of d cobble stone road infrastructure

Technical Challenges: Cobblestone infrastructure requires specialized knowledge and skills for proper installation and maintenance. Challenges can include selecting suitable cobblestones, ensuring proper drainage, achieving even surface levels, and addressing issues related to durability and longevity.

Lack of Coordination: Inconsistent coordination between various Departments and agencies of the government responsible for land use planning, transportation, infrastructure development, and historical preservation must be held accountable they can hinder the effective implementation of cobblestone infrastructure. Fragmented decision-making processes and inadequate communication channels may lead to delays, conflicts, or suboptimal outcomes.

Community Resistance: Local communities or business owners may resist cobblestone infrastructure projects due to concerns about disruption, negative impacts on accessibility, or unclear benefits. Engaging community members early in the planning and design stages, addressing their concerns, and demonstrating the long-term value of cobblestone infrastructure can help overcome resistance.

Infrastructure Compatibility: Integrating cobblestone infrastructure with existing urban elements, such as utility installations, can present technical challenges. Ensuring proper coordination with utility providers, addressing drainage and accessibility requirements, and minimizing disruption to other infrastructural systems require careful planning and engineering.

Transitioning from Existing Infrastructure: Retrofitting on existing urban areas are cobblestone infrastructure can be difficult due to the need to integrate the new design with the pre-existing built environment. Dealing with varying road conditions, utility rerouting, and accommodating diverse stakeholder preferences can pose challenges during the implementation phase.

Regulatory Barriers: Complex regulatory frameworks, including zoning restrictions, building codes, or heritage preservation requirements, can impede the implementation of cobblestone infrastructure. Navigating through regulatory processes, seeking obtaining the necessary permits, as well as guaranteeing adherence to applicable laws, can be a lengthy process and may require streamlining or modifying existing regulations.

Coordination and Stakeholder Engagement: Implementing cobblestone infrastructure often involves collaboration among multiple stakeholders, such as government agencies, local communities, contractors, and utility providers. Coordinating these stakeholders and ensuring effective communication throughout the project can be a challenge.

Regulatory and Administrative Hurdles: Navigating through complex administrative processes and regulatory requirements can pose challenges to the timely implementation of cobblestone infrastructure. Obtaining necessary permits, addressing legal considerations, and adhering to building codes and regulations can lead to delays and increased project costs.

Public Acceptance and Community Engagement: Introducing cobblestone infrastructure may face resistance or skepticism from the public, particularly if it involves changes to existing urban structures or transportation patterns. Engaging the community, addressing concerns, and fostering public acceptance requires effective communication, education, and involvement in the decision-making process.

Maintenance and Upkeep: Cobblestone infrastructure requires regular maintenance to ensure its functionality and aesthetic appeal. Challenges can arise in terms of funding for maintenance, scheduling routine repairs, and coordinating upkeep activities to prevent deterioration over time.

Accessibility and Universal Design: Designing cobblestone infrastructure to be accessible for all individuals, including those with mobility challenges or disabilities, can present difficulties. Ensuring that proper accessibility measures are such as ramps and tactile indicators while maintaining the desired aesthetics of cobblestone infrastructure can be a challenge.

2.9.1 Sustainable to Infrastructure development

The incorporation of sustainable principles into infrastructure projects is vital for meeting current and future societal needs while also minimizing any environmental damage. This involves the design, building, and management of infrastructure systems that encourage economic growth, social inclusion, and environmental protection. Sustainable infrastructure takes into account aspects such as resource efficiency, climate resilience, and community involvement. By introducing sustainability from the start of projects, infrastructure can help to achieve long-term development objectives. For instance, utilizing renewable energy sources in energy infrastructure or green building practices in construction projects can decrease carbon emissions and improve energy efficiency. Sustainable infrastructure development not only meets present requirements but also considers the long-term welfare of communities and the environment. (World Bank, 2016).

The States that sustainable infrastructure development is a key factor in fostering social inclusivity and allowing equitable access to essential services. Through increased involvement from marginalized groups, infrastructure projects can help close existing social divides and improve access to clean water, sanitation facilities, transportation networks, healthcare centers, and educational institutions. Furthermore, sustainable infrastructure can generate jobs and economic development, ultimately enhancing the overall quality of life and well-being of individuals and communities.

2.10 Conceptual framework

The conceptual framework for the study likely encompasses the following key elements:

Urban Land Use Policy Implementation: this is the central focus of the study, which involves examining the processes, mechanisms, and outcomes associated with the implementation of urban land use policies.

The study aims to understand how the urban land use policies are translated into concrete actions and interventions in the urban development context.

Cobblestone Infrastructure Development: the case study chosen for this research is the development of cobblestone infrastructure in the Kirkos sub-city.

This specific urban development project serves as the focal point for evaluating the implementation of the broader urban land use policies.

Influencing Factors: The conceptual framework likely includes an analysis of the various factors that influence the implementation of urban land use policies in the context of the cobblestone infrastructure project.

These factors may include institutional arrangements, resource availability, stakeholder engagement, governance structures, and local contextual conditions.

Implementation Process: the study aims to examine the different stages and components of the implementation process, such as policy formulation, planning, resource allocation, stakeholder coordination, and monitoring and evaluation.

Analyzing the implementation process can provide insights into the strengths, weaknesses, and areas for improvement in translating urban land use policies into practice.

Policy Outcomes and Impacts: the conceptual framework encompasses the assessment of the outcomes and impacts resulting from the implementation of the urban land use policies, as manifested in the cobblestone infrastructure development project.

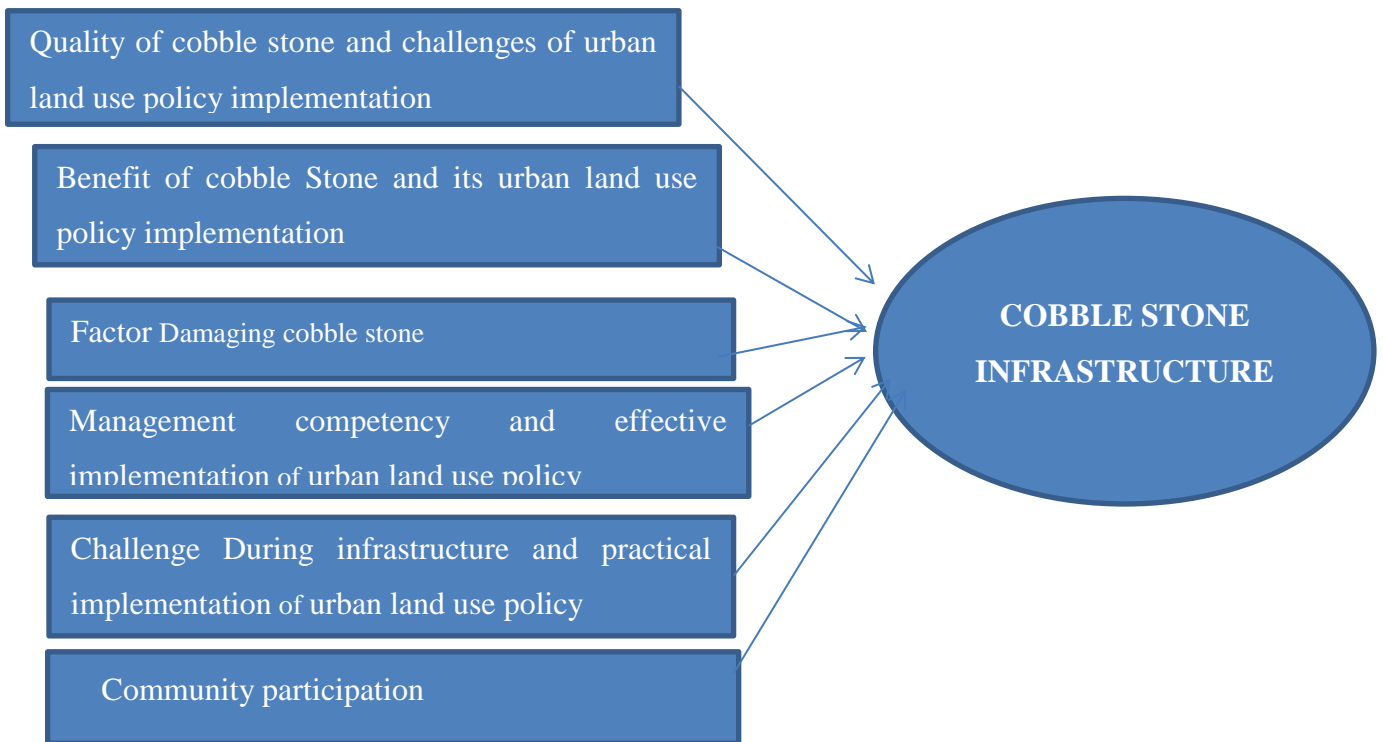
This includes evaluating the physical, social, economic, and environmental outcomes, and how they align with the intended objectives of the urban land use policies.

Policy Refinement and Adaptation: the conceptual framework likely considers the potential for the research findings to inform the refinement and adaptation of urban land use policies, both in the specific context of Kirkos sub-city and more broadly.

The study aims to generate insights and lessons that can enhance the effectiveness and responsiveness of future urban land use policy interventions.

Urban Governance and Development: underpinning the conceptual framework is the broader objective of contributing to the enhancement of urban governance and sustainable urban development.

The evaluation of urban land use policy implementation is seen as a means to improve decision-making, resource allocation, stakeholder coordination, and the alignment of urban development efforts with policy objectives from a social perspective, the pursuit of an individual's right to arrive may not be beneficial to all societies, resulting in an unequal balance of rights between wealthy and impoverished communities. This could enable less competent owners to acquire land through the land market on unfair terms, as well as potentially distort credit markets in favor of wealthy but inefficient managers. (Feder, 1999; Fitzpatrick, 2006).



Explanation of the conceptual framework diagram

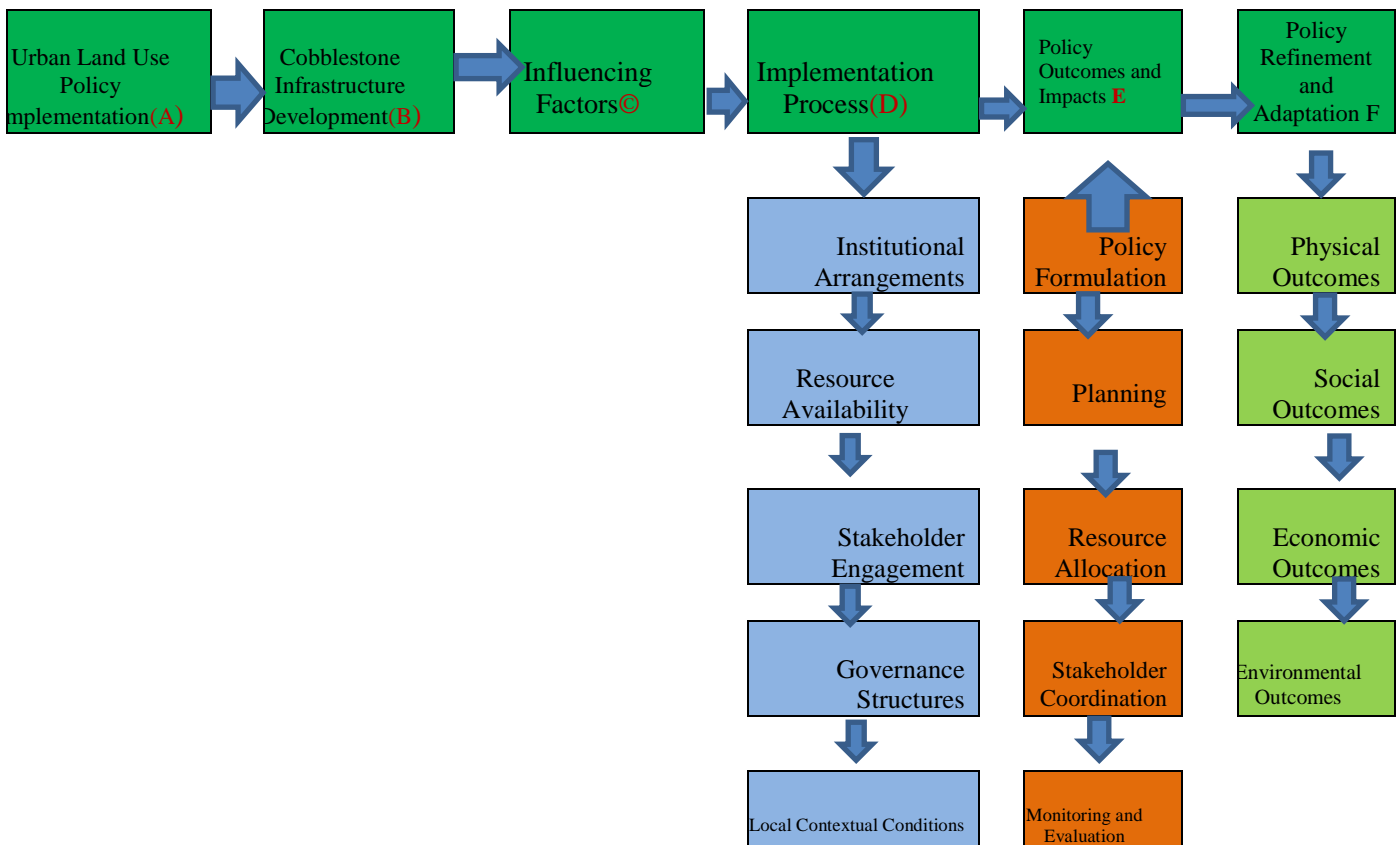
The central focus of the study is the "Urban Land Use Policy Implementation" (Box A), which is being evaluated through a case study of "Cobblestone Infrastructure Development" (Box B) in the Kirkos sub-city.

The "Influencing Factors" (Box C) that impact the implementation process are identified, including institutional arrangements, resource availability, stakeholder engagement, governance structures, and local contextual conditions.

The "Implementation Process" (Box D) is broken down into its key stages, such as policy formulation, planning, resource allocation, stakeholder coordination, and monitoring and evaluation.

The "Policy Outcomes and Impacts" (Box E) are assessed, covering physical, social, economic, and environmental outcomes of the cobblestone infrastructure development project.

The research findings are expected to inform "Policy Refinement and Adaptation" (Box F), which can then contribute to the broader objective of "Urban Governance and Development" (Box G).
 (Figure: diagrams by myself)



CHAPTER THREE

METHODOLOGY

3.1. INTRODUCTION

The research method, sources of data, sample and sampling techniques, data gathering instruments, data collection procedure, and method of data analysis are all extensively discussed in this chapter.

3.2 The Research Area

Location: - Ethiopia's capital city is one of the ten sub-cities in the area. It is bordered to the south by Nifase Silik Lafto, to the west by Lideta, to the east by Bole, and to the north by Arada sub-cities. Its coordinates are $9^{\circ}2'6''N$ and $38^{\circ}45'28''E$, and its population was 203,008 in 2011. Kirkos is one of the ten sub-cities of Ethiopia's capital, spanning an area of 1,464.72 hectares and situated close to the city center, bordered by Nifase Silik Lafto to the south, Lideta to the west, Bole to the east, and Arada to the north. This sub-city possesses 11 woredas, 31 sub-woredas, 111 villages, and 316 blocks, which reveal its organized structure. The Addis Ababa City Administration is further divided into ten sub-cities, including Kirkos, which illustrates the city's administrative subdivisions. This particular study area has been selected within the Kirkos sub-city due to its high population density. (Figure 3.12).

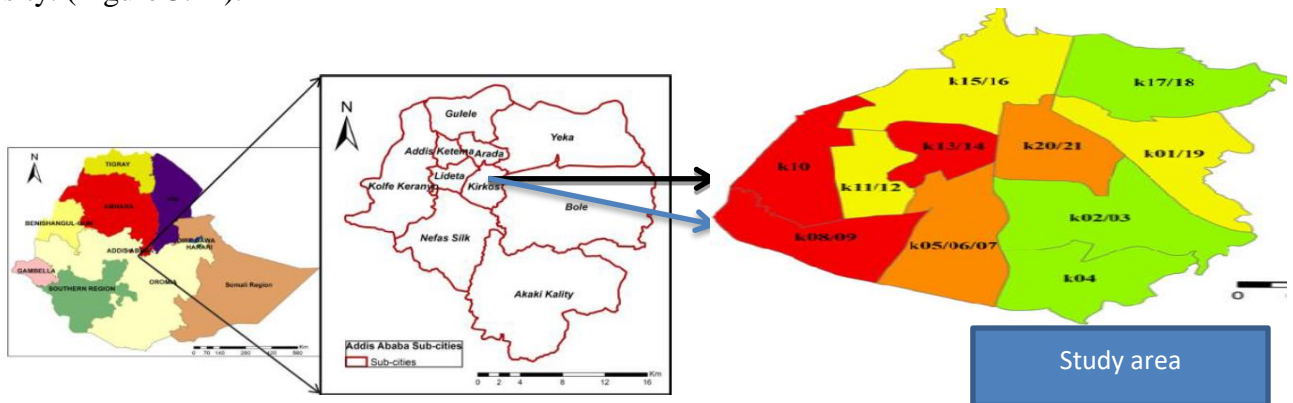


Figure 3.12 study area

3.3. Research design

The study employed an explanatory research design, as it was deemed appropriate to gather reliable quantitative data describing the characteristics, effects, and different factors of cobblestone roads. Creswell (2009) explains that research designs are plans and procedures that guide the decision-making process, from broad assumptions to detailed methods of data collection. This design was chosen as it facilitated the gathering of data to determine the relationship between variables and the implementation of cobblestone infrastructure in urban areas.

3.4. Research Approach

According to Creswell (2003), research approaches are strategies and processes used when conducting research, which can include quantitative, qualitative, and mixed approaches. These approaches span from general assumptions to specific methods.

In this study a survey strategy was chosen for this study in order to employ cross-sectional data collection using a quantitative research method. This method was used to determine potential causes of the connections between research-dependent and independent variables and to construct models of these relationships. This survey strategy is cost-effective and allows for the gathering of a large amount of data from a wide population. Quantitative data acquired can be evaluated quantitatively through descriptive and inferential statistics. A quantitative technique is utilized to evaluate objective theories by inspecting the association between variables (Anderson, 2009).

The quantitative method is preferred for this study due to its ability to measure variables on instruments and generate numerical data for analysis, such as graphs and statistics. This data can then be used to fulfill the objectives of the study.

3.4. Sources of data, collection approaches, tools and procedures

3.4.1. Source of Data

Both primary and secondary data sources were used, Head of the community participatory development agency, Head of Sub-City, Woreda Leaders, Kebele Government Officials, and cobblestone officials projects coordination, some pedestrian informants, and some cars and Members of local development committees as the main source of primary data. Other important

secondary sources of information include in this study are relate books, academic Journals, Proceedings, Books, Articles by Various Authors, and Internet-Base Information containing relevant information related to the subject under study.

A questionnaire was employed to gather primary data from employees of Kirkos sub-city and customer Areas. The major benefit of primary data collection is that it can be specifically designed to meet the researcher's desired needs. Subsequently, the information obtained from primary data was more applicable to the research objectives and goals (Yitbarek Z., 2019)

The research employed primary data sources to procure reliable, credible, and accurate information for the study. Both qualitative and quantitative data were used in this primary data collection process. Qualitative data was collected through interviews with the business development and corporate service departments.

On the other hand, quantitative data was collected through questionnaires for both internal and external employees of Kirkos sub-city as well as customers. The questionnaires used were a combination of open-ended and close-ended questions, the latter being multiple-choice questions based on Liker's-scale of five ordinal measures of agreement towards each statement (from 1 to 5). The reasons for using close-ended questionnaires are: to make it easier for the respondent to answer, to reduce the respondent's time spent on answering, and to better gauge the respondent's feelings or attitudes about something. Open-ended questions were designed to increase the response rate and allow for more accurate answers from the customers.

3.4.2 Data collection Method

For this research, data was collected from both primary and secondary sources. To get an in-depth understanding of primary sources, data was gathered from two groups of people, i.e. sub city land administration officials and customers of these offices. Additionally, the method used in selected town administrations under the Kirkos sub-city was designed to produce a wide variety of data related to the problem being studied. To the effect, I conducted a blended approach of quantitative and qualitative study design to collect and analyze data. This method allowed me to see different viewpoints and context-based practices from the participants' perspectives. This method is based on

the assumption that the data exists as is and it is beneficial to collect information about the problem under study.

3.4.3 Instrument used to Collection Data

The research gathered data mainly from primary sources, conducting in-depth independent interview sessions with leaders from community participation development agencies, governmental sectors, and non-governmental organizations. Additionally, Interviews, observations, and survey questionnaires were employed to obtain genuine information from respondents are Leaders from the Kirkos sub-city at the Woreda level, Woreda and Kebele level officers, an officer from the Cobblestone Project Coordination Office, informants from customers of Kirkos Sub-City, and members of the Local Development Committee, some with cars, are all invited to attend.. Observational and survey questionnaires allow the research proposer to gain real insight into focus group discussion.

3.4.4 Data Collection of Procedures

A group of respondents actively Research and data collection tools develop by research-mind executives Kebele Management for review of relevant literature. Officer out well, a Cobblestone Project Coordinating Office employee, and a resident of the development committee are dealt with in and the purpose of having Respondents in the interview is to strengthen the reliability of the data.

To ensure the accuracy of the data, the proposer-based leaders from the Kirkos sub-city administration developed data collection instruments, while Officers from the Kirkos sub-city the Cobblestone project coordination office, and the local development committee were interviewed. A group of respondents was also actively involved in the study to gather the necessary information, which was reviewed against related literature.

3.1.3 Sample and Sampling Techniques

The total number of sub-cities in Addis Ababa is 10. Of these low-lying towns, the research interest in Kirkos Sub-City has experience in several parts Local. In addition, the research prefers to work on cobblestone projects around in kirkos sub city in eleven woredas. Area is located in the central city. Therefore, target sampling is use for woredas as selection. This study, which had a manageable

sample size of 399 households out of a total population of 203,008 in the Kirkos sub-city, was conducted due to the familiarity and convenient access to research-related information. The participants filled out and responded to survey questionnaires.

$$n = \frac{N}{(1 + N(e)^2)}$$

Where,

N= number of population

n= Sample size

e = error limit

$$n = \frac{203,008}{1 + 203,008(0.05)^2} = 399 \text{ with in total number of each stratum}$$

Where $n_i = \frac{N_i}{N} * n$ n_i = number of sample each sample

N_i = the quantity of people in each stratum is counted

N = total population

n = total number of sample selected , 399

s.no	Woreda	Population	Sample $\frac{N_i}{N} * n_i$
1	01	18,226	36
2	02	24,991	49
3	03	15,650	31
4	04	28,450	56
5	05	20,925	41
6	06	11,042	22
7	07	17,002	33
8	08	21,484	42
9	09	22,550	44
10	10	22,688	45
Total		203,008	399

Source CSA 2007

Using simple random sampling techniques, the research selected only 399 respondents from the total members of these employees and customers and distributed the questionnaires to them.

3.6.1 Measurement of Variables

The dependent variable of the cobblestone infrastructure was measured by measuring the variable.

3.6.2. Independent Variable

The focus of the study is on the independent variables urban land policy implementation on of cobble stone, community understand benefit of cobble stone, factor damaging cobble stone like durability, management competency, challenge during infrastructure of cobble stone, community participation, challenges of urban land policy implementation and effectiveness.

3.6.3. Measurement of Dependent Variable

For this study, the dependent variable was the cobblestone infrastructure. This multi-dimensional framework was established based on various criteria, which emphasize the role of individuals in advancing the goals of cobblestone infrastructure in terms of product innovativeness and supplying first-rate infrastructure to promote the growth and expansion of the cobblestone infrastructure. The dependent variables cobble stone infrastructure was measured by using independent variable.

3.7. Test of Validity and Reliability

An adequate analysis of the data was conducted to reveal its significance and the analysis methods employed were appropriate. The validity and reliability of the data were carefully assessed.

The validity and reliability of the scores on instruments that along with additional standards for making knowledge to claims, created meaningful interpretations of the data.

To ensure the accuracy of the response, reliability, and validity must be taken into account. Best and Kahn (2006) stated that reliability and validity are key elements in the effectiveness of data-gathering tools. When selecting or designing the instruments, reliability (internal consistency) and validity (face and construct validity) should be considered. Therefore, the researcher should pay attention to the reliability and validity of the questionnaire employed different techniques as mentioned below.

3.7.1 Test of Validity

The validity of an instrument is determined by how accurately it measures what it is intended to measure. To ensure validity, expert opinion, feedback from peers and supervisors, and support from existing literature can be used (Kothari, 2004).

To ensure the quality of this research design, the content validity of the research instrument had to be verified. This was done by the advisor of this research, who assessed the appropriateness of questions and the scales of measurement. Furthermore, peer discussion with other researchers was conducted in order to examine the suitability of questions. This was done to assess if the developed instruments measure what they are meant to measure, as well as to analyze the clarity, length, structure, and wording of the questions. Through this test, the researcher was able to receive useful comments to alter certain questions. This is with reference to the relationship between the construct and its indicators, as stated by Punch (1998), which is known as validity.

3.7.2 Reliability Test

Reliability is the degree to which data collection methods, or methods of measurement, yield consistent findings, meaning that similar observations would be made or conclusions reached by other researchers and that there is transparency in how sense is made from the raw data. Reliability has to do with the accuracy and precision of a measurement procedure and is often measured using Cranach's Alpha, which is a coefficient of reliability. If the readings of Cranach's Alpha are close to 1, then the reliability of the internal consistency of the instrument is high. Generally, a reliability of less than 0.60 is deemed to be poor, those in the 0.70 range are acceptable, and those above 0.80 are considered to be excellent. To ensure reliability, copies of the questionnaire may be distributed to twenty respondents as a pilot test - those who do not participate in the main research.

Table 3.1 coefficient of Cronbach's alpha

Scale	Numbers of item	Cronbach's alpha
quality of cobble stone	12	.787
benefit of cobble stone	10	.869
post damage of cobble stone	6	.770
management competency	7	.877

challenge during construction	15	.804
challenges of urban policy implementation	11	.791
Effect of urban land policy implementation		

Source own survey data analysis 2023

3.8 Data Analysis Method

Both descriptive and inferential analysis techniques were employed to analyze the data. Coding was done and then Statistical Packages for Social Science (SPSS- Version 20) was used to analyze the data collected on the demographic variables, independent and dependent variables. Descriptive analysis was used to measure the distribution of the data and this was done through tables, frequency distributions, and percentages; summary statistics such as the mean values, standard deviation, and percentages were computed for each variable. Pearson correlation analysis was undertaken to measure the association between cobblestones infrastructures with urban land policy implementation, which was the second data analysis technique employed.

3.9 Ethical take into Account

The study strictly followed ethical principles relevant to social science research. Administrative approval and informed respondent permission were obtained before any data collection was initiated. The anonymity of respondents will be preserved at all times and any information deemed to be confidential will be respected. The purpose of the study was clearly explained to all respondents; thus, their privacy and personal values were kept confidential.

CHAPTER FOUR RESULT AND DISCUSSION

4.1 Introduction

This subsection features an overview of the study population from Kirkos sub-city that was included in the sample. The data was collected through questionnaires. The second section of this chapter then analyzes and interprets the relationships between the variables and the study's objective, which is presented in tables of frequencies and percentages of respondents. Descriptive analysis was initially conducted using the percentiles and frequencies for each research objective. The findings are based on the responses of the sample.

4.2 The respondents' demographic and socio-economic traits

4.2.1 Questionnaire Response Rate

The research targeted a sample of 399 staff members and customers of Kirkos sub city, Out of the 400 surveys distributed, 394 were responded, resulting in a 97% response rate, as seen in Table 1. This response rate is reliable for data analysis, as Babbie (2002) suggested that any response rate of 50% and above is acceptable. Additionally, this high response rate can be generalized to imply that the respondents were likely satisfied with the study and its conclusions.

Table 4.1 *Response Rate*

Ser.no	Respondents category	Frequency	Percentage
1	Responded	394	394
2	Did not responded	5	5
Total		399	100

(Source: developed for this study, 2023)

4.2.2 The Characteristics to Demographic of Respondents

This section, an analysis of demographic variables conducted. (Such as sex, educational level) and socio-economic variables including social responsibility, level of education and professional occupation of respondents was briefly presented.

Table 4.1 Gender of respondent

sex of respondent					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	220	55.8	55.8	
	Female	174	44.2	44.2	100.0
	Total	394	100.0	100.0	

Source: Own survey data analysis, 2023

Table 4.2 revealed that out of 399 respondents, 220 (55.8%) were male and 174 (44.2%) were female. This indicates that the majority of staff members and customers in the Kirkos sub-city were male

Table 4.2 Educational states of respondent

educational status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Certificate	48	12.2	12.2	12.2
	Degree and Above	206	52.3	52.3	64.5
	Diploma	140	35.5	35.5	100.0
	Total	394	100.0	100.0	

Source: Own survey data analysis, 2023

Table 4.3 shows that the majority of the respondents (52.3%) had a degree, followed by 35.5% with a diploma and 12.2% with a certificate. This implies that the respondents understood the questions about the implementation of an urban policy concerning cobblestone infrastructure.

Table 4.3 Occupation of respondents

occupation of respondent					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Labor	161	40.9	40.9	40.9
	Officer	205	52.0	52.0	92.9
	Woreda Administrative	10	2.5	2.5	95.4

	kirkos administration	4	1.0	1.0	96.4
	Others	14	3.6	3.6	100.0
	Total	394	100.0	100.0	

Source: Own survey data analysis, 2023

The above **Table 4.4** illustrates that majority of the respondent were found their occupation of respondent kirkos sub city officer scored 205(52%) followed by labor (construction work) scored 161(40.9%), and followed other works (security and cleaning) scored 14(3.6%), woreda administration scored at 10(2.5%) while the lower scored kirkos sub city administration scored with 4(1%). The majority of the respondents were Kirkos sub-city officers, scoring 52% in the range of 205. Professionals are more likely to understand the successful implementation of urban policy and the use of cobblestone infrastructure. Stand-alone Kirkos sub-cities, not part of a multi-sub-city system, tend to have lower efficiency ratings. It is argued that when a Kirkos sub-city is part of a system, greater efficiency is achieved, due to the need for a specialized group of managers and technical experts, and the avoiding of duplication of administrative tasks.

4.2,3 Internal road Status of Cobblestone infrastructure

Table 4. 4 The majority of the streets are cobblestone.

The majority of the streets are cobblestone.					
		Frequ ency	Percent	Valid Percent	Cumulative Percent
Vali d	Yes	293	74.4	74.4	74.4
	No	101	25.6	25.6	100.0
	Total	394	100.0	100.0	

Source: Own survey data analysis, 2023

According to Table 4.5, shows that 293 (74.4%) of respondents that have Most of the roads are cobblestone whereas the remaining 101(25.6%) The study participants replied that 74.4% of the internal road infrastructure in Kirkos sub-city is covered by cobblestone. The data indicates that the internal road infrastructure is efficient and looks functional.

Table 4. 5 The majority of the current roadways should be replaced with fresh cobblestone

The majority of the current roadways should be replaced with fresh cobblestone					
		Frequency	Percent	Valid Percent	Cumulative Percent
Val id	Yes	178	45.2	45.2	45.2
	No	216	54.8	54.8	100.0

Total	394	100.0	100.0
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Source: Own survey data analysis, 2023

Table 4.6 shows that 45.2% of the existing roads in Kirkos sub-city need to be replaced with new cobblestone infrastructure, while 54.8% of the respondents do not believe that replacement is necessary. This indicates that the urban land policy implementation of cobblestone infrastructure replacement has not been effectively implemented by the Kirkos sub-city administration.

Table 4. 6 Do you believe that future cobblestone roads will last for a number of years?

Do you believe that future cobblestone roads will last for a number of years					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	184	46.7	46.7	46.7
	No	210	53.3	53.3	100.0
	Total	394	100.0	100.0	

Source: Own survey data analysis, 2023

According to Table 4.7, shows that 184 (46.7%) of the respondents indicated that cobblestone roads serve for several years in the future whereas the remaining 210 (53.3%) of the study participants were not cobblestone roads serve for several years in the future instead they think that cobblestone roads are temporary program and cannot serve the community for long. This implies that in Kirkos sub city administration indicated that the cobblestone roads do not serve for several years in the future.

Table 4.7 Do you believe there should be laws governing how these roads are used?

Do you believe there should be laws governing how these roads are used					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	287	72.8	72.8	72.8
	No	107	27.2	27.2	100.0
	Total	394	100.0	100.0	

Source: Own survey data analysis, 2023

According to Table 4.8, this shows that 287 (72.8%) of the respondents that the usage of these roads must be regulated by law whereas the remaining 107 (27.2%) for those are not think the usage of roads must be regulated by law on infrastructure of cobblestone. From this result one can realize that since the majority 72.8% of the respondent agreed the importance of regulation

in the use of the cobblestone infrastructure, it is mandatory to keep and infrastructure of cobblestone must be regulated by law.

4.3 Descriptive statistics of the respondents

Table 4. 8 Quality of cobble stone infrastructure

Descriptive Statistics							
	SD	D	N	A G	SA	Me an	Std. Deviat ion
It is challenging to remove a single stone from the path with ease.	93	113	3	73	112	2.9 9	1.600
The strength of the road is increased by the size and shape of the stones.	103	5	7	77	152	3.3 0	1.685
Big concrete blocks and cement are used to firmly bind the road's edges and sides.	154	18	4	11 0	108	3.0 0	1.730
Using concrete and cement, the road is segmented at the right distance.	123	117	2	47	105	2.7 3	1.633
When used correctly, car speed limiters don't make nighttime walking difficult.	124	121	4	45	100	2.6 9	1.613
During "summer," the level road doesn't accumulate any water.	116	151	1	51	75	2.5 4	1.498
Sewer pipes and chasms are correctly repaired.	125	128	2	62	77	2.5 9	1.539
It is difficult to contaminate the road with dust from either side.	132	118	5	49	90	2.6 1	1.592
The road enhances the village's beauty.	83	28	5	12 3	154	3.6 0	1.562
The road made it easier for people to get around in cars and on foot.	136	82	4	71	101	2.7 9	1.661
The cobblestone roads are significantly more pleasant than the older ones.	94	73	7	89	131	3.2 3	1.628
The road will require frequent maintenance for a few of years.	135	112	0	66	81	2.6 1	1.581
Valid N (list wise)							

Source own survey data analysis 2023

Based on table 4.9 The quality of cobblestone road infrastructure is largely dependent on the technical support provided, the specific characteristics of the stones used (size, shape, and edge), and the quality of the consultant and contractor. The amount of staff and customers in the field is

largely determined by the frequency of their visits to each site. It is essential that the right personnel are assigned to oversee the construction (IFRC, 2012). Without the appropriately qualified technical staff, this could result in inadequate monitoring of the construction and a lower quality of infrastructure.

In order to gauge the villagers' perceptions of the quality of the road, a number of statements were presented to the respondents regarding the level of road conditions they expected to see.

It is essential that roads are managed properly in order to ensure the well-being of all road users, including users, residents, shoppers, employees, businesspeople, and taxpayers. To this end, a survey was conducted to gauge the villagers' opinion on the quality of the road. The survey contained several statements to assess the villagers' expectations of the road's standard. The stability of a cobblestone road depends heavily on each individual cobblestone remaining firmly in place; if not built with quality, the road can quickly deteriorate or be destroyed. A single cobblestone moved from its natural position can cause the entire road to become unstable over time. To prevent this, each cobblestone must be securely anchored in the ground and firmly attached. Any stones that become dislodged from their positions can be a major cause of damage to the road. The respondents disagree that the road does not meet the necessary standards in this regard.

The respondents showed significant agreement, with a mean of 3.00 and a standard deviation of 1.730, to the statement that the edges or ends of a road that connects to asphalt or earthen roads are not strongly fixed with large concretes and cement, making them vulnerable to destruction.

My observations during the road site inspection showed that if the joint area between the end of the cobblestone roads and either asphalt or earthen road is not made with the help of huge stone and cement, it will simply disintegrate and scatter the Cobblestones. The respondents' ratings also revealed a lack of quality in several areas of the roadways, with an $M= (2.73)$ and standard deviation (1.633). They expressed their disagreement with the assertion that the roads are correctly segregated with concrete and cement, and that car speed barkers are not properly applied, making night walks difficult. On the other hand, the respondents had a relatively average level agreement, with an $M= (3.60)$ and $SD= (1.562)$, that the road adds to the beauty of the village, with the quality of the road being more linked to the beauty of the villages.

The assertion that the road failed to support people moving around more easily with vehicles and on foot received a low-quality rating of $M= (2.79)$ and $SD= (1.661)$. This was mainly due to the

difficulties villagers experienced with cars on the old roads, as well as the mud and watery roads during the Kiremt season. Respondents showed a high level of agreement with a rating of $M=3.23$ and $SD=1.628$ that the cobblestone road is a great improvement from the roads before. They also had a notably high level of agreement with a rating of $M=2.61$ and $SD=1.581$ that the roads will not serve for several years with little maintenance. This suggests that the roads in the Kirkos sub-city would require high maintenance over several years.

Table 4. 9 Benefit of cobble stone infrastructure

Descriptive Statistics							
	V	L	A	H	VH	Mean	Std. Deviation
Roads provide improved access to villages.	98	71	14	139	72	3.04	1.504
Villages become more successful economically	88	68	10	194	34	3.05	1.381
Ensure a secure walk even at night	146	133	2	83	30	2.28	1.352
reduced mud during the wet season and less dust during the dry season	127	114	53	97	3	2.33	1.186
Access to supply trucks should be made easier, such as ex charcoal truck, Pit latrine emptier.	141	85	43	69	56	2.53	1.474
Access to ambulances, rental taxis, house cars, school buses, etc. has improved.	170	137	0	76	11	2.04	1.207
Children discovered sports (such as cycling and soccer)	124	102	52	62	54	2.54	1.421
improves the villages' aesthetics and cleanliness	148	90	48	93	15	2.33	1.295
provide knowledge for other related works	152	162	0	31	49	2.14	1.343
improved living conditions in the village	149	147	86	14	12	1.97	.989
Valid N (list wise)							

Source own survey data analysis 2023

According to the above table 4.10 shows as Cobblestone road infrastructure is a major asset to a community, offering a variety of benefits. These range from improved access to markets, hospitals, and schools; increased comfort, speed, and safety; and decreased running costs for vehicles. In addition to keeping cities tidy and attractive, roads also make essential services more

accessible to all. The construction of cobblestone roads has a positive impact on the social, economic, and environmental landscape, both locally and nationally. This research evaluates the community benefits of cobblestone roads in the research area, as seen in the table below. The construction of cobblestone roads has been highly beneficial in terms of socioeconomic development for the community.

The cobblestone roadways in the Kirkos Sub City have had a positive effect on the villagers' hardships, particularly during the rainy season and when traveling at night. However, according to Table 5, very few respondents reported that cobblestone roads adequately prevented muck during rainy seasons and dust during dry seasons, with a mean of 2.33 and a standard deviation of 1.186. Furthermore, the cobblestone road does not provide a safe walkway even at night, as expected by the locals, which is in conflict with the mean of 2.28 and standard deviation of 1.352. The respondents also disagreed with the levels of 2.53 mean and 1.474 standard deviations that the cobblestone road does not make it simpler for vehicles carrying supplies, including charcoal trucks and pit latrines, to access them. In addition, the respondents strongly disagreed with the mean of 2.04 and standard deviation of 1.207 that the road does not increase access to ambulances, rental taxis, house cars, school buses, etc. Moreover, the respondents strongly disagreed with the mean of 2.33 and standard deviation of 1.295 that the newly built cobblestone roads did not enhance the beauty and cleanliness of the settlements.

The respondents showed strong agreement that the community has become more economically feasible and has better access to roadways, with $M = (3.04, 3.05)$ and $SD = (1.504, 1.381)$. Nevertheless, the conditions of villages as living places have not changed significantly lately. Some informants also expressed that the village is undergoing drastic economic growth due to better housing rental possibilities. Children still do not consider the roads to be a safer place to play (e.g. soccer or cycling). This is not one of the benefits of the cobblestone road that is found in children's playing fields (e.g., soccer, cycling).

The respondents reported a high level of benefit from cobblestone roads in terms of making villages more economically viable (mean = 3.05, SD = 1.381) and better connected with the roadways (mean = 3.04, SD = 1.504). However, the respondents failed to provide safe walking paths at night (mean = 2.28, SD = 1.352) in the Kirkos sub-city administration and did not offer experience for other comparable projects as a result.

Table 4. 10 Factors that pose damage to cobble stone roads

Descriptive Statistics							
	VL	L	A	H	VH	Mean	Std. Deviation
Construction of water and sewer pipes for utility access is underway.	149	101	55	52	37	2.31	1.342
Telecommunication and electric poles	58	130	0	143	63	2.41	1.492
Improper ditches caused water or muck to overflow onto the roads.	60	94	46	138	56	2.50	1.454
Very heavy trucks-loaded with construction materials	61	100	43	128	62	2.57	1.468
Improper waste dumping	101	146	0	110	37	2.52	1.374
The landscape of significant road projects	78	88	56	130	42	2.92	1.331
Valid N (list wise)							

Source own survey data analysis 2023

According to the result of the above table 4.11, The quality and benefits of the cobblestone roads were determined to meet certain requirements and help the community in several ways. However, the potential for these qualities and benefits to be short-lived was revealed by the issues that were identified, such as the building of water and sewer lines and other utility access projects, which can cause roadways to deteriorate. The respondents agreed that this is the biggest issue, with an average of 2.31 (SD= 1.342), as it is nearly impossible to maintain water and sewer lines without removing the cobblestone. Nevertheless, a few responsible people are making an effort to keep the cobblestone road in good condition, despite the damage that can often occur due to its renovation and upkeep.

There was a strong consensus among the respondents that improper ditches, which caused water or muck to flow onto the roads, were a significant issue, with a mean rating of 2.50 and a standard deviation of 1.454. Additionally, improper waste disposal sites were thought to cause moderate problems with the roadways, with a mean of 2.52 and a standard deviation of 1.374.

Other issues that have an effect on and cause the degradation of cobblestone roads are telephone and electric poles, extremely heavy trucks carrying construction materials, and the layout of the roads. These issues are widely accepted as having caused considerable damage to the roads, with

respective Means of (2.41) and Standard Deviations of (1.492), (2.57) and (1.468), and (2.92) and (1.331).

Water and sewerage authorities demolished and destroyed cobblestone roads in order to install better water pipes, likely due to the responses of the respondents. This indicates a major problem with access to construction materials, such as water and sewage pipes, incorrect drainage that causes water or mud to overflow onto the roadways, excessively tall electrical and telecommunication poles, and improper disposal of waste.

Table 4. 11 The local government's ability to manage effectively (kebele/woreda administration)

Descriptive Statistics							
	SD	D	N	AG	S A	Mean	Std. Deviation
It is going according to plan to build the road	153	93	24	88	36	2.39	1.420
The projects are completed on time and within budget.	128	162	0	64	40	2.30	1.342
Managing all the actors successfully is the management's responsibility.	118	112	30	89	45	2.57	1.409
Organizing the neighborhood is the responsibility of the administration employees.	161	89	30	94	20	2.30	1.346
A plan is in place for the upkeep of the roads.	143	160	1	73	17	2.14	1.216
Road maintenance is part of a plan.	135	117	29	94	19	2.35	1.298
Community members honor the administration	159	89	22	93	31	2.36	1.410
Valid N (list wise)							

Source own survey data analysis 2023

Table 4.12 indicates that the opinions of the respondents were evaluated to measure the effectiveness and efficacy of managing the cobblestone infrastructure project. The local government body was in charge of managing and overseeing the road development projects, with its staff responsible for the initiation, planning, and implementation of the cobblestone projects. As such, the success of the road construction project depends on the efforts made by the local government body personnel. Furthermore, it was confirmed by the respondents that the

administrative staff lacks the necessary competence in community mobilization. The administrative representatives have been rated with a disagreement level of $M = (2.14)$ and $SD = (1.216)$, suggesting that they have had an unsatisfactory experience with expertly mobilizing the community for the project and addressing the need for improved road infrastructure in the area. For this, the management has not effectively coordinate all actors in the authority, with a strongly disagreement level of $M = (2.57)$ and $SD = (1.409)$. The respondent shows that the road projects are not accordingly the urban plan, the projects are not complete with in the time and budgets and the administration are not honored by the community, with very strongly disagreement level of The above data, with $M = 2.39$, $SD = 1.420$ for the first set, $M = 2.30$, $SD = 1.342$ for the second set, and $M = 2.36$, $SD = 1.410$ for the third set, implies that in Kirkos Sub City there is a major problem with road projects not being completed according to the urban plan and within the set time and budget, the administration are not honored by the community, the administrative authority has not to expertize the mobilizing community and the management has not effectively coordinate all actors.

Table 4. 12 Challenge during road construction

Descriptive Statistics							
	VL	L	A	H	VH	Mean	Std. Deviation
financial constraints	71	37	0	90	196	3.77	1.565
Community participation that is passive	89	39	35	82	149	3.41	1.600
inadequate coordination and project management	130	72	34	52	106	2.83	1.639
a lack of communal ownership	121	79	0	63	131	3.01	1.711
inappropriate ranking of each access road's importance	140	142	57	22	33	2.15	1.207
The area's landscape	187	100	51	22	34	2.03	1.268
inappropriate period or season for road construction	186	157	0	19	32	1.87	1.176
Taking out old road materials	145	141	58	14	36	2.12	1.212

Theft of building supplies	61	39	22	110	16 2	3.69	1.472
Recruiting volunteers for the local committee	176	156	0	16	46	1.98	1.290
Confidence in the financial management of officials	55	49	33	71	18 6	3.72	1.496
There was no prior public knowledge	187	102	55	17	33	2.00	1.243
establishing a fair contribution from families	204	161	0	8	21	1.68	.990
collection of community contributions on time	146	153	64	10	21	2.00	1.057
Road master plan for Addis Ababa City is in conflict	95	58	38	85	11 8	3.19	1.580

Source own survey data analysis 2023

According to the above Table 4.13, all parties involved with the cobblestone projects do not view them as simple undertakings. The projects might not be completed without some form of bumps in the road, which would affect the timely and affordable delivery of the newly constructed roads as well as the quality of the roads. The table above presents and rates a few of the challenges put forth to the respondents.

Financial constraints in road construction were thought to be the most difficult of the issues, with $M= (3.77)$ and $SD= (1.565)$, indicating a very high level challenge within the range. The second most difficult task in regard to the financial constraint was the lack of confidence in the financial management officials, with $M= (3.72)$ and $SD= (1.496)$. The community's extremely slow rate of fund raising presented a hurdle due to the $M= (2.00)$ and $SD= (1.057)$ levels of disagreement. The community's lack of engagement was another significant issue, with the household respondents' $M= (3.41)$ and $SD= (1.600)$ very low agreement. The following items are listed below in aggregate form. As a result, respondents believe that inadequate project management and coordination, as well as a lack of a sense of community ownership, have led to a moderate level of difficulty on the road building project, with $M= (2.83)$ and $SD= (1.639)$, $M= (3.01)$ and $SD= (1.711)$, respectively. Other challenges such as theft of construction materials, improper time/season of road construction, removing previous road materials, , very low level recruiting volunteer local committee member, and conflict with the Addis Ababa city road master plan,

Absence of prior community awareness, Setting equitable contribution by families, were considered as major source of challenge during the cobblestone road construction in the study area and confirmed with M= (3.69) and SD= (1.472), M= (1.87) and SD= (1.176), M= (2.12) and SD= 1.212 and M= 3.19 and SD= 1.580, and), M= (2.00) SD= 1.243 and SD= (1.68) and M= (0.990) respectively. During the interview session, respondents comprehended that the lion's share of the issue could be attributed to a lack of equitable contribution from the families, improper timing/season of the road construction, very low prior community awareness, very low local landscape, very high financial constraints, and inactive participation of the community. The construction of roads posed a great challenge, mainly financial, with community participation, conflict in the master plan, etc. This showed that the administrative representatives had low acceptance of the traditional cobblestone roads. The administrative officers' management had to lack trust in moderately addressing the need for improved road infrastructure in the community.

Table 4. 13 Challenge of urban land policy implementation

Descriptive Statistics							
	SD	D	N	A G	S A	Mea n	Std. Deviation
that the land policy is essential because it offers precise and current information about how the cobblestone infrastructure operates	119	115	5	105	50	2.62	1.462
Land management officials are performing accurately to the strategies outlined in the land policy for implemented related to cobble stone infrastructure.	76	118	17	103	80	2.98	1.466
The previous/earlier land transfer modalities applied to Ethiopian urban center changed by the current lease law, this transfer modality change brought the desired improvement	105	95	14	94	86	2.90	1.554
There are slow provision of infrastructure and poor land information systems	98	104	6	113	73	2.90	1.511
The land lease price is stable as highly appreciated by urban and land development management policy document	89	102	17	112	74	2.95	1.484
land related regulations and guidelines are clear and harmonized to make the policy	103	78	56	83	74	2.87	1.481

implementation efficient on cobble stone infrastructure							
The urban land policy gives land requesters current information regarding cobblestone infrastructure.	129	85	8	97	75	2.76	1.575
The problem of cobblestone infrastructure is the subject of a planned community consultation meeting on urban land policy.	113	128	36	79	38	2.49	1.345
The city administration implements policies to improve paving stone infrastructure.	154	94	28	84	34	2.37	1.401
That urban dwellers are satisfied in urban land policy related cobble stone infrastructure performance	79	193	2	101	19	2.46	1.206
Valid N (list wise)							

Source own survey data analysis 2023

According to the above Table 4.14 illustrate that the Challenge of urban land policy implementation in land related regulation and guidelines, policy of city administration and information about urban land policy. The table above presents a few of the challenges put forth to the respondents.

As demonstrated by the results, land policy does not play an important roles because it does not gives accurate and up-to-date information regarding the operation of the cobble stone infrastructure with high level disagreement ($M= (2.62)$ and $SD= 91.462$). Respondent's result of 119 the land management official was not performing Adhering precisely to the strategies outlined in the land policy for implement relates to cobble stone infrastructure. recorded respondents frequency result of 115 are agree, recorded respondents frequency of 113 With an inadequate infrastructure and a substandard land information system, the 103 documented rules and regulations regarding land are not consistent and unified, hindering the successful implementation of policies on cobble stone infrastructure and frequency result of 129 are the urban land policy not provide up to date information for the land requests infrastructure of cobble stone.

Land management officials are not executing the strategies laid out in the land policy concerning cobblestone infrastructure accurately. The existing lease law did not change the land transfer methods that were employed in Ethiopia's metropolitan regions, which did not yield the desired outcomes, resulting in a lack of resources for land management. Infrastructure development is

sluggish and land information systems are inadequate for $M = 2.98$ and $SD = 1.466$, $M = 2.90$ and $SD = 1.554$, and $M = 2.90$ and $SD = 1.511$ respectively, Given the lack of involvement of land policy in providing precise and up-to-date information regarding local government operations, a high-level challenge is presented in the cobblestone infrastructure, the second most difficult activity was the absence of an urban The land policy would have provided land requesters with access to the current Mean (M) and Standard Deviation (SD) values of the cobblestone infrastructure, which are $M=2.62$ and $SD=1.462$, and $M=2.76$ and $SD=1.575$, respectively.

The city administration's failure to develop policies that improve cobblestone infrastructure, the lack of organized meetings for community consultation regarding cobblestone infrastructure issues, the lack of clear and harmonized land-related regulations and guidelines, and the inefficiency of urban land policy enforcement have all been met with a high level of disagreement, with mean scores of 2.37 (SD=1.401), 2.49 (SD=1.345), 2.87 (SD=1.481) and 2.76 (SD=1.575) respectively, indicating the challenges to the implementation of this policy.

The urban land policy is facing many challenges, such as the city Administration not making policy which helps to improve cobble stone infrastructure. Additionally, there is no consultation meeting to get citizen feedback related to cobble stone infrastructure, and the land related regulations and guidelines are not clear and harmonized to make the policy implementation efficient. Furthermore, the urban land policy does not provide up-to-date information for land requesters who need cobble stone infrastructure.

Table 4. 14 Effective implementation of urban land policy on cobble stone infrastructure

Descriptive Statistics							
	SD	D	N	AG	SA	Mean	Std. Deviation
The city government is in a position to offer investors and developers of infrastructure serviced land.	109	160	6	74	45	2.46	1.366
The various operational procedures in the land office are well-coordinated by law and regulation.	164	123	9	58	40	2.21	1.380
There are issues with the development of	90	95	1	182	26	2.90	1.369

cobblestone infrastructure in communities under urban policy.							
There is a land supply system of the lease that is available to all income groups of the population, according to the results of the existing practical implementation of land-related revenue collection mechanisms, which are suitable on cobblestone infrastructure	85	183	3	94	29	2.49	1.267
The preparation of the urban land use policy, regulations, and guidelines involved interaction with citizens.	148	109	8	59	70	2.48	1.540
Clear and consistent land-related regulations and norms enable effective policy implementation.	146	176	0	28	44	2.11	1.286
There are inadequate urban land policy information systems and delayed infrastructure development.	131	123	8	48	84	2.57	1.562
are Poor urban land policy information systems and delayed infrastructure development	83	72	6	192	41	3.09	1.388
are the underprivileged sections of society profited from the procedures to control cobblestone infrastructure's faults in terms of policy.	139	181	0	43	31	2.10	1.221
In accordance with Proclamation No. 721/2011, the city administration, the leasing law helps to reduce land speculation.	82	85	7	170	50	3.05	1.411
The law supports infrastructure for urban land In accordance with proclamation No. 857/2014, the local government	86	37	4	146	121	3.45	1.538

Source own survey data analysis 2023

From the table 4.15 constructed tables, data shows there are strong level of disagreement on factors of effective urban land policy implementation in construction infrastructure. The table above presents and evaluates some of the challenges raised to the respondents. These challenges include a lack of good regulated law coordination of different working processes in the land office, land supply system of the lease not being accessible for all income groups, the policy, regulations and guidelines not being prepared in consultation with citizens related to urban land

use, land related regulations and guidelines not being clear and harmonized to ensure efficient policy implementation, imperfect mechanisms to regulate policy, cobble stone infrastructure not benefiting the under privileged groups, inadequate maintenance of land records, and a lack of awareness of citizens about their rights. $M= (2.21)$ and $SD= (1.380)$, $M= (2.48)$ and $SD= (1.540)$ and $M= (2.11)$ and $SD= (1.286)$, $M= (2.57)$ and $SD= (1.562)$, $M= (2.10)$ and $SD= (1.221)$ respectively. The other data's high mean demonstrates that there is widespread agreement on how to implement urban land policy effectively so that Proclamation No. 721/2011 and Proclamation No. 857/2014 provide support for urban land infrastructure by the municipal government and the law respectively. This, coupled with the regulation of land speculation, can help to improve the provision of infrastructure and urban land policy information systems, with M values of 3.05, 3.45, and 3.09 and SD values of 1.411, 1.538, and 1.388 respectively. Among the list of challenges, the city administration is in a position to provide developers of infrastructure with serviced property and investors related to cobble stone infrastructure, there is problems during urban policy for implementation of cobble stone infrastructure on community and the results of land-related revenue collection techniques' present actual application indicate that they are inappropriate for cobblestone infrastructure. with $M= (2.46)$ and $SD= (1.366)$, $M= (2.90)$ and $SD= (1.369)$ and $M= (2.49)$ and $SD= (1.267)$ respectively. This suggests that the coordination of various working procedures inside the land office is not well-governed by legislation, there is problems during urban policy for implementation of cobble stone infrastructure on community, The preparation of the policy, regulations, and guidelines for urban land use did not involve consult with citizens, There are inadequate urban land policy information systems and sluggish infrastructure provision and The measures to control the cobblestone infrastructure's policy flaws did not help the society's under privileged sections.

4.4. Discussion

This research focuses on seven key topics, such as the advantages of cobblestone in society, the quality of cobblestone, and the factors of post-construction and upkeep to damage of construction roads, management competency, challenges during cobble stone roads construction, challenges the urban land policy implementation and effectiveness of policy Implementation on cobble stone infrastructure. The following is a summary of the study's findings.

- The research findings suggested that the quality of cobblestone is greatly impacted by its size and shape. Furthermore, larger concrete and cement materials used in construction result in increased strength of the roads, yet the edges and sides remain loosely attached. (Mean = 3.00 with SD = 1.730). They strongly disagreed with M= (2.73) and standard deviation (1.633), that the road were not properly segregated using cement and concrete; the application of car speed barkers is improper and does challenging when walking at night.
- Benefit of cobble stone Cobblestone streets provide smoother surfaces compared to traditional unpaved roads, enabling better mobility and reducing vehicle operating costs. They have contributed to job creation, improved road safety, enhanced transportation access, and reduced dust and pollution. The cobble stone infrastructure should help to keep cities tidy and attractive. It is clear that building cobblestone roads is having a significant positive impact on society, the economy, and the environment.
- Factors that pose damage of cobble stone was improper construction techniques, such as inadequate compaction of the roadbed or insufficient foundation preparation, which can compromise the durability of cobblestone roads. Utility constructions, This is the most major issue that the respondents dispute to the level, such as water pipes and sewerage pipes are some of the reasons destroying the roadways M= (2.31) and SD= (1.342) such It is impossible to maintain water and sewer lines without first removing the cobblestone. The respondents also strongly concur that faulty ditches, which caused water or dirt to pour onto the roads, were a serious issue M= (2.56) and SD= (1.410). Additionally, it's thought that improper waste disposal may have damaged the roads moderate agree level, M= (2.52) and SD= (1.374), issue with the roads.
- Management competency of the local government administration was the big challenges the cobble stone infrastructure. In Africa, there are many unclear laws and rules governing land management, as well as overlaps between different sectors (APLC, 2010).Actions to reform land laws and regulations' using modern systems becomes achieving efficient and effective land management is crucial on a global scale, and It can thereby satisfy societal demands (Nov,2006). The some challenges of the management has not effectively coordinate all actors in the authority, with a strongly disagreement level of M= (2.57) and SD= (1.409) and that the road projects are not accordingly the

urban plan, the projects are not complete with in the time and budgets and the administration are not honored by the community, with very strongly disagreement level of $M = 2.39$, $SD=1.420$, $M= 2.30$, $SD= 1.342$ and $M= 2.36$, 1.410 .

- The challenges of cobble stone road infrastructure Regular monitoring helps identify gaps, challenges, and successes in land use implementation, enabling appropriate adjustments and interventions and The challenges related to the land market, as identified by Gondo (2008), include the general inadequacy of land-related information, shortage of skilled manpower and infrastructure, limited financial capacity, weak monitoring and evaluation mechanisms, bureaucratic tendencies, alleged favoritism, and lack of participation by the low-income group in the decision-making process. due to the absence of Financial constraints in road development were thought to be the most difficult of the difficulties listed with $M= (3.77)$ and $SD= (1.565)$, The inability to trust government officials to manage finances was the second-most difficult task in respect to the financial constraint with $M= (3.72)$ and $SD= (1.496)$, A moderate level problem is thought to have arisen on the road building project as a result of poor project management and coordination, as well as a lack of a sense of community ownership with $M= (2.83)$ and $SD= (1.639)$, $M= (3.01)$ and $SD= (1.711)$ and lack setting equitable contribution by the families, improper time/season of the road construction, very low absence prior community awareness.
- Since 2005, various problems have arisen due to the implementation of urban land use policy for cobble stone infrastructure, such as illegal housing at the site of cobble road, which have posed a challenge for urban land policy. (Treskon: 2006). The execution of Ethiopia's cobblestone road construction policy in urban areas is a recent development. Several issues with implementing policies Officials in charge of land management are not accurately implementing the plans established in the cobblestone infrastructure land policy, the present lease law does not alter the prior/previous land transfer procedures that were used in Ethiopia's urban areas, the intended improvement was not brought about by this transfer modality adjustment, Infrastructure development is sluggish, and land information systems are inadequate with $M= (2.98)$ and $SD= (1.466)$, $M= (2.90)$ and $SD= (1.554)$ and $M= (2.90)$ and $SD= (1.511)$ respectively. The city administration does not implement policies that improve paving stone infrastructure, An arranged community

gathering to discuss urban land policy and solicit input from residents over the cobblestone infrastructure issue did not take place, the lack of unified and unambiguous land-related legislation and guidelines hinders the effective execution of policies for cobblestone infrastructure and the urban land policy does not give land requesters the up dated information regarding the cobblestone infrastructure with $M= (2.37)$ and $SD= (1.401)$, $M= (2.49)$ and $SD= (1.345)$, $M= (2.87)$ and $SD= (1.481)$ and $M= (2.76)$ and $SD= (1.575)$ highly level of disagreement.

- The other challenges of infrastructure of cobble stone due to effective implementation of the urban land policy. (Burns, Nov, 2006). An action to reform land laws and regulations' using modern systems becomes achieving efficient and effective land management is crucial on a global scale. Focus of this study is on new urban lands infrastructure development for light road cobbles stone in woreda local district Declaration No. 721/2011 aimed at expanding development and providing Citizens benefit as much as they contribute to development. Due to well-regulated law, the formal system is rendered inefficient and unproductive, and this affects the coordination of various working activities in the land office, Not all income levels of citizens have access to the land supply system under lease, the urban land use policy, regulations, and standards were not developed with community consultation, There are not enough clear and consistent land-related regulations and standards to effectively implement policy the methods to control the cobblestone infrastructure's flaws in policy did not help the society's underprivileged groups with $M= (2.21)$ and $SD= (1.380)$, $M= (2.48)$ and $SD= (1.540)$ and $M= (2.11)$ and $SD= (1.286)$, $M= (2.57)$ and $SD= (1.562)$, $M= (2.10)$ and $SD= (1.221)$ respectively. Generally In accordance with proclamation No. 721/2011 lease law help to curb land speculation, the law supports urban land infrastructure in the city administration under proclamation No.857/2014, there are inadequate urban land policy information systems and sluggish infrastructure deployment in Kirkos sub-city administration with $M= (3.45)$ and $SD= (1.538)$ $M= (3.05)$ and $SD= (1.411)$ and $M= (3.09)$ and $SD= (1.388)$ respectively.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The study's data analysis was reported in the previous chapter. The study's key conclusions, recommendations based on the findings, and main findings were all included in this chapter.

5.2 The Summary of Findings

This study was conducted aiming at critical assessment of urban land use policy implementation: which focused on the use of land for cobblestone infrastructure in the Kirkos sub-city. The present study was guided by the following research questions: What are the main obstacles to putting urban land use policy on cobblestone infrastructure into practice?, What factor that affect effectiveness of urban land use policies regarding cobblestone infrastructure?, What are the key challenges on the urban land use policy implementation on construction and maintenance of cobblestone roads infrastructure?, What are the community's duties and responsibilities in implementing the urban land use policy for maintaining the cobblestone road construction? And How social and economic benefits of effective implementation of urban land use policy in related to cobble stone infrastructures in kirkos sub-city.

The research also seeks to evaluate the elements that influence the urban land use policy implementation on cobble stone infrastructure and its benefit: the case of land use for construction of cobblestone infrastructure, and forward the suggestions what has to be done next to address the issues identified and close the gap on this specific issue.

The study used a descriptive design approach. A survey of cross sectional research design was employed in the research to examine effect cobble stone infrastructure and its factors of urban land policy implementation. The target population was 203,008 employees and customers of kirkos sub city each woredas. Census was implied to all 11 branches of kirkos sub city woredas and 399 out these 5 samples are not responding from the customers and employees to be studied. Primary data was collected using structured questionnaires. The data collected was examined using Statistical Package for Social Sciences (SPSS) version 20 software to analyze descriptive

statistics such as frequencies, mean, and standard deviation. The data was then presented in the form of tables and the following were identified as the major findings:

- Geographical background of kirkos sub city was this number shows that the in kirkos sub city members are male, Most respondents have degree and above and that majority of the respondents' occupation of respondent were kirkos sub city officer this implies that respondents are well-educated and easily understand how to implement the urban policy in related to the infrastructure of cobble stone.

Financial Limitations: the research indicates financial constraints as a major challenge, hampering the timely completion of cobblestone projects.

- Explore innovative financing mechanisms, such as public-private partnerships, to mobilize additional resources.
- Ensure adequate and reliable budgetary allocations from the government for cobblestone infrastructure development.
- Enhance financial management capabilities to optimize the utilization of available funds.

Community Participation:

- The low level of active community participation in raising funds and contributing to the projects was found to impact the timeline and progress.
- Recommendation to strengthen community engagement and ownership through comprehensive awareness campaigns and participatory decision-making processes.
- Develop incentive structures to encourage and sustain community contributions and involvement.
- Build the capacity of community organizations to effectively mobilize and manage their contributions.

Project Management and Coordination:

- Issues related to poor management, lack of coordination, and ineffective monitoring were identified.

- Strategies to address this: establish clear project management structures and accountability mechanisms.
- Improve inter-agency collaboration and communication among relevant stakeholders.
- Implement robust monitoring and evaluation systems to track progress and address implementation challenges.

Urban Land Policy and Information Systems:

The research highlighted weaknesses in the urban land policy implementation, including inaccurate information and inadequate land information systems.

- Potential interventions: Review and update the urban land policies and regulations to align with cobblestone infrastructure development objectives.
- Strengthen land information management systems to provide reliable and up-to-date data to support evidence-based decision-making.
- Ensure effective coordination between land management authorities and infrastructure development agencies.

Community Ownership and Trust:

- The lack of community ownership and trust in officials managing the finances were identified as challenges.
- Strategies to build trust and ownership: enhance transparency and accountability in the management of community contributions and project finances.
- Involve community representatives in the financial oversight and decision-making processes.

Summary of the key points regarding the urban land use policy implementation and its impact on the cobblestone infrastructure project in Kirkos sub-city:

Positive Aspects: the recently established urban land policy in Kirkos sub-city aims to aid in the development of urban land infrastructure.

The land lease legislation and city administration work to reduce land speculation, as per Proclamation No. 857/2014.

Challenges: As per Proclamation No. 721/2011, the city administration was not in a position to provide serviced land for infrastructure developers and investors.

There were issues with the coordination of different working processes in the land office, as regulations and guidelines were not adequately coordinated.

The implementation of cobblestone infrastructure on communities faced challenges due to the lack of coordinated land-related policies.

The current practical implementation of land-related revenue collection mechanisms is not satisfactory.

The principles, rules, and regulations to make the cobblestone infrastructure program effective were not prepared in collaboration with citizens.

Strengthen the coordination and alignment of land-related regulations, guidelines, and working processes among different agencies and departments.

Ensure the city administration is equipped to provide serviced land for infrastructure development, as per the needs of the cobblestone projects.

Involve citizens and community representatives in the process of developing principles, rules, and regulations to improve the effectiveness of the cobblestone infrastructure program.

Enhance the transparency and accountability of land-related revenue collection mechanisms to build trust with the community.

Regularly report on the utilization of funds and the progress of the cobblestone infrastructure projects to foster trust and community ownership.

5.3. Conclusion

Present study focused on the effect of the seven major challenges identified for this study. These cobble stone infrastructure practices were benefit of cobble stone in society, quality of cobble stone, factor of post damage of construction roads, management competency, challenges during cobble stone roads construction, challenges the urban land policy implementation and effective Implementation of the policy on cobble stone infrastructure. From the purpose of the study, the following conclusions were reached.

Quality of Cobblestone Construction:

- The quality of the cobblestone has a significant impact, with proper size and shape improving the strength of the roads.
- However, the edges and sides of the roads were not firmly fixed with concrete and cement, and the roads were not properly segmented.

Perceived Benefits vs. Limitations:

- Cobblestone roads provide social, economic, and environmental benefits, but have limitations in reducing mud/dust and providing a safe walking surface.

Factors Compromising Durability:

- Improper construction techniques like inadequate compaction and foundation preparation can damage the cobblestone roads.
- Utility access construction and improper ditching also cause issues.

Challenges in Management and Coordination:

- Lack of effective coordination among government agencies and stakeholders.
- Roads not conforming to urban plans and facing community trust/ownership issues.
- Inadequate financial resources, project management, and community engagement.

Policy Implementation Gaps:

- Inaccurate implementation of land use plans and policies by officials.
- Lack of community consultation and clear, harmonized land-related regulations.
- Inadequate land information systems and delayed infrastructure development.
- The other challenges of infrastructure of cobble stone due to effective implementation of the urban land policy: The policy, regulations, and guidelines regarding urban land use were not developed in consultation with citizens, and the land-related regulations and

guidelines are not clear and harmonized to make the policy implementation efficient. Additionally, the mechanisms to regulate policy imperfections of cobblestone infrastructure were not adequately addressed.

Kirkos sub city, cobble stone infrastructure process can bring competitive advantage for them. The process needs to be focused on the motivation of employees and increasing the implementation of policy.

5.4. Recommendations

The research suggested the following recommendations based on the study findings.

- The kirkos sub city also the develop roads are cobblestone, most of the existing roads replaced in the time and infrastructure cobblestone regulated bylaw.
- It is recommended that the stones used to strengthen the roads should be of an appropriate size and shape, that the edges and sides of the road should be securely secured with large quantities of concrete and cement, and that the roads should be broken up into sections with concrete and cement at the appropriate intervals. Furthermore, speed bumps should be employed correctly to make night-time walking easier.
- In order to motivate the community to partake in road development, the government has taken steps to raise awareness at every level (federal, regional, woreda, and kebele). However, the local government is still facing difficulty in informing the community and other stakeholders regarding the necessity to maintain, manage, and repair the roads, as well as providing them with the opportunity to do so. It is expected that this will encourage the locals to monitor and check the local cobblestone infrastructure. To aware the benefit the cobble stone infrastructure for the community and minimized mud during the rainy season and dust during the dry seasons.
- The government on all levels - Federal, Regional, Woreda and Kebele - has implemented laws in accordance with the urban plan, ensuring that the project was finished on time. The management was responsible for coordinating with all the community members, and their efforts were greatly appreciated by the community.
- Other infrastructures, such as the installation of communications wires and water pipes that can cross local roads, should be put in place before construction on the cobblestone

road. This was the situation that practically occurred during the construction of the cobblestone roads throughout the country, specifically in the Kirkos sub-city.

- Due to the fact that the stability of one cobblestone in a certain location depends on the stability of the other, by nature it can easily decay or destroy itself if it is not made with quality. In light of this, once the contractors are done, the development committee must inspect and approve.
- Kirkos sub city land administration for cobblestone infrastructure to give recommendations based on experience from other well-functioning nations in order to make the implementation of the urban land policy effective, equitable, and well-functioning.
- According to Proclamation 857/2014, emphasis should be placed on urban land infrastructure of serviced land to prevent the usage of raw land, and land revenue should be used for its original purpose.
- The government at all levels (federal, regional, woreda, and kebele) has regulations for good laws to coordinate various working processes, a land supply system that makes leasing accessible to all income groups of citizens, and policy regulations and guidelines that are prepared after consultation with citizens and are harmonized to ensure that the policies are implemented effectively for cobblestone infrastructure.

5.5. Suggestions for areas of future study could include

The purpose of this research to examine critical assessment of urban land use policy implementation: the case of land use for construction of cobblestone infrastructure in Kirkos sub city. It considered only seven challenges, benefit of cobble stone in society, quality of cobble stone, factor of post damage of construction roads, management competency, challenges during cobble stone roads construction, challenges the urban land policy implementation and effectiveness of the policy Implementation on cobble stone infrastructure. Therefore, this study was not fully comprehensive and more research was recommended to examine the effect of other factors that affect cobble stone infrastructure and the further studies to conducting the urban land use policy implementation on infrastructure of cobble stone in Ethiopia as well as the world. Furthermore, it is challenging to generalize the outcomes of the study due to it being conducted within a single city administration located in the Kirkos sub city. To better assess if factors

influence infrastructure of cobble stone, further studies should be conducted that incorporate the practices of other city administrations and are conducted in various locations.

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Appendix I

QUESTIONNAIRES

A questionnaire developed to be filled by employee's officials and customers in Kirkos sub city woredas land administration office.

Dear Respondent,

The purpose of this questionnaire is to acquire ample information for the study titled "critical assessment of urban land use policy implementation: the case of land use for construction of cobblestone infrastructure in kirkos sub city". The research study was be carried out by the student researcher (Tewodros Cherie) for the partial fulfillment to acquire a Master of Arts in in Public Management and policy.

The main objective of this study is to access the critical assessment of urban land use policy implementation: the case of land use for construction of cobblestone infrastructure who is working under kirkos sub city, and also to access the effect of urban land use policy implementation. Accordingly, the questionnaire is expected to be completed within **10 – 15 Minutes** and for the successful completion of the study, your frank and honest responses are very crucial. Besides, note that the information you provide was be used for study purposes and it was be TREATED WITH ABSOLUTE CONFIDENTIALITY.

Therefore, please feel free and respond either by putting a tick mark (√) for the close-ended items or by filling in an appropriate answers for the open-ended questions.

Thanks very much.

Part One: General Back Ground of the Respondents

1. Name:

2. Position/Occupation: _____

3. Sex

Male

Female

4. Educational Background:

Certificate

Diploma

Degree and above

5. in your locality:

a. The majority of the streets are cobblestone.

Yes

No

b. The majority of the current roadways should be replaced with

fresh cobblestone.

Yes

No

4. Do you believe that future cobblestone roads will last for a number of years? Yes No

5. Do you believe there should be laws governing how these roads are used? Yes No

PART II

A. Quality of the Cobblestone Roads

For the following Quality of the Cobblestone Roads questioner your response expected to be the extent of your scale: 1=Strongly Disagree, 2= Disagree,3=Neutral, 4=Agree, 5=. Strongly agree for the questions. Therefore, please give your answer by putting “√ ” mark on the table or given space.

No	Statement of Quality	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	It is challenging to remove a single stone from the path with ease.					
2	The strength of the road is increased by the size and shape of the stones.					
3	Big concrete blocks and cement are used to firmly bind the road's edges and sides.					
4	Using concrete and cement, the road is segmented at the right distance.					
5	When used correctly, car speed limiters don't make nighttime walking difficult.					
6	During "summer," the level road doesn't accumulate any water.					
7	Sewer pipes and chasms are correctly repaired.					
8	It is difficult to contaminate the road with dust from either side.					
9	The road enhances the village's beauty.					
10	The road made it easier for people to get around in cars and on foot.					

11	The cobblestone roads are significantly more pleasant than the older ones.					
12	The road will require frequent maintenance for a few of years.					
<i>The overall quality of the road is appreciable</i>						

B. Benefits of the Cobblestone Roads

For the following Benefits of the Cobblestone Roads questioner your response expected to be the extent of your scale: 1=Very Low, 2=Low, 3=Average, 4=High, 5=Very High for the questions. Therefore, please give your answer by putting “√” mark on the table or given space.

No	Statement of Benefits	Very Low	Low	Average	High	Very High
1	Roads provide improved access to villages.					
2	Villages become more successful economically					
3	Ensure a secure walk even at night					
4	reduced mud during the wet season and less dust during the dry season					
5	Access to supply trucks should be made easier, such as ex charcoal truck, Pit latrine emptier.					
6	Access to ambulances, rental taxis, house cars, school buses, etc. has improved.					
7	Children discovered sports (such as cycling and soccer)					
8	improves the villages' aesthetics and cleanliness					
9	provide knowledge for other related works					
10	improved living conditions in the village					
<i>Please state other significant benefits:</i>						

C. Factors that pose damage to the Cobblestone Roads

For the following questioner of the factors damaging the cobblestone roads in your locality, your response expected to be the extent of your scale: 1=Very Low, 2=Low, 3=Average, 4=High, 5=Very High for the questions. Therefore, please give your answer by putting “√” mark on the table or given space.

No	Factors damaging the roads	Very Low	Low	Average	High	Very High
1	Are constructing of water and sewer pipes for utility access					
2	Telecommunication and eclectic poles					
3	Improper ditches caused water or muck to overflow onto the roads.					
4	hefty trucks carrying building supplies					
5	improper waste dumping					
6	The landscape of significant road projects					
<i>Please state other significant factors that could damage the roads:</i>						

D. Management Competency of the Local Government (Kebele/Woreda Administration)

For the following Management Competency of the Local Government questioner in cobblestone roads infrastructure and its urban land policy implementation, your response expected to be the extent of your scale: 1=Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5= Strongly agree for the questions. Therefore, please give your answer by putting “√” mark on the table or given space.

No	Management competency	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Road construction is going according to plan					
2	The projects are completed on time and within budget.					
3	The management is successful in coordinating all of the actors.					
4	The employees of the administration are capable of organizing the neighborhood.					
5	The upkeep of the roadways is planned.					

6	There is a plan for maintaining the roads.					
7	The administration is honored by the community					

Please state any limitations about the Kebele/Woreda administration:

E. Challenges during the Cobblestone Roads construction

For the following the challenges observed during the cobblestone roads project in your locality questioner in cobblestone roads infrastructure and its urban land policy implementation, your response expected to be the extent of your scale: 1=Very Low, 2= Low, 3=Average, 4=High, 5=Very High for the questions. Therefore, please give your answer by putting “√” mark on the table or given space.

No	Challenges during road construction	Very Low	Low	Average	High	Very High
1	that the land policy is essential because it offers precise and current information about how the cobblestone infrastructure operates					
2	Land management officials are performing accurately to the strategies outlined in the land policy for implemented related to cobble stone infrastructure.					
3	The previous/earlier land transfer modalities applied to Ethiopian urban center changed by the current lease law, this transfer modality change brought the desired improvement					
4	There are slow provision of infrastructure and poor land information systems					
5	The land lease price is stable as highly appreciated by urban and land development management policy document					
6	land related regulations and guidelines are clear and harmonized to make the policy implementation efficient on cobble stone infrastructure					
7	The urban land policy gives land requesters current information regarding cobblestone infrastructure.					
8	The problem of cobblestone infrastructure is the					

	subject of a planned community consultation meeting on urban land policy.					
9	The city administration implements policies to improve paving stone infrastructure.					
10	That urban dwellers are satisfied in urban land policy related cobble stone infrastructure performance					
11	Confidence in the financial management of officials					
12	There was no prior public knowledge					
13	Establishing a fair contribution from families					
14	Collection of community contributions on time					
15	Road master plan for Addis Ababa City is in conflict					
<i>Please state other significant challenges faced during the road construction:</i>						

F. Challenges of urban land policy implementation

For the following the Challenges of urban land policy implementation questioner in cobblestone roads infrastructure and its urban land policy implementation, your response expected to be the extent of your scale: 1=strongly agree, 2= Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree for the questions. Therefore, please give your answer by putting “√” mark on the table or given space.

No	Challenges of urban land policy implementation	strongly disagree	disagree	Neutral	Agree	Strongly Agree
1	That the land policy is essential because it offers precise and current information about how the cobblestone infrastructure operates					
2	Land management officials are performing accurately to the strategies outlined in the land policy for implemented related to cobble stone infrastructure.					
3	The previous/earlier land transfer modalities applied to Ethiopian urban center changed by the current lease law, this transfer modality change brought the desired improvement					
4	There are slow provision of infrastructure and poor land information systems					
5	The land lease price is stable as highly appreciated by urban and land development management policy document					

6	land related regulations and guidelines are clear and harmonized to make the policy implementation efficient on cobble stone infrastructure					
7	The urban land policy gives land requesters current information regarding cobblestone infrastructure.					
9	The problem of cobblestone infrastructure is the subject of a planned community consultation meeting on urban land policy.					
10	The city administration implements policies to improve paving stone infrastructure.					
11	That urban dwellers are satisfied in urban land policy related cobble stone infrastructure performance					

B. Effective implementation of urban land policy in cobble stone infrastructure

For the following the Effective implementation of urban land policy in cobble stone infrastructure questionnaires, your response expected to be the extent of your scale: 1=strongly agree, 2= Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree for the questions. Therefore, please give your answer by putting “√” mark on the table or given space.

No	Variables How responsive is urban land implementation	strongly disagree	disagree	Neutral	Agree	Strongly Agree
1	The city government is in a position to offer investors and developers of infrastructure serviced land.					
2	The various operational procedures in the land office are well-coordinated by law and regulation.					
3	There are issues with the development of cobblestone infrastructure in communities under urban policy.					
4	There is a land supply system of the lease that is available to all income groups of the population, according to the results of the existing practical implementation of land-related revenue collection mechanisms, which are suitable on cobblestone infrastructure					

5	The preparation of the urban land use policy, regulations, and guidelines involved interaction with citizens.					
6	Clear and consistent land-related regulations and norms enable effective policy implementation.					
7	There are inadequate urban land policy information systems and delayed infrastructure development.					
8	are Poor urban land policy information systems and delayed infrastructure development					
9	are the underprivileged sections of society profited from the procedures to control cobblestone infrastructure's faults in terms of policy.					
10	In accordance with Proclamation No. 721/2011, the city administration, the leasing law helps to reduce land speculation.					
11	The law supports infrastructure for urban land In accordance with proclamation No. 857/2014, the local government					

"Thank you for your time and participation"