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REMITTANCE INFLOWS AND FINANCIAL DEVELOPMENT IN SUB-SAHARAN AFRICAN COUNTRIES: DOES GOVERNANCE MATTER?

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REMITTANCE INFLOWS AND FINANCIAL DEVELOPMENT IN SUB-SAHARAN AFRICAN COUNTRIES: DOES GOVERNANCE MATTER?

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Abstract

Background: *The surge in remittances in most sub-Saharan African countries motivated this study to establish whether remittance inflows enhance financial development and whether governance plays any significant mediating role in the nexus between financial development and remittance inflows.*

Purpose: *The study examines the impact of remittance inflows on bank-based financial development in 26 sub-Saharan African (SSA) countries using three proxies of bank-based financial development. The study also examines whether government regulatory quality and effectiveness modulate the impact of remittance on bank-based financial development.*

Method*: The generalised method of moments (GMM) estimation technique is used to examine this linkage.*

Results: *The results show that when financial development is proxied by liquid liabilities and bank deposits, remittance inflow is found to have an unconditional positive impact on bank-based financial development, while governance is found to reinforce the positive relationship between remittance and financial development. However, when financial development is proxied by deposit money bank assets, remittance is found to have no profound effect on bank-based financial development, but it was found to interact with government effectiveness to yield a positive influence on financial development.*

Conclusion: *Overall, remittance inflows were found to have an overwhelming positive impact on the banking sector development. It was also found that good governance generally tends to reinforce the positive impact of remittances on banking sector development.*

Novelty: *This study adds value to the extant literature by providing answers to the role that governance plays in enhancing the impact of remittances on financial development in sub-Saharan African countries.*

Key words: remittances; governance; financial development; Generalised Method of Moments

JEL: F24; G21

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1. Introduction

The surge in remittance inflows has sparked interest in researchers in recent times on how this interest-free source of finance can be harnessed to facilitate economic development in general and financial development in particular. This is consistent with the Sustainable Development Goals (SDGs), where remittances have been identified as another source of funds to attain the SDGs.

Despite the negative impact brought about by COVID-19, which threatened the momentum that had been created in the pre-COVID-19 period, remittance inflows remained resilient in 2020, performing far better than anticipated to record a decline of only 1.6% below 2019 total inflows of $548 billion, a performance surpassing the projected decline of 20% (World Bank, 2021a). Low- and middle-income countries received $540 billion in 2020, surpassing overseas development assistance of $179 billion and foreign direct investment of $259 billion (World Bank, 2021a). Remittance inflows are projected to increase by 2.6% to $553 billion in 2021 and 2.2% to $565 billion in 2022 (World Bank, 2021a). The same trend is projected for SSA, when Nigeria, which accounts for the major decline in remittance inflows during the period, is excluded. SSA received a 2.3% increase in remittance inflows during the same period (World Bank, 2021a). This surge in remittances inflows was realised despite the relatively high remittance fees in SSA (World Bank Group and KNOMAD, 2021). Remittance inflows remained buoyant during the study period and are also projected to maintain the trend until 2030 (Migration Policy Institute, 2021). Part of the surge in remittances is accounted to the use of formal channels of remitting created by the closure of borders and the limited movement of people associated with COVID-19 lockdowns. The critical question this study aims to answer is two-fold: i) do remittance inflows have any impact on financial development? and ii) does governance play any significant role in the nexus between remittance inflows and financial development in sub-Saharan African countries?

Several studies acknowledge the positive role that institutional quality plays in enhancing the role that remittances have on financial development (see Ellahi *et al*., 2021; Ondoa and Seabrook, 2020; Sayilir *et al* 2018; Abubakar and Kassim, 2018; Baltagi et al., 2009). Other studies have also found the relationship to be inconclusive (see, for example, Ondoa and Seabrook, 2020).

It is now widely accepted that finance is important for economic growth and development (Levine. 1997). Financial sector development provides liquidity, information production, risk management, resource mobilisation and price discovery (Otchere, Senbet and Simbanengavi (2017). African countries have embraced this notion with the liberalisation of the financial sector and a revamp of policies and support structures. In some countries, these adjustments in the financial sector came as a package aligned to a structural adjustment programme (Otchere *et al*., 2017). However, the demand for an efficient financial sector has seen developing countries taking initiatives on financial sector development in bank-based and market-based financial domains. The globalisation, increasing customer awareness and complex financial transactions continuously mount pressure on the need for advanced financial sectors. The formation of or the proposed monetary unions in Africa, for example, the monetary union in the West Africa Economic Community of West African States (ECOWAS), the West African Economic and Monetary Union (UEMOA) and the East Africa Monetary Union, by 2024, has increased pressure for the African countries involved to streamline policies, legislation and operations to align with monetary union demands. African countries have been innovative in an effort to develop the financial sector, taking into account unique stylised factors for the African continent, especially accessibility to traditional financial service.

The reforms in the financial sector have resulted in improved liquidity in the market and financial innovation (International Monetary Fund 'IMF', 2016). In Africa, innovation in the financial sector has resulted in growth in the use of telephone-backed financial services such as Ecocash in Zimbabwe and M-Shwari, M-Pesa, M-Kopa in Kenya (IMF, 2016). This form of financial sector access does not require traditional financial services such as a formal account with a bank. Despite all the strides that have been made to develop the financial sector in most African countries, there are still huge variations in the level of financial sector development across African countries and between African countries. Some countries, such as South Africa, Nigeria and Ghana, have advanced financial systems by any standard (IMF, 2016), while other African countries have nascent financial sectors. The need for financial sector development has come at a time when African countries are receiving a surge in remittance inflows, which have overtaken official development assistance and foreign direct

investment. The banking system is the most advanced financial sector in sub-Saharan Africa with the market-based financial sector lagging (IMF, 2016). The objective of this study, therefore, is to investigate whether African countries can mobilise remittances to advance their financial sector development agenda. Table 1 shows the general trends of the selected financial development indicators and personal remittances in sub-Saharan African countries during the period 2010–2022.

Table1: Trends of financial development indicators and remittance inflows in sub-Saharan Africa (2010-2022)

Year	Domestic credit to private sector (% of GDP)	Broad money supply (% of GDP)	Personal remittances (% of GDP)
2010	50.3	37.7	2.2
2011	45.9	37.5	2.3
2012	45.6	37.1	2.2
2013	42.4	35.3	2.1
2014	41.4	34.3	2.1
2015	41	35.6	2.5
2016	41	36.5	2.4
2017	43	36.7	2.5
2018	40.6	37.2	2.8
2019	39.6	37.9	2.7
2020	37.3	41.4	2.5
2021	35.6	41.4	2.6
2022	35.8	40.8	2.6

Source: World Bank (2024)

Extant literature on the effect of remittances on financial sector development is tilted to a positive impact of remittances to financial development (see, Biyase and Naidoo, 2023; Sharaf and Shahen, 2022; Adekunle *et al*., 2020; Misati *et al*., 2019; Bhattacharya, Inekwe & Paramati, 2018; Gupta, Pattillo & Wagh, 2009; Karikari, Mensah & Harvey, 2016). However, evidence of a positive relationship between remittances and financial development have not been found in some studies (see

Olayungbo & Quadri, 2019; Karikari *et al.*, 2016; Coulibaly, 2015). Despite the inconsistent results, the question arises as to whether remittances can be harnessed with the objective of increasing the pace of financial development much needed by African countries to increase economic growth momentum. Some studies further suggest that there is enhanced benefit of remittances on financial sector development when the quality of institution is considered (see, for example, Ellahi *et al*., 2021; Ondoa and Seabrook, 2020; Baltagi et al., 2009). A dearth of literature has explored the impact of remittances on financial development, while incorporating institutional quality as a modulating variable. Governance has been selected as a moderating variable as it has a positive impact on financial development (see Ellahi *et al*., 2021; Ondoa and Seabrook, 2020) and remittances (see Ajide & Raheem, 2016).

This study explores the impact of remittances on financial development in SSA using a panel data of 26 countries and three bank-based financial development proxies, namely bank deposits, deposit money bank assets and liquid liabilities. It also examines whether governance modulates the impact of remittance on bank-based financial development. For this purpose, an interaction term was computed between remittance and each of the two proxies of governance, thereby estimating a system of equations.

The rest of the study is organised as follows: In Section 2, an overview of related literature is provided. Section 3 dwells on estimation techniques, while the results and discussion of the results are presented in Section 4. The last section, Section 5, concludes the study.

2. Literature Review

2.1 Theoretical Literature Review

Existing literature identifies the motives for migrants remitting back home as savings, coinsurance and altruism (Lucas & Stark, 1985). Levitt (1998) added social remittances that include sharing of ideas and social capital that is acquired by the migrants abroad. Adam Jr and Page (2005) added cash assets and

investment in human capital as some of the benefits associated with remittances. Remittances are also associated with increase in health expenditure, reduced undernourishment, reduced depth of food deficit, child mortality, remittance increase school enrolment and private school enrolment (Azizi, 2018). Although the impact of remittances at national level is still subject to debate, it can be argued that remittances have the potential of increasing consumption expenditure for families that receive remittances. Apart from consumption expenditure the coinsurance motive also imply that part of the remittances is invested. An increase in consumption expenditure has a multiplier effect on aggregate output at a national level, leading to an increase in real GDP. The financial sector becomes an important conduit for migrants to remit when formal channels are used. Although Sub- Saharan countries are among the countries with high remit fees of an average of 8%, a charge 5% more expensive than the SDG target of 3%, the United Nations under the SDGs encourage nations to provide financial systems that make it easy and cheaper for migrants not only remit but also use formal channels (World Bank 2021a). Thus, creating a possible benefit of financial sector developed to cater for migrants' needs and preferences. Governance is included as a modulating variable. Governance Institute of Austrian (2022) define governance as how institutions operate and controlled with a view to creating a mechanism of accountability, risk management and compliance administration.

There is growing literature on the impact of remittances on financial sector development (see, for example, Olayungbo & Quadri, 2019, Masuduzzaman, 2014; Giuliano & Ruiz-Arranz, 2009). While the findings from these studies show that remittances positively impact financial development, in other studies, it is argued that financial development also positively impacts remittances (see, Karikari, Mensah & Harvey, 2016; Giuliano and Ruiz-Arranz, 2009). In addition, some studies have found a negative impact of remittances on financial development (Karikari, Mensah & Harvey (2016), while others have found no relationship between the two variables (Coulibaly, 2015).

2.2 Empirical literature review

Biyase and Naidoo (2023) examined the remittance–financial development relationship for South Africa using the non-linear autoregressive distributed lag and data from 1980 to 2017. The study found

a positive impact of remittances on financial development when the autoregressive distributed lag approach was used. However, when NARDL was used, 1% increase in remittances was found to cause a 0.122% increase in financial development and a 1% decrease in remittances caused 0.334% decrease in financial development. Sharaf and Shahen (2022) in a study on the nonlinear impact of remittances on financial development for Egypt, using data from 1980 to 2019, found remittances to have a positive impact in the short run and a U-shaped impact on financial development in the long run. Increase in remittance initially substitute for financial development and, after a threshold – when remittance to GDP ratio reaches 7.28%, remittances compliment financial development. Das & McFarlane (2021), in a study on the relationship between financial development and remittances, using data from 1980 to 2017 and applied autoregressive distributed lag, found a U-shaped relationship between the two. Initially, as remittances increase, they have a negative impact on financial development until a threshold is reached where an increase causes a positive impact on financial development.

Saydaliyev, Chin & Oskenbayev (2020), investigated the effect of remittances on financial inclusion in developing countries which receive high remittances, using data between 2011 and 2018. The study found that remittances that foster financial inclusion are associated with institutional quality. The impact of remittances on financial inclusion is conditional upon individual perception of the institutions. Adekunle et al. (2020) analysed the relationship between financial development and remittances in 53 African countries using data from 1986 to 2017. Employing Pooled Mean Group estimation, the study found a positive long-run relationship between remittances and financial development. Azizi (2020) undertook a study on 124 developing countries using data from 1990 to 2015 and instrumental variable fixed effects. The study found a 10% increase in remittances to GDP leads to 1.7% increase in domestic credit to private sector, 1.9% increase in bank credit, 1.2% increase in bank deposit: 0.8% increase in liquid liabilities. Similarly, Kakhkharov & Rohde (2020) found a positive impact of remittances on financial development for 27 countries of the former Communist bloc using data from 1996 to 2013 and the GMM method.

Misati *et al*. (2019) studied the relationship between financial development and remittances for Kenya using 2006 to 2016 data. The study found a positive relationship between remittances and financial development. In the same vein, Williams (2016) examined the relationship between remittances and financial development in Sub-Saharan African countries employing panel data from 1970 to 2013. The study found the same results as Adekunle *et al*. (2020) and Azizi (2020) where remittances were found to contribute to financial development. In the study, a 10 percent increase in remittances was found to increase domestic private credit by 0.43 percent with a cumulative effect of 1.84 percent.

Karikari *et al.* (2016) found the same results as Williams (2016) in a separate study on 50 African countries using data from 1990 to 2011. The study used bank deposits and credit to private sector and money supply as proxies for bank -based financial development proxies. Using the fixed effects and random effects estimation, remittances were found to promote financial development in the short run. In the long run, the study found remittances to have a negative impact on financial development. Coulibaly (2015) examined the impact of remittances on financial development in 19 Sub-Saharan Africa countries using Panel Granger causality testing approach. The study used data from 1980 to 2010, remittances were found to have a positive influence on financial development in Sudan, Senegal, Niger and Sierra Leone. When liabilities were used as a proxy for financial development, remittances were found to have a positive influence on financial development in Gambia. In the same light, Masuduzzaman (2014) found remittances to have a positive impact on financial development in a study on Bangladesh using annual data from 1981 to 2013. The same results were confirmed by a study done by Aggarwal, Demirguc-Kunt & Martinez Peria *(*2011) in a study on 109 developing countries using data from 1975-2007. The study found a positive association between financial development and remittances.

Apart from the above-mentioned studies, there are a few studies that have also examined the impact of governance on financial development. These include studies conducted by Ondoa and Seabrook (2020), Ellahi et al. (2021), Khan et al. (2020), Sayilir et al (2018), Kassim (2018), Le et al (2015), and Hechmy

(2016), among others. Ondoa and Seabrook (2020), for example, investigated the impact of governance quality on financial development using a global sample of 120 countries split between 32 high and 88 low-income countries. Using data covering 2002-2017 and governance proxies as: political stability, absence of violence, voice and accountability and financial development proxies as: financial institution depth and credit to private sector, to examine this linkage. Political stability, regulatory quality and absence of violence were found to have a positive impact on financial development, while voice and accountability, governance effectiveness were negatively associated with financial development. The impact of the governance varied between low- and high-income countries, with greater impact recorded in high income countries compared to low-income countries. Similarly, Ellahi *et al*. (2021) examined the impact of governance, trade openness, real GDP, economic freedom, real output and inflation on financial sector development in selected Asian economies. The study used an index that combined market-based and bank-based measures of financial development (market capitalisation to GDP ratio, liquid liabilities, domestic credit to private sector, broad money). The World Governance Indicator (WGI) was used as a proxy for governance, which comprises of 6 major dimensions - governance effectiveness, regulatory quality, voice and accountability, rule of law and control of corruption and political stability. Using Generalised Method of Moments (GMM) the study found governance to be a driver of financial sector development and stock market development in four Asian countries. Khan *et al.* (2020) examined the relationship between quality of institutions and financial development 189 developing and emerging countries. The results suggest that good quality of institutions work to improve financial sector development. Sayilir *et al* (2018) analysed the relationship between different aspects of governance and financial development. Structural equation modelling approach revealed a positive relationship between the two.

Abubakar and Kassim (2018) studied the determinants of financial development in 50 OIC countries and found the quality of institutions to promote financial depth and lending activities. Le *et al* (2015) examined the determinants of financial depth for Asian and the Pacific region economies. Among these factors, institutional factors were found to be an important financial sector determinant. In the same spirit, Hechmy (2016) investigated the impact of governance of financial development in a study on

Middle East and North African Region. Governance was found to have a negative effect on financial development. This finding in contrary to findings by Ellahi *et al*. (2021), Kassim (2018) and Sayilir *et al*. (2018), making another study important.

The empirical literature reviewed in this section on the impact of remittances on financial development and the impact of governance on financial development clearly point to the modulating role that governance plays in the relationship between remittances and financial development. Therefore, it is important to take a fresh look at the impact of remittances on financial development by considering the modulating role that governance plays in the nexus between these two variables.

3. Estimation Techniques and Empirical Analysis

3. Estimation Techniques

GMM specification

The current study uses a modified version of GMM technique proposed by Roodman (2009a). As highlighted in previous studies, the GMM has several advantages, which makes it to be a preferred estimation techniques over other available techniques (see, for example, Asongu & Nwachuwku, 2016; Odhiambo, 2020). As has been reported in the attendant literature, the GMM technique is suitable when the number of countries is higher than the number of time periods (see also Odhiambo, 2020; Asongu and Odhiambo, 2020). In the current study, the number of countries is 26, while the study period is between 2013 and 2017. This makes the GMM to be the most appropriate estimation technique for our study.

In line with Asongu and Odhiambo (2019; 2020; 2021) and Odhiambo (2020), the model used in the current study can be expressed as follows:

Variables in levels are given in Equation 1

$$FIN_{i,t} = \sigma_0 + \sigma_1 FIN_{i,t-\tau} + \sigma_2 REMIT_{i,t} + \sigma_3 Gov_{i,t} + \sigma_4 REMITxGov_{i,t} + \sum_{h=1}^{2} \delta_j \, CV_{h,i,t-\tau} + \eta_i + \xi_t + \varepsilon_{i,t} \quad (1)$$

Variables in First Difference are given in Equation 2

$$FIN_{i,t} - FIN_{i,t-\tau}$$

$$= \sigma_1(FIN_{i,t-\tau} - FIN_{i,t-2\tau}) + \sigma_2(REMIT_{i,t} - REMIT_{i,t-\tau}) + \sigma_3(Gov_{i,t} - Gov_{i,t-\tau}) + \sigma_4(REMITxGov_{i,t} - REMITxGov_{i,t-\tau}) + \sum_{h=1}^{2} \delta_h(CV_{h,i,t-\tau} - CV_{h,i,t-2\tau}) + (\xi_t - \xi_{t-\tau}) + (\varepsilon_{i,t} - \varepsilon_{i,t-\tau}) \quad (2)$$

Where:

$FIN_{i,t}$ = Financial development proxied by bank deposits (BD), liquid liabilities (LL), and deposit money bank assets (DOMC).

REMIT = Remittance inflows of country i in period t

Gov (Governance) = Proxied by regulatory quality (Reg) and government Effectiveness (Goveff) of country i in period t.

*REMITxGov = I*nteractions between remittance and each of the proxies of governance.

CV = A vector of control variables, i.e., interest rate and trade.

σ_0 and $\varepsilon_{i,t}$ = constant and the error term, respectively.

Definition of variables

Table 2: Data source and definitions of variables.

Variable		**Definitions of variable (Measurement)**	**Source**
Remittance	Remit	Remittance inflows	GFD/WDI
Trade	Trade	Exports +Exports/GDP	WDI
Liquid Liabilities	LL/GDP	Liquid liabilities to GDP	GFD
Deposit money bank assets	DOMC/GDP	Deposit money bank assets to GDP	GFD

Interest rate	Interest	Interest rate	WDI
Bank Deposits	BD/GDP	Bank deposits to GDP	GFD
Regulatory quality	Reg	The ability of the government to formulate and implement sound policies and regulations.	WGI
Government effectiveness	Goveff	This captures, inter alia, the perceptions of the quality of public services, the quality of the civil service, and the degree of its independence from political pressures.	WGI
WDI = World Bank Development Indicators of the World Bank. GFD = Global Financial Development WGI = Worldwide Governance Indicators			

Data sources for all the variables included in the study are reported in Table 2.

3.1 Empirical Analysis

The empirical results reported in Table 3 show that the relationship between remittance, governance and ban-based financial development depends largely on the financial development and governance proxy used. When liquid liabilities (LL) and bank deposits (BD) are used, remittance inflows are found to have a positive and significant impact on bank-based financial development. This applies irrespective of whether governance is proxied by regulatory quality (Reg) or government effectiveness (Goveff). However, when the deposit money bank assets (DOMC) variable is used as a proxy, remittance inflows are found to have no profound impact on bank-based financial development in Reg and Goveff specifications. This finding is supported by the coefficient of remittance variable, which is positive and significant in the relevant LL and BD equations, but statistically insignificant in the DOMC functions.

The results also show that, although regulatory quality has a significant impact on financial development, the nature of its impact tends to vary depending on the financial development proxy used. When BD and LL are used as financial development proxies, regulatory quality is confirmed to have a negative and significant effect on financial sector development. However, when the DOMC variable is used a proxy, regulatory quality is found to have a positive effect on financial sector development. These results have been confirmed by the coefficient of the regularity quality, which has been found to be negative and statistically significant in the LL and BD equations, but positive in the DOMC equation. The results further show that government effectiveness only influences bank-based financial development when bank-based financial development is measured by BD, but its effect is negative. This is affirmed by the coefficient of government effectiveness, which has been found to be negative and statistically significant in the BD equation, but insufficient in the other two bank-based financial development specifications.

It was also found that Reg and Goveff interact with remittance to reinforce the positive impact of remittance on financial development when BD and LL are used as a proxy for financial development. This has been affirmed by the coefficient of the interaction terms in these equations, which have been found to be positive and statistically significant. Although government effectiveness does not have a positive impact on financial development when financial development is proxied by DOMC, it interacts with remittance to yield a positive impact on financial development.

Other results show that trade has no profound impact on financial development, while interest rate has a negative and significant impact on financial development. These results apply, irrespective of whether financial development is measured by LL, DOMC, or DB.

The study used four information criteria to ascertain the validity of the estimated GMM models. These include i) the second-order Arellano and Bond autocorrelation test (AR (2)) 2) the Sargan and Hansen over-identification restrictions; 3) the Fisher test for the joint validity of the estimated coefficients, and 4) the Difference in Hansen Test (DHT) for exogeneity of instruments. These information criteria have largely supported the robustness of the above-mentioned results.

Table 3: Remittance, governance and bank-based financial development

			Dependent Variable: Financial Development[2]			
	Model 1 LL/GDP		Model 2 DOMC/GDP		Model 3 BD/GDP	
	Regulatory quality (Reg)	Government Effectiveness (Goveff)	Regulatory quality (Reg)	Government Effectiveness (Goveff)	Regulatory quality (Reg)	Government Effectiveness (Goveff)
Constant	-2.2451	.8157497	3.02549[5***]	3.30305***	-1.053871	-0.83039
	(0.118)	(0.369)	(0.001)	(0.003)	(0.194)	(0.260)
Remit	0.3077**	0.349678***	-0.0670634	0.20578	0.3076***	0.22314***
	(0.011)	0.000	(0.534)	(0.157)	(0.000)	(0.002)
Reg	-2.34256***		2.0029*		-1.4132***	
	(0.000)		(0.079)		(0.005)	
Goveff		0.162008		-0.82704		-1.01562**
		0.736		(0.317)		(0.013)
Remit*reg	0.2678**		-0.2491		0.3349***	
	(0.012)		(0.174)		(0.000)	
Remit*Goveff		0.20528***		0.328384*		0.21982***
		(0.001)		(0.077)		(0.004)
Trade	0.0020	-0.006278	0.0075	-0.00326	0.0047	-0.00845
	(0.857)	(0.579)	(0.492)	(0.713)	(0.609)	(0.145)
Interest rate	-0.0626 ***	-0.09570***	-0.1061***	-0.09996***	-0.0774***	-0.02246**
	(0.007)	(0.001)	0.008	(0.001)	(0.000)	(0.042)
Time Effects	Yes	Yes	Yes	Yes	Yes	
AR(1)	0.335	0.325	0.245	0.397	0.327	0.389

[2] The lagged dependent variable was included in all the regressions.

AR(2)	0.633	0.855	0.469	0.436	0.952	0.950
Sargan OIR	0.007	0.002	0.036	0.126	0.010	0.008
Hansen OIR	0.239	0.211	0.346	0.558	0.329	0.168
DHT for instruments						
(a)Instruments in levels						
H excluding group	0.288	0.119	0.323	0.866	0.253	0.143
Dif(null, H=exogenous)	0.264	0.386	0.371	0.342	0.404	0.279
(b) IV (years, eq(diff))						
H excluding group	0.291	0.243	0.328	0.519	0.309	0.158
Dif(null, H=exogenous)	0.203	0.179	0.388	0.482	0.397	0.350
Fisher	12011.74***	5408.57***	21724.43***	59474.43***	9999.38***	5205.88***
Instruments	25	24	25	25	25	25
Countries	26	26	26	26	26	26
Observations	102	102	102	102	102	102

*, **, and ***: significance levels at 10%, 5%, and 1%, respectively.

4. Conclusion

The impact of remittances as the second largest source of external finance after FDI for low- and middle-income countries has attracted many studies in recent years. In this study, the impact of remittances on bank-based financial development is examined in 26 SSA countries during the period 2013-2017. The study used three proxies of bank-based financial development, namely i) LL to GDP; ii) DOMC; and iii) BD as a ratio of GDP. The study also examines whether good governance has any impact on the nexus between financial development and remittances. For this purpose, an interactive term was computed between remittance and governance proxies. A modified version of GMM was used in this analysis. The findings of the study revealed that the impact of remittances on financial development

largely depends on the proxies used to measure the level of financial development and governance. When financial development is proxied by LL and BD, remittance inflow is found to have unconditional positive impact on bank-based financial development, while governance is found to reinforce the positive relationship between remittance and financial development. This applies irrespective of whether governance is proxied by Reg or Goveff. However, when financial development is proxied by DOMC, remittance was found to have no profound effect on bank-based financial development, but it interacts with government effectiveness to yield a positive influence on financial development.

Overall, it can be concluded that remittances play a positive role in supporting financial development in sub-Saharan African countries, as confirmed by two out of the three proxies of financial development. Governance also generally tends to reinforce the positive impact of remittances on bank-based sector development. It is recommended that practical policies aimed at attracting remittance inflows should be prioritised by the studied countries to foster the growth and development of the financial sector. Governments in the countries under study are encouraged to enforce good governance in order to maximise the benefits drawn from remittance inflows.

Although steps were taken to ensure the efficacy of the study, as with any scientific study, this study is not without any limitations. For example, the study was limited by data availability. Expanding the sample size in future studies could yield different results. In addition, the study focused on bank-based measures of financial development. Future studies could, therefore, explore this analysis using market-based financial development data to establish whether their findings would differ fundamentally from those reported in this study. This is important given that the contribution of the market-based financial sector is currently gaining momentum with the globalisation and further liberalisation of the financial sector in many African countries.

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Data availability: Variables used in the study were retrieved from World Bank Development Indicators, Global Financial Development and Worldwide Governance Indicators as specified in Table 2.

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