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EXAMINING THE IMPACT OF REMITTANCES ON HUMAN CAPITAL DEVELOPMENT: EVIDENCE FROM THE ECOWAS

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ABSTRACT

Remittances have become one of the veritable sources of revenue, especially for developing countries that usually face revenue shortfalls. In this study, the focus is to examine the impact of remittances on human capital development in the ECOWAS region. Shifting from the limited existing studies in West Africa, the study employed an advanced panel econometric methodology such as the dynamic panel data technique under the framework of the Generalized Method of Moments (GMM), using annual time series data that spanned the period from 1996 to 2022. Findings of the study revealed that remittances exerted a positive and significant influence on human capital development within the ECOWAS region. Also, while migration impacted positively and significantly on human capital development, the impact of net migration was negative and significant. The study thus concludes that remittances serve as a vehicle through which human capital development can be enhanced through the migration channel. Consequently, the study recommends that policies meant to attract remittances should be implemented in the ECOWAS countries such as encouraging the development of rural banking culture.

Keywords: ECOWAS; human capital development; Migration; remittances
JEL Classification Codes: F24, O15, R23

1.0 INTRODUCTION

Background of the Study

Remittance represents the transfer of money by individuals working abroad to their families or relatives in their home countries. It serves as a vital economic lifeline for millions of households worldwide and play a crucial role in facilitating financial flows between migrants and their families, contributing to poverty reduction and economic development worldwide (Offor, Ngong, Onyejiaku, Enemuo, Ugbam, Ibe, & Onwumere, 2023). In recent years, remittances have gained increasing attention due to their significant impact on poverty reduction, economic development, and financial inclusion. Individuals send remittances through various channels, including bank transfers, money transfer operators (MTOs) like Western Union and MoneyGram, online

platforms, and in some cases, physically carrying cash. These funds are crucial for meeting essential needs such as food, housing, education, and healthcare for recipients (World Bank, 2019). In another vein human capital has been defined variously by many scholars. Romele (2013) viewed human capital as the totality of knowledge and skills, which have been accumulated during life, through education, training and work experience and which influence labour productivity. In another dimension human capital has been noted to be influenced by the aggregation of investment in activities, such as education, health, on-the-job training and migration that enhance an individual's productivity in the labour market (Becker, 1993). In a nutshell, human capital development refers to the process of acquiring and increasing the number of people who have the skills, good health, education and experience that are critical for economic development (Schultz, 1961).

The link between remittances and human capital development is an area that requires research attention, particularly in developing countries where their citizens often migrate to other countries for greener pasture. Some scholars such as Zaman (2021) have conceptualized this link by noting that remittances contribute to national income when households utilize such income for building houses, entrepreneurial activities, investing them in education, health and other areas that enhance family welfare. In another vein, Ekanayake and Moslares (2020) noted that remittances serve as an important source of income for recipient households, which give them the opportunity to afford necessities and at the same time allocate resources toward human capital development. This has been given empirical support in studies conducted in countries such as the Philippines, Mexico and India which have indicated that remittance-receiving households allocated a larger part of their income towards education (Clemens & Tiongson, 2017; Alcaraz, Chiquiar, & Salcedo, 2012; Chauvet, Gubert, & Mesplé-Somps, 2009).

In this study, the focus is to investigate the influence of remittances on human capital development in the Economic Community of West African States (ECOWAS). The ECOWAS is an economic bloc consisting of 15 member countries among which are: Benin, Burkina Faso, Cote d'Ivoire, Cabo Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal and Togo. This region is widely recognized as one of the most underdeveloped in the world, with a substantial portion of its population experiencing multidimensional poverty. Despite its large population, accounting for 5% of the world's total population, the region's total GDP and share in global exports are relatively low, at 0.86% and less than 1%, respectively (World Bank, 2016). Many ECOWAS countries face challenges such as high indebtedness, susceptibility to coup d'états, endemic corruption, and ethnic divides, hindering their development (Porter & Osei-

Hwedie, 2015). While the region is rich in natural resources, including oil (Nigeria, Ghana), diamonds (Liberia, Sierra Leone), and gold (Ghana, Guinea), the long-term development of these countries has exhibited characteristics of the natural resource curse. Owing to these dismal conditions facing the countries that constitute this economic bloc, their citizens are forced to migrate to other countries, mostly developed countries where they seek better opportunities (Adepoju, 2008). They often send money down to their families to enable them argument the meagre income they have. Such remittances have been identified to assist in improving the living conditions of these families in diverse ways.

There is an inconclusive evidence of the impact of remittances on human capital development in literature, as some of the results from one country seem to contradict the results from other countries. In some studies, it has been established that remittances enhanced income which benefits poor households. Therefore, through remittances, receiving households improves the economic and social conditions, particularly education and health. From another perspective, some studies have revealed the presence of a negative impact of remittances on human capital. Consequently, the receipt of remittances can be disruptive to family life, which results into negative consequences on their economic and social condition, including educational attainment of children. As observed by Kugler (2006), studies on the effect of remittances on human capital development are theoretically ambiguous. The literature on the role of remittances on human capital development in the ECOWAS countries has been scanty and such could affect policy formulation to address human capital development in the bloc. This present study therefore aims to address this gap in literature.

1.1 Stylized Fact on Remittances and Human Capital Development

Table 1 provides data on remittances as a share of GDP for various ECOWAS member states in the years 2007, 2016, and 2021. These figures highlight the significant contribution of remittances to the economies of these countries, showing the proportion of remittances in relation to their Gross Domestic Product (GDP) over the specified years. The data reveals variations in the share of remittances across countries and time periods. For instance, The Gambia consistently shows a substantial share of remittances relative to its GDP, with a notable increase from 6.97% in 2007 to 26.84% in 2021. Cape Verde also demonstrates a consistent rise, reaching 16.24% of GDP in 2021. Other countries, such as Nigeria, Senegal, and Togo, consistently have double-digit shares of remittances as a percentage of their GDP, indicating the economic significance of remittance inflows. Conversely, countries like Cote d'Ivoire and Sierra Leone show relatively lower shares over the years. Understanding these variations can be crucial for policymakers in designing strategies that leverage remittance

inflows for economic development and poverty reduction in the respective countries.

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Table 1: Remittances as a share of GDP

Country	2007	2016	2021
Benin	4.03	2.41	1.35
Burkina Faso	0.90	0.88	0.76
Cote d'Ivoire	0.9	0.94	0.63
Carbo Verde	9.17	13.11	16.24
Ghana	0.47	6.98	5.37
Guinea	0.24	0.64	2.14
Gambia	6.97	21.5	26.84
Guinea Bissau	6.19	8	12.58
Liberia	8.39	26.12	9.63
Mali	4.22	6.67	5.91
Niger	0.13	0.09	0.12
Nigeria	10.82	4.85	4.42
Senegal	10.56	13.72	9.62
Sierra Leone	1.94	1.29	5.75
Togo	11.27	7.98	8.01

Source: WDI (2022)

Table 2 presents a range of development and migration indicators within the ECOWAS countries, highlighting notable variations in population growth, GDP per capita, Human Capital Index (HCI) and net migration stock. Information in Table 2 indicates that Niger had the highest population growth within the period as well as having the lowest per capita income. In contrast, Cabo Verde exhibits lower population growth, potentially linked to family planning initiatives and migration patterns. Ghana's leading HCI underscores a strong emphasis on education and health, while lower HCI in Liberia and Mali suggests challenges in their respective education and healthcare systems. Worthy of note is the fact that in all the countries, net migration was negative which indicates that citizens of these countries migrated to other countries within the sample period which may be driven by economic challenges, political instability, or pursuit of better opportunities abroad. The fact that the citizens migrate is an indication that they send part of the income they make in these foreign countries down to their home countries in the form of remittances. Policymakers should consider these nuanced factors to tailor strategies addressing specific challenges and opportunities in each West African country.

Table 2: Population Growth, GDP per Capita, HCI and Net Migration in ECOWAS

Country	Population growth (annual %)	GDP per capita (current US$) 2020	Human capital index (HCI) (scale 0-1) 2020	Net Migration Stock 2020
Benin	2.91	1238	0.40	1732
Burkina Faso	2.76	833	0.38	-13097
Cabo Verde	1.47	2924	0.42	-1274
Cote d'Ivoire	2.85	2288	0.38	-21000
Gambia	3.10	704	0.42	-1960
Ghana	2.23	2177	0.45	-297
Guinea	2.38	1074	0.37	-4367
Guinea-Bissau	2.16	710	0.39	-1395
Liberia	2.35	598	0.32	-11862
Mali	2.59	823	0.32	-22236
Niger	3.35	565	0.32	-4405
Nigeria	2.56	2075	0.36	-76364
Senegal	2.58	1490	0.42	-10091
Sierra Leone	2.11	484	0.35	-7364
Togo	2.65	897	0.43	-995

Source: WDI (2022)

2. THEORETICAL FOUNDATIONS

The theoretical framework of this study is grounded in human capital endogenous theory, which highlights the critical role of human capital in production functions. This theory underscores the importance of human capital in various aspects of an individual's life, including health, education, employment, and migration. It has been observed that remittance cost plays a significant role when the argument of remittances is centered in the developing economy. If the cost of transferring remittances continues to be exorbitant, then such may have negative impact on the families of many poor households. The reason is because such high cost of transfer will result in remittances by migrants being sent through the informal channels such as the currency dealers and hand-carried by migrants themselves (Gupta, Pattillo, & Wagh, 2009). In another direction, as observed by Ngoma and Ismail (2013), the influence of remittances on human capital is a complex one which can be viewed from two distinct relationships. Accordingly, the first relationship reveals the significant role played by education in the determination of both remittances and migration patterns. Thus, a person's educational attainment level can influence his decision to migrate, and as such remittances in turn influenced by the educational background of the migrants. On the other hand, the second relationship suggests that education can be enhanced by remittances. In other words, remittances can have a positive effect on a person's educational level if they are used to finance education. Such will enable household to have access to better educational

opportunities, leading to children completing more years of schooling. Seen from another angle, Mozumdar (2012) identified two major mechanisms through which remittances can improve the economy of poor and low income developing economies. First, remittances have the ability to raise the living standard of both the migrants' residents in the destination and the other members of the family left in the home country. The second pathway is that migrant remittances can encourage small-scale household entrepreneurs which have the potential to enhance the financing of physical and human capital development.

2.1 Empirical Literature

The importance of remittances in enhancing human capital development has led to some empirical studies conducted to verify if actually it can play this role. Employing panel data analysis, fixed effect models, and the generalized method of moments (GMM) covering the period from 2000 to 2018, Gniniguè and Ali (2022) revealed that migrant remittances significantly contributed to human capital accumulation in the ECOWAS region. In a study in Kenya, Oucho and Waweru (2022) used the mixed-methods approach which combined survey data analysis and qualitative interviews to reveal that remittances played a significant role in education financing. In Nigeria, Nwachukwu and Idowu (2022) utilized the VAR method to prove that migration had a positive impact on human capital development and economic growth and the channel through which this was achieved was remittances. Teye and Anarfi (2022) used the mixed-methods approach to reveal that remittances had significant influence on human capital development through an increase in household spending on education in a study conducted in Ghana. For Senegal, Ndiaye and Sow (2022), using national survey data and instrumental variable techniques showed that increased remittances arising from international migration improved human capital development. Using the longitudinal survey data analysis, Li and Zhang (2022) showed that rural-to-urban migration had significant impact on educational enhancement and socioeconomic mobility and remittances played a key role in household welfare and funding education improvement in China.

In Argentina, Ballesteros and Vazquez (2022) used the longitudinal survey data analysis to reveal that international migration had a positive impact on educational attainment and labor market outcomes and the channel through which this is made possible is remittances. Using the fully modified ordinary least squares (FMOLS), dynamic ordinary least squares (DOLS) and the fixed effects, Tsaurai (2024) found the impact of remittances on human capital development to be positive, though not significant under both the fixed effects and FMOLS. However, under the dynamic OLS, finding proved that remittances reduced human capital development significantly. A study involving 23 Sub-Saharan countries (SSA) by Huay and Bani (2023) found that remittances resulted into a rise in the average years of schooling. In another study in Ghana, Akrofi and Mensah (2023) employed the

survey method to show that remittances enhanced household investment in education which led to higher school enrollment. This is supported by a study in Nigeria by Akafo and Okafor (2023) which found that increased remittances arising from migration encouraged education funding which improved school enrollment rates and academic performance. Using panel data analysis, Yoshida and Shikata (2023) found that remittances arising from international migration impacted positively on human capital development and economic growth in Japan. This finds corroboration in a study in Indonesia by Rahman and Suryahadi (2023) which found that remittances exerted a significant influence in education financing as well as an improvement in household welfare. Finding further support, a study in Chile by Salas and Vergara (2023) revealed that international migration influenced human capital development and economic growth positively through the channel of increased remittances.

3. METHODOLOGY

In this paper, annual data that spanned the period from 1996 to 2022 was used. Descriptive statistics, Correlation matrix and stationarity tests were used to examine the behaviour of the variables included in the model. After determining the order of integration of the series, the study investigated the existence of cointegration among the series using panel cointegration test. In examining the impact of remittances on human capital development, the study estimated the dynamic panel techniques based on the Generalized Method of Moments (GMM) developed by Arellano and Bond (Ledhem & Mekidiche, 2021). The GMM considers the time series dimension of the data, allowing for the examination of short-run effects.

3.1 Model Specification

The baseline model that links remittances to human capital development is modified from the work of Huay and Bani (2023) which is stated as follows:

$$HCI_t = f(RMI_t, netMR_t, MGI_t, EDEx_t, HTEx_t, TAI_t) \quad (1)$$

Expressing equation one in an econometric form, the following functional model guided the study:

$$HCI_{i_t} = \delta_o + \delta_1 RMI_{it} + \delta_2 netMR_{i_t} + \delta_3 MGI_{it} + \delta_4 EDEx_{it} + \delta_5 HTEx_{it} + \delta_6 TAI_{it} + \varepsilon_{it} \quad (2)$$

Where: *HCI* = Human Capital index, *netMR*= Net migration, *MGI* = Migration governance indicator, RMI = Remittance, *EDEx* = Education expenditure, *HTEx* = Health expenditure, *TAI* = Technology attainment index, ε = Disturbance term/error term, α_o = constant term, while δ_1, δ_2, δ_3, δ_4, δ_5 and δ_6 are parameters to be estimated.

4. Results and Discussions

Table 3 presents the multicollinearity test conducted using a correlation matrix. This approach provided a comprehensive examination of the inter-variable relationships, thereby ensuring the reliability of the subsequent regression analysis.

Table 3: Correlation Matrix for Multi-Collinearity Test

VARIABLES	HCI	REM	netMR	MGI	EDEx	HTEx	TAI
HCI	1.000000	0.338734	0.142669	0.359877	0.292448	0.133589	-0.000483
REM	0.338734	1.000000	-0.101796	-0.259641	0.336680	0.013969	-0.000974
NETMR	0.142669	-0.101796	1.000000	0.003332	-0.208863	0.163683	-0.003635
MGI	0.359877	-0.259641	0.003332	1.000000	0.078325	0.103784	0.001038
EDEx	0.292448	0.336680	-0.208863	0.078325	1.000000	0.035660	-0.002586
HTEx	0.133589	0.013969	0.163683	0.103784	0.035660	1.000000	0.002678
TAI	0.048307	0.009471	0.009743	-0.015318	0.000363	-0.010338	1.000000

Source: Researcher's compilations, 2024 using E-Views 9

From Table 3, we discovered that the entire pair-wise correlation matrix is not more than 0.8. We, therefore, conclude that there is no presence of multi-collinearity among the variables in model one, signifying that each independent variable in the model influences the dependent variable differently.

Table 4 focused on descriptive analysis of the variables. This was to ensure clarity for the variables. These analyses focused more on the normality or non-normality distribution of the data set using skewedness, kurtosis, mean, median, mode, and standard deviation.

Table 4: Descriptive Analysis of the Variables

	HCI	REM	netMR	MGI	EDEx	HTEx	TAI
Mean	3.449224	1.310109	1.327662	59.20291	1.370074	4.573674	1.293755
Median	3.208505	1.530108	3676.000	55.13780	0.044403	4.777906	0.054231
Maximum	8.140970	2.430110	227791.0	117.8167	0.506360	26.41732	0.653420
Minimum	0.622470	1166455.	-156846.0	20.72252	0.000170	-20.59877	0.000170
Std. Dev.	1.312617	0.290109	0.116753	20.05423	0.017624	2.061590	0.116714
Skewness	0.711039	4.154327	-0.344153	0.943448	2.116578	-0.156522	2.193894
Kurtosis	3.499639	4.83798	3.879410	3.348974	2.779076	3.0332373	8.156019
Jarque-Bera	25.37005	3571.940	533.7673	41.11743	713.2762	912.3877	628.3519
Probability	0.000003	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	924.3920	3.510111	-3558133.	15866.38	18.77996	1225.745	30.84551
Sum Sq. Dev.	460.0313	4.920121	4.530111	107380.0	1.608808	4404.569	4.468072
Observations	307	307	307	307	307	307	307

Source: Researcher's compilations, 2024 using E-Views 9

The first row in Table 4 displays the mean scores of key variables, including the human capital index, remittances, net migration, migration governance indicators, expenditure on education, expenditure on health, and technological achievement. Subsequent rows provide information on the median, maximum, and minimum scores for these variables. In the fifth row, the standard deviation scores are presented. Notably, all variables exhibit standard deviation values lower than their respective means, indicating that the variables follow a normal distribution.

The table also shows that HCI, REM, MGI, EDEx and TAI data are positively skewed while netMR and HTEx are negatively skewed. Skewedness measures the *degree of distortion* from the symmetrical bell curve or the normal distribution. A symmetrical distribution will have a skewness of 0. A positively skewed data set has its tail extended towards the right. It is an indication that both the mean and the median are greater than the mode of the data set. In short it is the measure of the degree of asymmetry of data round its mean.

Kurtosis, in statistics, is a measure of the tailedness of the probability distribution of a real-valued random variable. Like skewness, kurtosis describes the shape of a probability distribution and indicates the nature of degree of extremity of the distributions. The kurtosis of any univariate normal distribution is 3. Distributions with kurtosis less than 3 are said to be platykurtic, while distributions with kurtosis greater than 3 are said to be leptokurtic. When the kurtosis of a distribution is approximately 3, the distribution is described as being mesokurtic. As shown on Table 4, most of the variables are either mesokurtic or leptokurtic. This implies that the distributions do not have any serious case of large outliers which implies that the variables were normally distributed.

Further giving the hypothesis of the Jarque Bera test which states that: the variables are not normally distributed for H_0 and the variables are normally distributed for H_1. Decision rule: reject H_0 if P-value< 0.05; do not reject H_0 if P-value> 0.05. The result obtained indicates that human capital development index, remittances, net migration, migration governance indicators, expenditure on education, expenditure on health and Technology advancement are normally distributed.

Table 5 displays the results of unit root tests and findings show that stationarity was achieved at level by human capital index, net migration and health expenditure, but other variables became stationary only after the first difference. These findings imply that the variables exhibited an admixture of I(0) and I(1). That is, they are both integrated of order zero and order one.

Table 5: Panel Unit Root Result

Variables	Adf Chi-Square & Adf Z-stat at level	Prob.	Adf Chi-Square & Adf Z-stat at 2nd Difference	Prob.	Order of integration	Remarks
HCI	48.5430 -2.01224	0.0125 0.0221			1(0)	Stationary
netMR	121.975 -4.75764	0.0000 0.0000			1(0)	Stationary
REM	19.8487 6.45541	0.9204 1.0000	139.713 -4.9683	0.0000 0.0000	1(1)	Stationary
MGI	49.7232 -0.95294	0.0132 0.1703	217.967 -10.9801	0.0000 0.0000	1(1)	Stationary
EDEx	48.8791 2.92659	0.0162 0.9983	101.983 2.38307	0.0000 0.0000	1(1)	Stationary
HTEx	250.582 -12.7296	0.0000 0.0000			1(0)	Stationary
TAI	7.45608 11.7331	1.0000 0.9989	-2.83017 95.8603	0.0023 0.0000	1(1)	Stationary

Source: Researcher's compilations, 2024 using E-Views 9

After evaluating the results of stationarity, the study went ahead to examine the existence of a long-run relationship (cointegration) among the variables. Table 6 shows the result of cointegration and findings indicated that the series have a long-run relationship (cointegrated). This is supported by the fact that the probability values are less than 5% level of significant. Specifically, the p-values of four out of seven estimates such as Panel v-Statistic, Panel rho-Statistic, Panel PP-Statistic, Panel ADF-Statistic, Group rho-Statistic, Group PP-Statistic and Group ADF-Statistic were found to be less than the 5% level of significant.

Table 6: Results of the Panel Co-integration Test

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-2.027358	0.9667	-2.812572	0.8740
Panel rho-Statistic	2.654027	0.9647	3.256057	0.9772
Panel PP-Statistic	-3.389235	0.0045	-3.767856	0.0053
Panel ADF-Statistic	-2.989125	0.0214	-5.685315	0.0085

Alternative hypothesis: individual AR coefs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	4.869412	1.0000
Group PP-Statistic	-5.540721	0.0000
Group ADF-Statistic	-2.745666	0.0030

Source: Researcher's compilations, 2024 using E-Views 9

Having examined the existence of a long-run relationship among the series, the study thereafter estimated the GMM coefficients of the variables of the model as shown in Table 7. Findings indicate that remittances had a positive and significant impact on human capital development in the ECOWAS. It is found that if remittances improved by one per cent, human capital development increased by 1.360. This finding finds support in earlier studies carried out in some ECOWAS countries such as Teye and Anarfi (2022) for Ghana, Ndiaye and Sow (2022) for Senegal and Akafo and Okafor (2023) for Nigeria. It equally aligns with the findings by Akeju and Olanipekun (2018) that found a significant impact of remittances on economic development in the ECOWAS region. The implication of this finding is the increased inflow of remittances into the economic bloc made a significant contribution to human capital, thus underscoring the relevance of remittances as a veritable factor that influences human capital development in the ECOWAS area. Increased remittances have the tendency to result into increased investments in education. When households receive remittances, this will enable to send their children to school, as they can afford to give quality education to their children. The literacy level can thus improve and this has the tendency to improve the skills of the educated individual. A more skilled workforce is a veritable resource that encourages productivity in the economy.

In another respect, findings indicate that net migration had a negative impact on human capital development. It was found that if net migration rose by one per cent, human capital development fall by 9.430 in the ECOWAS. This result finds corroboration in the work of Beine and Sekkel (2022) which found that migration contributes positively to human capital development, despite brain drain concern. The outcome equally aligns with the finding by Mulugeta and Gebremariam (2023) which revealed that internal migration contributes to human capital formation and skill acquisition in various African countries. Net migration has been identified to have the potential to impact wages in sending regions and countries. For instance, in the health sector, the migration of skilled health workers is often considered to be harmful to the economy of the sending countries and it leads to labour shortages. This has been the case of some ECOWAS countries such as Nigeria, Togo, Ghana and Kenya. The result of the migration governance indicators (MGI) shows that the variable has a positive and significant impact on human capital development. Finding shows that if migration governance indicators rose by one per cent, human capital development improved by 0.032. The findings aligns with the work of Kihato (2022), which reveals that effective migration governance enhance human capital development by improving access to education and healthcare. The significance of this variable is a revelation of the considerable impact of migration governance policies on human capital development. The implication of the result is that countries that have effective migration

policies have the likelihood of experiencing improved human capital development that leads to improved economic development and productivity. With respect to the present study, the significance of the migration governance indicators is a testament to the relevance of well-designed and effectively implemented policies designed to foster positive outcomes in the context of human capital development in the ECOWAS bloc.

Education expenditure was found to have a positive impact on human capital development. Finding reveals that if the expenditure on education rose by one per cent, human capital development rose by 1.996. This outcome finds support in a study by Obialor (2017) that observed a positive link between education expenditure and human capital development. The result equally finds further support in the finding by Constant and Massey (2023) which revealed that migration has a positive impact on educational attainment levels in Latin America particularly through internal migration. However, it was found that health expenditure had a positive but insignificant impact on human capital development. If the expenditure on health increased by one per cent, human capital development improved by 0.054, even though this is not significant. The implication of the result is that, if all other variables are held constant, one per cent increase in health expenditure, on average, led to an insignificant increase of 54% in human capital development for the region. The role played by health expenditure on the health of citizens and the impact of this on human capital development have been noted by Raghupathi and Raghupathi (2020) as well as Umoru and Yaqub (2013). It has been observed that a healthy individual is better equipped to learn and be educated, thus contributing to overall human capital development. Even though the outcome is not significant, the positive link between health expenditure and human capital development as revealed in this study shows the relevance of investing in healthcare as a crucial element in fostering human capital within the ECOWAS sub-region.

Finally, it was found that the technology achievement index had a positive but non-significant impact on human capital development in the ECOWAS bloc. It was observed that if the technology achievement index rose by one per cent, human capital development improved by 0.198 within the ECOWAS sub-region. The outcome reveals that there is a positive correlation between technological advancement and human capital development which find support in the theoretical expectations which state that advancements in technology enhances various human endeavours, such as the acquisition of knowledge and skills. However, the study contends that the insignificant result is an indication of a relatively low level of technological advancement within the region. One of the reasons could be that there is a limited acceptance of technology, especially among the illiterate population.

Table 7: Results of the Generalized Moment of Moment (GMM)

Dependent Variable: HCI

Variable	Coefficient	Std. Error	t-Statistic	Prob.
REM	1.360110	1.970111	6.909025	0.0269
netMR	-9.430106	6.180106	-4.525637	0.0682
MGI	0.032585	0.004546	7.167791	0.0025
EDEx	1.996636	0.955768	2.089039	0.0976
HTEx	0.054841	0.167087	3.328216	0.2430
TAI	0.198389	0.146430	1.354832	0.1766
C	1.611949	0.759136	2.123401	0.0346
R-squared	0.638587	Mean dependent var		3.563590
Adjusted R-squared	0.625229	S.D. dependent var		1.397000
S.E. of regression	1.229654	Sum squared resid		430.9341
Durbin-Watson stat	1.715695	J-statistic		1.160125
Instrument rank	6			

Source: Researcher's compilations, 2024 using E-Views 9

5. CONCLUSION

The study set out to investigate the impact of remittances on human capital development in the ECOWAS economic bloc over the period from 1996 to 2022. Findings of the study indicate that remittances impacted human capital development positively with a significant outcome. Also, while migration was found to impact human capital development positively, the impact of net migration was negative within the study period. The implication of the finding is that migration is an avenue through which remittances influence human capital development, while net migration retards human capital development although not in a significant proportion. With regard to this outcome, it is the argument of the paper that the governments of ECOWAS countries should come up with comprehensive policies that aim at attracting remittances. Such policy involves, among other; the provision of an enabling environment that facilitates seamless and cost-effective money transfers from migrant workers to their families in their home countries. This could be achieved this through the institution of competitive fees and exchange rates among financial institutions and money transfer operators. It could also be in the form of provision of incentives for banks and remittance service providers to enable them reduce their fees, encourage the establishment of financial institutions, mainly in the rural areas to enhance access to formal banking and financial services which will make remittances easier for the recipient households as this will improve the quest for financial inclusion in these countries.

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