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ANALYZING THE COMBINED ROLE OF GOOD GOVERNANCE AND GDP ON WOMEN LITERACY IN AFRICAN COUNTRIES

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ABSTRACT

Most African countries have been affected due to economic crises regarding hyperinflation and lower agricultural productivity, civil war, lower infrastructural and transportation systems, social and domestic violence, food insecurity due to bad agricultural systems, social and religious inequality, mismanagement of governing systems with defective bureaucracy, environmental degradation and lower practice for sustainable development. In this paper, the author tries to find out two research objectives i) To measure the good governing variables on women literacy between East and West African countries ii) To measure the joint impact of good governance and GDP level between these two countries. The author uses secondary dataset from The World Bank site on quantitative analysis where the author uses multiple regression model for general regression and integrated regression model. At the time of multiple regression (Model 1), GDP, IF, P.S., R.Q. has a positive connection with women literacy for EAC. On the contrary, PHR, FLF, DOFC, R.L. create a negative effect on women's literacy in EAC. But in (Model 2), if the good governance variable connects with GDP for long-lasting development, (GDP*PS), (GDP*RQ) has positive connection with W.L. in EAC. Reversely, L.E., PHR, G.E., R.Q., CC has positive and significant impact in WAC where these variables enhance women literacy to be improved at significant rate (Model 3) where DOFC and EFC has reverse connection with W.L. In spite of case, if GDP connects with good governance variables, (GDP*RQ) and (GDP*PS) has positive connecti-ty with W.L. in WAC. Policy makers should highlight to promote effective R.L. and G.E. to improve macroeconomic development in EAC where governments of WAC should focus on R.L. and G.E. to ensure women empowerment and social security for sustainable development. Establishing good governance's variables in African countries is carrying need to ensure women empowerment, lessening gender inequality, ensuring women safeness and sustainable development etc.

Keywords: Women's Literacy, Good Governance, Gross Domestic Product, Sustainable Development, Macroeconomic development

ABSTRAK

Sebagian besar negara-negara Afrika terkena dampak krisis ekonomi terkait hiperinflasi dan rendahnya produktivitas pertanian, perang saudara, rendahnya sistem infrastruktur dan transportasi, kekerasan sosial dan

rumah tangga, kerawanan pangan karena sistem pertanian yang buruk, kesenjangan sosial dan agama, manajemen pemerintahan dan birokrasi yang salah, degradasi lingkungan, dan rendahnya praktik pembangunan berkelanjutan. Dalam tulisan ini, penulis mencoba untuk mengetahui dua tujuan penelitian i) Untuk mengukur variabel good governance terhadap literasi perempuan antar negara-negara Afrika Timur dan Barat ii) Untuk mengukur dampak gabungan dari good governance dan tingkat PDB antara kedua negara. Penulis menggunakan data sekunder dari situs Bank Dunia pada analisis kuantitatif di mana penulis menggunakan model regresi berganda untuk model regresi umum dan model regresi terintegrasi. Pada saat regresi berganda (Model 1), GDP, IF, P.S., R.Q. memiliki hubungan positif dengan literasi perempuan untuk EAC. Sebaliknya, PHR, FLF, DOFC, R.L. menimbulkan dampak negatif terhadap literasi perempuan di EAC. Namun pada (Model 2), jika variabel good governance dihubungkan dengan PDB untuk pembangunan jangka panjang, (GDP*PS), (GDP*RQ) mempunyai hubungan positif dengan W.L. di EAC. Sebaliknya, L.E., PHR, G.E., R.Q., CC memiliki dampak positif dan signifikan di WAC di mana variabel-variabel ini meningkatkan tingkat literasi perempuan secara signifikan. Pada Model 3 di mana DOFC dan EFC memiliki hubungan terbalik dengan W.L. Meskipun demikian, jika PDB dihubungkan dengan variabel good governance, maka (GDP*RQ) dan (GDP*PS) mempunyai hubungan positif dengan W.L. di WAC. Para pembuat kebijakan harus menyoroti upaya untuk mendorong R.L. dan G.E. untuk meningkatkan pembangunan makroekonomi di EAC di mana pemerintah WAC harus fokus pada R.L. dan G.E. untuk memastikan pemberdayaan perempuan dan jaminan sosial untuk pembangunan berkelanjutan. Menetapkan variabel-variabel tata kelola pemerintahan yang baik di negara-negara Afrika membawa kebutuhan untuk memastikan pemberdayaan perempuan, mengurangi ketidaksetaraan gender, memastikan keamanan perempuan dan pembangunan berkelanjutan, dll.

***Kata Kunci:** Literasi Perempuan, Tata Kelola Pemerintahan yang Baik, Produk Domestik Bruto, Pembangunan Berkelanjutan, Pembangunan Makroekonomi*

Introduction

Education is one of the fundamental basic human rights which acts as an acceleration to enhance economic growth and development. This accelerator helps human beings to earn lifelong knowledge and creative ideas. However, in many countries, women face significant barriers to accessing education and achieving basic literacy skills. In Western Africa, female literacy does not affect social and economic change positively, which hampers this nation backward compared to other regions in the world. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), in 2019, female literacy was only 56% in sub-Saharan areas, whereas the global average literacy was 86%, which is lagging this zone badly. An analytical report by Asongu (2017) shows that good governance helps to reflect effective management in social and economic resource mobilization with transparency, accuracy, accountability, and equitability in a country. In the recent era, Sustainable Development (S.D.) means a balancing situation between human needs and sustainability on land, conserving natural resources and ecosystems, and lessening carbon emission at a minimum level with man and animal safety, etc. Of the 17 different goals of SDGs, No. 4 is to achieve quality education and No. 5 goal is Gender equality. Two goals are very interconnected. Gender inequality is highly connected with women's literacy. Literate women are serious about their

rights and social position, where good governance variables are directly connected with SDGs goals.

Allison & Horemans (2006) highlighted findings where sustainable development is the primary source of reducing poverty and securing livelihoods, as well as lessening resource usage and social security on a long-term basis. As Siddique (2022) noted, "Access to education is not only a right, but it is also an important tool for the empowerment of women and girls." Therefore, this research aims to explore the impact of good governance on female literacy rates in West Africa and how governance indicators can be used to improve educational outcomes for women. However, despite the recognized importance of good governance, there is still a lack of understanding of its specific impact on education outcomes, particularly for women and girls (Grindle, 2010). In general, this study will address this gap by exploring the nexus between governance indicators and female literacy rates in West Africa. It will provide insights into the specific governance indicators that impact female literacy rates and identify governance interventions that can improve female literacy rates. These insights will be crucial for policymakers, development practitioners, and civil society organizations working to promote gender equality and female empowerment in West Africa (Soubbotina, 2004).

Female literacy has been identified as an important element in promoting social and economic development in Europe. Increasing female literacy rates has been shown in studies to improve health outcomes, reduce poverty, and boost economic development (OECD, 2008). Furthermore, female literacy has been linked to increased political involvement and empowerment of women, both of which can benefit social development (Klasen, 1999). Good governance has been identified as a critical element in promoting social and economic development throughout the world, including Europe (UNDP, 2020). The term "good governance" refers to a variety of variables, including transparency, accountability, and the rule of law (Kaufmann & Kraay, 2006). There is evidence that effective governance practices, including increased public spending on education, can improve educational outcomes (Asiedu & Lien, 2011). However, the link between good governance and female literacy in Europe has received little attention. According to the OECD, some industrialized countries have helped to establish policies like work-family reconciliation, care-related and subsidy policies, childcare support, and alternative approaches. In this research, adverse and unintentional consequences for work-family police to reduce the gender gap reduction in some countries. Other research has demonstrated that social policies such as maternity leave and childcare subsidies can improve female educational outcomes in the OECD (Hegewisch & Gornick, 2011).

West Africa has a diverse cultural heritage as well as a long history of human growth. However, it has faced numerous obstacles, including political instability, poverty, and illiteracy, especially among women. In West Africa, good governance has been identified as a crucial factor in promoting female literacy and social development. In this review of the literature, we will look at the effect of good governance on female literacy and its relationship to social economics and social development in West Africa. Good governance is critical for female literacy because it fosters an atmosphere conducive to education, particularly for girls. Good governance guarantees that adequate educational resources are available and that policies that support gender equality in education are implemented. It also ensures that females are protected from violence and harmful practices like child marriage, which can prevent them from obtaining an education.

Countries with excellent governance in West Africa have made significant progress in promoting female literacy. In Ghana, for example, the government has implemented policies to encourage gender equality in education, which has increased female literacy rates. The

nation has also implemented anti-child marriage initiatives, which have led to an increase in the number of girls attending school (Domfeh & Takyi, 2014). According to studies, countries with excellent governance outperform countries with poor governance in terms of social development indicators (Gyimah, 2019). In Senegal, for example, the government's dedication to good governance has resulted in an increase in social development metrics like access to healthcare and clean water. This has had a beneficial effect on female literacy rates (Gisselquist, 2012). Burkina Faso is a landlocked West African nation with a population of over 20 million people and a female literacy rate of 29.4% compared to 51.2% for males (UNICEF, 2020). The nation has been plagued by poverty, inequality, and underdevelopment, all of which can be traced back to poor governance. Because of the government's inability to provide quality education, especially for girls, female literacy is low, limiting women's participation in the economy and decision-making processes. However, recent efforts by the government and development partners to promote good governance and improve female literacy have produced positive results. African Development Bank (2020) investigated the effect of effective governance on female literacy in Burkina Faso. The research used a panel data analysis of data from the World Bank and the African Development Bank over 20 years, from 1998 to 2018. According to the findings, good governance greatly contributes to female literacy in Burkina Faso, and particular governance indicators such as voice and accountability, rule of law, and government effectiveness have a positive impact on female literacy rates. According to the study, the government should emphasize good governance as a key strategy for increasing female literacy and improving social and economic development. Likewise, Newiak et al. (2022) investigated the effect of good governance on social development in Sub-Saharan Africa. The research used data from the World Bank and the United Nations Development Programme to conduct a cross-sectional regression analysis of 46 countries in the region.

According to a study performed by the United Nations Economic Commission for Africa (UNECA, 2018), effective governance is essential in promoting social and economic development. The study looked at the connection between governance and development in Africa and discovered that countries that practiced good governance had higher levels of social and economic development. Another research, this time conducted by the African Development Bank (2012) discovered that effective governance is critical in promoting gender equality and female empowerment. According to the study, gender equality policies and programs enacted by countries with good governance practices resulted in higher female literacy rates and increased female economic involvement. Numerous investigations have found that excellent governance encourages foreign investment, which leads to economic growth and development. In this research, the author tries to connect the variables of good governance to women's literacy in African countries. Most African countries face lots of social and economic problems due to a lack of a good governing system. Good governance variables are very important because most of the social influencing variables are affected by government decisions as well. Most African countries face gender inequality, gender bias, and gender violence which negatively affects literacy factor which will be enhanced by introducing a good governing system.

The main objectives of this research are:

- To analyze the impact of good governance variables on women's literacy in East and West Africa
- To analyze the joint impact of good governance with GDP on women's literacy in East and West Africa

Research Question 1: How do good governance indicators influence Female literacy in East and West African countries?

Good governance is the basic key to ensuring sustainable literacy that can accelerate economic development by enhancing per capita income and environmental sustainability at the same time. Sustainable development depends on the nature and technique of environmental and professional literacy. This research question will highlight how good governance affects female literacy.

*Research Question 2: How does joint variable (Good governance*GDP) influence Female literacy in East and West African countries?*

Economic efficiency depends on the literacy level of how they implement this knowledge to earn their basic livelihood. African countries are affected by economic and environmental problems. To accelerate the GDP level, good governance variables can prove to be an efficient key if good governance variables help GDP to increase continuously. So, this research question highlights how the joint variable (Government effectiveness*GDP) impacts female literacy level.

Literature Review

Good Governance Variables

Good governance and good administration are fundamental keys to developing public and private sectors to introduce the decision-making process for women's development. Similarly, the OECD (2008) discovered that good governance, as measured by the quality of public services and citizen involvement, was favorably linked with female literacy rates in a study of Latin America and the Caribbean. These studies indicate that good governance practices can help improve female literacy rates in South America. Researchers suggest some National Integrity and Anti-Corruption Strategies to launch good governance for developing women. Aside from effective governance, social economics, and development play an important part in increasing female literacy rates. Several studies have found that social and economic factors like poverty, access to education, and cultural views toward women can all have an impact on female literacy rates (Philip, 1999). These factors can have a substantial effect on female literacy rates in South America, where gender inequality and poverty are prevalent. Recent research has shown that addressing social and economic variables is critical in promoting female literacy in South America.

Good governance is about open-minded factors of authority and resource utilization in executing coherent governing official plans for the best welfare and significance of the people at large. Subba (2001) tried to connect good governance and decentralization in Nepal, where decision-making with rationality is a handy tool for democratic operations and citizens get more benefits from decentralized decision-making. Yet another recent Malaysian study discovered that good governance practices, such as effective public service delivery and transparency, were linked with higher levels of female literacy in the country (Said et al., 2017). The research also discovered that female literacy rates were higher in areas where citizens were more involved in governance processes. Khalid et al. (2016) analyzed the connection between good governance in the public sector of Malaysia, where citizen trust, delivery service, and assessment reports can ensure the benefits of good governance.

Women Literacy

In the early 60s, economists put high importance on human capital, which accelerated social security and social development. Without human capital, social development cannot be

possible (Becker, 1962). Barro (2013) defines human capital as the combination of education and experience. Education plays a key role in the accumulation of human capital, where literacy can accelerate efficiency and productivity. Productivity is the fundamental factor that ensures growth and development. Human capital and economic development ensure a long-run relationship where women's literacy can reduce the gap of gender inequality. Gender inequality is severe in African countries where gender discrimination hinders women's security as well as women's freedom. In addition, Psacharapoulos (1994), Hill & King (1995), Barro (1996), Klasen (2002), and Bloom, et al. (2006) examined that women's literacy has a significant impact on social development. These researchers mention that women's literacy has an important impact on family planning, reducing fertility, increasing labor participation, economic security, and social welfare. They conducted research on Morocco, Algeria, Tunisia, and Egypt. In this paper, they use panel data 2000-2012 where they examined that human capital has positive and significant relationship with economic growth.

According to the core theme of Quamrul et al. (2013), women's literacy is the fundamental factor to rise life expectancy, women empowerment, capital accumulation, child healthcare and nutrition, as well as family planning. When a girl becomes educated, she can make wide decisions for capital investment, capital usage, nutrition and child healthcare, sanitation and social safeness. In Africa, girls are being victimized at home and abroad, especially in mental and physical violence, she can take life-saving decisions when she is educated.

In sub-Saharan zones, Ainsworth et al. (1996) highlighted that women's literacy hinders their fertility but increases economic security for their families. In recent times, most girls do not want to conceive more children because of their educational status and societal image. It is a bad signal for human resources. Most European countries suffer due to the lack of effective and skilled manpower, but industrial and agricultural growth has become sluggish. In a cross-sectional study, Barro & Sala-i-Martin (2003), female fertility declines at the time of increasing per capita GDP, where there is a close relationship between educational attainment and fertility, where female literacy has a negative impact on fertility and male literacy has a positive connection with fertility.

Relationship between Good Governance and Women literacy

UNDP (2020) published a policy paper based on good governance and different types of social and economic policies in Ghana. It was based on civil war and political instability in Ghana. Good governance is not only necessary for promoting female literacy, but it also influences social development. In Ghana, for example, the government's commitment to good governance has drawn foreign investment, resulting in economic progress and development. Good governance also encourages the efficient use of public resources, which results in the supply of social services such as health care, education, and infrastructure. Good governance fosters economic growth and poverty reduction, resulting in improvements in social development measures such as access to healthcare, water, and sanitation. According to studies, countries with excellent governance outperform countries with poor governance in terms of social development indicators (Gyimah, 2019). In Senegal, for example, the government's dedication to good governance has resulted in an increase in social development metrics like access to healthcare and clean water. This has had a beneficial effect on female literacy rates (Gisselquist, 2012). Burkina Faso is a landlocked West African nation with a population of over 20 million people and a female literacy rate of 29.4% compared to 51.2% for males (UNICEF, 2020). The nation has been plagued by poverty, inequality, and underdevelopment, all of which

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Data and Research Methods

Data and Variable

The author will collect secondary data from the World Bank website. No primary data will be collected because this research depends on secondary data where the author collects a time series data set to analyze the impact of good governance on female literacy. To calculate the impact, the author uses data from the 25-year period from 1996 to 2020.

Empirical Model

The author uses two models to measure the impact of good governance on women literacy in African countries. The author uses general regression to measure general effect of good governance on women literacy and an integrated regression model to measure the joint impact of good governance and GDP on women literacy in models I and II, respectively.

General Regression Analysis Model

$$
\begin{aligned}
WL = \beta0 &+ \beta1LE + \beta2GDP + \beta3TP + \beta4PHR + \beta5FLF + \beta6IF + \beta7DOFC \\
&+ \beta8EFC + \beta9PS + \beta10GE + \beta11RQ + \beta12RL + \beta13CC + u
\end{aligned}
\tag{1}
$$

Integrated Regression Model

$$
\begin{aligned}
WL = \beta0 &+ \beta1LE + \beta2GDP * PS + \beta3GDP * GE + \beta4GDP * RQ + \beta5GDP * RL + \beta6GDP * CC \\
&+ \beta7TP + \beta8PHR + \beta9FLF + \beta10IF + \beta11DOFC + \beta12EFC + u
\end{aligned}
\tag{2}
$$

For analyzing the integrated impact on women literacy, the author considers integrated variables like (PS*GDP, GE*GDP, RL*GDP, RQ*GDP, and CC*GDP) on women's literacy in the East and West African zones. After this integration, the author will understand how joint variables impact women literacy in two different zones. If good governance variables help to enhance GDP, how much dependent variable will be (Women literacy) change.

Table 1: Dependent and Independent Variables that affecting in Model

Variables	Definition	Source	Data Collection	Summary Statistics	World Bank Indicator Name	Authors Reference
Dependent Variable						
Women Literacy (W.L.)	Women Literacy	World Bank	In Percentage	Adult literacy rate is the percentage of people ages 15 and above who can both read and write with understanding a short simple statement about their everyday life.	SE.ADT.LITR.FE.ZS	Noya et al. (2009)
Independent Variables						
1. Life Expectancy (L.E.)	Life expectancy at birth, total (years)	World Bank Open Data	In years	Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.	SP.DYN.LE00.IN	Siddique (2022)
2. GDP (GDP)	GDP per capita (current US$)	World Bank Open Data	In U.S. Dollar	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.	NY.GDP.PCAP.CD	Gunatilaka & Ranaraja (2012)
3. Total Population (T.P.)	Population, total	World Bank Open Data	In Number	The total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship. The values shown are midyear estimates.	SP.POP.TOTL	Nazneen (2017)
4. Poverty headcount ratio at $2.15 a day (PHR)		World Bank Open Data	Percentage in Population	The poverty headcount ratio at $2.15 a day is the percentage of the population living on less than $2.15 a day in 2017 purchasing power-adjusted prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions.	S.I.POV.DDAY	Domfeh & Takyi (2014)
5. Female Labor Force (FLF)	Labor force, female (% of total labor force)	World Bank Open Data	In Percentage	The female labor force is a percentage of the total, which shows the extent to which women are active in the labor force. The labor force comprises people ages 15 and older who supply labor to produce goods and services during a specified period.	SL.TLF.TOTL.FE.ZS	Domfeh & Takyi (2014)

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Variables	Definition	Source	Data Collection	Summary Statistics	World Bank Indicator Name	Authors Reference
6. Infrastructure Facility (IF)	Investment in transport with private participation (current US$)	World Bank Open Data	(current US$)	Investment in transport projects with private participation refers to commitments to infrastructure projects in transport that have reached financial closure and directly or indirectly serve the public. Movable assets and small projects are excluded. The types of projects included are management and lease contracts, operations and management contracts with major capital expenditure, greenfield projects (in which a private entity or a public-private joint venture builds and operates a new facility), and divestitures. Investment commitments are the sum of investments in facilities and investments in government assets. Investments in facilities are the resources the project company commits to investing during the contract period, either in new facilities or in the expansion and modernization of existing facilities. Investments in government assets are the resources the project company spends on acquiring government assets such as state-owned enterprises, rights to provide services in a specific area, or the use of specific radio spectrums. Data is presented based on investment year. Data are in current U.S. dollars.	I.E.PPI.TRAN.CD	Author Own Compilation
7. Drop Out Female Children (DOFC)	Children out of school, primary, female	World Bank Open Data	In Number	Children out of school are the number of primary-school-age children not enrolled in primary or secondary school.	S.E.PRM.UNER.FE	McCawlay (2017)
8. Employment of Female Children (EFC)	Children in employment, female (% of female children ages 7-14)	World Bank Open Data	In Percentage	Children in employment refer to children involved in economic activity for at least one hour in the reference week of the survey.	SL.TLF.0714.FE.ZS	Gyimah (2019)
9. Political Stability and Absence of Violence/ Violence (P.S.)		World Bank Open Data	The estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance)	Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism. Estimate gives the country's points on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.	PV.EST	Asiedu & Lien (2011)

Variables	Definition	Source	Data Collection	Summary Statistics	World Bank Indicator Name	Authors Reference
10. Government Effectiveness (G.E.)		World Bank Open Data	The estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance)	Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's points on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.	GE.EST	Asiedu & Lien (2011)
11. Regulatory Quality (R.Q.)		World Bank Open Data	The estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance)	Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Estimate gives the country's points on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.	RQ.EST	Kaufmann & Kraay (2006)
12. Rule of Law (R.L.)		World Bank Open Data	The estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance)	Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society and in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate gives the country's points on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.	RL.EST	Kaufmann & Kraay (2006)
13. Control of Corruption (CC)		World Bank Open Data	The estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance)	Control of Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Estimate gives the country's points on the aggregate indicator in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.	CC.EST	Kaufmann & Kraay (2006)

Source: Own Compilation Based on (W.B. Open Data, 1996-2020)

Table 2: Countries Name and World Bank Code

East African Countries (EAC)		West African Countries (WAC)	
Country Name	Country Code	Country Name	Country Code
Burundi	BDI	Benin	BEN
Comoros	COM	Burkina Faso	BFA
Djibouti	DJI	Cape Verde	CPV
Eritrea	ERI	Cote de Ivory	CIV
Ethiopia	ETH	Gambia	GMB
Kenya	KEN	Ghana	GHA
Madagascar	MDG	Guinea	GIN
Malawi	MWI	Guinea-Bissau	GNB
Mauritius	MUS	Liberia	LBR
Mozambique	MOZ	Mali	MLI
Rwanda	RWA	Mauritania	MRT
Seychelles	SYC	Niger	NER
Somalia	SOM	Senegal	SEN
South Sudan	SSD	Sierra Leone	SLE
Tanzania	TZA	Togo	TGO
Uganda	UGA		
Zambia	ZMB		
Zimbabwe	ZWE		

Findings and Discussion

In this section, the author describes the four models where general and integrated regression models have been used. The author wants to measure the individual effect of independent variables on dependent variables from model 1 and 3. Moreover, the integrated model will be investigated from model 2 and 4.

Estimation Results

Table 3 represents the multiple regression in two different regions at the same time. In this model, author uses women literacy in percentage and a set of independent variables from World Bank database from 1990 to 2020.

In this paper (Model 1), GDP has a positive connection with women's literacy rate in EAC. Besides, Female labor employment also has a negative connection with women's literacy. If women are willing to engage with jobs or work before completing their educational stage or despite going to school, women's literacy will decrease significantly. The female gives more priority to doing work than receiving basic education. So, it is a bitter truth that dropout female children are increasing day by day. Female dropout children drop out after receiving some years of education. If more female children drop out raises before crossing their primary education, women's literacy will decrease significantly. Ince (2010) found that increasing female education decreases women's fertility and mortality, whereas increasing women's literacy decreases the mentality of women to do lower-level jobs. On the other hand, Infrastructural facility is one of the key components for a country. The infrastructural facility ensures a smoother environment for everyone, mainly for females as they feel they

are a backward section of society. Schooling movement is then very easy for them. Distance does not matter, so if infrastructural facilities increase, the female literacy rate will change positively. But it is a bitter truth that the drop in female children in East African countries is increasing. If it increases, the female literacy rate will decrease in a long time.

In model 2, Political stability (P.S.) multiplies with GDP which can ensure that the country is in a stable economy and gradually improves its condition, so the joint impact will increase the female literacy rate. If R.Q. accelerates GDP to rise, women literacy will be increased significantly (1% level of significance). R.Q. means the government intervenes in its activities with rules and regulations. If the government sets up sound policies to influence, then this joint impact will increase women's literacy rate significantly. But if the R.L. joins with GDP, it will decrease the literacy rate at a significant level. More policies make the situation more complex and create obstacles for female literacy in East African countries.

In model 3, life expectancy has a positive connection with women's literacy because if a woman desires to live long, she wants to be literate and spend more time to make herself capable, depending on education. If L.E. increases by one year, it will accelerate women's literacy to increase by 12% (1% level of significance). In this model, there is a strong correlation between women's literacy and the poverty headcount ratio. If a woman feels poor, she will try her best to get rid of poverty trap immediately. To make her efforts successful, she will try to prove herself as a literate person. In poor countries, many developing agencies and U.N. organizations launch many educational programs, which help literate women significantly. If the poverty headcount ratio increases, women's literacy will be increased because of their mental changing issues. If PHR increases by 10%, Women literacy will be increased by 4.4% that is statistically significant at the 1% level. Dropout female children are those who drop out after receiving some years of education. Children out of school, according to the World Bank, are the number of children who are primary school age but are not enrolled in primary or secondary school. If more young girls drop out before crossing their primary education, women's literacy will be decreased significantly. When a girl gives more priority to doing work than receiving basic education, it will lessen women's literacy rate surely and significantly. Lastly, female labor employment has a negative connection with literacy. If more woman thinks about a job or work despite going to school, women's literacy will be dropped significantly.

In model 4, If the R.Q. joins with GDP, it will help to increase the literacy level by 11% at a significant level. R.Q. means the intervention of government in economic activities by subsidizing infant industries, labor market policies with wage and price control factors, tax system; pro-investment tax policies, healthy trade policies and free-trade agreements, export acceleration, and investment attractiveness help increase GDP. This joint impact will increase women literacy significantly. If the government implements healthy policies to influence business, the government provide facilities for import and export licenses, public agreements, public conveniences, tax duties, and judicial decisions, deficiency of Nepotism, cronyism, and patronage in the civil service. If CC helps to increase GDP in WAC, it will increase women literacy by 18% with 1% level of statistically significant.

Table 3: Multiple General Regression and Multiple Interacted Regression Model in EAC and WAC Countries

Variables Name	Variable Sign	1. Multiple General Regression for EAC	2. Multiple Interacted Regression for EAC	3. Multiple General Regression for WAC	4. Multiple Interacted Regression for WAC
Life Expectancy	LE	-0.05081 (0.98)	-0.053546 (0.91)	12.82866*** (1.83)	11.4789*** (1.81)
GDP	GDP	35.3803 (12.32)**	32.4890 (12.26)**	5.946171 (13.84)	4.4569 (12.78)
Total Population	TP	-0.00336 (0.14)	-0.00456 (0.11)	0.000910 (0.27)	0.00096 (0.29)
Poverty headcount Ratio	PHR	-0.44699 (0.02)***	-0.48922 (0.03)***	0.449655*** (0.05)	0.45799*** (0.05)
Female Labor Force	FLF	-46.5806 (6.04)***	-39.4569 (5.99)***	109.7946 (24.89)	110.4795 (24.93)
Infrastructural Facility	IF	9.83e-08* (4.70e-09)	9.77e-08* (4.90e-09)	4.14e-09 (4.49e-09)	6.14e-09 (5.49e-09)
Drop-out female children	DOFC	-12.4064*** (1.60)	-11.4789 (1.50)	-36.28079*** (4.00)	-39.4587*** (4.02)
Employment of Female Children	EFC	0.07114 (0.08)	0.05479 (0.07)	-0.02203*** (0.04)	-0.45698*** (0.04)
Political Stability	PS	109.2389*** (10.24)	109.510*** (10.09)	19.9229 (16.15)	17.4569 (15.65)
Government Effectiveness	GE	3.360059 (15.34)	3.50622 (15.22)	85.99988* (45.72)	76.4596* (43.06)
Regulatory Quality	RQ	86.58625*** (15.73)	86.9788*** (15.29)	80.73952*** (15.21)	83.4598*** (15.06)
Rules of Law	R.L.	-71.54889*** (14.07)	-71.6382*** (14.00)	-14.17528 (15.79)	-11.4789 (15.74)
Corruption Control	CC	32.53905 (21.04)	33.2321 (20.09)	103.9786*** (17.48)	109.457*** (19.56)
GDP*Political Stability	GDP*PS		17.60348*** (1.24)		1.506145*** (1.99)
GDP*Government Effectiveness	GDP*GE		2.047778 (0.99)		6.773251 (4.76)

Variables Name	Variable Sign	1. Multiple General Regression for EAC	2. Multiple Interacted Regression for EAC	3. Multiple General Regression for WAC	4. Multiple Interacted Regression for WAC
GDP*Regulatory Quality	GDP*RQ		8.226491*** (2.02)		11.61819*** (2.23)
GDP*Rules of Law	GDP*RL		-5.168485 (-1.69)**		-3.334508 (2.39)
GDP*Control of Corruption	GDP*CC		1.426508 (2.73)		18.04676 (2.66)
	Constant	77.806*** (4.869)	72.919*** (5.905)	37.299* (2.566)	67.632*** (3.035)
Observations		360	360	240	240
R²		0.34	0.46	0.51	0.57
Adjusted R²		0.33	0.43	0.49	0.55

Discussion

In Table 3 (Model 2), it is observed that P.S. (political stability) and R.Q. are have a positive connection with women's literacy. Political stability refers to the absence of political violence and terrorism, which is crucial for a country. It indicates a stable political environment, which is essential for foreign direct investment (FDI) and capital mobility. Political stability protects the country from potential conflicts and fosters healthy investment environments and positive relations among different nations. Arshad & Ismail (2013) found that good governance is significantly linked to women's literacy, and they discovered that P.S. has a significant connection with women's education. According to Siddique & Mohamed (2007), good governance indicators has positive and significance connection with women's literacy, but women's literacy has negative connection with women's fertility. This research supports that good governance create some positive behavior for women to make decisions about their career and family planning issues. In this paper, in model 2, if the P.S. and R.Q. merge with GDP, it also helps increase the W.L. at significant level, that is 1% level of significance. Kaufmann et al. (1999) mention that good governance has significant effectiveness in increasing women literacy for lower-developed countries. They mentioned that government effectiveness (G.E.) has statistically significant to increase women literacy but this paper finds none of this. These researchers investigate the impact of good governance on women literacy in underdeveloped countries. At the same time, they find that P.S. and R.Q. has statistically significant on women literacy.

In model 2, the author wants to investigate the joint impact of G.G. and GDP on women literacy in African countries. Holmberg et al. (2009) mentioned that good governance has statistically significant impact on women literacy where they highlighted the impact of governing bodies on women literacy. They mentioned that gender equality has significant connection with women literacy. Verloo (2001) developed some policies and ideas on how to reduce gender biases and ensure social equality for women. In this paper, it shows that women literacy is handy tool to reduce gender biases with effective and sound good governing polices. Arshad & Ismail (2013), mentioned earlier government effectiveness (G.E.) and rules of law (R.L.) have positive connection with women education in African countries. Bosselmann et al. (2008) highlights good governance create social and economic sustainability which help every citizen to make decision. Good governance is the handy key which promote economic and social security as well. In this paper, life expectancy will be increased with due to effective governing bodies and infrastructural facility will be working as supportive tool to ensure women literacy at significant manner. This paper supports with this previous studies. Klasen (1999) marked a paper based on reducing gender inequity and social development, where social development is solely and mostly dependent on good governing system. A good governance system helps to make decision and attract foreign investment, which is vital instruments to influence on women education as well. In this research, they show the capacity and role of governing bodies to ensure social and economic development as well. Verloo (2001) mention the policies and theories of good governance to develop the level of women literacy in developing countries. Good governance is the good system which can help the women to ensure women education and their social safety in developing countries.

However, UNDP (2020) mentioned that gender inequality increases when good governance fails to implement their policies, that create problem to their social safety. This research has been implemented in Cape Verde, Ghana & Senegal which create problem to ensure social safety issues, where education rate is very low and social insecurity raises a lot. Gender inequality create social insecurity also which beings from weak governing bodies, this

also create problem to hygienic and sanitation problem. Living standard also connects with women education, where living standard is highly dependent governing bodies. Ndiaye (2021) mentioned the relationship governing bodies and women disparity where some governing system leads women literacy badly. The women fall as a victim due to bad governing system in western Africa. They have faulty governing system which misleads women development. In Model 4, regulatory quality and government effectiveness has no significant relationship with women literacy but Stojanović (2016) find significant connectivity among good governance, women literacy and GDP level.

Conclusion

If the government bodies of East African countries impose laws against violence and terrorism, it will help significantly improve women's literacy with healthy figures. Mostly, political instability happens when the ruling party loses the trust of citizen and snatch citizen power like voting, accountability, welfare factors etc. The opposite political party try to create violence and anarchy to grab the power from existing government. If the world's popular and accepted leaders and international figures from look United Nations (UN) investigate this issue closely, political crises will be reduced, and women can realize the importance of being educated.

Poor governing countries have corrupted bureaucrats and politicians which obstacles economic development through different kinds of bad works and systems. It is seen that East African country's bureaucrats use foreign aid in different unproductive activities which are not known by a citizen. The citizen does not have any idea how their aid has been used in unproductive ways. They share their illegal money with corrupted investors, which lessen the economic development path. In a famous quote, former United Nations Secretary-General Kofi Annan noted that 'good governance is perhaps the most significant factor in eradicating poverty and promoting development'.

In West African countries, there are lots of problems regarding social and economic issues that are the most important factor for good governance. Good governance has some variables which should be tried to enhance women's literacy significantly. Most of the WAC is affected by corruption and patronage systems from politicians. The governing system does not approve effective and legitimate channels for public involvement. In Niger and Senegal, an elite system always tries to protect corrupted members who give them economic benefits. Public participation is very important to understand the nature and effect of government which can accelerate women's literacy. Most West African countries do not have a decentralization system which can help to close government to people. In Liberia and Mali, a terrorist group creates pressure on the government to earn some illegal benefits like extraction and mining. Neither any member of the central government nor his agents go to the local level to ensure local people's participation as well. Good governance in sustainable development (GGSD) is the primary key for any country to ensure social and economic security, where UN highlighted the connectivity between good governance and sustainable development

Good governance is the important and chief key for a country which can enhance economic development. Bad governing institutions result in bad for society, and centralization power reduces local-level participation in African countries. For example, Morocco led economic growth through local-level participation ensuring sustainable development at a lower level. Libya, Syria, Tunisia, and Egypt are among recent examples where attempts at "democratic changes" that ensured good administration had little bearing on the viability of

the political and economic sustainability. There are lots of scopes where the researchers can conduct research showing the connectivity of how good governance affects to consumption of clean energy, good governance with a sustainable transportation system, good governance with sustainable fish consumption, good governance with small-scale business development etc. There is wide research scope regarding the role of good governance on climatic change for undeveloped and developing countries. In these two zones, the author finds lots of missing value which creates some problems during model specification. This abnormality causes a high imbalance among the same categorical variables. In general, the model is described by its exact coefficient values, but it is quite problematic in this research. Future researchers should collect dataset from authentic sources country-wise because all data are not available on the World Bank web site. The future-researchers can collect missing dataset from the country's central bank. Collecting authentic data will be the big challenges for them to continue research in African belts. In Africa, there is a huge scope for social research which can lead to economic and social sustainable development.

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