

The Impact of Remittances on Economic Growth: Evidence from Ghana

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ABSTRACT

Purpose

Amid growing global remittance flows and their associated impact on economic performance, this paper provides empirical evidence on the effect of remittances on economic growth.

Design/Methodology/Approach

Annual time-series dataset and the Fully Modified Ordinary Least Square (FMOLS) semi-parametric econometric technique are used to establish the effect of remittance variables on economic growth.

Findings

Findings indicate that remittances have a positive effect on economic growth, and since official estimates of remittances tend to considerably understate the actual volume of remittance flows, more accurate data on remittances is likely to reveal an even more pronounced effect on growth. The study also revealed that the exchange rate in Ghana tends to have a negative effect on remittances, and therefore, in an attempt to increase GDP, government can seek to manage the level of the exchange rate through monetary policy tools.

Practical Implications

For policy purposes, we recommend that foreigners, investors and policy makers and managers, must take into consideration that difference in remittance patterns as they influence individuals behaviour, investment decisions, and consequently the economic performance.

Originality/Value

To the best of our knowledge, this study provides the first empirical evidence of disaggregated remittances on economic growth in Ghana. This study uses yearly data to provide empirical evidence that remittances determines economic performance.

Keywords: Remittances, Economic growth, GDP, Migrants, Ghana

INTRODUCTION

Remittances have an array of effects on a nation's economy (Addisson, 2015). But economists are still debating whether remittances have a positive effect on a nation's economic development (Magai, 2020). The fact that savings are used for consumption rather than the accumulating of productive assets (Ahmed & Hakim, 2017), and the theoretically low marginal propensity to consume out of transitory income are all cited by those who hold the view that remittances do not contribute to economic growth. Remittance advocates emphasise the growth of payment systems and financial institutions that handle and deal in remittance (Sekantsi, 2018), the use of remittance as foreign exchange (Abbas, 2016), and the role remittance plays in developing economies as a substitute for debt, which helps reduce people's credit constraints in such developing economies. These

arguments can be categorised into two groups of development economists: those who support a bottom-up strategy in which the individual is lifted out of poverty first and society follows, and those who support a top-down strategy that emphasises the development of institutions (Turok & Habiyaemye, 2020). On the other hand, external factors like remittances and imports from other nations are equally important for enhancing economic growth, particularly in developing countries (Jouini, 2015). Remittances have been seen as a growth-improving element in emerging nations and as a driver for capital accumulation, technological advancement, and output growth. A World Bank (2016) study suggests that recorded remittances have grown faster than foreign direct investment and it was also documented that remittances have increased more quickly than foreign direct investment (Tahir, Khan & Shah, 2015). The connection between remittances and growth, particularly in West Africa, has received little attention despite the growing significance of remittances in total foreign capital flows. Furthermore, no substantive consensus has been reached regarding the connection between remittances and growth. The overall impact of remittances on Ghana's economic growth is examined in this study. In light of this, the purpose of this study was to investigate how remittances have affected Ghana's economic expansion.

Economists generally agree that remittances have an economic influence through consumption, growth, income distribution, savings, investments, and poverty reduction. Remittances are becoming more important in developing economies when credit markets are inefficient. Recent research in finance and economic development has identified remittances as critical variables in emerging economies' development prospects, as well as their potential beneficial effect as a growth instrument in these developing economies (Addison, 2014). The focus of these papers makes the different studies examining the effect of remittances on African economic growth more clearly. While some empirical studies (Meyer and Shera (2017), Sobiech (2019), and Ferdaous (2016) find evidence of a negative or no impact, others (Lim & Simmons (2015) and Chowdhury (2016) find evidence that remittances have a beneficial impact on economic growth. According to Chaudhry (2019) and Docquier (2017), remittances have a favourable effect on growth, especially in nations with strong financial intermediation, as they lessen poverty, stabilise consumption, and ease the capital limitations of low-income earners. However, the negative effects on growth may be explained by the emigration of highly skilled and productive individuals as well as an overreliance on the global economy (Nwaogu & Ryan, 2015). Remittances are also not used for direct productive investment, claims Withers (2019). Instead of being used to promote long-term growth and development, these funds are spent on consumption, housing, and land, which is seen as a waste of resources. In addition, other substitutes were employed in the experiments of different researchers. Alkhathlan (2013) and others claim that foreign aid increases an economy's income and rate of investment by refilling its available resources. In the few remittance studies that have been conducted in Ghana, the consequences on economic growth have never been taken into account (Zanforlini, 2018; Matuzeviciute & Butkus, 2016; Siaw & Adam, 2010; Sobiech, 2019). In order to help resolve the current problem, more study is required due to such discrepancies in findings. An empirical analysis of the connection between remittances and economic growth is essential for achieving this goal. There is, however, scant current empirical data examining the effect of remittances on Ghana's economic expansion. The remainder of this article is organized as follows. Section II reviews the literature on remittances in Ghana. Section III discusses the data and methodology used for the study. Section IV presents and discusses results of the study. Finally, Section V presents conclusions and recommendations.

LITERATURE REVIEW

Pure Altruism and Self Interest theory

According to the Pure Altruism theory, migrants send money home to help out the rest of their family (Paerregaard, 2015). According to Klabunde and Willekens (2016), in this paradigm, the usefulness of the immigrant is subtracted from that of his or her family back home. This implies that the migrant is obligated to send extra money to his family during tough economic times in his native country. The idea holds that remittances are "compensatory transfers" since they increase in response to economic hardships in the migrant's home country, such as droughts or financial crises (Nkoobe, 2019). In order for the migrant to remit additional payments, economic setbacks or "bad luck," as Klabunde and Willekens (2016) refer to it, must be creating a gap for the remaining family. Remittances are countercyclical because they are compensatory in nature under the Pure Altruism paradigm, which means they typically rise if economic conditions worsen across the business

cycle (Vargas-Silva, 2008). Altruistic remittances, according to the Bank of Uganda (2007), can be countercyclical to GDP patterns. This is likely because migrants frequently send more money home during recessions to help their families manage their expenses. According to Brown (2016), who also made observations about remittance behavioural patterns under a Pure Altruism paradigm, there is a negative correlation between remittance quantities and domestic economic conditions. This idea proposes that the volume of remittance inflows would decline as domestic economic conditions improved. On the other hand, the argument based on pure self-interest contends that remittances are not always countercyclical. The number of remittances might decrease in a number of circumstances or scenarios because of the recipient country's struggling economy. In this instance, there is no inverse relationship between the volume of remittances and the economic performance of the home country (Brown, 2006). Remittance volumes and home country economic performance may actually be positively correlated, with low remittance volumes reflecting unfavourable economic circumstances. The Pure Self Interest theory was developed as a result of these behavioural tendencies.

Harrod-Domar Growth Model

This growth strategy is built on saving and investing. Harrod (1939) and Domar (1946) claimed that increasing investment promotes not just total demand, which leads to an increase in national income, but also total supply, which leads to an increase in productivity. Increased productivity leads to increased national income, and as a result, a significant quantity of cash will eventually transfer back into more investment. Economic growth is directly proportionate to or dependent on the marginal savings rate and capital-output ratio in this regard. They both stressed the importance of capital accumulation in economic growth. They also examined the significance and viability of government engagement and macroeconomic control in boosting economic growth by regulating savings, introducing foreign capital, and improving the capital-output ratio. According to Harrod and Domar, in order to increase its capital stock, any economy must save a portion of its national income and invest in new investments.

The Harrod-Domar Growth Model is a macroeconomic theory that provides insights into the relationship between investment, savings, and economic growth. Although it is a simplified model and may not capture all real-world complexities, it can be useful in examining the potential effect of remittances on economic growth in certain contexts. However, the Harrod-Domar model has some limitations and does not account for factors like technological progress, population growth, or the quality of investments. Moreover, the impact of remittances on economic growth can vary depending on how these funds are used, the institutional environment, and the economic structure of the recipient country. While the Harrod-Domar model provides a theoretical framework for understanding the potential link between remittances and economic growth, real-world analysis should consider additional factors and employ more sophisticated models to capture the complexities of this relationship accurately. Researchers often use empirical methods, time-series data, and cross-country studies to assess the actual impact of remittances on economic growth in diverse contexts.

Empirical Review

There have been numerous empirical studies on the relationship between remittances and economic growth in developing nations. As will be seen in this section, numerous studies on the impact of remittances on economic growth have yielded conflicting findings. Regarding how remittances affect recipient countries' economic growth, scholars are divided. The factors governing remittances and their effect on the economic development of West Africa were examined by Kadozi (2019). Remittances connect local savings and investment and introduce third-world countries to the newest technology and management skills from rich countries, according to Kadozi (2019), which has a significant impact on third-world economic progress. In addition to economic development, several studies have attempted to establish a relationship between remittances and other macroeconomic factors like investment, real exchange rate, and export performance. The impact of remittances and foreign aid on the growth of savings and investments in 34 West African nations between 1980 and 2004 is examined by Chowdhury (2016). Foreign aid and remittances both have a favourable effect on the growth of savings and investment in West African economies, according to the results of the study's two-stage least squares estimate model. However, it was discovered that in the 34 nations investigated, remittances were more successful than foreign aid at encouraging savings and investment. The results of the study indicate that remittances can be anticipated to have a favourable indirect impact on recipient countries' economic growth if they raise savings and investments. The results of two studies that examined the impact of remittances on Dutch disease must be

weighed against this finding. Using data from 1975 to 2002 and a panel of 100 developing countries, Jouini (2015) found a positive correlation between remittances and economic growth. The results show, however, that the positive correlation only exists in nations with weak or underdeveloped financial institutions. Zanforlini (2018) found evidence in favour of remittances having a favourable effect on economic growth using dynamic GMM calculations. The study, which looked at 162 nations over a 32-year period, found that remittances could significantly increase a recipient country's long-term economic growth if those nations had sound political and economic institutions. Matuzeviciute and Butkus (2016) used a panel model of 113 developing nations using data from 1970 to 1998 to examine if remittances are associated with GDP growth. Remittances and economic growth were found to be negatively correlated by the study's instrumental variable estimate technique. The paper claims that moral hazards brought on by remittances reduce the employment pool, which is bad for economic growth. Using Fixed Effects and Ordinary Least Squares (OLS) models, Meyer and Shera (2017) found that remittances have no impact on economic growth. They made use of information from a panel study that included 84 countries between 1970 and 2004. The report claims that no emerging economy has evidence of remittance-led growth. Remittances have reportedly prevented economic growth in a number of nations, according to the study. According to Zanforlini (2018), model misspecification and failure to address the endogeneity issue were two of the key reasons that several earlier studies provided evidence in favour of the positive growth implications of remittances. The results of a study by Ahmed and Hakim (2017) support the earlier findings. Contrary to what some other academics have said, the study's analysis of data from 1960 to 2007 shows that remittances do not directly contribute to economic growth. Empirical literature is hotly debated, just as theoretical literature. The studies' conclusions regarding how remittances affect economic growth were inconsistent and ad hoc. This makes it impossible to draw broad conclusions about how remittances affect the West African economy. Helgoe, Oswald, and Quattro (2020) used the Granger-causality and Cointegration tests inside the Vector Autoregression (VAR) framework to analyse the relationship between remittances and economic growth in Ghana. Using time series data over a 33-year period, it was found that remittances contribute to economic growth in Ghana. As a result, it was argued that emigration regulations should be established to make it more appealing to leave and send money back to Ghana since remittances advance economic development. Lartey (2011) looked into the connection between remittances and per-capita growth as well as if capital accumulation or other factors are the main ways that remittances affect growth. Researchers found a link between remittances and growth using data from Sub-Saharan African nations and dynamic empirical models. The data also provide two important financial development criteria's threshold values, which must be met.

DATA AND METHODOLOGY

Data

The study primarily made use of secondary annual time-series data obtained from the World Bank's World Development Indicators (WDI) database, covering the period [specify exact start year]–[specify exact end year]. After accounting for [specify: e.g., first-differencing / lagged variables / listwise deletion of years with missing observations], the estimation sample comprises 29 annual observations; this is lower than the 32 years nominally covered by the raw series and the discrepancy is due to [specify the exact reason, e.g., loss of degrees of freedom from differencing, or unavailable data in specific years]. Four variables were employed in the final specification: economic growth, remittances, inflation, and the exchange rate. Economic growth is measured as GDP per capita growth (annual %) in [specify: current or constant US dollars], drawn from the WDI series [specify exact WDI indicator code, e.g., NY.GDP.PCAP.KD.ZG]. Remittances are measured as personal remittances received (% of GDP), WDI series [specify code, e.g., BX.TRF.PWKR.DT.GD.ZS]. Inflation is measured using [specify: consumer price index, annual %], WDI series [specify code]. The exchange rate is measured as [specify: official exchange rate, local currency units per US dollar, period average], WDI series [specify code]. Import and export variables were considered in the general model specification in Section 3.3 because the literature (e.g., Jouini, 2015) identifies trade openness as a plausible channel linking remittances to growth; however, they were excluded from the final estimated model because [specify the actual reason, e.g., they were statistically insignificant in preliminary estimation, introduced multicollinearity with the exchange rate variable, or reduced the usable sample further]. Time series regression was used as the research methodology, applied via Fully Modified Ordinary Least Squares (FMOLS). This choice reflects a deliberate trade-off: with only 29 usable annual observations, more data-intensive techniques such as the Johansen cointegration test, an Error Correction

Model (ECM), Vector Error Correction Model (VECM), or system GMM would have very low statistical power and unreliable asymptotic properties. The study therefore does not report unit root, cointegration, or GMM-based estimates, and this is acknowledged as a limitation of the study rather than an omission: findings should be interpreted as evidence of association over the sample period rather than as evidence of long-run equilibrium relationships or causal short-run dynamics. Future extensions of this study using a longer time series, higher-frequency (quarterly or monthly) data, or a cross-country panel would be better placed to apply these techniques, as discussed in Section 5. The generalisability of the results is correspondingly limited to Ghana over the sample period and should not be extrapolated to other countries or periods without further testing.

Model specification

In studying the remittances and growth nexus in Ghana, the study augments the aggregate production function of the Romer endogenous growth model adopted in Levine and

Zervos (1998) and Manu (2017). The general specification of the model is;

$$Y_t = f(\sum_{n=1}^1 \text{Remittances}, \sum_{n=1}^2 \text{Macro economic variables})$$

Y_t indicates the Economic growth, the economic growth is represented by GDP per capita. Remittances is also represented by remittances as a percentage of GDP and macro-economic variables which is also represented by inflation and exchange rate.

The reduced form of the model is written as;

$$\text{Economic growth (EG)} = \alpha + \beta_1 \sum_{n=1}^1 \text{Remittances} + \beta_2 \sum_{n=1}^2 \text{macro variables} + \varepsilon_t$$

Where;

Economic Growth = {Gross domestic product (GDP)}

$\sum_{n=1}^1 \text{Remittances}$ = remittances as a percentage of GDP

$\sum_{n=1}^2 \text{macro variables}$ = inflation and exchange rate

ε_t = error term

Trends in remittances in Ghana

Figure 1 below shows the trend of overseas remittances between the periods 2018 to 2022.

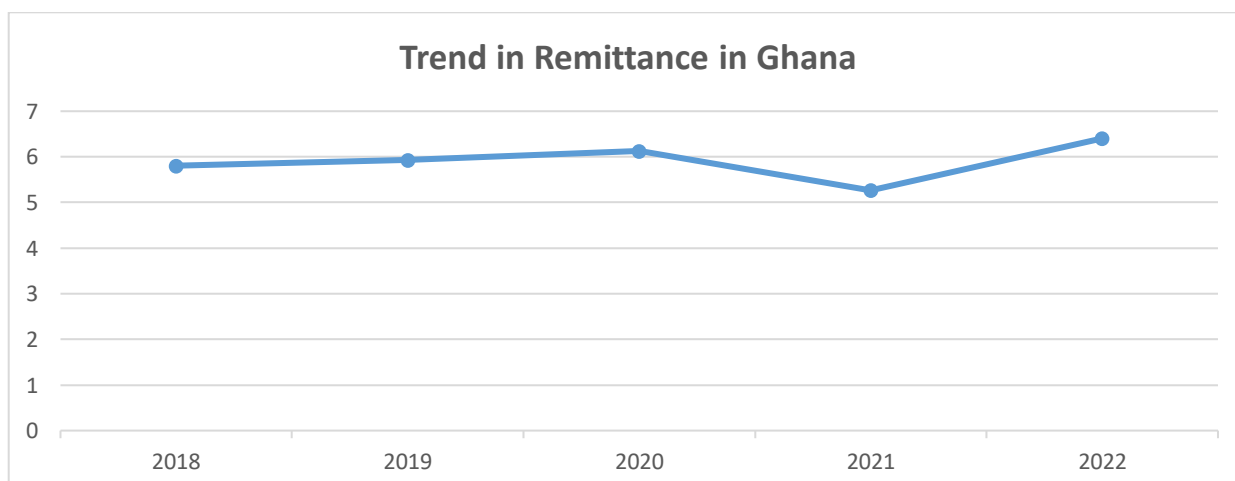


Figure 1: Trends in Remittances

From Figure 1, we could vividly see that remittances to Ghana have generally exhibited an increasing trend over the five years period, with some fluctuations which could be due to global some economic conditions and other factors. Remittances are a significant source of foreign exchange for the Ghanaian economy and contribute to household income and economic stability (Alagidede & Ibrahim, 2017). While the overall trend from 2018 to 2022 has been positive, there have been variations in the growth rates of remittances. Some years might have seen higher growth rates compared to others, influenced by factors such as global economic growth, exchange rate movements, and regional economic conditions. The fall in 2021 remittance could be as a result of global events, such as economic slowdowns, the COVID-19 pandemic, and changes in migration patterns, can impact remittance flows. For instance, the COVID-19 pandemic and associated lockdowns in various countries could have temporarily affected the ability of migrants to send remittances. However, government policies and initiatives aimed at promoting remittances and reducing the costs of transfers could also influence the downward trend in 2021. These policies might include partnerships with financial institutions, offering incentives to senders and recipients, and promoting financial inclusion. Also, exchange rate fluctuations between the currencies of the sender's country and the Ghanaian cedi can impact the value of remittances received by recipients in Ghana. These fluctuations can influence the amount and value of remittances.

Regression Analysis

Table 1: Regression Analysis

Variables	Economic growth (GDP)
Remittances	0.0068
	(0.0064)
Inflation	-0.0014
	(1.4500)
Exchange rate	-0.1813**
	(2.8500)
_cons	0.3717**
	(12.1900)
Number of Obs	29
R- Squared	71.59%
Prob>F	0.0011

Source: Eviews, 2023 z statistics in parentheses ***p<0.01, **p<0.05, *p<0.1

Variables	Remittances
Exchange rate	-0.3425
	(0.0036)
_cons	0.1234**
	(32.86)
Number of Obs	29
R- Squared	64.23%
Prob>F	0.0043

Source: Eviews, 2023

DISCUSSION OF RESULTS

The overall regression model for economic growth is statistically significant (Prob>F = 0.0011), and explains a substantial share of the variation in economic growth (R-squared = 71.59%, meaning that approximately 72% of the variation in GDP per capita growth over the sample period is accounted for by remittances, inflation, and the exchange rate jointly). At the level of individual coefficients, however, the picture is more nuanced. The

coefficient on remittances is positive (0.0068) but, unlike the exchange rate and the constant term, does not carry significance stars in Table 1, indicating it does not reach conventional levels of statistical significance ($p < 0.10$) in this specification. This distinction matters: the model as a whole performs well, but the data in this sample do not allow us to reject the possibility that the true remittances-growth relationship is zero. We therefore interpret the positive sign as suggestive rather than conclusive evidence, consistent with the broader empirical literature's lack of consensus discussed in Section 2.3. Economically, a coefficient of this magnitude would imply that a one-percentage-point increase in remittances as a share of GDP is associated with a comparatively modest change in GDP per capita growth, which is plausible given that remittances constitute only one of many channels influencing growth and that a meaningful share of remittance income in Ghana is understood to be directed toward consumption rather than productive investment (Withers, 2019). This finding is directionally consistent with Bettin and Zazzaro's (2018), Bouoiyour and Miftah's (2016), and Brown's (2006) findings, though the lack of statistical significance here also aligns with the null or weak findings reported by Meyer and Shera (2017) and Ahmed and Hakim (2017), and departs from the significant negative associations reported by Chaudhry's (2019) and Docquier's (2017) investigations. The economies of West Africa have benefited to varying degrees from remittances in their expansion, though the strength of that relationship, as shown here, is sensitive to model specification and sample period. Remittances can also help countries' foreign exchange reserves rise, which stabilises their own economies and leads to positive growth. Remittances are neither a magic bullet nor a replacement for a prolonged, locally built development effort to solve the issues of low-income countries, claims Ferdaous (2016). Furthermore, mass migration can negatively impact domestic labor markets in particular industries like higher education, public services, science and technology, manufacturing, and services, especially when those who migrate abroad are typically highly skilled workers who are expensive and difficult to replace. Remittances made by migrant workers can help families with their immediate financial struggles by meeting their children's basic requirements for food, healthcare, and education. In addition to being a source of small-scale savings, an untapped market for money transfers has the potential to pave the way for the expansion of the formal financial sector, which is crucial for the economic development and growth of African nations (King & Levine, 1993). Additionally, the correlation between inflation rate and economic growth was negative with a coefficient of -0.0014 and statistically insignificant. The negative coefficient of -0.0014 shows that for every unit increase in inflation rate, there is a corresponding drop in economic growth of 0.0014 US dollars. The results support Korkmaz's (2015) theory that the rate of inflation has a detrimental impact on economic growth. The analysis contests the findings of Lim and Qutb's study from 2021, which indicated a favorable correlation between inflation and economic growth. Interest rates, government spending, and loan properties are the key causes of greater inflation. Others include quick salary rises, growing raw material costs, the abrupt increase in import prices, rising energy expenses that drive up the cost of manufacturing and shipping items, as well as greater production costs. A high interest rate is theoretically predicted to be detrimental to growth in real GDP per capita because it increases the cost of borrowing, which in turn slows the rate of private sector investment and, as a result, lowers real output growth. The rate of inflation in West African nations continues to be a significant source of issues. A high rate of inflation causes resource misallocation by upsetting stable growth and distorting changes in interest rates. According to Chowdhury and Sundaram (2023), there is a point at which inflation is detrimental to growth; as a result, creeping inflation on its own is not deleterious to growth.

Additionally, the analysis found a statistically significant negative relationship between the exchange rate and Ghana's economic growth (coefficient = -0.1813, $p < 0.05$), indicating that exchange rate depreciation is associated with lower economic growth over the sample period. This result is consistent with the findings of Abdullah (2020) and Ugwuanyi and Ugwunta (2017), who similarly demonstrated a negative association between the exchange rate and GDP per capita, but conflicts with Omodero (2020). The results back up the endogenous growth theory, which promotes boosting the level and rate of per capita production growth through the use of economic tools like exchange rates and tax laws. According to the endogenous growth theory, internal, rather than external, causes are what ultimately drive economic growth (Pasichnyi, 2017). The success of a nation's economy as a whole can be impacted by the way exchange rates shape its external trade and financial contacts (Van't Klooster & Fontan, 2020). It is significant to highlight that a number of variables, including the trade structure of the nation, inflation dynamics, productivity levels, monetary and fiscal policies, and general economic conditions, affect how exchange rates affect economic growth. Additionally, different outcomes may result depending on whether the change in the currency rate is gradual or abrupt, and if it reflects underlying economic fundamentals or speculative forces. To balance these effects and promote stable economic growth,

governments and central banks frequently work to manipulate currency rates (Dikau & Volz, 2021). Achieving this equilibrium can be difficult, therefore when making choices on economic and exchange rate policies, officials must carefully assess any potential trade-offs.

Last but not least, the exchange rate negatively impacted remittances with a coefficient of -0.3425 and a statistically significant effect on remittances in Ghana. A 1 unit increase in exchange rate will result in a 34.25% percent fall in remittances, according to the negative coefficient of -0.3425, and vice versa. The analysis supports Jaiyeoba's (2015) findings that the exchange rate negatively impacted remittances to Ghana and disagrees with Magai's (2020) conclusions that the currency rate positively impacted remittances.

The negative effect of exchange rate fluctuations on remittances can be understood through the lens of the "Migrant's Dilemma" theory, which highlights the challenges faced by migrants and their families when dealing with currency fluctuations. Exchange rate volatility can significantly impact the value of remittances sent by migrants to their home countries (Poghosyan, 2023). A depreciating local currency relative to the currency of the host country can lead to a reduction in the purchasing power of remittances when converted into the home currency (Poghosyan, 2023). To mitigate this negative effect, policies and financial instruments that offer exchange rate protection or mechanisms for efficient currency conversion may be considered to safeguard the value of remittances and their positive impact on recipient households.

Cognitive Dimensions of Remittances

Cognitive dimensions of remittances refer to the ways in which individuals perceive, understand, and make decisions about remittances within the context of their socio-economic and cultural environment (Opiniano, Tan & Rudd, 2023). These cognitive dimensions can have a significant impact on how remittances are sent, received, and utilized. Here are some key cognitive dimensions to consider; perceived significance and purpose, financial literacy and decision-making, social norms and expectations, risk perception and financial planning, cultural values and identities, migration and aspirations, expectations and satisfaction. Understanding these cognitive dimensions is crucial for policymakers, researchers, and development organizations aiming to design effective interventions and programs related to remittances in Ghana. It helps ensure that these initiatives align with the cultural, social, and economic contexts of the recipients and contribute to positive socio-economic outcomes.

SUMMARY AND CONCLUSION

This study aims to empirically examine the impact of remittances on Ghana's economic development. The results of some studies indicate that remittances positively influence economic growth, whereas the results of other studies indicate that remittances negatively influence economic growth, hence it is unclear if remittances have an impact on growth or not. This prompted additional investigation into the field of study in order to enrich the body of knowledge and arrive at a more firm conclusion regarding the issue. However, later research showed that remittances had a positive and significant relationship with Ghana's economic development. Ghana's economic expansion was negatively impacted by inflation and, more significantly, by the exchange rate. To gain a better understanding of the impact of remittances on economic growth, this study can be expanded to include West African or African nations. Quarterly or monthly data could be used in studies on the impact of remittances on economic growth to obtain larger data points and examine how the relationship seen here will differ. In order to examine any progress in the contributions of remittances to economic growth in Ghana, the complete study might be repeated in five years.

Policy Implications and Recommendations

The findings carry several implications for policymakers, financial institutions, and development organisations in Ghana. First, given the positive, if not always statistically decisive, relationship between remittances and economic growth, policy should focus on strengthening the channels through which remittances translate into growth rather than assuming the relationship is automatic. This includes reducing the transaction costs of formal remittance transfers, which remain high across the West African corridor relative to global averages, so that a larger share of funds sent reaches recipients and financial-sector channels rather than being lost to fees or diverted through informal transfer routes. Second, the significant negative effect of exchange rate depreciation on both

economic growth and remittance inflows found in this study suggests that exchange rate stability should be treated as a channel of interest to migration and diaspora policy, not only conventional monetary policy.

Predictable exchange rate management and, where feasible, hedging instruments or remittance products denominated to protect senders and recipients from currency volatility, could help preserve the purchasing power of remittance income. Third, financial inclusion and financial literacy initiatives targeted at remittance-receiving households could help shift a greater share of remittance income from consumption toward savings, productive investment, and small enterprise formation, addressing the concern raised in the literature (Withers, 2019) that remittances are often absorbed into consumption rather than productive use.

Fourth, given the study's data limitations, the Bank of Ghana and Ghana Statistical Service could support future research by publishing higher-frequency (quarterly or monthly) remittance and macroeconomic data, which would allow subsequent studies to apply cointegration and error-correction techniques that this study's annual sample size could not support.

Future research should also consider extending the analysis to a panel of West African countries, incorporating institutional quality indicators as moderating variables, and examining sectoral or regional variation in how remittances are used within Ghana.

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