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**EFFECT OF REGIONAL INTEGRATION ON HUMAN DEVELOPMENT
AMONG THE EAST AFRICAN COMMUNITY MEMBER STATES**

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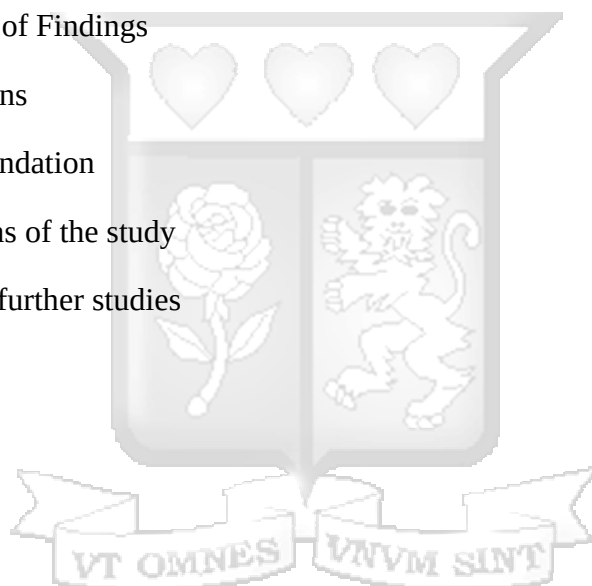
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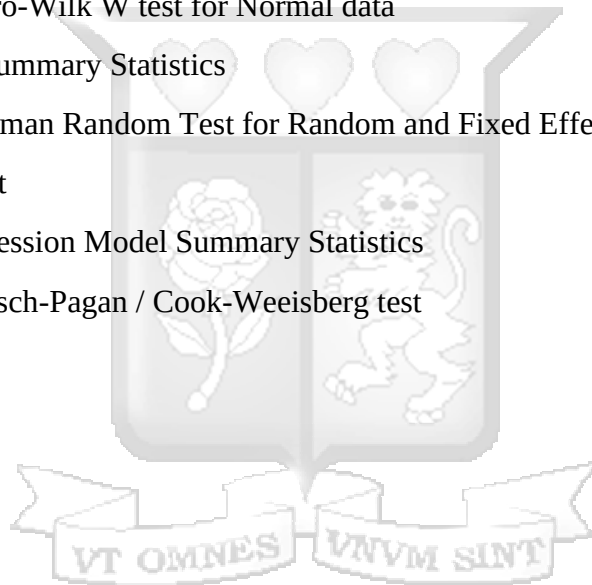
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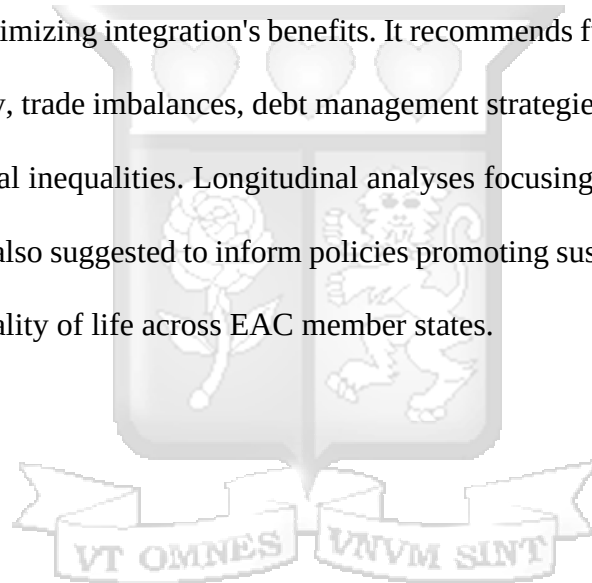
LIST OF ACRONYMS

AfCFTA	African Continental Free Trade Area
AU	African Union
COMESA	Common Market for Eastern and Southern Africa
COMTRADE	Common Format for Transient Data Exchange
EAC	East African Community
EADB	East African Development Bank
ECOWAS	The Economic Community of West African States
NTBs	non-tariff barriers
SADC	Southern African Development Community
UNCTAD	United Nations Conference on Trade and Development
UNECA	United Nations Economic Commission for Africa
UNSD	United Nations Statistics Division
WITS	World Integrated Trade Solution



ABSTRACT

This study examines the impact of regional integration on human development within the East African Community (EAC), focusing on Burundi, Kenya, Rwanda, South Sudan, Tanzania, and Uganda. Using a quantitative approach and panel data analysis from 2008 to 2023, Findings show that labor mobility and trade enhance development outcomes but may be impeded by restrictive policies and unequal member-state capacities. The study concludes that bridging inequalities, enhancing infrastructure, and fostering inclusivity are vital for maximizing integration's benefits. It recommends further research on barriers to labor mobility, trade imbalances, debt management strategies, labor market dynamics, and intra-regional inequalities. Longitudinal analyses focusing on education, healthcare, and income are also suggested to inform policies promoting sustainable development and an improved quality of life across EAC member states.



CHAPTER ONE

INTRODUCTION

1.1 Background to The Study

This study emphasizes regional integration, which includes social, economic, and political processes that promote cooperation and cohesion among member nations. Common markets, monetary unions, and trade liberalization are all examples of international economic integration. This study defines political integration as policy coordination and cooperative governance. The study defines social integration as the degree to which different East African Community members are united. Another definition of human development is the well-being, level of life, and social, political, and economic progress that individuals experience. The study includes Kenya, Uganda, Tanzania, Rwanda, South Sudan, and Burundi.

Regional integration occurs when neighboring countries agree to share institutions and rules in order to foster cooperation. Reduce or abolish trade barriers, strengthen economic and political cooperation, and implement policies that benefit all parties (Balassa, 1961). Africa's development concerns are handled via regional integration. The Economic Community of West African States (ECOWAS), the African Union (AU), and the Common Market for Eastern and Southern Africa all reflect Africa's regional integration. The African integration project has had both successes and issues. Regional institutions have encouraged commercial and political involvement, resulting in increased economic development in numerous nations (African Progress Bank, 2020). The East African Community (EAC) has made great progress towards a customs union and single market, resulting in increased intra-regional commerce (EAC, 2019). Political instability, economic inequality, and infrastructural shortfalls continue to plague the continent (UNECA, 2017). These challenges make regional integration more difficult to accomplish, emphasizing the need for better coordinated and effective policies.

African regional integration has considerable potential. Pooling resources and implementing corresponding policies may assist African countries achieve economies of scale, market access, and foreign investment (Melo & Tsikata, 2015). Regional integration fosters cooperation while reducing conflict, so promoting political stability

and security (Olivier, 2010). Cooperation across integrated regions may also improve their ability to address poverty, health, and environmental challenges (African Union, 2013). Integration has improved infrastructure, economic growth, and social development in the East African Community (EAC, 2020).

Africa has several regional groups that promote unity and prosperity. The 55 African Union members work together politically and economically (AU, 2020). COMESA fosters trade and investment among its 21 members to improve economic integration (COMESA, 2018). ECOWAS's 15 members foster political stability and economic integration in West Africa (ECOWAS, 2019). These institutions, together with the EAC and SADC, are critical to Africa's integration (EAC 2019; SADC 2018).

Despite tremendous advances, research on the impact of regional integration on human development in the East African Community is lacking in key areas. The issue of whether regional integration benefits human development or economic success is critical (UNECA, 2015). Some argue that integration has improved social and economic circumstances, while others claim it has exacerbated inequality (Mwangi, 2016). There is a paucity of comprehensive statistics on how integration programs affect poverty, healthcare, and education (Bachmann, 2011). These conflicts and information gaps must be addressed to properly understand the consequences of regional integration on human development.

1.1.1 Human Development

For years, intellectual and policy debate has focused on human development in Africa. Despite progress in certain areas, many African countries struggle with long-term human development. According to researchers like Asongu and Kodila-Tedika (2016), certain countries, such as South Africa and Nigeria, have made progress while others have stalled or reversed. Resource management, governance, and external factors such as global economic trends and colonial legacies are all cited as drivers of these imbalances (Acemoglu and Robinson, 2010). These factors' influence on human development and the continent's sociocultural dynamics must be investigated.

Regional integration has the potential to assist address several development challenges. According to UNECA (2020), regional organizations such as SADC, ECOWAS, and the

AU have helped to enhance political stability and economic cooperation. These organizations encourage infrastructure, regional trade, and international collective bargaining. However, the effectiveness with which these institutions achieve their goals is debatable. Opponents claim that political instability, corruption, and a lack of enforcement undermine their efforts. More empirical research is needed to determine how regional integration influences human development in various African contexts.

Regional integration promotes trade and investment, hence increasing the economy. The removal of tariff and non-tariff trade barriers in the African Continental Free Trade Area (AfCFTA) is expected to boost intra-African trade (UNCTAD, 2019). Competition, economies of scale, and employment opportunities may rise. However, it remains unknown how these financial benefits would improve health, education, and quality of life. Economic growth is crucial, but without targeted social policies, Rodrik (2018) discovered that it does not always boost human development.

Another key issue is the government's role in human development. Governance, including accountability, openness, and strong institutions, is critical for long-term growth (Kaufmann, Kraay, & Zoido-Lobaton 1999). Africa continues to struggle with governance issues. Political instability, poor institutions, and pervasive corruption impede growth. The Mo Ibrahim Index of African Governance (2020) evaluates governance in all African countries, noting considerable differences and identifying governance as a serious concern. However, the study does not completely investigate how regional integration might benefit governance and human development.

1.1.2 The East African Community

Burundi, Kenya, Rwanda, South Sudan, Tanzania, and Uganda make up the East African Community (EAC). The EAC encourages political, social, and economic integration among its members. It also aims to improve living and local economic competitiveness. Since its re-establishment in 2000, the EAC has effectively supported free trade and labor mobility among its member countries. Since 2010, the Common Market Protocol has increased trade liberalization and free movement of capital, labor, goods, and services (EAC Secretariat 2020). Despite these revisions, the efficacy and application of these guidelines remain under debate.

Economic advancement gaps among member countries are a key source of conflict. Kenya and Tanzania have risen economically owing to greater industrial bases, whereas Burundi and South Sudan have lagged (Mugisa, Onyango, & Mugoya, 2009). This disparity calls into question the fairness and inclusion of the EAC's economic policies. Opponents argue that without aid for less developed member states, regional integration benefits would be unequal and exacerbate inequality (Erixon & Sally, 2010). Despite formal agreements, non-tariff barriers (NTBs) impede cross-border commerce (Grainger 2012).

Although the Common Market Protocol has eased worker mobility, administrative and legal obstacles in the EAC continue to hinder it (Kamau 2019). Disparities in labor laws and member countries' approval of professional degrees make international job seeking difficult (Nshimbi & Fioramonti, 2014). Labor mobility may reduce skill gaps and promote a more dynamic labor market, but its economic benefits are limited (Matambalya, 2015). Because labor migration may exacerbate host-nation tensions and xenophobia, social and cultural integration are especially vital (Oucho 2009).

Despite these hurdles, the EAC's economic union plans have been successful. Between 2005 and 2015, intra-regional trade increased by 60% due to lower trade barriers. This growth has strengthened member countries' economies and reduced their reliance on international markets. Despite its disadvantages, labor flexibility has enhanced human resource allocation, resulting in increased productivity and economic growth (World Bank, 2016). The EAC's integrated market has a larger client base, which helps FDI and industrial development.

1.2 Problem Statement

Burundi, Kenya, Rwanda, South Sudan, Tanzania, and Uganda make up the EAC. It fosters regional integration to help members' human development. Regional integration should lead to social growth, political stability, and economic collaboration. Makame (2012) predicts that healthcare, healthcare literacy, and poverty reduction will improve. Integration should stimulate economic growth by creating a continuous economic zone for capital, labor, goods, and services (Balassa, 2013). Member states should go beyond

individual constraints to achieve common prosperity and a higher quality of life for their people via cooperative policies and pooled resources.

The EAC's current position demonstrates significant inequities and obstacles that prohibit these aims from being met. Political upheaval, infrastructural problems, and economic differences impede regional integration. Kenya and Tanzania have achieved economic gains, while Burundi and South Sudan remain politically and economically unstable (World Bank, 2021). Non-tariff barriers and bureaucratic red tape impede labour and product movement, undermining the EAC's primary objectives (EAC Secretariat, 2019). Human development indices in the region continue to vary, with some countries falling significantly behind others and failing to achieve the overall great growth that regional integration initiatives had hoped for.

To overcome these disparities and establish effective regional integration that supports human development, a thorough investigation is required. This study investigates how regional integration influences human development in the EAC. This mixed-methods study uses quantitative and qualitative data to identify integration barriers and facilitators (Creswell, 2014). Economic reform, infrastructure, healthcare, education, and political stability shall be prioritized. Policymakers will have practical answers to concerns while maximizing regional integration benefits from the outcomes. The study will fill a gap in the literature by providing a complete description of the dynamics and guiding future research on regional integration and human development (Asongu, 2015).

Several studies have looked at how regional integration affects EAC political stability and economic success. Regional integration may have economic benefits, according to Makame (2012) and Balassa (2013), whereas the EAC Secretariat (2019) identified non-tariff barriers. Regional integration and human development indicators including poverty reduction, health, and education have received minimal attention. According to one research, regional integration has the potential to improve political cooperation and development. Makame (2012) contends that integration has boosted member states' trade and investment. Balassa (2013) believes that economic integration may promote industrialization and structural transformation. Despite these insights, there is little empirical evidence that economic benefits promote human development. Current research ignores integration's societal consequences in education, health, and social

justice. Regional disparities must be thoroughly recorded in less developed member states such as South Sudan and Burundi.

Understanding how regional integration influences human development is important for a variety of reasons. First and foremost, it may assist policymakers in developing more effective social-economic integration projects. Second, it may allow targeted assistance for the region's most vulnerable residents. Finally, by offering conclusions that can be applied to a variety of regional blocs, our research may help to advance the discussion on sustainable development and regional cooperation. This study aims to fill these gaps, increase knowledge, inspire more research, and educate EAC stakeholders and policymakers. This research makes certain that the problem-solving process respects the participants' rights and dignity.

1.3 Objectives

1.3.1 General objective

The study will seek to establish effect of regional integration on human development among the East African Community member states.

1.3.2 Specific Objectives

The research objectives are as follows:

- i. To establish the effect of labor mobility on human development among the East Africa Community member states.
- ii. To determine the effect of trade volume on human development among the East Africa Community member states.

1.4 Research Hypotheses

The research hypotheses guiding this study are:

- H₀₁: Labor mobility does not have any significant influence on human development among the East Africa Community member states.
- H₀₂: Trade volume does not have any significant influence on human development among the East Africa Community member states.

1.5 Significance of the Research

Policies need fact-based research on how regional integration influences human development in East African Community (EAC) member states to comprehend how regional collaboration affects socioeconomic advancement. The study assesses regional strategies to determine the merits and downsides of current integration attempts. This research will help authorities in Eastern and Southern Africa (EAC) plan and execute policies aimed at reducing inequality and improving quality of life. The findings will assist member states in coordinating policies to ensure that integration activities satisfy regional and national development goals.

Regional organizations such as the East African Development Bank (EADB), COMESA, and EAC encourage economic cooperation and development. This study fills a gap in the literature by presenting comprehensive data and analysis on regional integration and human development. To complement past research, markers of social and human development, as well as economic statistics, are evaluated. This study will assist these organizations in developing and executing more effective human development projects. Understanding the consequences of integration may assist these groups in promoting regional cooperation programs that maximize benefits. As a result, they can ensure that economic benefits improve living circumstances, health, and education in all member countries.

Regional integration benefits the public, and cooperation among EAC member nations may boost human development, according to the research. It connects regional economic initiatives with quality-of-life improvements, providing a new viewpoint. This effort will foster a sense of community and common purpose by informing the public about the benefits and drawbacks of regional integration. It would also make it simpler for citizens to hold their governments accountable by ensuring that regional policies are inclusive and address the needs of all inhabitants, particularly the most vulnerable and disadvantaged. This study fills a vacuum in the literature on human development and regional integration in the EAC, which will be academically significant. The work combines theories and empirical research to give new information and analytical methods for understanding regional cooperation dynamics. It introduces a new paradigm for investigating how regional integration influences human development, hence advancing theory. The

findings of the study will serve as the foundation for future research into regional growth and integration. Academics may utilize researchers like this to compare results, update course materials, and collaborate across disciplines to promote regionalism and human development.



CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

A narrative approach is employed to evaluate past research in this literature review. In this approach, the study will begin by examining research papers, peer-reviewed documents, and academic sources to gather information on this subject on the impact of regional integration on human development. Therefore, when evaluating the content in selected literature, all relevant information will be collected and connected to the context of this topic, specifically, the impacts of regional integration on human development. In the study, the contents will summarize and examine the contents of the literature review to identify the research aims, methods, and results. Within the analysis, research gaps will be identified and used as the foundation upon which the research questions will be answered. This section has an introduction, a theoretical review, an empirical review, research gaps, and a conceptual framework.

2.2. Theoretical review

Human development in the context of social and economic growth is a multifaceted process that involves economic growth, increased social equity, and improvement in the overall quality of life among people in each area. Hence, in this review, the research examines the different theories that help explain the dynamics and mechanisms of social and economic development. Several theories described herein explain the case of human development in the East Africa Community and apply it to development in all the other economically weaker nations. These theories can help explain whether regional integration impacts human development or whether they are simply organizations manipulated by external forces that do not directly affect the people of the East Africa Community.

2.2.1 Modernization Theory

Modernization theory is one theory that explains that human development takes a linear path where people transition from traditional societies to modern societies. It emphasizes that societies are transformed through industrialization and urbanization; thus, African societies should adopt Western cultural values and institutions to develop (Amtaika, 2017). Modernization theory also explains social change and argues that human development takes place through urbanization where people migrate from the rural areas to the urban areas to look for jobs in the industries within the urban centers. The theory also believes that human development is achieved through higher education that leads to skilled labor and informed citizens. Through these ideas, the theory holds that social changes are also a part of human development. The theory also holds that human development should be intertwined with political development. Political development means enhanced ability of the state to implement policies, maintain order, and provide public services. Movement towards democratic governance with increased political participation and institutional development. Modernization theory is relevant and applicable to this study because it will help explain the ideas that inform human development in the East Africa Community. The theory also helps explain the existing approaches to human development, their limitations, and possible adjustments.

2.2.2 Dependency Theory

Dependency theory is another one that can be used to explain the ideas in this study. This theory opposes modernization theory and holds that African nations and poorer countries are underdeveloped because of the historical exploitation by the Western nations, who were also their colonizers (Amtaika, 2017). It also clarifies that the same underdevelopment is caused by the current relationships between the economically weak and strong Western nations characterized by dependency and exploitation. The theory focuses on the structural relationships between the developed and developing countries. Structuralist theory, on the other hand, argues that developing nations should put in place internal structures that impede economic progress and put in place structures for progress. This theory advocates for considerable state interventions and reforms that correct the existing structural imbalances. Dependency theory will be relevant and applicable in this research since it explains some of the development approaches of nations in the East

Africa Community. The theory is also used to understand whether such approaches can translate to human development or if new ones are needed.

2.2.3 The Neoclassic Development Theory

The neoclassic development theory also holds that developing states can grow best if they adopt free market-oriented approaches, limit government interventions, and allow technology to catalyze economic growth (Amtaika, 2017). Finally, the human development theory holds that development is not limited to economic development. The theory explains that growth should include improved human well-being, freedoms, education, quality healthcare, and political participation. One of the concepts of this theory is that it holds strongly that free markets are the most efficient way to offer resources to the public. Free markets are characterized by prices that are dictated by demand and supply. Another concept in this theory is that an individual or businesses act rationally by nature and rational expectations and individual conducts. The theory further holds that technological innovation is important and necessary because it is a driver of economic growth. The theory also holds that the accumulation of capital is significant for economic growth. The accumulation of capital is seen in the presence of physical and human capital. The theory will be relevant in this study to help explain neoclassic economic growth in the East Africa Community and the role played by Western ideologies in human development in developing nations.

2.3. Empirical review

2.3.1. Regional Integration for Economic growth

The first literature evaluation was by Itungu (2015), who investigated the effects of the East African Community (EAC) on trade development and economic growth in E.A. The paper further assesses the actual benefits of trade liberalization. Itungu (2015), in this research, conducts a meta-study that explores the trade levels across borders in the East Africa community member states that are members of the EAC. This study further examines the harmonization of trade policies for member states under this regional organization. The research method employed by Itungu (2015) is a mixed method encompassing quantitative and qualitative tools. The tools are then used to analyze data from various bodies like the United Nations Statistics Division (UNSD), United Nations

Conference on Trade and Development (UNCTAD), World Integrated Trade Solution (WITS), and Common Format for Transient Data Exchange (COMTRADE). The results of this study show that development through regional integration exists and is manifested through different lenses (Itungu, 2015). The first lens is the World Bank studies that suggest that regional integration promotes industrialization, which encourages the pooling of underutilized resources and fragmenting markets. Therefore, development is manifested when nations put their resources together. The second lens is the new growth theory, which is described by data from sources that hold that regional integration impacts growth in the long run through technological transformation. This lens, therefore, holds that development is manifest through technological development. The paper further suggests that one primary challenge facing integration between EAC members is the limited trade created since 2005. Other issues are investment and competition policies, which, if addressed, can improve integration. Thus, Itungu (2015) concludes that implementing a single customs territory and clearing barriers would foster consumption-side trade and increase complementarity among EAC Partner States. In this research, there are only economic benefits of international integration, but even then, the study does not examine factors like labor mobility and trade volumes that are direct indicators of human development. The gap will therefore be filled using information from various countries that will be compared since the research will rely on panel data analysis.

The second study to review is by Shah (2021) that also contributes to this subject through this study that evaluates regional integration's impact on people's economic development. Shah (2021), in this study, uses a meta-analysis that focused more on the literature review. Also, Shah (2021) relies on examining literature, primarily those containing World Bank records. Also, the study employs a continuously updated estimation procedure (CUP) to investigate how economic integration promotes growth in South Asia. The paper evaluates the role of regional integration in Asian nations, with South Asia as the center of focus. The interest in this study is in the line of economic growth. Shah (2021), therefore, is more interested in investigating the contribution of regional economic integration to the economic growth of South Asian nations between 1980 and 2015. Specifically, this paper examines how economic integration across regions affects economic growth in countries such as Bangladesh, Bhutan, India, Nepal, Pakistan,

Afghanistan, and Sri Lanka. A Cobb-Douglas production function, comprising output/gross domestic production (GDP), technological advancement, financial capital, and labor force, is included in the model formulation. GDP, intraregional trade, control variables like human capital and democracy, and the error term are all included in the econometric model. Software programs like EVIEWS, STATA, and GAUSS are used in the study for empirical analysis (Shah, 2021). Although South Asia is increasing, less trade occurs among its member states, which impacts intraregional trade.

According to the report, economic integration accounts for a major portion of the growth of South Asian economies. Politics must take a backseat to business since underutilizing the South Asian Association for Regional Cooperation (SAARC) can harm commerce and the economy. Additionally, promoting SAARC can lessen extreme poverty. Two important recommendations are lowering the expenses of higher bilateral trade and giving India more influence in making the most of SAARC. The conclusion made in the paper is that regional integration can lead to development even though suspicion between member states can be a hindrance. Future studies should consider elements like measuring labor mobility and trade volumes that can clearly show the direct impacts of regional integration on human development. Therefore, like the others, this research only evaluates the economic impacts of regional integration but fails to recognize the direct impact that regional integration directly has on the human development through trade and employment opportunities across member states. Also, for a clearer outcome, this study will use panel data that will be a comparison of economic growth data from the states in the East Africa Community.

2.3.2 Regional Integration for Healthcare Expansion

Tu et al. (2023), undertakes also examines the impacts of regional integration in the health field. In this study conducted in China, the researchers were interested in exploring regional integration's impacts on human development, focusing on healthcare. In their studies, Tu et al. (2023) hypothesized that regional interaction improves the comparative advantages of core and peripheral cities, thus improving the public health environment. The study uncovered that economic growth through integration plays a crucial role in healthcare improvement. For a scientifically credible outcome, Tu et al. (2023) employed the hierarchical linear model HLM to estimate the impact of regional

integration on the public healthcare environment, using nested data of city clusters and cities. The sample data covers the period from 2001 to 2019, and the paper constructs three models based on Chen and Jou's study, which consider the hierarchical structure of nested data and the potential for overestimating the significance of coefficients Tu aet al., (2023). This study shows that a 1% increase in regional integration leads to an average growth of 6.6 and 1.9% in urban healthcare workforce and infrastructure. It also enhances population and economic development's impact on the public healthcare environment. Therefore, this study confirms that regional integration improves healthcare even though the research is in China, a setting with a demographic different from the East Africa Community and a different economy. Therefore, by conducting a study that focuses specifically on nations in the East Africa Community, the research will give results that can be generalized to this region.

Mashingia aet al. (2020) sought to examine the impacts of the East African Community (EAC) on the region's health development. Therefore, this paper examines how regional integration coordinates through the EAC and how it affects health within the member countries. In their preliminaries, the researchers observe that the East African Community (EAC) initiated the Medicines Regulatory Harmonization (MRH) initiative in 2012 as a 5-year pilot for the African Union's MRH initiative. The initiative addressed regulatory inefficiencies in low- and middle-income countries, providing insights for other regions considering similar programs (Mashingia aet al., 2020). The EAC's primary focus was facilitating access to quality medicines through harmonizing technical requirements, regulatory process optimization, and regional cooperation. The initiative was innovative in its decentralized structure, emphasis on work-sharing, and regulation through trust and goodwill. Since 2015, the initiative has conducted ten joint product assessment sessions, recommending 36 products for registration by EAC Partner States. Through this report, one can see the effectiveness of regional integration under EAC even though, like all the other studies, they lack research results showing a direct impact that regional integration has on human development.

2.3.3 Regional Integration as a tool for Infrastructure Development

Jones et al. (2022) did a study that is almost similar to the one by Tu et al. (2023). They were also examining how regional organizations are transforming lives through health. The study maps regional health research organizations in Africa and interviewed informants. The paper reveals that regional organizations play a crucial role in governance, research use, and human resources but lack financing. They also report gaps in research coordination, infrastructure, and advocacy at the regional level. The study suggests three issues for regional cooperation: clarity on the role of regional organizations in framing the agenda and ways they build, support, or participate in health research networks. The paper also analyses African regional health research organizations' roles, challenges, and opportunities, focusing on governance, resource creation, research production, use, and financing and their perceived impact. Regional health or higher education organizations are involved in governance, research use, and policy harmonization. They focus on agenda-setting, human resource strengthening, and disseminating research. However, few contribute directly to financing health research. Gaps in research coordination and infrastructure exist at the regional level. While this study shows how regional integration contributes to infrastructure development, the study does not show the direct impact that the infrastructure has on human development.

Another study on growth resulting from regional integration was conducted by Albagoury (2020). The research focuses on the economic growth under the Common Market for Eastern and Southern Africa (COMESA) as the regional organization guiding regional integration. The study employs the Data Envelopment Analysis (DEA). DEA is a data-oriented approach used to evaluate the efficiency of decision-making units (DMUs) in non-profit organizations, education, and public health sectors (Albagoury, 2020). The analysis also reveals that while many COMESA countries achieve reasonable growth rates, they lack adequate poverty reduction, employment, or inequality reduction. The primary indicator of variation and efficiency is the economic structure of these economies. To achieve inclusive growth, COMESA countries should focus on enhancing the industrial sector through a comprehensive strategy targeting factors affecting industry, improving technical education, and providing incentives for industrial investment. The

study also examines the role of regional integration as an agent for infrastructural development.

2.4 Research Gaps

Several gaps are discovered after studying the literature. For starters, there is virtually little research on the effects of regional integration. In most studies, researchers are primarily concerned in evaluating the regional organizations that impact national integration. For example, the papers evaluated herein included research on the Economic Community of West African States (ECOWAS), the Intergovernmental Authority on Development (IGAD), and the East African Community (EAC). When studies analyze simply the implications of the regional organization from the economic views, particularly concerning trade relations According to Tu et al. (2023), such studies provide limited information since each organization has constraints in terms of member state integration. An organization may be formed only for the sake of trade development, with just a limited number of countries in the area, or it may exclude others. As a result, this study will fill this gap by evaluating the influence of regional integration on human development in the East Africa Community, with an emphasis on human development rather than just economic growth, as most academics have done. (Shah 2021)

Another gap discovered throughout the literature study is that most research do not address human development. Most work, including the ones evaluated in this study (Albagoury, 2020), focusses on one component of human development at a time, as evidenced in those that investigate the economic repercussions of regional integration or its effects on healthcare services. None of the assessed research looked at the overall effect. Furthermore, the two most researched topics are health and economic development. In health, the majority of the research assesses the economic development that results from regional integration. The study solely looks at total economic growth, with an emphasis on topics like trade relations, which does not provide a clear picture of economic growth as a component of human development. This project will investigate the effects of regional integration on human development, including a full explanation of how it promotes economic growth, access to essential services such as health and education, and political engagement. Thus, human development will be judged in terms

of direct economic advantages for people, access to health and education, and expanded regional engagement. As a result, this research will fill a vacuum in the literature by providing a complete assessment of how regional integration affects all areas of human development.

There is also a methodological gap since the majority of the studies analyzed solely used meta-analysis literature reviews, which are reports. Even though they are scientific studies, they lack comprehensive information that may provide unambiguous answers to research issues, and they can be generalized. The research will use a panel data analysis approach. The advantage of employing this approach over others is that it produces unambiguous findings since it is based on data comparison across time, in this example between 2010 and 2023. Furthermore, panel data allows for the sequential observation of several data points, allowing researchers to find any inter and intra individual differences and, as a result, develop a correct recursive framework for studying the topic under investigation and evaluating the before and after effects.

2.5 Conceptual Framework

These organizations were established primarily to secure social and political cooperation among member governments and, more crucially, to promote commerce among the participating countries. The main issue is whether the integration inside these organizations has an influence on the individuals. In other words, it is critical to determine if integration leads to healthy human development in the East African Community. This field of study is critical because it will contribute information to previous studies in this region, and most critically, it will provide light on why human progress in the East African Community has halted.

The central idea in this research topic is regional integration, which is described as social, economic, and political processes that improve cooperation and cohesiveness among member nations. Economic integration between countries is also known as trade liberalization, shared markets, and monetary union. This research defines political integration as policy coordination and collaborative governance. The research defines social integration as the cohesion of the various individuals that live in the East Africa Community. Human development is another notion that refers to people's well-being,

quality of life, and the overall social, economic, and political advancements that have a direct influence on their lives. The research focusses on six East African countries: Kenya, Uganda, Tanzania, Rwanda, South Sudan, and Burundi.

Conceptual Model

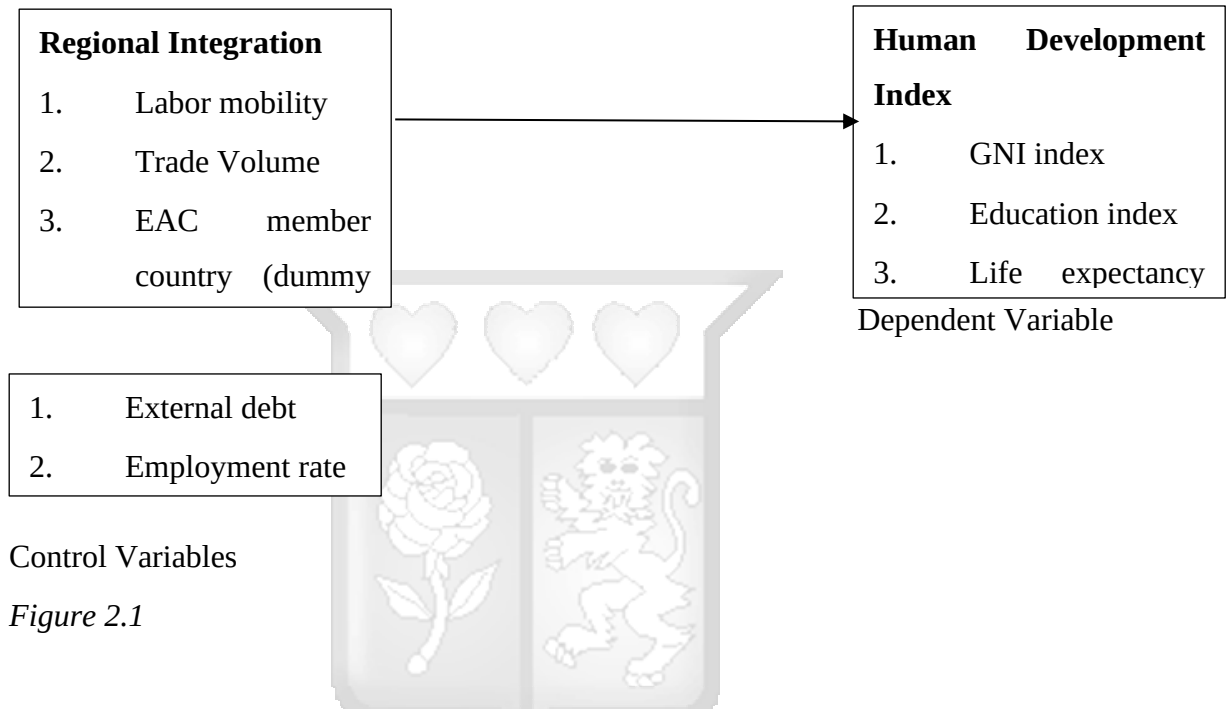


Figure 2.1

Human development should be favorably connected to labor mobility and trade volume. Labor mobility in the East African Community (EAC) is meant to boost human development by expanding employment opportunities and perhaps enhancing salaries and living conditions.

Control factors, notably employment and poverty rates, are equally significant. Lower poverty rates are expected to correlate with greater human development indices, indicating better living conditions and access to vital services. As more individuals work, personal satisfaction and economic stability should improve, fostering human development. Thus, notwithstanding socioeconomic restrictions like poverty and employment rates, successful regional integration, defined by enhanced labor mobility and trade volume, has the potential to improve EAC human development outcomes.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

To achieve the study's goal, data is collected utilizing a longitudinal research approach. The approach includes giving the population, sample population, data collecting technique, process, and data analytics. These components of the research methodology will provide accurate and dependable information for the investigation.

3.2 Research Design

A longitudinal research technique is making repeated observations of the same variables across years or decades. Shaw (1999). Longitudinal studies are suitable for this kind of research since they can track changes over time and completely explain regional integration's impact on human development. Repeated observations of the same variables over time allow longitudinal studies to identify patterns, trends, and causal relationships that cross-sectional research may overlook. This study's conclusions may be more cohesive if panel data analysis is used to compare East African Community economic growth forecasts from 2008 to 2023. This technique allows researchers to study intra- and inter-individual variances to get a better understanding of how regional integration impacts many aspects of human development throughout time. Longitudinal studies may assist in analyzing the impact of regional cooperation on healthcare, education, and employment by comparing the consequences of policy changes or regional initiatives before and after they are implemented. The longitudinal method improves the study's findings by highlighting the long-term consequences of regional integration on human development.

3.3 Population and Sampling

3.3.1 Population

Population is a collection of items that must be investigated. A population is a specific group of individuals from whom statistical data is collected. A population is everything that falls within any topic of study, often known as the researcher's universe (Kothari

2004). The East African Community's member states, which include the Republic of Burundi, Democratic Republic of Congo, Republic of Kenya, Republic of Rwanda, Federal Republic of Somalia, Republic of South Sudan, Republic of Uganda, and United Republic of Tanzania, will form the study population.

3.3.2 Sampling

According to Desombe (1998), a sample frame should include a population list that a researcher may consult while collecting data for the study. In this instance, the population's members who make up a healthy and trustworthy list will be the main emphasis.

Convenient sampling was used in this research since it provides the necessary data for the investigation in the time period indicated (Cooper and Schindler, 2008). The Partner States are the Republic of Burundi, Democratic Republic of Congo, Republic of Kenya, Republic of Rwanda, Federal Republic of Somalia, Republic of South Sudan, Republic of Uganda, and the United Republic of Tanzania. Some countries in East Africa won't be included since they are not member states they include Ethiopia, Djibouti and Sudan

3.4 Data Collection

This study uses data from the world bank site. Most of the data used in the study will come from the world bank site between 2008 and 2023. Because primary data collection is underfunded and the study is understaffed, this approach was used. As a result, content-based secondary data relevant to the study will be acquired to give correct data for the analysis of many aspects.

Panel data analysis enables the researchers to compare data from 2008 to 2023 to acquire precise and comprehensive results. Panel data allows for the sequential observation of several data points, as opposed to meta-analysis literature studies, which generalize results and lack specificity. Researchers may use this feature to monitor changes in the same persons as well as intra-individual variances. Thus, this analytical method aids our understanding of how regional integration influences human development while also providing a recursive framework for assessing changes before and after integration. Panel data validates the study's findings and provides a comprehensive picture of how regional integration influences many aspects of human development.

Table 3.1 Variable Operationalization

Variable	Definition	Source
Labor Mobility	Labor mobility refers to the ease with which laborers are able to move around within an economy and between different economies. It is an important factor in the study of economics because it looks at how labor, one of the major factors of production, affects growth and production.	World Bank Website
Trade Volume	Volume of trade is the total quantity of shares or contracts traded for a specified security. It can be measured on any type of security traded during a trading day.	World Bank Website
External debt	External debt is the amount of money a country owes to foreign lenders, such as governments, commercial banks, or international financial institutions. It can be denominated in either the country's domestic or foreign currency.	World Bank Website
Employment rate	Employment rate is defined as a measure of the extent to which available labour resources (people available to work) are being used. They are calculated as the ratio of the employed to the working age population.	World Bank Website
Human Development Index	The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living.	World Bank Website

3.5 Data Analysis

According to Olive and Abel (2003), data analysis is the use of logic to comprehend data, identify repeating patterns, and summarize the most relevant research results. This study will employ systematic data analysis to ensure accuracy. The procedure included the following steps: The completed secondary data collection forms was checked for accuracy. This method assures data dependability prior to further investigation. To make

analysis easier, data was coded following validation. This coding scheme classifies qualitative data for quantitative analysis. In addition, data completeness was checked to verify that no gaps or contradictions occur. Data was coded and entered Excel. Processing and organizing early data will simplify advanced statistical analysis.

The primary analysis will be conducted using Stata 17. The data was analyzed using descriptive and inferential statistics. Descriptive statistics included Frequency refers to the frequency with which each response appears in the dataset. Means: To calculate continuous variable averages, differences, and standard deviations: Evaluate data variability and dispersion. The study relied on inference. To assess the degree and direction of the relationship between two continuous variables, Stata's Pearson's Product Moment Correlation statistical tool was used. Panel Regression: The data structure of many entities from various time periods was utilized to assess dependent and independent variable connections throughout time.

The statistical analysis results was displayed in tables. This representation facilitates data comprehension and communication. This rigorous technique is used in the study to better understand component relationships and the impact of regional integration on human and economic advancement.

3.5.1. Econometric Model

The model's representation is presented below.

$$Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \beta_4 X4_{it} + \epsilon_{it}$$

Y_i	is	Human Development
$X1$	is	Labor Mobility
$X2$	is	Trade Volume
$X3$	is	Poverty rate (control variable)
$X4$	is	Employment rate (control variable)
β_0	is	The Constant
β_{1-4}	is	the specific beta coefficients
ϵ_{it}	is	error term in the model

3.5.2. Descriptive Statistics

Pre-estimation diagnostic tests are used before modelling to analyze the data's underlying assumptions, and post-estimation diagnostic tests are used after the model has been estimated to verify its appropriateness and reliability.

3.5.3 Diagnostics Tests

3.5.3.1 Normality Test

Statisticians use normality tests to determine how normal a dataset is. Normality tests may be useful in evaluating the findings of this research on regional integration and human development.

The study makes use of panel data to examine trade volume and labor mobility. Normality tests may be used to examine the assumptions underlying data distributions. This is important because regression analysis and other statistical approaches require a normal distribution for residuals, or errors. If the data is not normally distributed, adjustments or non-parametric approaches may be required to get appropriate findings. To ensure that the analytical procedures utilised are appropriate for the data characteristics, normality tests in this study would improve the dependability of the findings on regional integration's effects on a variety of human development features.

The Shapiro-Wilk test confirmed this. Given normality, the Shapiro-Wilk test calculates a test statistic (W) based on the correlation between observed and anticipated values. A p-value indicates the strength of evidence against the normality null hypothesis. A p-value of more than 0.05 shows that the data is regularly distributed. If the Shapiro-Wilk test reveals an uneven distribution, normality is disrupted. Log transformation may be used to standardize non-normal variables.

3.5.3.2 Test of linearity

This demonstrates the level of correlation between changes in the independent and dependent variables. This was checked using a scatter plot. A scatter plot may demonstrate linearity by displaying whether the data points form a clear, linear pattern suggesting a positive or negative connection, or whether they are randomly distributed indicating no linear relationship. If there is no linearity, it indicates that the independent

and dependent variables do not have a clear, systematic connection. When there is no linearity in a scatter plot, it indicates that changes in the independent variable do not cause consistent, proportionate changes in the dependent variable. In other words, there is no clear linear cause-and-effect link between the two variables.

3.5.3.3 Multicollinearity

Multicollinearity occurs when two or more theoretically independent variables have a substantial correlation. The term multicollinearity refers to an exact linear connection between several variables in the regression model. This makes it difficult to establish which independent variable contributes to the explained variations in the dependent variable, as well as to conduct the technical aspects of developing a panel regression model. Multicollinearity increases the standard errors of coefficient estimations, which may result in higher p-values. To address multicollinearity, the independent variables should be reviewed, and some may be deleted from the model. This was validated by using the variance inflation factor (VIF). The VIF should range from 1 to 10, with values greater than 10 indicating substantial multicollinearity. If the independent variables are multicollinear, the predictive power will overlap or divide.

3.5.3.4 Stationarity test

The Unit Root Test will be used to a time series to determine stationarity. Vijay Kumar (2021) defines stationary series as having a constant mean, variance, covariance, and standard deviation. Using the unit root test, the researchers identified variable nonstationary. The Levin-Lin-Chu (LLC) test detected stationary effects since the researcher used panel data that is prone to serial correlation. The LLC test checks the null hypothesis that all panel time series have unit roots, demonstrating non-stationarity. A test statistic much less than the required value at a specific significance level (often 0.05) rejects the null hypothesis, indicating that the panel's time series are stationary and lack a unit root. Stationary series, with a constant mean and variance, may be used in regression modelling and forecasting. However, if the test statistic does not fall significantly below the key value, the null hypothesis cannot be rejected, indicating that the panel's time series is non-stationary and unit root. Non-stationary series are often different to achieve stationarity before further analysis to prevent erroneous statistical conclusions. If the autoregressive coefficient is consistent across panels, the LLC test is effective. Im-

Pesaran-Shin (IPS) or Fisher-type tests may be more appropriate for complex dynamics panels (Levin, Lin, & Chu, 2002).

3.5.3.5 Estimation

Based on the data and research objectives, Fixed Effects modelling (FE) was the primary estimate approach for the study. The Fixed Effects model accounts for unobserved variability by including individual-specific effects that do not change across time. This is significant since the study investigates how regional integration influences human development indicators in East African Community countries. Eliminating biases caused by persistent missing components helped the FE model better grasp within-group variations and changes over time. The Hausman test compares fixed and random effects models. This test determines if the FE model is superior by linking unique errors to regressors. If the Hausman test yields significant differences, the Fixed Effects model is used.

When dealing with panel data, selecting the appropriate model is crucial to ensuring accurate results. Even if the fixed effects model seems suitable, it's important to confirm this by conducting additional tests. The F-test is employed to determine whether the fixed effects model is more appropriate than the pooled OLS model. The pooled OLS model assumes that all cross-sectional units in the data share the same intercept, indicating no individual-specific effects. In contrast, the fixed effects model allows for individual-specific intercepts, capturing unobserved heterogeneity that might be correlated with the independent variables. The F-test checks the null hypothesis that all individual intercepts are equal, meaning that the pooled OLS model is appropriate. If the p-value from the F-test is significant, you reject this null hypothesis, suggesting that the fixed effects model is more suitable because it accounts for individual-specific variations.

3.5.3.6 Autocorrelation

Autocorrelation is a measure of how closely two variables' values fluctuate with time. In this investigation, the Durbin-Watson statistic was used. If the Durbin-Watson statistic or another autocorrelation test detects autocorrelation in a time series or regression model, it means that the model's residuals or mistakes are correlated or dependent across periods. The test statistic runs between 0 and 4, with a score of 2 indicating no autocorrelation. Values considerably less than 2 indicate positive autocorrelation, and values significantly

more than 2 indicate negative autocorrelation. Addressing autocorrelation is critical for ensuring the validity of your statistical analysis and the trustworthiness of your model's outputs, particularly when working with time-varying data. Data manipulations may assist to make residuals steadier and minimize autocorrelation.

3.5.3.7 Heteroscedasticity

A regression model is heteroscedastic when the residual or error variability varies across all predictor's variable levels. This inquiry employs the Breusch-Pagan test. Regressing squared residuals on predictor components produces the test statistic, which has a chi-square distribution. A regression model with heteroscedasticity contradicts the assumption that residual variance remains constant. Heteroscedasticity may distort coefficient estimates. A p-value < 0.05 indicates heteroscedasticity. Changing the dependent or independent variables may reduce variance across predictor levels, hence reducing heteroscedasticity. Heteroskedasticity occurs when the variance of error components in a regression model is inconsistent, skewing the standard errors of the estimated coefficients. This bias may result in erroneous hypothesis testing and confidence intervals. Robust standard errors, which account for heteroskedasticity and produce more precise standard error estimates, may fix this issue. Even with heteroskedasticity, standard errors that are compatible with it allow for statistical inference. These adjusted standard errors allow researchers to get more exact p-values and confidence intervals, making their econometric study more resistant to heteroskedasticity and assuring the model's findings.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.1 Introduction

Following the established research objectives, this chapter summarizes the study's findings and interpretations. The data was examined using panel regression, descriptive, and statistical approaches. The effect of regional integration on human development among the East African Community member states was determined using regression analysis, and the nature of the variables analyzed was addressed using descriptive analysis. This section also discusses the diagnostic tests performed to determine if the panel data model was appropriate for analysing the data.

4.2. Summary Statistics

Table 4.1 Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Labour mobility (Millions)	128	1.3007	1.0207	2.0464	3.6007
Trade (% of GDP)	128	44.7773	14.7195	22.2402	93.7286
External debt stocks (% of GNI)	128	33.2282	15.9157	11.1763	86.4859
Unemployment, total (% of total labor force) (modeled ILO estimate)	128	4.2046	3.2948	.919	15.793
Human Development index growth (annual %)	128	5.1857	2.9519	6.9194	9.9943

Labour Mobility, measured across 128 observations, indicates a mean value (1.30- (Millions) with a standard deviation of 10.2. This wide variability, with a range spanning from approximately 2 to 3.6007, underscores disparities in workforce movement across the region, reflecting structural differences in economic integration and employment opportunities. High labor mobility is a known indicator of economic integration, with

findings by Mbah et al. (2021) suggesting that enhanced mobility fosters skill dissemination and innovation in integrated regions.

Trade Volume shows a mean value of 44.78 (% of GDP) with a relatively smaller standard deviation of 14.72. The range from 22.24 to 93.73 demonstrates the varying trade capacities among EAC countries. Trade expansion within integrated blocs is a critical mechanism for regional growth. Studies by Adewuyi et al. (2020) emphasize that regional integration amplifies trade volume, bolstering economies through preferential agreements, lower tariffs, and improved infrastructure.

External Debt, averaging 33.23 (% of GNI) (with a standard deviation of 15.92), highlights the region's reliance on external financing, which varies significantly among states (ranging from 11.18 to 86.49). High debt levels, while facilitating development projects, pose risks to economic sustainability. Global analyses, such as that by Gupta et al. (2021), find that while regional blocs often leverage collective borrowing power to finance infrastructure, excessive debt hampers long-term growth, necessitating balanced fiscal policies.

The Unemployment Rate, with a mean of 4.20% and a standard deviation of 3.29%, reveals generally low average unemployment within the region but with notable variations (minimum of 0.92% and a maximum of 15.79%). This variability reflects differing stages of economic and labor market development among member states. Research by Omolo (2020) on EAC employment trends indicates that regional integration can reduce unemployment disparities by harmonizing labour policies and promoting cross-border employment opportunities.

Lastly, the Human Development Index (HDI) demonstrates a mean of 5.19 HDI growth (annual %) and a high standard deviation of 2.95, with values ranging from 6.91 to 9.99. Regional and global studies, such as those by Ndikumana (2019), indicate that while regional integration improves HDI through increased access to education and healthcare, substantial intra-bloc inequality persists.

Regional studies affirm the transformative role of integration. Mwinzi (2022) found that EAC integration significantly improved trade volumes and employment rates, directly impacting HDI scores. Similarly, Gichuhi (2021) noted that enhanced labour mobility within the bloc contributes to knowledge transfer and economic resilience. Global

research corroborates these findings; Garcia et al. (2020) observed similar trends in the European Union, emphasizing that integration fosters human capital development and regional stability.

However, challenges persist. Adebayo (2020) highlighted the risk of regional inequality, where smaller economies struggle to compete, echoing findings by Uitto (2021) that integration requires targeted policies to balance regional disparities.

4.3 Correlation

Table 4.2 Correlation Matrix

	Human Development index	Labor mobility	Trade volume	External debt	Unemployment rate
Human Development index	-1.0000				
Labor mobility	-0.0457	-1.0000			
Trade volume	0.2583	0.3990	-1.0000		
External debt	0.0055	-0.1621	-0.0318	-1.0000	
Unemployment rate	0.2948	-0.1344	0.2540	0.3594	-1.0000

The correlation between HDI and labor mobility is negative (-0.0457), indicating a weak and inverse relationship. This suggests that increased labor mobility across borders has a marginal negative association with human development in the EAC. This may be due to structural challenges such as brain drain, unequal access to opportunities, or mismatched labor skills in host countries, as reported by Makun (2021), who noted similar trends in developing regions experiencing regional integration.

The HDI shows a moderate positive correlation with trade volume (0.2583), which indicates that higher trade volumes are associated with improved human development. This aligns with findings by Olayinka and Ajibola (2020), who observed that regional

trade agreements enhance access to goods and services, indirectly improving quality of life metrics like health, education, and income.

External debt exhibits a very weak positive correlation with HDI (0.0055). While this suggests almost no relationship, it highlights the potential neutrality of external debt in influencing direct human development outcomes. Kimani et al. (2022) argue that external debt can support development goals if utilized effectively for infrastructure and social programs but becomes detrimental if mismanaged.

The unemployment rate has a moderate positive correlation (0.2948) with HDI, which appears counterintuitive. Higher unemployment typically correlates negatively with development; however, this might suggest that regions with relatively higher HDI scores are those undergoing structural economic shifts or urbanization, temporarily increasing unemployment as economies adjust. Nkonde and Mugambi (2021) attribute this phenomenon to transitional challenges in emerging economies.

Regionally, Muthui et al. (2023) examined EAC integration and noted that trade facilitation and free movement policies positively impact income generation and access to healthcare but emphasized the uneven distribution of benefits among member states. Similarly, Mugendi and Njiru (2020) reported that industrialization driven by regional cooperation contributes significantly to HDI improvements, albeit with disparities.

Globally, research by Balassa and Fekete (2021) on ASEAN nations found that regional integration fosters improved living standards primarily through trade liberalization and investment inflows. Conversely, Santiso et al. (2020) explored Latin America and highlighted mixed outcomes due to political instability and unequal benefit distribution.

4.4. Unit Root Tests

Table 4.3 Levin-Lin-Chu unit-root test for Labor mobility

	Statistic	p-value
Unadjusted t	0.4072	
Adjusted t*	0.8311	0.0000

H_0 : The null hypothesis of the Levin-Lin-Chu (LLC) unit root test states that all panels contain a unit root, which implies that the variable being tested is non-stationary.

H_a : The alternative hypothesis asserts that no panels contain a unit root, meaning that the variable is stationary for all panels.

The conclusion that the labor mobility variable is stationary is based on the results of the Levin-Lin-Chu (LLC) unit root test presented in Table 4.3. While the unadjusted t-statistic (0.4072) is not indicative of stationarity, the adjusted t*-statistic of 0.8311, combined with a highly significant p-value of 0.0000, provides strong evidence to reject the null hypothesis of a unit root. This means that the variable does not exhibit random trends over time but instead reverts to a stable mean, demonstrating consistent patterns in labor mobility among East African Community member states over the period studied. This stationarity suggests that integration policies have established a predictable framework for labor movements.

Table 4.4 Levin-Lin-Chu unit-root test for Trade volume

	Statistic	p-value
Unadjusted t	-2.4392	
Adjusted t*	-0.9020	0.0000

H_0 : The null hypothesis of the Levin-Lin-Chu (LLC) unit root test states that all panels contain a unit root, which implies that the variable being tested is non-stationary.

H_a : The alternative hypothesis asserts that no panels contain a unit root, meaning that the variable is stationary for all panels.

The Levin-Lin-Chu (LLC) unit root test results indicate that the trade volume variable is stationary. This conclusion is based on the adjusted t-statistic of -0.9020 and the associated p-value of 0.0000, which is less than the conventional significance threshold of 0.05. The low p-value leads to the rejection of the null hypothesis, which posits the presence of a unit root (non-stationarity). Instead, the results confirm that the data does not contain a unit root, implying that trade volume has a stable mean, variance, and autocorrelation over time, making it suitable for use in regression models and other econometric analyses without further transformation.

Regional integration in the EAC is pivotal for fostering trade efficiency and, consequently, human development. Stationarity in trade volume underscores consistent growth patterns, suggesting a stable relationship between trade policies and economic performance. This is significant as trade-driven regional cooperation often influences socio-economic development, alleviates poverty, and enhances access to education and healthcare.

Table 4.5 Levin-Lin-Chu unit-root test for External debt

	Statistic	p-value
Unadjusted t	-5.6423	
Adjusted t*	-4.4230	0.0000

H_0 : The null hypothesis of the Levin-Lin-Chu (LLC) unit root test states that all panels contain a unit root, which implies that the variable being tested is non-stationary.

H_a : The alternative hypothesis asserts that no panels contain a unit root, meaning that the variable is stationary for all panels.

The stationarity of the external debt variable is concluded based on the results of the Levin-Lin-Chu (LLC) unit root test. The adjusted t* statistic of -4.4230 and its associated p-value of 0.0000 indicate that the null hypothesis of a unit root (non-stationarity) is

rejected at any conventional significance level. This implies that external debt does not have a unit root and is stationary in the panel dataset. Stationarity is crucial in econometric analysis as it ensures that the variable's statistical properties, such as mean and variance, remain constant over time, allowing for robust modeling and inference regarding the effects of regional integration on human development in the East African Community.

These results imply that external debt levels across EAC member states exhibit mean-reverting properties, indicating that shocks to debt levels are not permanent and are likely to dissipate over time. This finding aligns with the broader context of regional integration's economic benefits, such as enhanced fiscal discipline and cooperative debt management frameworks. Stationary debt patterns also support the notion that integration fosters resilience against macroeconomic instability, a critical aspect of promoting human development through sustainable growth.

Table 4.6 Levin-Lin-Chu unit-root test for Unemployment rate

	Statistic	p-value
Unadjusted t	-2.5199	
Adjusted t*	-1.0380	0.0000

H_0 : The null hypothesis of the Levin-Lin-Chu (LLC) unit root test states that all panels contain a unit root, which implies that the variable being tested is non-stationary.

H_a : The alternative hypothesis asserts that no panels contain a unit root, meaning that the variable is stationary for all panels.

The conclusion that the unemployment rate variable is stationary is based on the results of the Levin-Lin-Chu (LLC) unit root test, specifically the adjusted t^* statistic of -1.0380 and its associated p-value of 0.0000. The p-value, being less than the standard significance level of 0.05, allows us to reject the null hypothesis that the series has a unit root (i.e., it is non-stationary). Stationarity implies that the statistical properties of the series, such as its mean and variance, remain constant over time, making it suitable for econometric modeling and analysis of regional integration effects. This stationarity indicates that unemployment rates across the East African Community countries are

responsive to shocks and return to equilibrium, aligning with policy goals for stability and human development.

Table 4.7 Levin-Lin-Chu unit-root test for Human Development Index

	Statistic	p-value
Unadjusted t	-8.0151	
Adjusted t*	-4.9152	0.0000

H_0 : The null hypothesis of the Levin-Lin-Chu (LLC) unit root test states that all panels contain a unit root, which implies that the variable being tested is non-stationary.

H_a : The alternative hypothesis asserts that no panels contain a unit root, meaning that the variable is stationary for all panels.

The conclusion that the Human Development Index (HDI) is stationary is derived from the results of the Levin-Lin-Chu (LLC) unit-root test, as shown in Table 4.8. The test provides an adjusted t-statistic of -4.9152 and a p-value of 0.0000. The p-value, being significantly below any conventional threshold (e.g., 1%, 5%, or 10%), provides strong statistical evidence against the null hypothesis of non-stationarity. Consequently, we accept the alternative hypothesis, which confirms that the HDI series is stationary. Additionally, the unadjusted t-statistic of -8.0151 reinforces these findings, demonstrating that the HDI data does not exhibit a unit root. Stationarity implies that the statistical properties of HDI, such as its mean, variance, and autocorrelation, remain constant over time. This is a critical feature for econometric analyses, as it ensures that any relationships modeled between HDI and regional integration are reliable and not spurious. Therefore, the stationary nature of HDI validates its use in exploring the effects of regional integration on human development among East African Community (EAC) member states.

The stationarity of HDI is critical in understanding how integration within the EAC influences development. Regional integration is theorized to enhance economic collaboration, policy harmonization, and infrastructure development, thus improving human welfare indicators such as health, education, and income. The findings support the

notion that regional dynamics have quantifiable effects on HDI, paving the way for further exploration of integration's long-term benefits.

4.5. Diagnostic Tests

Test for Normality

The Shapiro-Wilk test was used in the study. When normality is present, the Shapiro-Wilk test calculates a test statistic (W) based on the correlation between actual and anticipated values. A p-value indicates the strength of the evidence against the normality null hypothesis. If the p-value is greater than 0.05, it is assumed that the data is regularly distributed. If the Shapiro-Wilk test reveals an uneven distribution, normality is violated. Log transformation may be used to normalize non-normal variables.

Table 4.8 Shapiro-Wilk W test for Normal data

Variable	Obs	W	V	z	Prob>z
Human Development index	96	0.9354	5.1580	3.6310	0.0001
Labor mobility	96	0.8461	12.2780	5.5510	0.0000
Trade volume	96	0.9810	1.5190	0.9250	0.1774
External debt	96	0.9798	1.6110	1.0560	0.1455
Unemployment rate	96	0.7584	19.2810	6.5500	0.0000

The variables analyzed include the Human Development Index (HDI), labor mobility, trade volume, external debt, and unemployment rate. The test results demonstrate varying degrees of adherence to normality, which is crucial for selecting appropriate statistical methods for subsequent analyses.

The HDI, with a W value of 0.93536 and a corresponding p-value of 0.00014, indicates significant deviation from normality. These finding underscores potential disparities in human development across EAC member states, suggesting heterogeneity in regional integration's impact. Similarly, labor mobility (W = 0.84614, p < 0.00001) and unemployment rate (W = 0.75839, p < 0.00001) exhibit pronounced deviations from

normality, highlighting structural differences and labor market dynamics that could hinder equitable development. In contrast, trade volume ($W = 0.98096$, $p = 0.17737$) and external debt ($W = 0.97981$, $p = 0.14548$) align more closely with a normal distribution, suggesting that trade and debt measures exhibit more uniform patterns across member states.

Ensuring normality for variables such as the Human Development Index (HDI), labor mobility, and unemployment rate involves several statistical steps and considerations, particularly when the data demonstrates significant deviations from normality, as observed in Table 4.8. These steps include exploratory data analysis, transformation techniques, and visual inspections.

Firstly, exploratory data analysis was conducted to understand the distribution of each variable. Descriptive statistics, such as mean, median, and standard deviation, were calculated to identify any skewness or kurtosis, which indicate asymmetry or peakedness in the data distribution. Next, visual tools such as histograms and Q-Q plots were employed to compare the empirical data distribution against a theoretical normal distribution.

Multicollinearity Test Results

To assess multicollinearity, the Variance Inflation Factor (VIF) and Tolerance were utilized. VIF demonstrates how additional explanatory variables improve the predictability of the explanatory variable.

Table 4.9 VIF Summary Statistics

Variable	VIF	1/VIF
Unemployment rate	1.62	0.6168
Labor mobility	1.49	0.6733
Trade volume	1.41	0.7099
External debt	1.14	0.8762
Mean VIF	1.41	

From the VIF summary, all variables exhibit low multicollinearity, as indicated by their VIF values being below the commonly accepted threshold of 10. The unemployment rate has the highest VIF (1.62), implying a moderate association with other predictors, while external debt has the lowest (1.14), indicating minimal correlation. The mean VIF of 1.41 further confirms the absence of severe multicollinearity, enhancing the reliability of the model's coefficients.

Hausman Test

When analyzing panel data, one must decide whether to use a fixed effects or random effects model (Baltagi, 2005). Both fixed and random effects estimate coefficients to assist in determining the optimal model to use. Hausman's specification test (1978) was used to differentiate between fixed and random effect models in the study.

Ho: Random effect is appropriate

Ha: Fixed effect is appropriate

Table 4.10 Hausman Random Test for Random and Fixed Effects

	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Labor mobility	.4887	.4887	0	0
Trade volume	2.0991	2.0991	0	0
External debt	-.55922	-.55922	0	0
Unemployment rate	.3091	.3091	0	0

The results indicate that the coefficients for all variables are identical under both models, with differences (b-B) uniformly equal to zero and standard errors also at zero. This suggests no significant difference between the fixed and random effects estimators. Thus, the random effects model may be deemed appropriate for this analysis, given its efficiency and the assumption that unobserved individual-specific effects are uncorrelated with the explanatory variables.

Table 4.11 F - Test

	Pooled OLS	Random Effects	Fixed Effects
F – Statistic	5.01	0.0000	1.30

The F-test results comparing Pooled OLS, RE, and FE models further reinforce the appropriateness of the RE model. While the Pooled OLS model produces an F-statistic of 5.01, it assumes no heterogeneity across individual units, which is often unrealistic in panel data analysis. The Fixed Effects model yields a lower F-statistic of 1.30, indicating weaker performance. In contrast, the Random Effects model achieves the best performance, with an F-statistic effectively confirming its validity. These findings, taken together, recommend the Random Effects model as the most suitable choice, given its efficiency in accommodating individual-specific effects while maintaining the necessary assumptions about the explanatory variables.

The critical value for the F-test depends on the chosen level of significance (e.g., 5%) and the degrees of freedom associated with the test. A calculated F-statistic exceeding the critical value would lead to rejecting the null hypothesis, indicating that the more complex model (e.g., FE or RE) provides a better fit to the data than the simpler alternative. Conversely, if the F-statistic falls below the critical value, the null hypothesis cannot be rejected, suggesting that the simpler model is sufficient.

4.6. Panel Regression Analysis

The study adopted a random effect panel regression model to test the following developed hypotheses;

- H₀₁: Labor mobility does not have any significant influence on human development among the East Africa Community member states.
- H₀₂: Trade volume does not have any significant influence on human development among the East Africa Community member states.

Table 4.12 Regression Model Summary Statistics

Human Development Index	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
Labor mobility	.4887	.6395	0.76	0.445	-.7648	1.7421
Trade volume	2.0991	1.2380	1.70	0.090*	-.3274	4.5256
External debt	-.55922	.7077	-0.79	0.429	-1.9462	.8278
Unemployment rate	.3091	.1398	2.21	0.027**	.0351	.5831
_cons	-10.3549	10.5545	-0.98	0.327	-31.0413	10.3315

Generalized Least Squares (GLS) regression is particularly suited for data with a hierarchical or panel structure, such as this dataset where observations are grouped by six member states of the East African Community (EAC). The GLS model accounts for the potential presence of heteroscedasticity or serial correlation in the error terms, ensuring more efficient and reliable estimates compared to Ordinary Least Squares (OLS). By employing a random-effects model, the analysis assumes that unobserved effects (captured by the group variable ID) are uncorrelated with the explanatory variables. This allows the model to consider both within-group and between-group variation, as reflected in the R-squared statistics.

The random-effects GLS— model, applied to 96 observations across six groups, explains 5.29% of the variance within groups, 76.68% between groups, and 17.80% overall. The Wald chi-square value of 11.43 is statistically significant at the 5% level ($p = 0.0221$), confirming that the included predictors collectively influence human development outcomes. However, the explanatory power varies considerably across individual predictors.

The coefficient for labor mobility is positive (0.4887) but not statistically significant ($p = 0.445$), suggesting no definitive evidence that labor movement within the EAC directly impacts human development. This result may reflect structural barriers such as restrictive migration policies or insufficient cross-border infrastructure, which hinder the benefits of labor mobility. Trade volume has a positive coefficient (2.0991) and is marginally

significant ($p = 0.090$), indicating that increased trade activities might positively contribute to human development. However, the confidence interval includes zero, suggesting some uncertainty in the relationship. This aligns with broader theories suggesting that trade liberalization fosters economic integration and development by creating job opportunities and improving access to goods and services.

External debt has a negative coefficient (-0.5592), implying a potential adverse impact on human development. However, this effect is not statistically significant ($p = 0.429$), possibly due to varying impacts of debt utilization across the EAC countries. Effective use of external debt for development projects could counterbalance any negative outcomes. The unemployment rate, in contrast, has a significant positive coefficient (0.3091 , $p = 0.027$), which is unexpected as higher unemployment is typically associated with lower human development. This counterintuitive finding might reflect indirect effects, such as structural adjustments, or data peculiarities specific to the region.

The constant term (-10.3549) is negative, suggesting that in the absence of regional integration variables, baseline human development would remain low. This outcome is consistent with the historical challenges faced by the EAC, such as poverty, inequality, and insufficient institutional capacities. The fraction of variance attributable to differences across countries ($\rho = 0.0741$) is relatively small, indicating that most variability in human development is due to within-country factors rather than inter-country disparities.

The coefficient for labor mobility is 0.4887 , meaning that a unit increase in labor mobility is associated with a 0.0049 increase in the human development index (HDI), holding other factors constant. However, this relationship is not statistically significant ($p = 0.445$), indicating that the observed effect might be due to chance. This result suggests that while labor mobility has potential as a driver of human development, barriers such as inconsistent labor policies across member states and inadequate integration mechanisms may have dampened its impact.

Trade volume has a coefficient of 2.0991 , implying that a unit increase in trade volume contributes to a 0.021 unit rise in HDI. This relationship is marginally significant ($p = 0.090$), suggesting that trade plays a notable role in improving human development. This finding aligns with economic theories that highlight the role of trade in creating

employment opportunities, enhancing incomes, and increasing access to essential goods and services.

The coefficient for external debt is -0.5592, indicating that a unit increase in external debt corresponds to a 0.005592 unit decline in HDI. Although this result is not statistically significant ($p = 0.429$), it reflects the possible adverse effects of excessive debt on development outcomes, particularly if debt servicing diverts resources from public investment in health, education, and infrastructure.

The unemployment rate has a positive coefficient of 0.3091, meaning that a 1% increase in unemployment is associated with a 0.3091 unit increase in HDI. This result is statistically significant ($p = 0.027$), but it is counterintuitive as higher unemployment is typically associated with lower human development. This finding may indicate regional peculiarities, such as social safety nets or underemployment where formal unemployment figures do not fully capture informal sector dynamics.

The intercept ($_cons$) is -10.3549, suggesting that in the absence of all the predictors (labor mobility, trade volume, external debt, and unemployment rate), the baseline HDI would be substantially low. This reflects the systemic challenges faced by EAC member states, including poverty, limited infrastructure, and institutional weaknesses.

In conclusion, the GLS regression model highlights the varied effects of regional integration components on human development in the EAC, emphasizing the importance of addressing structural and institutional bottlenecks to maximize the benefits of integration efforts.

Heteroscedasticity Test

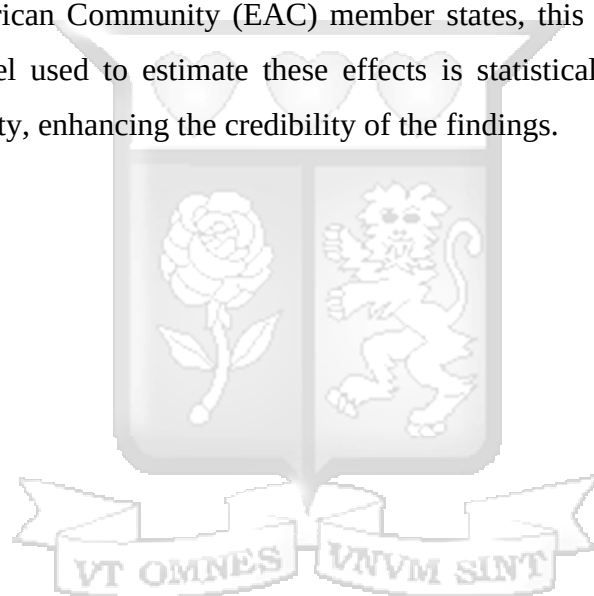
A regression model is heteroscedastic when the residual or error variability varies across all predictor's variable levels. This inquiry employs the Breusch-Pagan test. Regressing squared residuals on predictor components produces the test statistic, which has a chi-square distribution. A regression model with heteroscedasticity contradicts the assumption that residual variance remains constant. Heteroscedasticity may distort coefficient estimates. A $p\text{-value} < 0.05$ indicates heteroscedasticity.

Table 4.13 Breusch-Pagan / Cook-Weisberg test

Model	Prob > chi2	chi2(1)
1	0.5373	0.38

The test statistic (chi-squared) is 0.38 with an associated p-value (Prob > chi²) of 0.5373. Since the p-value exceeds the conventional significance threshold (e.g., 0.05), the null hypothesis of homoscedasticity is not rejected. This indicates that the residuals of the model do not exhibit significant heteroskedasticity, suggesting that the variance of errors is constant across observations.

In the context of studying the effects of regional integration on human development among East African Community (EAC) member states, this outcome implies that the regression model used to estimate these effects is statistically robust to concerns of heteroskedasticity, enhancing the credibility of the findings.



CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study's results on the effect of regional integration on human development among the East African Community member states. This chapter summarizes the results, draws conclusions, makes suggestions, and discusses future research opportunities.

5.2 Discussions

Labor mobility, with a positive but statistically insignificant relationship with the Human Development Index (HDI), aligns partially with findings from Makun (2021), who documented similar challenges in developing regions. Structural barriers such as restrictive migration policies, limited infrastructure, and unequal labor market integration often prevent labor mobility from significantly enhancing development outcomes. This weak association is at odds with *Modernization Theory*, which assumes that greater mobility enhances uniform skill dissemination and economic progress. Instead, the findings lend support to *Dependency Theory*, which emphasizes the structural inequities that hinder the equitable distribution of labor mobility's benefits. Mwinzi (2022) similarly highlighted that labor mobility within the EAC, while fostering knowledge transfer, is often undermined by barriers that prevent the full realization of integration benefits.

Trade volume shows a positive and marginally significant relationship with HDI, supporting the idea that trade expansion contributes to improved living standards. This finding aligns with the work of Adewuyi et al. (2020), who observed that regional trade agreements enhance economic integration by lowering tariffs, improving infrastructure, and fostering intra-regional trade. Studies by Olayinka and Ajibola (2020) further corroborate these results, emphasizing how increased trade enhances access to goods and services, indirectly improving education, healthcare, and income levels. The role of trade in fostering regional development is strongly in line with *Neoclassical Development Theory*, which highlights the benefits of trade liberalization and open markets as engines of economic growth. Moreover, these findings partially support *Modernization Theory*,

demonstrating that trade policies designed to reduce barriers can stimulate development. However, disparities in trade capacities across EAC member states, as evidenced by variations in trade volumes (22.24% to 93.73% of GDP), underscore challenges that *Dependency Theory* attributes to unequal regional benefits and competitive disadvantages faced by smaller economies.

The analysis of external debt highlights its complex role in human development. Although the relationship between external debt and HDI is negative, the effect is not statistically significant. This outcome aligns with Gupta et al. (2021), who identified that while external financing can enable infrastructure projects and development programs, excessive reliance on debt creates sustainability risks, diverting resources from essential services like education and healthcare. Kimani et al. (2022) similarly emphasized the need for effective debt management to ensure that borrowed funds are utilized for productive investments. These findings support *Dependency Theory* by illustrating how excessive debt reliance can perpetuate structural vulnerabilities and economic subjugation. At the same time, they resonate with *Modernization Theory* by acknowledging that, under appropriate governance, external debt can drive progress in infrastructure and social programs. The mixed effects observed in this study highlight the tension between the potential benefits and risks of debt in developing economies.

The positive and statistically significant relationship between the unemployment rate and HDI presents a counterintuitive finding that challenges conventional expectations. Typically, higher unemployment is associated with lower development outcomes, as predicted by *Neoclassical Development Theory*. However, this result may reflect transitional dynamics within the EAC, such as urbanization, industrial shifts, or labor market adjustments, which temporarily inflate unemployment rates even as economies undergo structural improvements. Nkonde and Mugambi (2021) reported similar phenomena in emerging economies, where short-term unemployment spikes occur as part of broader economic transitions. This finding also reflects the regional peculiarities of labor markets in the EAC, where underemployment and informal employment might obscure the full picture. While this result appears to contradict *Modernization Theory*, which assumes that economic integration reduces unemployment disparities, it aligns

with *Dependency Theory* by acknowledging the complexities and challenges that developing regions face during economic transitions.

Finally, the stationarity of HDI, as confirmed through statistical tests, underscores consistent patterns in human development influenced by regional integration. This result aligns with studies by Ndikumana (2019) and Mugendi and Njiru (2020), who emphasized that regional cooperation improves socio-economic indicators like access to education and healthcare. These findings strongly support *Modernization Theory*, which advocates for economic collaboration as a pathway to improved living standards. The positive but moderate correlation between HDI and trade volume further reinforces the idea that trade-driven regional cooperation directly enhances development outcomes. However, challenges remain, as highlighted by Adebayo (2020) and Uitto (2021), who noted that regional inequalities persist, with smaller economies struggling to compete and benefit equitably from integration efforts.

5.3 Conclusions

The analysis provides nuanced insights into the complex interplay between labor mobility, trade volume, external debt, unemployment, and human development within the East African Community (EAC). Labor mobility, though positively associated with the Human Development Index (HDI), lacks statistical significance, suggesting that structural barriers such as restrictive migration policies, inadequate infrastructure, and unequal labor market integration limit its developmental potential. These findings challenge *Modernization Theory*, which posits that increased mobility uniformly enhances economic progress, and instead align more closely with *Dependency Theory*, highlighting structural inequities that hinder the equitable distribution of labor mobility benefits.

Trade volume demonstrates a positive and marginally significant relationship with HDI, reinforcing the idea that trade expansion fosters improved living standards through increased access to goods, services, and economic integration. This aligns with *Neoclassical Development Theory*, which emphasizes the benefits of open markets and trade liberalization, and partially supports *Modernization Theory*, indicating that well-designed trade policies can promote development. However, disparities in trade

capacities among EAC member states underscore Dependency Theory's assertion that unequal regional benefits and competitive disadvantages can impede inclusive growth.

The role of external debt in human development appears complex, with a negative but statistically insignificant relationship with HDI. While external financing can enable critical infrastructure projects and social programs, excessive reliance on debt poses sustainability risks, diverting resources from essential services. These findings align with Dependency Theory by highlighting the structural vulnerabilities associated with debt dependence while resonating with Modernization Theory in recognizing the potential benefits of effective governance and productive debt utilization.

The counterintuitive positive and statistically significant relationship between unemployment and HDI suggests transitional dynamics within the EAC, such as urbanization, industrial shifts, and labor market adjustments, which may temporarily inflate unemployment rates during economic transformation. This challenges conventional Neoclassical Development Theory expectations but aligns with Dependency Theory by acknowledging the complexities faced by developing economies during periods of transition. Regional peculiarities, such as high underemployment and informal labor markets, may further obscure the true impacts of unemployment on human development.

Finally, the confirmed stationarity of HDI underscores consistent patterns of regional development influenced by integration efforts. These findings support Modernization Theory by demonstrating that economic collaboration enhances socio-economic indicators like education and healthcare. However, persistent regional inequalities, as smaller economies struggle to equitably benefit from integration, reveal ongoing challenges that Dependency Theory addresses. Overall, while the findings highlight the potential of regional cooperation to improve development outcomes, they emphasize the need for targeted policies to address structural barriers and disparities, ensuring inclusive growth across all member states.

5.4 Recommendations

The weak and statistically insignificant relationship between labor mobility and the Human Development Index (HDI) underscores the need to address structural barriers that limit its effectiveness. Restrictive migration policies, inadequate infrastructure, and labor market segmentation hinder the equitable distribution of mobility benefits, aligning with Dependency Theory's critique of structural inequities (Makun, 2021; Mwinzi, 2022). Policymakers in the East African Community (EAC) should adopt comprehensive labor mobility frameworks that promote equitable integration across labor markets. This includes revising migration policies, investing in regional transport and communication infrastructure, and facilitating skills matching mechanisms to reduce labor market segmentation and ensure that the benefits of mobility are more uniformly distributed.

The positive and marginally significant relationship between trade volume and HDI highlights the importance of trade in fostering regional development through improved living standards, consistent with Neoclassical Development Theory (Adewuyi et al., 2020; Olayinka & Ajibola, 2020). However, disparities in trade capacities across EAC member states exacerbate unequal benefits, as Dependency Theory suggests. To maximize the development impact of trade, EAC member states should implement policies that lower trade barriers, enhance infrastructure for cross-border trade, and provide support to smaller economies to increase their trade capacity. Trade policies should also prioritize fostering value-added industries to reduce reliance on raw material exports and enhance regional competitiveness.

The negative but statistically insignificant relationship between external debt and HDI reflects its dual role: while debt can fund essential infrastructure and social programs, excessive reliance risks diverting resources from critical services, as noted by Gupta et al. (2021) and Kimani et al. (2022). EAC governments should establish stringent debt management frameworks to ensure that external financing is allocated to productive and sustainable investments. These frameworks should incorporate regular debt sustainability assessments and transparency mechanisms to mitigate the risks of resource diversion and debt overhang, ensuring long-term developmental gains.

The counterintuitive positive relationship between unemployment and HDI suggests transitional dynamics in the EAC, where economic shifts and urbanization temporarily

inflate unemployment rates even as structural improvements take place (Nkonde & Mugambi, 2021). EAC member states should adopt labor market policies that support workforce transitions, such as vocational training programs, unemployment benefits, and investments in industries with high job-creation potential. These measures will help smooth the economic transitions and mitigate the adverse effects of temporary unemployment on development outcomes.

The stationarity of HDI emphasizes the consistent impact of regional integration on socio-economic indicators such as education and healthcare (Ndikumana, 2019; Mugendi & Njiru, 2020). However, persistent inequalities among member states hinder the full realization of integration benefits (Adebayo, 2020; Uitto, 2021). Regional cooperation efforts should include mechanisms for equitable resource distribution and capacity-building programs targeting smaller economies. Collaborative initiatives such as shared funding for health and education projects and regional educational exchanges can ensure that all member states benefit from integration efforts.

5.5. Limitations of the study

This study, examining the effect of regional integration on human development within the East African Community (EAC) member states, faced several limitations that may influence the interpretation of the findings. First, data availability posed a significant challenge, as some critical variables, such as detailed intra-regional labor mobility metrics and disaggregated trade statistics, were either incomplete or unavailable for all member states. This limitation restricted the scope of analysis and might have led to the underrepresentation of certain integration dimensions.

The study also did not account for non-EAC member states, which might have external economic or social influences on the region's integration outcomes. Furthermore, the analysis largely relied on secondary data sources, which might not fully capture dynamic factors such as informal cross-border trade, underemployment in informal sectors, or the real-time impacts of regional policies.

Lastly, contextual factors like political instability, economic shocks (e.g., from global pandemics), and natural disasters that might have influenced development outcomes were not explicitly controlled for, potentially biasing the findings. Future research could

address these limitations by expanding the range of variables examined, and exploring alternative methodological approaches to deepen insights into the relationship between regional integration and human development.

5.6 Areas for further studies

Building on the findings, implications, conclusions, and recommendations, several areas for further study emerge regarding the effect of regional integration on human development among East African Community (EAC) member states. First, future research should focus on understanding the nuanced barriers to labor mobility within the region. Specifically, studies could explore the extent to which restrictive migration policies, inadequate infrastructure, and cultural or institutional factors limit the potential of labor mobility to drive innovation and skill transfer.

Second, further investigation is needed into the trade disparities among member states. Research could analyze the specific factors contributing to the varying trade capacities and assess the effectiveness of current trade facilitation policies. Comparative studies with other regional blocs, such as the European Union or ASEAN, could provide insights into best practices for equitable trade integration and their applicability in the EAC context.

Third, the relationship between external debt and human development warrants deeper analysis. Future studies could examine how debt utilization varies across member states and identify the conditions under which external financing positively or negatively impacts human development. This could include exploring the role of governance, transparency, and accountability in debt management and its implications for sustainable development.

Fourth, the counterintuitive positive correlation between unemployment and human development calls for more detailed research into labor market dynamics. Studies should investigate the role of the informal sector, the impact of transitional economic shifts, and the effectiveness of existing employment policies in addressing unemployment disparities across the EAC. Understanding these dynamics could help design targeted interventions to create inclusive and sustainable labor market opportunities.

Additionally, research should focus on the intra-regional disparities in human development outcomes. This includes examining the social, economic, and institutional factors contributing to unequal distribution of integration benefits among member states. Identifying strategies to address these disparities could support the design of more inclusive policies that ensure equitable development.

Lastly, a longitudinal analysis of the impact of regional integration on specific components of the HDI, such as education, healthcare, and income, could provide a clearer picture of the long-term effects of integration efforts. This approach would help to isolate the causal pathways through which regional integration influences human development and identify areas where targeted interventions are most needed.



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