Female Migration, Remittances and Poverty Reduction in ECOWAS.

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Abstract

The fact that more people than ever are moving in search of better lives for their families and opening new possibilities, while others are compelled to relocate because of natural disasters or conflicts has become a worldwide problem. Previous research has demonstrated that migration has extended throughout the world, with people migrating globally in 2022 originating in the south and moving north. Although gender migration has a worldwide aspect, its incidence in sub-Saharan Africa tends to be larger than in other parts of the world. This research considers the role of migration and remittances on poverty reduction in ECOWAS countries from 1990 to 2020. Also, the joint interactive effect of female migration and remittances in reducing poverty in ECOWAS countries. Using a qualitative approach, we employed UNDESA datasets to present statistics on the frequency of female migration in Africa and the sub-continent, while other data was gotten from the world bank. The study used the Prais-Winsten regression model with panel corrected errors (PCSE) and controls for heteroscedasticity and serial correlation using the feasible generalized least squares technique (FGLS) for robustness analysis. Findings from the study shows that female migrants help the family reduces poverty in the household. However, the reverse is the case with remittances, as results show that remittances exert a negative impact on poverty. Economic growth was seen to have a positive effect with the alleviation of poverty, as a growing economy is expected to lead to a reduction in poverty. Finally, the interactive effect between female migration and remittances shows that an increase in the joint effect of the two variables leads to reduction in poverty in ECOWAS countries. Therefore, ECOWAS countries should put in place regulations guiding female migrants in the region in order to enjoy the benefits and reduce poverty. Also, remittances flowing to wealthier households should be taxed and the proceeds used to improve the standard of living of people in poverty and the also put in place policies that would ensure the economy continues to grow in order to reduce poverty in ECOWAS countries.

Keywords: Gender, Migration, Poverty, Remittances, ECOWAS, PCSE

1. Introduction

The Agenda 2030 places importance on reducing extreme poverty and addressing multidimensional poverty (Patel, 2019; Traverso & Mankaa, 2023). Scholars argue that remittances from abroad hold the potential to foster economic growth and alleviate poverty by providing recipient households with necessary financial resources to tackle consumption and poverty-related issues (Acheampong et al., 2021; Oladipo, 2020). These remittances are funds received by dependents in domestic countries from migrants residing abroad. Remittances inflows across developing countries have grown in the past years and been considered as one of the main sources of external financing for household.

Personal remittances received (current US$) globally increased from $657.45 million in 2020 to $766.85 million in 2022 with about $588,102million inflow into Low- and Middle-Income countries and up to $53,137million into SSA countries while estimated data revealed that some countries in ECOWAS have a large share of remittances; Ghana and Nigeria record of $4,292million and $17,208million in 2020 rose to $4,664million and $20,127million in 2022 respectively (World Bank, 2022). These statistics indicate that remittances inflow from stock of ECOWAS migrants increases over time and are extremely important for the region. Scholars have identified migration as a pathway for households support and out of poverty mechanism in developing countries (Akeju & Olanipekun, 2018).

While migration itself is not a new phenomenon, often driven by the pursuit of better economic prospects or arising due to environmental challenges, the recent surge in international migration has been notable. Despite the challenges posed by the Covid-19 pandemic, the estimated number of migrants exceeded 281 million in 2020 (UNDESA, 2021). Statistics indicate that migrants accounted for 3.5% of the global population in 2020, contrasting with 2.8% in 2000 and 2.3% in the 1980s (UNDESA, 2021). This trajectory aligns with the SDG target 10.7.2, which centres on migration policies aimed at achieving inclusive growth.

A notable fact is the impact of COVID-19 crises on remittances as the pandemic is an unprecedented crisis that may have changed the behavior of migrants in ways that cannot be predicted and may have induced people to switch from formal to informal channels for the transmission of their funds, also as in Nigeria, a large black-market exchange rate premium may have pushed people to find more informal channels for the delivery of their funds from abroad.

Contrary to widespread belief, migration is not exclusively associated with males. Female migrants constitute a substantial 48% of international migrants (IMR, 2017). Women's mobility has been a significant aspect of international migration, evident in the statistics revealing that women and girls comprised 50% of the internally displaced population (IDPs) in 2021 (53.2

million) and 48% of those relocated across borders (21.3 million) among displaced populations (Shriwise, 2022). While the majority of migrant women relocate voluntarily, some are compelled to leave their home countries due to persecution, violence, environmental degradation, natural disasters, or other circumstances jeopardizing their safety, lifestyle, or habitat (Boskovic & Jankovic, 2023). The United Nations (2019) views migration as a gender-specific norm and expectation. Generally, any examination of the causes and repercussions of migration, whether it is coerced, voluntary, or somewhere in between, necessitates a gender-focused approach (Kosmalska, 2022).

The decision of women to migrate is influenced by various factors, including their autonomy in decision-making, access to resources, and the prevailing gender disparities in both their home and destination countries. Similar to other migrants, the outcomes of women's migration depend on their level of freedom to move, the circumstances of forced migration, and the legitimacy of their stay in the destination country (Andrews et al., 2023). Moreover, the choice for women to migrate is often linked to their ability to send remittances to support their families. This aligns with the findings of the United Nations report (2020), highlighting that migrant women frequently remit a substantial portion of their earnings at regular intervals.

Furthermore, research has revealed that the foreign remittances sent by migrant workers have a substantial impact on the national economy of the recipient nations, particularly in terms of poverty alleviation (Akeju & Olanipekun, 2018; Ali, Jaleel & Bhagat, 2019; Issack & Nzai, 2023). These remittances bolster the cash reserves of receiving households, enabling them to withstand local economic shocks and facilitating their engagement in productive endeavours. By fostering higher rates of capital accumulation, remittances often form a substantial pool of investable resources that supplement national savings and contribute to the overall growth of the nation (Xia, Qamruzzaman & Adow, 2022). On the other hand, if remittances are biased to benefit the income of more affluent households, they may exacerbate poverty (Azizi, 2020; Bang, Mitra & Wunnava, 2022). Thus, indicating that the nature of the benefactor has significant association with the effect of remittances on poverty reduction, as remittances might not be pro-poor (Kayani, 2021).

It is pertinent to consider that in spite of huge remittance inflow into ECOWAS countries, the region remains perverted by high level of poverty, for instance, data from the World Bank revealed that in 2018 poverty headcount ratio measured at national poverty lines for most ECOWAS countries are higher than the rest of most Eastern and Northern African countries such as Uganda with 20.3%, Tanzania 26.4%, Mauritius 31.8% with Niger record of 40.8%, Burkina Faso 41.1%, Nigeria 40.1%, Sierra Leone 56.8%, and Togo 45.5% of their population living in poverty. The co-movement of poverty rate with remittance inflow poises question as to what extent and under which scenario can remittance inflow promote poverty reduction.

Earlier research works consider remittances inflows from both male and female (Akeju & Olanipekun, 2018; Abduvaliev & Bustillo, 2020; Lawal, et al., 2022) while this study considers remittances from the stock of female migrants. To the best of the knowledge of the authors, this study is one of the first to use female migration and remittance data in assessing the interaction with household poverty using macroeconomic approach.

This study's primary goal is to investigate how women contribute to the poverty reduction strategies via inflows from remittance across West Africa countries. Attempt is made to consider the role of women in the developmental agenda while also showcasing their strength in the migration and development schemes. The study specifically attempts to evaluate the link among female migration, remittances and poverty reduction as well as the interacting effect of female migration and remittances and its overall effect in reding poverty in West Africa.

The remaining part of this paper is organized as follows. Section two explores stylized facts on the interconnection among female migration, remittance and poverty reduction across sub-Sahara Africa countries and ECOWAS in particular. Section three presents the methodology; in section four the findings are discussed while section five presents the conclusion and policy implication of the study.

2. Literature Review

Female migration and poverty reduction

The intersection of female migration and poverty reduction in the Economic Community of West African States (ECOWAS) has become a compelling focus of scholarly attention. As the region experiences a rising trend in female migration, understanding its implications for poverty reduction is paramount. ECOWAS has a longstanding history of high mobility. It is estimated that approximately 7.6 million international migrants were residing in the sub-region as of mid-year 2020. Recent migration trends in the region have been shaped by the policies of the Economic Community of West African States (ECOWAS), particularly the free movement of persons regime implemented since the late 1970s. While the majority of migrants within Western Africa tend to relocate within the region, a growing number are venturing to various destinations within Africa and beyond, driven by the pursuit of job opportunities and improved economic prospects. Statistics reveal that nearly half of all global migrants are female, and numerous studies substantiate the active involvement of women in migration, occurring both within countries and across international borders (ILO, 2010).

Migration as a pathway out of poverty has been identified by scholars from developing countries, particularly those in Sub-Saharan Africa (Bhatt 2009; Ghebru et al. 2018; Olagunju et al. 2019). This significantly influences household welfare, community dynamics, and ultimately, the overall economy, as evidenced by various studies (Fonta et al. 2011; Nwaru et al. 2011). The impact of labour migration on the welfare of the origin community or country is generally substantial and positive, though exceptions exist.

Specifically, Nigeria plays a significant role in contributing to net migration within Sub-Saharan Africa. According to World Development Indicators (WDI), Nigeria accounted for approximately 17% of the net migration in the region in 2017 (ILO 2019). The movement of individuals from their usual places of residence is typically influenced by various factors, encompassing both push and pull dynamics including high levels of unemployment, population growth, political instability, ethno-religious conflicts, and poverty, urban-rural dichotomy and inequalities (Ghebru et al. 2018; Bisseleua et al. 2018; Darkwah & Verter 2014). Understanding the gender dynamics of migration and its influence on poverty reduction is essential for fostering gender equality and formulating socially inclusive policies. Maximizing the effective utilization of remittances becomes crucial in the broader effort to alleviate poverty within the country. This study holds significant policy relevance, as prevailing poverty policies have predominantly been shaped by the concept of the feminization of poverty. Meanwhile, historical attributions of migration have primarily centered on males, leading to policy frameworks that may not adequately address the nuanced gender dimensions inherent in migration and its impact on poverty reduction. It is, therefore, crucial to understand the gender dimension of migration. This understanding holds significance in promoting gender equality and empowering women, thereby contributing to enhanced economic growth, poverty reduction and attainment of the Sustainable Development Goals (SDGS) that strives to leave no one behind, and, ultimately fostering a gender equitable and socially inclusive (GESI) society.

Migration, generally, offers a pathway for individuals, particularly women, to move from lower to middle-class socioeconomic standings (ILO, 2004; De and Ratha, 2005). Contrary to men, women tend to remit a larger portion of their income and actively manage household finances, ensuring that remittances are directed towards family essentials like food and clothing back in their home countries (IOM, 2005). Despite facing limited labour prospects abroad and earning less than men, women exhibit a consistent pattern of prioritizing familial welfare (ILO, 2004). For impoverished women, migration serves as a means to assert agency in environments where opportunities are typically scarce. Migration increasingly presents educational and career prospects that may not be accessible or allowed for women in their home countries. It also offers alternatives to traditional gender roles, such as the role of a caregiver, despite many women engaging in home care while abroad. Opportunities like paid domestic work in foreign households offer economic autonomy compared to being an unpaid domestic worker in their own homes (Momsen, 1999).

The interconnection of Migration, Remittances, and Household Poverty

The intricate relationship between migration, remittances, and household poverty has become a focal point of academic inquiry and policy consideration. As individuals seek employment opportunities beyond their usual places of residence, the resulting migration patterns have profound implications for household economic conditions. Understanding the motivations and drivers behind labour mobility is crucial for contextualizing its impact on household poverty. Whether driven by economic opportunities, job market conditions, or other factors (FAO, 2017; ILO, 2014), the decision to migrate for employment significantly influences the socio-economic landscape of both the origin and destination areas. Remittances, often a direct outcome of labour mobility, play a pivotal role in shaping household poverty levels. The increasing volume and influence of international remittance flows into developing nations have garnered significant attention. According to the World Bank (2014), the international remittances directed towards developing countries were estimated to have soared to $436 billion in 2014.

Proponents argue that remittances contribute positively to poverty reduction by enhancing various aspects in remittance-receiving countries, including human capital, economic growth, alleviation of credit constraints, household disposable income, savings, investment, and expenditures on health and education (Azizi, 2021; Azizi, 2018; Terrelonge, 2014). However, there exists a contrasting view suggesting that remittances could exacerbate poverty, particularly if they disproportionately favour wealthier households (Azizi, 2021).

Research by Anyanwu (2011) revealed a correlation between international remittances and increased income inequality in Africa, suggesting that a 10% rise in remittance flows corresponds to a 0.013% increase in income inequality. Furthermore, it is argued that remittances primarily serve consumption purposes rather than being allocated for investment (Acheampong et al, 2021; Ssozi & Asongu, 2016). This pattern indicates that when remittances are channeled toward consumption rather than investment, they might contribute to deteriorating human development and worsening poverty levels in the recipient countries. Additionally, Azam & Gubert (2006) put forth the argument that remittances might actually exacerbate poverty due to two primary reasons. Firstly, they propose that migration is a collective decision made by extended families aiming to diversify risk and establish a social network, leading remittances in Sub-Saharan Africa to primarily support family consumption during adverse shocks rather than investment. Secondly, they suggest that remittances create a moral hazard, as those remaining behind may exert less effort to improve their own circumstances, expecting migrants to compensate for any shortfalls in consumption.

Exploring this impact by gender disaggregation is crucial for policy interventions. Therefore, this study investigates the relationship between female migration and the resulting impact of remittance inflows on poverty reduction in West Africa. Additionally, the study aims to discern the synergistic effect of female migration and remittances on poverty reduction within the region.

Remittances and Poverty Reduction

Remittances have a major positive link with poverty alleviation, according to Akhter and Islam's (2019) analysis of the impact of remittances on household poverty reduction in Bangladesh through both the domestic and international migration channel. The study came to the conclusion that remittances and international migration are significant means of assisting low-income households in escaping poverty. As a result, it is advised that migrants receive the necessary technical and vocational training to enable them to reach their full potential and optimise the benefits of remittances to the home economy. Additionally, Huay and Bani (2018) discovered a positive correlation between remittances, poverty, and the development of human capital in a number of developing nations; Wagle and Dekota (2018) discovered a similar pattern in their investigation on the effect of overseas remittances on poverty in Nepal.

According to Yoshino, Taghizadeh-Hesary, and Otsuka (2017), a 1 percentage point rise in the GDP share of remittances from overseas is linked to a 16% and a 22.6% decrease in the poverty gap and severity ratios, respectively, for a few specific developing Asian nations. Abduvaliev and Ricardo Bustillo (2019) examined panel data on ten chosen Commonwealth of Independent States (CIS) nations in a similar fashion. The results showed that a 1% increase in remittance flow was associated with roughly a 0.25% rise in per capita GDP and a 2% drop in poverty severity. These findings were derived using economic growth, remittance, and indicators of poverty (poor headcount, poverty gap, and poverty severity). Remittances have been shown to significantly reduce poverty by raising income and balancing consumption levels.

Using statistics on nine European nations from 2005 to 2017, Mehedintu, Soava, and Sterpu (2019) discovered that the global economic crisis had an impact on emerging countries' remittances as well as their likelihood of falling below the poverty line. Moniruzzaman (2020) regressed the link between food security indicators and remittances in Bangladesh using survey datasets and the Two Stage Least Square Instrumental Variable Method (2SLS-IV) and Generalised Method of Moments (GMM). The results showed that remittances contribute to household food security and have a considerable impact on food security. The findings also show that the existence of remittances lowers food-related uncertainty, gives the household a coping mechanism to offset food-related shocks, and enhances the nutritional content of the diet in homes who receive remittances.

3. Methodology

3.1. Data and Sources

In this study, the geographic scope encompasses ECOWAS countries, specifically Benin, Burkina Faso, Cape Verde, The Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast/Cote d'Ivoire, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo, spanning from 1990 to 2020 with a five-year interval for data collection. The study employed five-year interval based on data availability on female migration from UNDESA.

The dependent variable under examination is poverty reduction (POV), and the per capita household consumption expenditure serves as a proxy for measuring poverty. Female migration (FMG) and remittances (REM) constitute the primary independent variables in this analysis. Additionally, control variables such as the level of economic activities (GDP), the population of each nation (POP), and the inflation rate (INF) are considered. In the specification of a poverty estimation, the GDP is important because it is a major factor that influences poverty and stability in the economy. Also, poverty is influenced by the population dynamics of the country while inflation signifies the general stability of an economy. This is because it has significant effect in affecting poverty levels in an economy, as an high level of inflation tends to worsen poverty as it affects income and savings of poor households.

Data for all variables, except for female migration, were sourced from the World Development Indicators (WDI) of the World Bank. Female migration data was obtained from the United Nations Department of Economic and Social Affairs (UNDESA). To address the study's objectives, interactive terms representing the relationship between female migration and remittances will also be included in the analysis.

3.2. Model Specification and Estimation Technique

The theoretical foundation for poverty according to Brady (2019) can be seen from three perspective which are behavioural, structural and political. The behavioural theory concentrates on individual behaviour which happens as a result of incentives and culture, while the structural theory focuses on demographic and labour market while political theory focuses on power and institutions. From our study, it can be seen that the behavioural and structural effects is more related based on our focal variables. Also, following the study of {Ali, Abdul, Jaleel &Bhagat, (2019); Ravallion, (1997;2008) and Anyanwu and Erhijakpor (2010;2012)}, who studies migration, remittances and poverty reduction, likewise the growth-poverty model, the study would adapt and modify the model.

The broad objective of the study is investigating how female migration and remittances aid in reducing poverty in West Africa. Thus, a linear function would be specified in equation (1):

$$POV_{it} \ = \propto_0 + \propto_1 FMG_{it} + \propto_2 REM_{it} + \propto_3 GDP_{it} + \propto_4 POP_{it} + \propto_5 INF_{it} \ + \ \varepsilon_{it} \text{-----(1)}$$

Here, the variables are as defined as in 3.1 above, while the $\propto$'s are the parameters to be estimated; l = l,…,N represents the number of cross-sections, t is the period of study and ε is the error term. Based on apriori expectation, female migration is expected to impact positively on the household as the remittances sent by them will increase household income and reduce consumption, however, female migration can cause a setback to the country, when female leave professional jobs and there will be a shortage of that profession in the country. However, remittances generally are seen to impact positively and reduce household poverty. In order to achieve the second objective which is to examine the interactive effect of female migration and remittances on poverty reduction in West Africa, this study intends to adopt the methodology of Adeleye et al (2020; 2021). The female migration -remittances relation would be indicated by the interaction of FMG and REM and this is expressed in equation (2);

$$POV_{it} = ɣ_0 + ɣ_1 FMG_{it} + ɣ_2 REM_{it} + ɣ_3 GDP_{it} + ɣ_4 POP_{it} + ɣ_5 INF_{it} + ɣ_6 (FMG * REM)_{it} + \varepsilon_{it} \text{---}(2)$$

Where, $\propto_0 \ and \ ɣ_0$ are the parameters to be estimated; ε is the error term. In order to evaluate the overall effect of female migration and remittance on poverty, the first differential of equation 2 would give:

$$FMG = \frac{dPOV}{dFMG} = ɣ_1 + ɣ_6 REM = 0 \text{--}(3)$$

$$REM = \frac{dPOV}{dREM} = ɣ_2 + ɣ_6 FMG = 0 \text{--}(4)$$

The signs of the coefficients of the interaction terms will determine the interaction of female migration and remittance and its effect on poverty. However, if the coefficients of both variables with poverty is zero, it implies that there is no significant effect on poverty. For this study, the Prais-Winsten regression model with panel corrected errors (PCSE) would be used based on the cross-sectional dependence in the data and if the variables are cointegrated. This estimation technique controls for heteroscedasticity and serial correlation. Lastly, we intend to use the feasible generalized least squares technique (FGLS) for robustness analysis.

Table 1: Variables and Measurement

Variables	Measurement	Sources
Poverty	**Per capita household consumption expenditure (%)**	**World Bank Data (WDI)**
Female Migration	**Female migrants as a percentage of the international migrant stock**	**United Nations Department of Economic and Social Affairs, Population Division (UNDESA)**
Remittances	**Personal remittances (% of GDP)**	**World Bank Data (WDI)**
Gross domestic product	**Real GDP**	**World Bank Data (WDI)**
Population	**Total Population**	**World Bank Data (WDI)**
Inflation	**Inflation (Consumer Prices, Annual %)**	**World Bank Data (WDI)**

4. Empirical Analysis

4.1. Summary Statistics

Table 4.1 presents the descriptive statistics among the variables used in the study. The statistics show that on average poverty is 22.3% in ECOWAS countries. Also, the mean value of female migration in ECOWAS countries is 47.8%. This implies that the rate of female migration in ECPWAS countries is on the high side. Likewise, data concerning growth in the countries was 22.5%, while population was 15%, inflation was 8.13%. however, remittances had the lowest value of 4.45%, which signifies that remittances are low on the average among ECOWAS countries. Standard deviation explains how far the observations are from the sample average while the minimum and maximum values tell us about the minimum values used for estimation. Remittance and inflation had the lowest value and the maximum value was inflation at 72.83.

Table 4.1: Summary Statistics

Variable	Measurement	Mean	Std. Dev.	Min	Max
Pov. Red	97	22.277	1.421	19.172	26.683
Fem. Mig	112	47.765	3.239	41.200	53.600
Remittance	102	4.456	5.071	0.004	22.979
GDP	110	22.575	1.491	19.563	26.938
Population	112	15.781	1.314	12.806	19.155
Inflation	100	8.133	12.023	-2.477	72.836

Source: Author's Computation.

4.2. Correlation Analysis

Table 4.2 below is the pairwise correlation in order to test for the problem of multicollinearity amongst the variables. All the starred variables in the table below had a positive and significant relationship amongst themselves. However, among the regressors, no evidence of perfect linear representation because the correlation statistics are less than 80% from which it becomes a major concern.

Table 4.2: Correlation Matrix

Variables	Lpovr	Fmg	Rmt	Lgdp	Lpop	inf
Lpov	1.000					
Fmg	0.185**	1.000				
Rmt	-0.312***	-0.0132	1.000			
Lgdp	0.421***	-0.0068	-0.0091	1.000		
Lpop	0.3595***	-0.1239	-0.325***	0.518***	1.000	
Inf	0.135	-0.0734	-0.1466	0.1602*	0.191**	1.000

Source: Author's Computation. ***, **,* indicate statistical significance at the 1%, 5% and 10% level

4.3. Pre-estimation Test: Cross Sectional Dependence

Prior to estimating the Prais-Winsten regression correlated panel test, it is of utmost importance to carry out cross sectional dependence, stationarity and cointegration test. However, for this study, only the cross-sectional dependence (CD) test was carried out. The stationarity and cointegration test could not be carried out due to the nature of the five-year data used in the study as a result of our female migration data. Thus, the result presented in Table 4.3 is the pre-estimation test for CD. This test is carried out in order to determine if we have cross sectional dependence among the variables. According to Pesaran (2004) CD test, the null hypothesis can either be strict cross-sectional independence or weak cross-sectional independence

(Pesaran,2015). Thus, the outcome from Table 4.3 below confirms the evidence of CSD. This implies that we reject the null hypothesis of cross-sectional independence and accept the alternate hypothesis of cross-sectional dependence. Therefore, the result shows the presence of cross-sectional dependence among countries at the 1% level with the exception of female migration. Thus, any shock that occur in any of the ECOWAS countries can be transmitted to others easily.

Table 4.3: Pre-estimation check

Variable	CSD Statistics	p-value	average joint	mean	mean abs
Lpovr	16.598***	0	7	0.57	0.69
Fmg	-1.547	0.122	7	-0.05	0.48
Rmt	4.614***	0	7	0.16	0.49
Lgdp	26.798***	0	7	0.92	0.92
Lpop	28.726***	0	7	0.99	0.99
Inf	8.732***	0	7	0.3	0.49

Source: Author's Computation. ***, **,* indicate statistical significance at the 1%, 5% and 10% level

4.4. Composite Results: PCSE and FGLS

Here, the first objective of the study is to examine the effect of female migration and remittances on poverty reduction in ECOWAS countries. Furthermore, the study investigates the interactive effect between female migration and remittances on poverty reduction. From Table 4.4, the main regression is the linear regression, correlated panel corrected standard error, while the robustness check is from column {1-3} which is the feasible generalized least squares. From the main results, the coefficients female migration is positive and statistically significant at the 1% level. As expected, this suggest that female migration helps in reducing poverty in ECOWAS countries and this validates the study of De and Ratha (2005), which opined that particularly for women, migration is the pathway to move from lower income class to middle class socioeconomic class. This view was also supported by ILO (2004). This implies that a percentage change in female migrants leads to a 0.476 increase in poverty reduction, holding other things constant. This is not surprising as the recent outflux of female migrants can be seen to reduce poverty as household consumption expenditure increases. Also, according to (Olagunju et al, 2019 & Ghebru et al, 2018), migration is seen as a pathway out of poverty in developing economies which supports the high figures experienced in female migrants in ECOWAS and it is in line with the findings of this study.

However, the coefficients of remittance are negative and statistically significant at the 1% level and this validates the study of Azizi (2021) which opines that remittances could have a negative effect on poverty especially when they are being remitted to wealthier households. Also, Hein’s (2005) result collaborates the findings from our study that migrants’ remittances did not necessarily contribute to improved living conditions. Therefore, our findings contradict the study of Terrelonge (2014) and Azizi (2018) where they argued that remittances positively affect poverty reduction because it helps in various aspects of human capital, household disposable income and expenditures on health and education. This implies that a percentage increase in remittances leads to a 0.476 reduction in poverty level. Also, a positive and significant relationship is experienced between growth and poverty reduction, which implies that as the economy grows, poverty increases by 0.836%. lastly, the interactive effect between female migration and remittances shows that an increase in the joint effect of the two variables leads to reduction in poverty in ECOWAS countries. Column {1-3} under the FGLS estimation is the robustness test deployed in the study. The estimation which is the third column shows no autocorrelation and heteroskedastic with cross-sectional correlation gives the best result under the robustness check, followed by the no autocorrelation and homoscedastic estimation in column 1 while the column two is no autocorrelation and heteroscedastic estimation is not significant for all variables. Given these results, we can conclude that the interacting effect has a good effect on poverty reduction.

Table 4.4:
Composite results (Dep. Var:lpovr)

Variables	**PCSE**	**FGLS**		
	Main Regression	**Robustness Check**		
		{1}	**{2}**	**{3}**
Constant	-30.048**	-30.048**	-4.927	-25.221***
	(12.986)	(12.852)	(6.516)	(8.724)
Fmg	0.476***	0.476**	0.034	0.399***
	(0.179)	(0.189)	(0.084)	(0.142)
Rmt	-0.414***	-0.414***	-0.101	-0.378***
	(0.135)	(0.132)	(0.093)	(0.059)
Lgdp	0.836**	0.836***	0.947	0.727**
	(0.408)	(0.217)	(0.346)	(0.128)
Lpop	0.6060	0.607	0.256	0.661***
	(0.802)	(0.589)	(0.468)	(0.324)
Inf	0.0220	0.022	-0.017	0.037***
	(0.372)	(0.053)	(0.023)	(0.012)
fmg*rmt	-0.009***	-0.009***	-0.0009	-0.008***
	(0.003)	(0.003)	(0.018)	(0.0007)
R-Squared	0.315			
Wald Statistics	53.58	51.47	33.74	316.8

Source: Author's Computation. ***, **,* indicate statistical significance at the 1%, 5% and 10% level

5. Conclusion and Policy Implications

This study examined the impact of female migration and remittances in the alleviation of poverty and also the interaction between female migration and remittances and its resultant effect on poverty reduction in the ECOWAS states from 1990 to 2020 using a five-year gap plan. This type of data set was used as a result of the female migration data which had a five-year gap interval. The findings from the PCSE and FGLS provides sufficient evidence that female migration helps in reducing poverty in ECOWAS countries. This implies that female migrants help the family and thus reduce poverty in the household. However, the reverse is the case with remittances, as results show that remittances exert a negative impact on poverty and this could be as a result of the recipients of the remittances. Economic growth was seen to have a positive effect with the alleviation of poverty, as a growing economy is expected to lead to a reduction in poverty. Finally, the interactive effect between female migration and remittances shows that an increase in the joint effect of the two variables leads to reduction in poverty in ECOWAS countries. The findings therefore suggest that ECOWAS countries to pit in place regulations guiding female migrants in the region in order to enjoy the benefits and reduce poverty. Also, remittances flowing to wealthier households should be taxed and the proceeds used to improve the standard of living of people in poverty and the also put in place policies that would ensure the economy continues to grow in order to reduce poverty in ECOWAS countries.

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