

Remittances, Foreign Direct Investment and Growth in SADC: A Panel Co-integration Approach

Strike Mbulawa *

Abstract: *The current growth in per capita gross domestic product for countries within Southern Africa Development Community (SADC) has been below the target of 7% as provided by the sustainable development goals. This study uses panel co-integration techniques to establish the presence of non-linearity between long term growth and remittances, the substitutability or complementarity between foreign direct investment (FDI) and remittances as sources of long term growth. Annual data for 12 SADC member states for the period 1970 to 2014 was employed. Findings show that remittances promote long term growth and the connection between the two is nonlinear. Remittances positively affect growth as long as the level of elasticity is at most 1.09% after which the level of growth subsides. The non-linearity connection suggests the need for strong institutions to extend the positive effect of remittances beyond the threshold. The study finds that remittances and FDI flows are complementary in the growth process. The SADC region benefits by putting policies that promote trade and develop financial products that promotes continuous investment by households who are the key recipients of remittances. SADC countries benefit more by increasing reliance on remittances as opposed to FDI flows to spur growth.*

Keywords: Economic Growth, SADC, Remittances, FDI, DOLS, Non-linearity.

Introduction

Remittances by migrants to their home country are a major source of external development finance for developing countries. They are defined as personal money flows from migrants to their relatives and friends in their home countries for specified development purposes (Ratha et al., 2007). International Migration Outlook (2006) defines them as gross earnings of employees staying abroad for less than a year and they represent the net wealth of workers moving from one country of employment to another. They play an important role in alleviating poverty as they flow to beneficiaries in home countries. They have an effect of reducing the costs of borrowing and improving the credit worthiness in recipient countries (Acharya & Leon-Gonzalez, 2013; Ratha, 2013; Makram & Montassar, 2014). Statistics show that there was a global increase in the flow of remittances between 2001 and 2006 which was around 115% and 80% for all developing countries and Sub Saharan Africa (SSA) respectively. Fajnzylber and Lopez (2008) show that worker remittances in Latin America represent seventy (70) percent of foreign direct investment flows which is eight times larger than official development assistance coming into the region. The

* Faculty of Business and Accountancy, Botho University, Gaborone, Botswana.
E-mail: smint50000@gmail.com

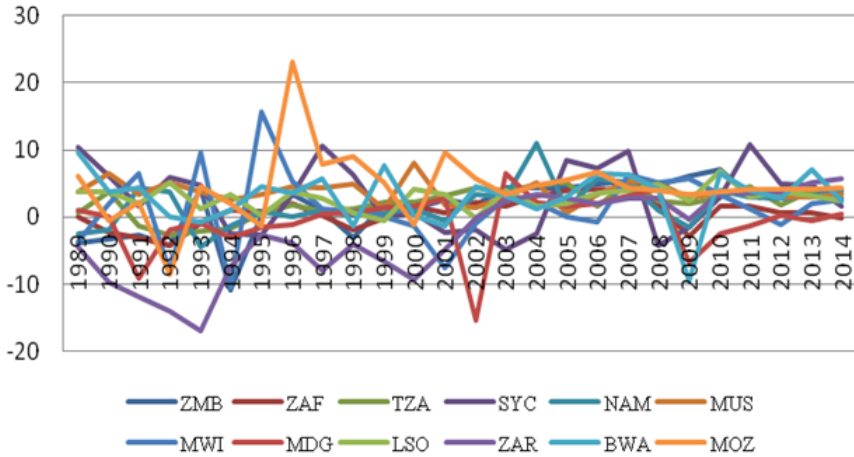
amount of remittances flowing to individual countries varies and evidence generally shows that lower poverty levels and improvements in human capital are associated with high remittance flows. Studies (Manni & Afzal, 2012; Mbulawa, 2015a; Kwame Asiedu, 2013; Barro et al., 2013; Ndambiri et al., 2012; Tiwari & Mutascu, 2011; Valeriani, Peluso, et al., 2011) show that economic growth is influenced by factors like low inflation, degree of openness for a country, flows of foreign direct investment (FDI), quality of institutions and capital flows. At the same time one can not overlook the fact that remittances can be a major source of development as they flow direct to the intended recipients in the home country. Remittances act as a supplement to household consumption expenditure which is an important input to the growth process.

Remittances are not the only source of economic development which people in the foreign countries can contribute. People outside the country can also contribute to development through exports, FDI, promotion, research and development and tourism (Oruc, 2011). While it is plausible to claim that worker remittances compete with foreign aid in driving growth it is also pertinent to mention that foreign aid comes with extra benefits like skills and technological transfer. Remittances are important especially for countries that are net exporters of labor (Driffield & Jones, 2013; Ratha, 2013; Lubambu, 2014). As workers leave for better opportunities in other countries the living conditions of their families at home improve as well. The sustainable development goals (SDG) aim among other things to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Least developed countries are expected to attain a rate of growth of per capita gross domestic product (GDP) of at least 7% per annum which is still out of reach for most of Southern Africa Development Community (SADC) member states. Figure 1, shows that the growth rate for per capita GDP has been erratic and remained between 1% and 5% per annum on average over the period for 12 member states¹. Most of them have experienced negative growth rates of up to 10% per annum being the highest experienced by South Africa (ZAR) in 1993. Mozambique (MOZ) experienced a highest growth rate of 23% per annum in 1996. In 2014 the growth rates have remained positive but below the 6% level which was experienced by ZAR. The average growth rate, for the entire period, for all the member states has remained between 1% and 4% which is still low. This means all the countries are still below the rates of growth as expected by SDGs.

Attaining of the SDGs requires countries within SADC to establish effective sources of long term economic growth. It is possible to drive growth using foreign direct investment (FDI) flows and worker remittance flows, both of which originate from outside a country. The two flows can either be complementary or substitutes in the growth process (Oumi, 2016; D'Agosto, Solferino, & Tria, 2006). Analyzing their behavior and significance needs further attention since previous results are still inconclusive. Previous studies do not provide evidence on whether or not remittances and foreign direct investment are complements or substitutes within SADC given the current levels of financial development. Again, in the case of SADC, they fail to explain whether or not the impact of the flow of remittances

¹Zambia (ZMB), Swaziland (ZAF), Tanzania (TZA), Seychelles (SYC), Namibia (NAM), Mauritius (MUS), Malawi (MWI), Madagascar (MDG), Lesotho (LSO), South Africa (ZAR), Botswana (BWA) and Mozambique (MOZ).

Figure 1
Growth Rate of Per Capita GDP for SADC Member States (1989-2014)



on long term growth is linear or non linear yet this is important for policy formulation (Bezuidenhout, 2009; Van Eyden, Owusu-Sekyere, Kemegue, et al., 2011; Anyanwu, 2011; Mbulawa, 2015b; Orji, Uche, & Ilori, 2014). Understanding the link among these variables in the context of SADC is important to influence long term growth. Policy makers fail to give the right courses of action in the absence of studies that give direction and this study fills that gap. In the context of SADC, this study shows that the flows of remittances and economic growth have a non linear relationship in the long term. Long term growth falls when remittances increase beyond 1.09%; the study shows that trade openness and improved financial development are also potential sources of long term growth. Member states benefit with more remittances than with foreign direct investment flows in the long term. Remittances are a potential source of growth for SADC member states provided that the level of financial development is high. The study provides evidence that remittances are complementary to foreign direct investment in the long run but the later has no significant direct impact on growth. The rest of the study is organized as follows: section 2 provides a review of literature, section 3 explains the methodology employed in the study, section 4 discusses results and section 5 gives conclusions and policy recommendations.

Literature Review

Remittances play a significant role in economic growth and several studies have been done to explain the former's connection with growth. Basically there are two strands in literature in which the first supports the idea that remittances promote growth. Previous results have been different across the studies sampled in this study. Evidence shows that a significant amount of remittances flowing to developing countries are spent on consumption by households. Much of the expenditures are spend on construction of homes, health-

care and education which contribute to development (Mashayekhi, 2013; Tahir, Khan, & Shah, 2015). Fajnzylber and Lopez (2008) argue that country heterogeneity was important with higher remittances being associated with high growth rates, investment rates and lower volatility of output. Similarly, Azam and Khan (2011) used simple log linear model and the method of least squares and found that worker remittances have a positive and significant impact on growth. Again, Imai, Gaiha, Ali, and Kaicker (2012) confirm that remittances flows are beneficial to economic growth. However, their study shows that volatility of capital flows like remittances and foreign direct investment are harmful to growth efforts. This means remittances are an important source of shocks to output. In a study by Ukeje and Obiechina (2013) evidence of a positive long run impact of remittances on growth is given and furthermore that only lagged values of remittances have significant and positive effect on growth in the short run. Other studies (Javid, Arif, & Qayyum, 2012; Driffield & Jones, 2013; Blouchoutzi & Nikas, 2014) also confirm the positive impact of remittances on growth using different data sets. Surprisingly, Giuliano and Ruiz-Arranz (2009) show remittances boost growth in countries that have less developed financial systems as they provide an alternative way to finance investment and help reduce liquidity constraints.

The second strand in literature shows that remittances do not promote growth or they have an insignificant effect. Shafiq, Haq, Khan, and Khan (2012) used annual data and the vector auto regression approach to examine the long and short relationship between remittances and growth. Findings show that the former has a negative and insignificant impact on growth in the long term and there was no short run relationship. Ahoure (2008) examined the role of governance in the connection between remittances and economic growth using data for SSA countries and system generalized methods of moments. Remittances were found to have a negative effect on economic growth after controlling for governance. The negative effect is mitigated to a larger extent for countries that performed well. Remittances have a favorable impact on growth in countries that have political stability and low corruption. Furthermore, Okodua (2010) shows that remittances have an insignificant negative effect on economic growth which may be as a result of monies received being channeled to non productive uses. Some studies (Ratha et al., 2007; Sharma, 2006) argue that the negative impact of remittances on growth has been caused by the fact that recipients would spend more on entertainment as opposed to investment. It can also be as a result of increased consumption expenditure which increase imports at the expense of exports resulting in slow growth. Barguelli, Zaiem, and Zmami (2013) argue that the effect of remittances on growth changes from negative to positive when an interaction between education and remittances is introduced in the model. This shows that remittances have an indirect effect on growth as influenced by the level of human capital. Similarly, Barguelli and Zaiem (2013) also show that the direct effect of remittances on economic growth is negative while the indirect effect induced by the inclusion of education is positive. Barajas, Chami, Fullenkamp, Gapen, and Montiel (2009) show that worker remittances are cannot be a source of growth. They are a poor source of investment funds since households mainly use them to solve other life threatening challenges.

In the context of Africa and SADC, studies differ on the link between remittances and financial systems. Fayissa and Nsiah (2008) show that remittances boost growth in coun-

tries with less developed financial systems suggesting that the two factors are substitutes. Remittances provide an alternative way to meet investment expenditure and dealing with the problem of illiquidity. However, other studies ([Gazdar & Kratou, 2012](#); [Singh, Haacker, Lee, & Le Goff, 2011](#); [Larsson & Ångman, 2014](#)) argue that remittances promote growth in countries with developed financial systems and this suggests the two are complements. [Mbulawa \(2015a\)](#) shows that remittances are not a significant source of growth using a selected sample SADC countries. Findings in [Adenutsi \(2014\)](#) show that, on the contrary, remittances promote growth for countries in Sub Saharan Africa. This is supported by [Mingiri and Ikhide \(2015\)](#) who show that remittances contribute to growth in the SADC region and this becomes even stronger with the improvement in the quality of institutions.

It is also important at this point to review some studies that show the link between foreign direct investment (FDI) and growth. Evidence shows that, while remittances have a positive effect, there are several studies suggesting that foreign direct investment has a positive impact on economic growth ([Melnyk, Kubatko, & Pysarenko, 2014](#); [Koojaroenprasit, 2012](#); [Behname, 2012](#); [Ahmad, Ahmad, & Hayat, 2013](#)). [Alfaro, Chanda, Kalemli-Ozcan, and Sayek \(2006\)](#) argue that FDI promote growth where the financial market is well developed. A more developed financial market makes it easy for credit constrained entrepreneurs to start their own firms. Thus financial markets allow for backward connections between foreign and local firms to turn to FDI spillovers. High growth is experienced in financially developed markets as the relative productivity of foreign firms increase ([Mundaca, 2005](#); [Acosta, Baerg, & Mandelman, 2009](#)). However [Khaliq, Noy, et al. \(2007\)](#) argue that, though FDI has an overall positive effect, the effect of FDI varies across sectors in the economy. It has a positive effect on sectors like gas, hotel and restaurant, transport and communication and the private sector while the effect on mining and quarrying is negative. This finding is further supported by ([Fortanier, 2007](#)) who show that the effect of FDI on growth differs depending on the country of origin and ([Tintin, 2012](#)) shows that FDI enhances growth and development in developing countries more than in developed countries. Again, [Umeora \(2013\)](#) argue that FDI flows do not result in growth but on the contrary they increase inflation and exchange rates. [Nunnenkamp and Spatz \(2004\)](#) further argued that an increase in FDI does not bring about economic growth in host countries with unfavorable characteristics like schooling, institutional development and trade openness. The influence of FDI on growth is indirect and the direction of causality moves from economic growth to FDI ([Louzi & Abadi, 2011](#); [Alexiou, Tsaliki, & Osman, 2014](#)).

Previous studies are failing to provide conclusive evidence on the effect of remittances on growth. Evidence is not clear on whether FDI and remittance can be used as complements or substitutes to the growth process. This presents a dilemma to policy makers as some studies support a positive effect, others a negative effect while others show that there is no effect of remittances on growth. Studies are suggesting that the link between remittances and growth is linear yet it is possible for the effect of the former on the later to first increase and then decrease, and vice versa, after reaching a certain level. Thus absence of a linear relationship has not been addressed in literature and this leaves gap for further investigation especially in the context of SADC.

Methodology and Data

The study employs annual macroeconomic data for the period 1970 to 2014 obtained from World Bank (2016). The study employs sample of 12 SADC states and three countries (Zimbabwe, Angola and Swaziland) were excluded because they did not have adequate data for key variables. Gross domestic product (GDP) was used as a measure of growth. It is defined as the gross value added by all residents producers in the economy plus taxes minus subsidies which were excluded from the value of products. It is measured at current prices in constant United States Dollars (Azam & Khan, 2011; Ukeje & Obiechina, 2013). The study employed two key explanatory variables: remittances (REM) were measured as personal transfers and compensation of employees. It comprises current transfers in cash or kind received by resident from non-resident households. Compensation of employees includes remuneration of those working in a country where they were not resident (Giuliano & Ruiz-Arranz, 2009; Azam & Khan, 2011; Shafiq et al., 2012). The square of remittances (REM2) was used to test for non linearity and foreign direct investment (FDI) is defined as foreign direct investment net inflows as a percentage of GDP. It is the sum of equity capital, reinvestment of earnings and other capital flowing into the economy (Imai et al., 2012; Ukeje & Obiechina, 2013; Hassan, Sanchez, & Yu, 2011). Three control variables were employed: credit to private sector (CPS), a proxy for financial development, is defined as financial resources provided to the private sector like loans and trade credits (Arsène & Guy-Paulin, 2013; Yakubu & Affoi, 2014; Olowofeso, Adeleke, & Udoji, 2015); physical capital (GFCF) given as improvements on land, plant, machinery and purchases of equipment, construction of infrastructure like roads, schools and hospitals (Driffield & Jones, 2013; Dilshad, 2013) and trade openness (TO) was defined as the total exports and imports of goods and services divided by two (Balioune-Lutz & Ndikumana, 2007; Matadeen, Matadeen, & Seetanah, 2011). The variable *fdirem* is an interaction term to capture the complementarity or substitutability between foreign direct investment and remittances. Variables were employed in logarithmic form, thus:

$$lgdp = f(lrem, lrem2, lfdi, lgfcf, lcps, lto) \quad (1)$$

The study employed the dynamic panel ordinary least squares (DOLS) adopted from Stock and Watson (1993); Kao and Chiang (2001); Baltagi and Kao (2001) to explain the long term connection. Test for unit root using Augmented Dickey Fuller test and test for cointegration (Kao, 1999; Engle & Granger, 1987) among the variables were important as explained below.

Panel Unit Root and Cointegration Test

The test for stationarity in panel data requires the use of methods that can handle time series and cross sectional data. The power of testing and estimation is enhanced by testing for both unit root and co-integration. The method by Levin, Lin, and Chu (2002) to test for unit root has been employed. It tests the hypothesis of each time series having a unit root against the alternative that the series is stationary. The test for cointegration was

based on the methods by [Kao \(1999\)](#); [Engle and Granger \(1987\)](#). Kao used four Dickey-Fuller (DF) and one Augmented Dickey-Fuller (ADF) to test the null hypothesis of no co-integration ($H_o : \rho = 1$).

Panel Cointegration Framework

There are two ways for examining co-integration among variables: dynamic ordinary least squares (DOLS) and fully modified ordinary least squares (FMOLS). [Stock and Watson \(1993\)](#) argue that DOLS estimator is the more efficient of the two and so it provides the basis for interpretation of results in this study. This is used by regressing the explained variable onto independent variables, using leads and lags of their first differences as well as ordinary least squares approach. It is mainly used for variables that are I(1) and they should have a single cointegrating vector. The regression used is as follows:

$$w_{it} = \alpha_i + \beta_{DOLS}x_{it} + \sum_{j=-q}^q c_{ij}\Delta x_{it+j} + \Gamma_{it} \quad (2)$$

The component $\sum_{j=-q}^q c_{ij}\Delta x_{it+j}$ is composed of leads and lags of the first difference of x and the error term is given by Γ_{it} . The dependent variable is given by w_{it} and x_{it} is a vector of explanatory variables as defined above. Model (2) can be specified as

$$lgdp_{it} = \alpha_i + \beta_1lrem_{it} + \beta_2lrem2_{it} + \beta_3lgfcf_{it} + \beta_4lfdi_{it} + \beta_5lfdirem_{it} + \beta_6lcps_{it} + \beta_7lto_{it} + \sum_{j=-q}^q c_{ij}\Delta x_{it+j} + \Gamma_{it} \quad (3)$$

Results and Discussion

The results for panel unit root are reported in Table 1. The results show that the null hypothesis is rejected at 1% level for all variables. It is evident that all variables are stationary after first differencing and therefore the series is therefore integrated of order one (1). Given that variables are stationary it is also important to check for co-movement in the long run.

Table 1
Test for Panel Unit Root

Variable	t-statistic	p-value
lgdp	-2.857	0.051
lrem	-3.958	0.001
lgfcf	-5.430	0.000
lfdi	-6.315	0.000
lcps	-13.05	0.000
lto	-15.20	0.000
fdi*rem	-3.348	0.000
lrem2	-10.36	0.000

Author's own compilation from E-views

Variables that are integrated are expected to be co-integrated otherwise the regression results are not useful. Results for co-integration tests are given in Table 2 and they provide evidence of panel co-integration between remittances, foreign direct investment and growth within SADC. This means that there is co-movement between the variables in the long term which is critical for policy making. Thus it is important to further examine the degree or nature of this long run relationship using regression analysis. As a result the study estimates elasticity to explain the link between key variables. This has been achieved using the DMOLS approach.

Long run regression results are presented in Table 3 and 4 using DMOLS. Results in Table 3 have all the variables in levels while Table 4 has an interaction term. The value of R2 is at least 79% which shows that model explains much of the variability of growth around the mean. There is no problem of multicollinearity in the model because the variance inflation factor is at most 5.24 which is acceptable (see (Hair Jr, Anderson, Tatham, & William, 1995; Neter, Wasserman, & Kutner, 1989)). Basically, results in the two Tables are the same and they show that one of the key explanatory variables, remittances, has significant and expected signs while foreign direct investment has a negative and insignificant sign. The results are in form of elasticities because variables used are in logarithms. When considering the elasticities, results show that the square of remittances and the interaction term have elasticities between zero and

Table 2
Test for Co-integration

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized	Eigen value	Max-Eigen	0.05 Critical	Prob**
No. of CE(s)		statistic	Value	
None*	0.360	53.68	46.23	0.006
At most 1	0.238	32.69	40.07	0.266
At most 2	0.156	20.48	33.87	0.722
At most 3	0.076	9.555	27.58	0.990
At most 4	0.032	4.009	21.13	0.999
At most 5	0.006	0.777	14.26	1.000
At most 6	2.400	0.002	3.840	0.955

Max-eigenvalue test indicates 1 Cointegrating eqn(s) at the 0.05 level
 *denotes rejection of the hypothesis at the 0.05 level
 **MacKinnon-Haug-Michelis (1999) p-values
 Source: Output from E-views

one. This means that any change in these factors results in a less than proportionate change in growth. The level of elasticity is higher, greater than one, for remittances, financial development and trade openness which suggest that any small change in these variables leads to a more than proportionate change in growth.

Table 3
Results of Long Run Analysis through DOLS

Variable	Coefficient	Std.Error	t-Statistic	Prob
irem	1.146	0.489	2.344	0.010
irem2	-0.546	0.094	-5.754	0.000
lfdi	-0.081	0.110	-0.684	0.342
lgfcf	-0.082	0.312	-0.262	0.651
lcps	1.580	0.209	7.529	0.000
lto	2.832	0.244	11.57	0.000

$R_2 = 0.785548$, Adj R-squared = 0.283350, S.E. of regression 1.263190, Longrun Variance 0.973731, Mean dependent var 22.26916, S.D. Dep var 1.492160, Sum Squared Resid 126.0564, Variance Inflation Factor 4.66
Source: Output from E-views

The discussions in this study are based on Table 4 which contains an interaction between remittances and foreign direct investment.

Table 4
Results of Long Run Analysis through DOLS

Variable	Coefficient	Std.Error	t-Statistic	Prob
irem	1.154	0.614	2.466	0.017
irem2	-0.688	0.084	-8.167	0.000
lfdi	-0.090	0.132	-0.684	0.497
fdirem	0.273	0.046	5.860	0.000
lgfcf	-0.091	0.328	-0.277	0.782
lcps	1.628	0.211	7.707	0.000
lto	2.808	0.259	10.80	0.000

$R^2 = 0.809066$, Adj R-squared = 0.372985, S.E. of regression 1.1952, Longrun Variance 0.886426, Mean dependent var 22.24647, S.D. Dep var 1.5095, Sum Squared Resid 115.7189, Variance Inflation Factor 5.24
Source: Output from E-views

Evidence shows that remittances, trade openness and the level of financial development are important sources of economic growth while foreign direct investment may reduce long term growth in SADC. The study shows that a 1% increase in the flow of remittances results in 1.51% increase in economic growth. Consistent with previous findings (Driffield & Jones, 2013; Blouchoutzi & Nikas, 2014) the study supports remittances led growth process in the case of developing countries. However, in the case of SADC, the increase in growth as a result of an increase in remittances does not persist forever. It reaches a threshold beyond which growth begins to fall confirming a non linear relationship in the long term. Precisely the study shows that growth efforts are realized as long as remittances increase by at most 1.09%². If remittances increase beyond this level then the level of growth is expected to fall. This can be prevented where effective policies are put in place to stretch further the benefits of attracting remittance flows into SADC member states. Findings in this study differ from those in some previous studies (Giuliano & Ruiz-Arranz, 2009; Ukeje & Obiechina, 2013) which support a linear relationship between growth and remittances.

Evidence, in this study, shows that foreign direct investment and remittances are complementary. This is represented by a positive interaction coefficient of 0.28% between the two variables. This study shows that, in the context of SADC, member states can realize

²Turn around point is calculated as $1.51/(2 \times 0.69) = 1.51/1.38 = 1.09\%$

more growth rates in the long term by taking advantage of remittances flows provided there are sufficient flows of FDI. The result shows that foreign direct investment has not been growing economies of SADC member states as it shows a negative, though not significant effect. The negative coefficient can be explained by net inflows of foreign direct investment that is not relevant to host countries. This means that foreign direct investment can only be beneficial if it combines well with other resources, like development of human capital, found in host countries. However, our results show that the negative effect is eliminated by the increase in the inflow of worker remittances. Growth efforts can pay dividends when SADC countries come up with policies that enhance remittances flows so that they support monetary flows into the economy which are of a capital nature.

Again the study shows that the level of sensitivity of economic growth is high whenever there is a change in the level of financial development. For example a 1% increase in the level of financial development, as proxied by credit to private sector, leads to a 1.63% increase in long term growth. This is in line with the financial development growth led hypothesis and results show the importance of developing the banking sector to influence growth in the region. Consistent with previous studies (Hassan et al., 2011; Christopoulos & Tsionas, 2004; Abu-Bader & Abu-Qarn, 2008; Samargandi, Fidrmuc, & Ghosh, 2013), the study clearly shows that the level of financial development supports growth efforts in the region. Thus high level of financial development creates a channel through remittances come into the economy. The level of development of financial markets encourages investment by households and firms. This means that inflows of remittances are not entirely used on current consumption in the region. The study also shows that the level of trade openness is still important for growth in SADC. The level of elasticity of 2.81% suggests that a growth will increase by a more than proportionate amount whenever there is change in trade openness. Thus policies that promote trade openness are essential for SADC.

Conclusion and Recommendations

This study uses panel co-integration techniques to establish the presence of non linearity between long term growth and remittances, the substitutability or complementarity between FDI and remittances as sources of long term growth for 12 SADC member states. The findings in study dismiss evidence by previous studies (Shafiq et al., 2012; Okodua, 2010; Barguelli & Zaiem, 2013) that worker remittance flows have a negative effect on growth in recipient countries. The study finds that remittances, on the contrary, promote long term growth within a regional bloc. However, the connection between the two is non linear such that the former will retard growth after reaching a certain threshold. In other words increased remittances flow is not an end in itself in answering the growth problem for SADC states. Thus the study supports the remittances led development success story up to a certain level after which other sources of development are essential. This non linearity connection between remittances and growth suggests that policy makers take a cautious position on their reliance on the former to affect the later. This kind of linkage may be due to the fact that recipients are not willing to continue to invest their funds forever as what firms would do. Thus households may invest up to a certain level after

which they seem to divert their receipts to meet other life necessities. Thus putting strong institutions, as suggested by [Alexiou et al. \(2014\)](#), in place is essential to extend the positive effect of remittances on growth. Continuous development of financial markets creates opportunities for households to save and focus on investment expenditure which promotes long term growth. This may be done by creating products that appeal to the needs of households as they are the recipients of remittances. Furthermore consumers would want to see readily available opportunities to invest and this drives them to engage with relatives working elsewhere to provide the necessary capital. The study suggests that transferring money to families back home should be made easy and cheaper to improve remittance inflows which will support foreign direct investment flows. The study also concludes that remittances and FDI are complementary in growth process. The former may help close the financing gap for households who may not have access to the later and this may help ease financial constraints. But [Chami, Fullenkamp, and Jahjah \(2005\)](#) argues that remittances are inadequate in reducing the financing gap. This is consistent with findings in this study that suggests that remittances can meet financing needs by households facing financial constraints. The results in this study do not suggest that the factors identified are the only drivers of growth. The study did not control for other factors that may have a moderating effect on remittances. For example factors like political stability, governance, property rights and rule of law, which were not analyzed in this paper, may explain the behavior of remittance flows to host countries. SADC member states need to keep their economies open, continue to improve their financial markets and the flow of worker remittances to grow their economies in the long term.

References

- Abu-Bader, S., & Abu-Qarn, A. S. (2008). Financial development and economic growth: Empirical evidence from six MENA countries. *Review of Development Economics*, 12(4), 803–817.
- Acharya, C. P., & Leon-Gonzalez, R. (2013). The impact of remittance on poverty and inequality: A micro-simulation study for Nepal. *GRIPS Policy Research Center, Discussion Paper: 11-26*.
- Acosta, P. A., Baerg, N. R., & Mandelman, F. S. (2009). Financial development, remittances, and real exchange rate appreciation. *Economic Review-Federal Reserve Bank of Atlanta, ISSN 0732-1813*, 94.
- Adenutsi, D. E. (2014). *Financial liberation and international remittances in Sub-Saharan Africa: A panel data analysis* (Unpublished doctoral dissertation). Stellenbosch University.
- Ahmad, N., Ahmad, A., & Hayat, M. F. (2013). Foreign remittances and economic growth in Pakistan: An empirical investigation. *Journal of Basic Applied Science Research*, 3(7), 813-819.
- Ahoure, A. A. E. (2008). Remittances, governance and growth in Sub-Saharan African Countries: A dynamic panel data analysis. University of Cocody, Abidjan, Cote d'Ivoire.
- Alexiou, C., Tsaliki, P., & Osman, H. R. (2014). Institutional quality and economic growth: Empirical evidence from the Sudanese economy. *Economic Annals*, 59(203), 119–137.
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2006). *How does foreign direct investment promote economic growth? Exploring the effects of financial markets on linkages* (Tech. Rep.). National Bureau of Economic Research. Retrieved from <http://www.hbs.edu/faculty/Publication%20Files/07-013.pdf>
- Anyanwu, J. C. (2011). Determinants of foreign direct investment inflows to Africa, 1980–2007. *Africa Development Bank, Working Paper, 136*, 1–31.
- Arsène, M. F., & Guy-Paulin, D. D. (2013). An econometric analysis of the Nexus between credit to the private sector, inflation and economic growth: Case of Cameroon 1965–2010. *Global Journal of Management and Business Research Interdisciplinary*, 13(7), 41–53.
- Azam, M., & Khan, A. (2011). Workers' remittances and economic growth: Evidence from Azerbaijan and Armenia. *Global Journal of Human-Social Science Research*, 11(7), 1–7.
- Baliamoune-Lutz, M., & Ndikumana, L. (2007). *The growth effects of openness to trade and the role of institutions: New evidence from African countries* (Tech. Rep.). Working Paper, University of Massachusetts, Department of Economics.
- Baltagi, B. H., & Kao, C. (2001). Nonstationary panels, cointegration in panels and dynamic panels: A survey. , 7–51. doi: 10.1016/s0731-9053(00)15002-9
- Barajas, A., Chami, R., Fullenkamp, C., Gapen, M., & Montiel, P. J. (2009). Do workers' remittances promote economic growth? *IMF Working Paper, WP/09/153*.

- Barguelli, A., & Zaiem, M. E. H. (2013). The effect of migrant remittances on economic growth through education: The case of Tunisia. *Management Sciences*, 2(8), 33–40.
- Barguelli, A., Zaiem, M. H., & Zmami, M. (2013). Remittances, education and economic growth a panel data analysis. *Journal of Business Studies Quarterly*, 4(3), 129–139.
- Barro, R. J., et al. (2013). Inflation and economic growth. *Annals of Economics and Finance*, 14(1), 85–109.
- Behname, M. (2012). Foreign direct investment and economic growth: Evidence from Southern Asia. *Atlantic Review of Economics*, 2, 1–14.
- Bezuidenhout, H. (2009). A regional perspective on aid and FDI in Southern Africa. *International Advances in Economic Research*, 15(3), 310–321.
- Blouchoutzi, A., & Nikas, C. (2014). Emigrants' remittances and economic growth in small transition economies: The cases of Moldova and Albania. *Journal of Economics and Business*, 17(2), 97–117.
- Chami, R., Fullenkamp, C., & Jahjah, S. (2005). Are immigrant remittance flows a source of capital for development? *IMF Staff Papers*, 52(1) *ABI/INFORM Global*.
- Christopoulos, D. K., & Tsionas, E. G. (2004). Financial development and economic growth: Evidence from panel unit root and cointegration tests. *Journal of Development Economics*, 73(1), 55–74.
- D'Agosto, E., Solferino, N., & Tria, G. (2006). The migration FDI Puzzle: Complements or substitutes? Retrieved from <http://www.ceistorvergata.it/repec/rpaper/No-76.pdf>
- Dilshad, W. B. (2013). Impact of workers' remittances on economic growth: An empirical study of Pakistan's economy. *International Journal of Business and Management*, 8(24), 126–131.
- Driffield, N., & Jones, C. (2013). Impact of FDI, ODA and migrant remittances on economic growth in developing countries: A systems approach. Aston Business School, Birmingham, UK.
- Engle, R. F., & Granger, C. W. (1987). Co-integration and error correction: Representation, estimation, and testing. *Econometrica*, 55(2), 251–276.
- Fajnzylber, P., & Lopez, J. H. (2008). *Remittances and development: Lessons from Latin America*. World Bank Publications.
- Fayissa, B., & Nsiah, C. (2008). The impact of remittances on economic growth and development of Africa. Department of Economics and Finance Working Paper Series. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/>
- Fortanier, F. (2007). Foreign direct investment and host country economic growth: Does the investor's country of origin play a role. *Transnational Corporations*, 16(2), 41–76.
- Gazdar, & Kratou. (2012). Institutions, financial development and the remittances-growth nexus in Africa. Retrieved from <http://www.gdn.int/admin/uploads/editor/files/>
- Giuliano, P., & Ruiz-Arranz, M. (2009). Remittances, financial development, and growth. *Journal of Development Economics*, 90(1), 144–152.
- Hair Jr, J. F., Anderson, R. E., Tatham, R. L., & William, C. (1995). *Multivariate data analysis with readings*.

- Hassan, M. K., Sanchez, B., & Yu, J.-S. (2011). Financial development and economic growth: New evidence from panel data. *The Quarterly Review of Economics and Finance*, 51(1), 88–104.
- Imai, K. S., Gaiha, R., Ali, A., & Kaicker, N. (2012). Remittances, growth and poverty: New evidence from Asian countries. *Asia and the Pacific division, Discussion papers No 15*.
- Javid, M., Arif, U., & Qayyum, A. (2012). Impact of remittances on economic growth and poverty. *Academic Research International*, 2(1), 433–447.
- Kao, C. (1999). Spurious regression and residual-based tests for cointegration in panel data. *Journal of Econometrics*, 90(1), 1–44. doi: 10.1016/s0304-4076(98)00023-2
- Kao, C., & Chiang, M.-H. (2001). On the estimation and inference of a cointegrated regression in panel data. *Advances in Econometrics*, 15, 179–222. doi: 10.2139/ssrn.1807931
- Khaliq, A., Noy, I., et al. (2007). Foreign direct investment and economic growth: Empirical evidence from sectoral data in Indonesia. Retrieved from http://www.economics.hawaii.edu/research/workingpapers/WP_07-26.pdf
- Koojaroenprasit, S. (2012). The impact of foreign direct investment on economic growth: A case study of South Korea. *International Journal of Business and Social Science*, 3(21), 8–19.
- Kwame Asiedu, M. (2013). Trade liberalization and growth: The Ghanaian experience. *Journal of Economics and Sustainable Development*, 4(5), 23–42.
- Larsson, P., & Ångman, J. (2014). Remittances and development: Empirical evidence from 99 developing countries. Retrieved from <http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A733959&dswid=-7726>
- Levin, A., Lin, C.-F., & Chu, C.-S. J. (2002). Unit root tests in panel data: Asymptotic and finite-sample properties. *Journal of Econometrics*, 108(1), 1–24.
- Louzi, B., & Abadi, A. (2011). The impact of foreign direct investment on economic growth in Jordan. *IJRRAS-International Journal of Research and Reviews in Applied Sciences*, 8(2), 253–258.
- Lubambu, K. M. K. (2014). The impacts of remittances on developing countries. *European Parliament, Policy Department DG External Policies, EXPO/B/DEVE/2013/34..* Retrieved from <http://www.europarl.europa.eu/activities/committees/studies>
- Makram, G., & Montassar, Z. (2014). The causal relationship between remittances and poverty reduction in developing country: Using a non stationary dynamic panel data'. *Atlantic Review*, 1, 1–12.
- Manni, U. H., & Afzal, M. N. I. (2012). Effect of trade liberalization on economic growth of developing countries: A case of Bangladesh economy. *Journal of Business Economics and Finance*, 2(2), 37–44.
- Mashayekhi, M. (2013). Maximizing the development impact of remittances', United Nations, unctad/ditc/tncd/2011/8.
- Matadeen, J., Matadeen, S., & Seetanah, B. (2011). Trade openness and economic growth: Evidence from Mauritius. Retrieved from <http://sites.uom.ac.mu/wtochair/Conference%20Proceedings/2.pdf>

- Mbulawa, S. (2015a). Determinants of economic growth in Southern Africa development community: The role of institutions. *Applied Economics and Finance*, 2(2), 91–102.
- Mbulawa, S. (2015b). Effect of macroeconomic variables on economic growth in Botswana. *Journal of Economics and Sustainable Development*, 6(4), 66–87.
- Melnyk, L., Kubatko, O., & Pysarenko, S. (2014). The impact of foreign direct investment on economic growth: Case of post communism transition economies. *Problems and Perspectives in Management*, 12(1), 17–24.
- Mingiri, & Ikhide. (2015). The relationship between external financial flows and economic growth in the Southern Africa Development Community (SADC): The role of institutions, Third Middle East Conference, Dubai. , 16–18.
- Mundaca, G. (2005). Can remittances enhance economic growth? The role of financial markets development. University of Oslo.
- Ndambiri, H., Ritho, C., Ng'ang'a, S., Kubowon, F., PC Mairura, Nyangweso, P., Muiruri, E., & Cherotwo, F. (2012). Determinants of economic growth in Sub-Saharan Africa: A panel data approach. *International Journal of Economics and Management Sciences*, 2(2), 18–24.
- Neter, J., Wasserman, W., & Kutner, M. (1989). Applied linear regression models. Homewood, IL: Irwin.
- Nunnenkamp, P., & Spatz, J. (2004). FDI and economic growth in developing economies: How relevant are host-economy and industry characteristics. *Transnational Corporations*, 13(3), 53–86.
- Okodua, H. (2010). Workers' remittances and economic growth in selected Sub Saharan African countries. Unpublished PhD thesis. Covenant University, Nigeria.
- Olowofeso, E. O., Adeleke, A. O., & Udoji, A. O. (2015). Impact of private sector credit on economic growth in Nigeria. *CBN Journal of Applied Statistics*, 6(2), 81–101.
- Orji, A., Uche, A. S., & Ilori, E. A. (2014). Foreign capital inflows and growth: An empirical analysis of WAMZ experience. *International Journal of Economics and Financial Issues*, 4(4), 971–983.
- Oruc, N. (2011). Remittances and development: The case of Bosnia. Netzwerk Migration in Europa. Retrieved from <http://www.migrationeducation.org>
- Ouni. (2016). Remittances, foreign direct investment and economic growth in some selected MENA countries: A panel data analysis, third European academic Research Conference on Global business, Economics, Finance and Banking, 1-3.
- Ratha, D. (2013). The impact of remittances on economic growth and poverty reduction. *Policy Brief*, 8, 1–13. Retrieved from <http://www.migrationpolicy.org>
- Ratha, D., et al. (2007). Leveraging remittances for development. Migration Policy Institute, Policy Brief, World Bank, Washington D.C. Retrieved from <http://www.migrationpolicy.org>
- Samargandi, N., Fidrmuc, J., & Ghosh, S. (2013). Is the relationship between financial development and economic growth monotonic for middle-income countries. *Economics and Finance Working Paper*, 13-21. doi: 10.1016/j.worlddev.2014.11.010
- Shafiq, M., Haq, I. U., Khan, A., & Khan, S. (2012). The role of foreign remittances and economic growth in poverty alleviation: Time series evidence from Pakistan. *World Applied Sciences Journal*, 19(3), 366–369.

- Sharma, H. (2006). Explaining the remittance behavior and the role of remittances in the GDP growth in Nepal. Working Paper.
- Singh, R. J., Haacker, M., Lee, K.-w., & Le Goff, M. (2011). Determinants and macroeconomic impact of remittances in Sub-Saharan Africa. *Journal of African Economies*, 20(2), 312–340.
- Stock, J. H., & Watson, M. W. (1993). A simple estimator of cointegrating vectors in higher order integrated systems. *Econometrica*, 61(4), 783–820.
- Tahir, M., Khan, I., & Shah, A. M. (2015). Foreign remittances, foreign direct investment, foreign imports and economic growth in Pakistan: A time series analysis. *Arab Economic and Business Journal*, 10(2), 82–89.
- Tintin, C. (2012). Does foreign direct investment spur economic growth and development? A comparative study. Retrieved from <http://www.etsg.org/ETSG2012/Programme/>
- Tiwari, A. K., & Mutascu, M. (2011). Economic growth and FDI in Asia: A panel-data approach. *Economic Analysis and Policy*, 41(2), 173–187.
- Ukeje, E. U., & Obiechina, M. E. (2013). Workers' remittances-economic growth nexus: Evidence from Nigeria, using an error correction methodology. *International Journal of Humanities and Social Science*, 3(7), 212–227.
- Umeora, C. E. (2013). Effects of foreign direct investment (FDI) on economic growth in Nigeria. Retrieved from <http://ssrn.com/abstract=2285329>
- Valeriani, E., Peluso, S., et al. (2011). The impact of institutional quality on economic growth and development: An empirical study. *Journal of Knowledge Management, Economics and Information Technology*, 6, 1–25.
- Van Eyden, R., Owusu-Sekyere, E., Kemegue, F., et al. (2011). *Remittance inflows to Sub-Saharan Africa. The Case of SADC. University of Pretoria, Department of Economics, Working Paper Series* (Tech. Rep.). Retrieved from <http://www.up.ac.za/media/>
- Yakubu, Z., & Affoi, A. (2014). An analysis of commercial banks. *Current Research Journal of Economic Theory*, 6(2), 11–15.