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Remittances through Formal and Alternative Channels and its Effect on Financial Inclusion in Kenya

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ABSTRACT

In the current dynamic world, those with no or little access to key financial products and services suffer a great deal of disservice. This study examines the effect of remittance channels (commercial banks and alternative sources) have on financial inclusion and then check the moderating effect of money remittance regulation on the relationship between the remittance channels and financial inclusion in Kenya. It uses the World Bank and Central Bank of Kenya's dataset on remittances and financial inclusion covering the period from 2009 to 2018. We estimate our model using the Ordinary Least Square assumptions to find the association. We find that remittances from alternative channels other than commercial banks influence financial inclusion in Kenya. We further notice that the money remittance regulations have no moderating effect on the relationship between remittance channels and financial inclusion in Kenya. Our results suggest that commercial banks are not able to appropriately sell their products and services to remittance receiving households while fintechs and other internet remitting service providers seems to roll on products and services that enhance the use of savings and credit facilities. We suggest that more avenues and policies should be enacted to foster the use of alternative sources while improving structures within commercial banks to empower financial inclusion in Kenya.

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Introduction

While many developing countries depend on remittances for economic development, the global remittances in this COVID season continues to decrease. The World Bank 2020 brief report estimates a global decline of 14 percent by 2021. However, the inflows to SSA continues to impact on sectors within the economy. The Central Bank of Kenya (2019) data on remittance flows to Kenya in the third quarter of 2020 stood at U \$ 2.013 billion. These amounts flow through formal channels and are influenced by several factors including transfer methods, available payment system channels, number of competitors, payment locations, exchange rates, and the amount of legal and regulatory restrictions on foreign currency exchange (Orozco & Yansura, 2016). Countries that do not restrict the movement of remittances are more likely to attract inflows which encourage the setting up of more robust channels for remitting money. Countries with well-developed banking sector opens up formal channels of remitting money back home.

Technological advances and innovations within the industry significantly contribute to the enhancement of formal remittance transfers. The expansion of the popular M-Pesa service beyond Kenya's borders is also helping, with direct cash transfers on mobile making it easier for the millions who actively use mobile money to receive money instantly from relative abroad. Some internet money remitting channels (Fintech) like WorldRemit and Wave are able to facilitate the transfer of money directly from diaspora to an MPesa account in Kenya. However, a migrant's general payment behaviour and personal characteristics typically influence their choice of channel. Financially literate expats are more likely to use formal remittance channels such as banks, mobile wallets, and money transfer services to send money home. The ease of sending money back home is a major factor in the sharp growth of Kenyan remittances. As a result, local banks have entered into partnerships with remittance service providers that allow them to handle larger volumes of inflows.

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In Kenya, the money remittance regulations, 2013 governs the establishment and licensing; the ownership and management; and the operations of money remittance operators. Misati and Kamau (2018) assert that regulations influence remittance flows and that government can encourage transfer via formal channels by eliminating or minimizing taxes drastically on income remittances, allowing local banks to function abroad, relaxing exchange and capital controls, among other incentives. This study employs money remittance regulation as a dummy variable where the compliance and none compliance parameters were used to check if the implementation of the regulation in 2014 influenced the relationship between remittance channels and financial inclusion or not.

Financial inclusion, linked to improved financial performance and poverty reduction, means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way (Arthur et al., 2020). In Kenya, financial inclusion has improved over the years with an outstanding record of 82.9 percent as reported by financial sector deepening in 2019. These development is largely attributable to the institution of mobile financial services in 2007, improved partnerships and novelties such as digital finance, agency banking, mobile apps and mobile banking. Mobile money has acted as an ‘on-ramp’ for formal financial inclusion principally through digital finance.

Despite the recorded progress made by financial institutions, this does not truly reflect in the financial health of the Kenyan economy as majority of the counties remain unserved by formal financial intermediaries. There is an uneven distribution in access and usage of financial products and services in the arid and semi-arid regions in Kenya as much of these regions barely have access to a variety of products and services due to the Kenya’s centralised system. (Kalunda & Ogada, 2019). Financial Inclusion is needed for rural and downtrodden masses that are the future growth engine of the economy. In the current dynamic world, those with no access to key financial products will suffer much more serious consequences now than it was in the past. This shows the urgency in bringing financial products and services to every home.

Existing studies on remittances and financial inclusion have found association (Arthur et. al, 2020; Ambrosius and Cuecuecha, 2015; Anzoategui, et al., 2014) while others have not (Shrestha & Joshi, 2018; Uchenna et al., 2015). This study aims at finding out the relationship with an attempt to find out if the two are complementary, supplementary or contrary. In this paper, we use volume of deposits and credits to GDP as our financial inclusion parameters. We find the composite of these parameters as our financial inclusion indicator to assess the effect. We first examine the effect these channels (commercial banks and alternative sources) have on financial inclusion and then check the moderating effect of money remittance regulation on the relationship between the remittance channels and financial inclusion in Kenya. In doing so, we attempt to identify empirically and theoretically the relationship between remittance channels and financial inclusion as a component of financial development.

The remainder of this paper is structured as follows. Section 2 discusses the literature review. Section 3 presents the methodology while Section 4 focusses on results and discussions. section 5 finally presents conclusion.

Literature Review

Akerlof (1970) developed the information asymmetry theory as a plausible explanation to the imbalance of information between market participants leading to inefficient outcomes in financial markets. The theory opines that proper access to information helps migrants to remit through channels that offer lower remittance fees and convenience in remitting. Proper information on the remittance channels creates awareness of financial products and services thereby influencing the usage of formal banking services and internet money remitting services by remittance recipients. Advocates of this premise claim that both remittance senders and receivers of remittances create incentives for either party to seek and liaise with financial institutions who are involved in other financial products and services beyond remittances. This in turn enhance financial awareness both for the senders and receivers and can bring about increased demand for other financial products and services by remittance receivers. This furthermore, increases the likelihood of money transfer services responding to existing demand, hence improving financial inclusion (Brown et al., 2013; Toxopeus & Lensink, 2008).

Anzoategui, et al., (2014) discussed the impact of remittances on access to financial services such as loans and savings accounts through formal financial institutions utilising household level survey data from El Salvador, where remittances account for 16.4% of GDP. They found out that inflows of remittance channels increase the possibility of having deposit accounts by 11%. However, inflows of remittances does not increase the likelihood of borrowing loans.

Ambrosius and Cuecuecha (2016) conducted a study in Mexico to examine the effect of cross-border remittances on the usage of formal and informal financial products and services. The study utilised Mexican household data and they established strong evidence of the effect of cross-border remittances on financial inclusion with regards to the presence of recent use of credit, outstanding debt, the existence and ownership of savings accounts. However, the authors emphasised that although they established a causal effect on borrowing from informal sources they did not find comparable effects on borrowing from formal sources. They concluded that beneficiaries of remittances did have demand for financial services but the formal sector was not adequately meeting their needs. Instead, informal sources were ready to lend against cross border remittances while formal establishments were restricting the services they offer to savings accounts only.

Shrestha and Joshi (2018) used a unique micro-level data from Nepal household survey to examine the effect of remittances on financial inclusion, i.e. households' access to and utilisation of formal financial services using two alternative binary variables, which specify whether the family has a deposit account at a formal financial institution, and whether the household has benefited from a loan from a formal financial institution. Using the probit regression models, the results showed that remittances tend to decrease the claim for both deposit accounts and credit from formal financial institutions.

Kalunda and Ogada (2019) established the degree of financial inclusion using traditional banking channels to determine financial performance of commercial banks in Kenya. A sample of 30 commercial banks for a 9-year period from 2005-2013 were analysed. The study revealed that the level of financial inclusion in Kenya as depicted by the index of financial inclusion was low during the study period with a progressive marginal increase. The study also indicated that financial inclusion had a statistically significant positive effect on all the three measures of bank performance. The study recommends that commercial banks should take an active role in increasing financial inclusion as it is consistent with banks' profit motive.

Buencamino and Gorbunov (2002) noted that over the years governments were bringing up a number of incentive based and obligatory measures to encourage expats to send more through formal channels. Commenting on the obligatory minimum remittance requirements brought up in Bangladesh, Pakistan, Republic of Korea and the Philippines they noted that mandatory measures were only effective where the government played a significant role in the process by directly supporting indigenous companies win contracts overseas. In turn, the local company deposited all or portion of the employees' incomes overseas in indigenous banks

Research and Methodology

We employ the explorative and longitudinal research design for this study. We use dataset from over 3 million Kenyans living at the diaspora from 2008 to 2018 as our target population for this study. We define remittance channels as money transfer services offered by commercial banks and other authorized alternative channels such as international remittance service providers other than commercial banks in Kenya (World Remit, Wave, SimbaPay as well as other fintech remittance service providers). Data from informal channels were not captured in this paper. Data on remittance channels were collected from World Bank's Remittance Price World Wide from 2010 to 2018 while that of volume of deposits and credits to GDP as financial inclusion variables were collected from Central Bank of Kenya's annual report and bank supervisory reports and Kenya National Bureau of Statistics.

Time series multiple OLS regression analysis was carried out to determine the effect remittance channels have on financial inclusion in Kenya using the regression model below:

$$FI_t = \alpha_0 + \beta_1 InCRC_t + \beta_2 InARC_t + \varepsilon_t$$

We further determine the effect of the money remittance regulation on the relationship between remittance channels and financial inclusion in Kenya using the regression model outlined below

$$FI_t = \alpha_0 + \beta_3 InRC_t + \beta_4 MRR_t + \beta_4 (InRC_t * MRR_t) + \varepsilon_t$$

FI_t refers to financial inclusion (composite) at time t.

InCRC_t, and **InARC_t** represent natural log of commercial banks remittance channels and alternative remittance channels respectively at time t.

InRC_t denotes natural log of total remittance channels at time t.

MRR_t is the moderating variable, money remittance regulations at time t.

The Remittance channels variables were transformed into natural log-form to reduce sharpness and to give more reliable results.

Results and Discussions

We apply the ordinary least square model to set the investigation in motion. In order to test the appropriateness of our model, we conduct unit root test using the Augmented Dickey-Fuller Test (ADF test) to test the stationarity. The existence of unit root suggests that the data is not stationary hence running regression on it would result to spurious regression.

Table 1: Unit Root (None and First difference)

Variable	ADF Statistic	1% Level	5% Level	10% Level	Comment
FI	-6.256	-2.626	-1.95	-1.612	Stationary
CRC	-12.72	-2.6223	-1.949	-1.6618	Stationary
ARC	-10.52	-2.6223	-1.949	-1.6618	Stationary

Source: Study data (2008-2018)

We then check the linearity and multicollinearity to ensure that the OLS assumptions are taken care of.

Table 2: Linearity Diagnostic Tests (Pearson Correlation Matrix Result)

	ARC	CRC	FI
ARC	1		
CRC	0.3688	1	
FI	0.4617	0.8209	1

Source: Study data (2008 - 2018)

Table 3: Variance Inflation Factor Test of Multicollinearity

Variable	VIF	1/VIF
CRC	3.44	0.290698
ARC	3.29	0.303951

Source: Study data (2008-2018)

In order to establish the effect of remittance channels on financial inclusion, we perform robust regression analysis to control for heteroskedasticity. Hypotheses H_{01} , H_{02} were tested to establish the statistical significance. The F-statistics at 5 confidence level of significance were 0.000. This confirmed the goodness of fit and the suitability of remittance channels in predicting the variations in financial inclusion in Kenya.

To test our hypotheses, the following null hypotheses were formulated:

H_{01} : Remittances channels have no effect on financial inclusion in Kenya.

H_{02} : Money Remittance Regulations has no moderating effect on remittance channels and financial inclusion in Kenya.

From the table, we estimate our first regression model as

$$FI = 10.795 - 0.052CRC + 0.032ARC$$

Table 4: Remittance Channels and Financial Inclusion in Kenya

FI	Coef.	Std. Err.	T	P> t	[95% Conf.	Interval]
CRC	-0.052	0.030	-1.72	0.097	-0.114	0.010
ARC	0.032	0.006	5.82	0.000	0.021	0.044
_cons	10.795	2.117	5.1	0.000	6.451	15.139

Number of obs = 36

F(2, 27) = 176.23

Prob > F = 0.0000

R-squared = 0.9812

Adj R-squared = 0.9756

Source: Study data (2008-2018)

Our results show that alternative remittance channels ($\beta=0.032$, $p=0.000 < 0.05$) positively and significantly affects financial inclusion. Therefore, the null sub hypothesis that alternative remittance channels have no effect on financial inclusion in Kenya was rejected at five percent level of significance. However, remittance channels through commercial banks ($\beta= -0.052$, $p=0.097 > 0.05$) has no effect on financial inclusion in Kenya. The positive coefficient of 0.032 for other channels indicates that a one percent increase in alternative remittance channels increases financial inclusion by 3.2 percent. The results confirm that alternative remittance channels are statistically significant, hence improving financial inclusion while commercial banks remittance channels do not influence financial inclusion in Kenya.

The results are consistent with Kalunda and Ogada (2019) whose findings reveal that commercial banks have no significant effect and hence should take an active role in increasing the financial inclusion using the commercial bank channels. More attention should be geared towards improving the use of commercial bank channels to curb its negative effect on volume of deposits. This result sides with Ambrosius and Cuenquecha (2016) suggesting that demand for financial products and services from the formal sector were restraining the services they provide to savings accounts only, hence decreasing financial inclusion however, informal and other channels were willing to improve financial inclusion by providing products and services such as credits. Since our results show that alternative channels helps in improving financial inclusion than the commercial banks, such channels should be encouraged as structures within commercial banks are improved to enhance financial inclusion.

We then examine the moderating effect of money remittance regulations on the relationship between remittance channels and financial inclusion. Our regression model is outlined as

$$FI = -4.505 + 0.043RC + 0.020MRR + 0.026 (RC * MRR)$$

Table 5: Money Remittance Regulation on Remittance Channels and Financial Inclusion in Kenya

FI	Coef.	Std. Err.	T	P> t	[95% Conf.	Interval]
RC	0.043	0.0080	5.35	0.000	0.026	0.059
MRR	0.020	0.010	1.93	0.062	0.001	0.041
RC*MRR	0.026	0.0178	1.45	0.159	0.062	0.011
_cons	-4.505	1.6726	-2.69	0.012	-7.925	-1.084

Number of obs = 36

F(6, 29) = 449.05

Prob > F = 0.0000

R-squared = 0.9894

Adj R-squared = 0.9871

Source: Study data (2008-2018)

Our results show that money remittance regulation as a moderating variable ($\beta=0.026$, $p=0.159 > 0.05$) has no statistical significant influence on the relationship between remittance channels and financial inclusion. Therefore, the null sub hypothesis that there is no moderating effect in Kenya was not rejected at five percent level of significance. This shows that the money remittance regulations enacted by government has no direct influence in improving remittance inflows through either commercial banks or alternative channels. Buencamino and Gorbunov (2002) notes that measures put in place to influence remittance inflows were only effective where the government played a significant role in the process by directly supporting domestic financial institutions

Conclusions

Our first objective sought to determine whether remittance channels influences financial inclusion. From our results, we find that remittances from alternative channels other than commercial banks influences financial inclusion in Kenya. Our second objective examined the extent to which money remittance regulations moderates the interaction between remittance channels and financial inclusion in Kenya. We notice that money remittance regulation has no significant effect on financial inclusion. These results suggest that commercial banks are not able to appropriately sell their products and services to remittance receiving households while fintechs and other internet remitting service providers seems to roll on products and services that enhance the use of savings and credit facilities.

Money Remittance Regulations seems to be administrative in nature with no lasting effect in improving inflows through both commercial banks and other alternative sources. The emergence of regulatory and policy framework approach to formal remittance systems need to satisfactorily take into account Kenyan specific domestic circumstances. More avenues and policies should be enacted to foster the use of alternative sources while improving structures within commercial banks to improve financial inclusion in Kenya. The financial sector should further be developed to make formal transfer cheaper through use of modern technology like mobile money transfers, remittance transfer providers and other internet remitting companies other than banks alone.

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