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## Diaspora remittances and economic growth in Zimbabwe

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### Abstract

The study investigated the relationship between diaspora remittances and economic growth for Zimbabwe. Time series data for the period from 1990 to 2019 were used. The study employed the error correction model (ECM) to determine the relationship between diaspora remittances and economic growth. Data from World Bank database were used. The study found diaspora remittance to be statistically significant in explaining economic growth. The study, therefore, recommend that Zimbabwe should put formal structures to tap in all flows from diaspora remittances. Furthermore, tax

charged on remittances should not be discouraging for those who intend to send in their remittances. A clear policy be put in place and be made open to the public on the spending of income earned as a result of remittances. A significant share on expenditure of remittances earned, should be directed towards social amenities. Also, the Reserve Bank of Zimbabwe should endeavour to eliminate bottle necks in the processing of remittances as this act to the negative of remittances inflow.

**Keywords:** economic growth, diaspora remittances, error correction model

### 1. Introduction

Statistics on total remittances to Zimbabwe through both Money Transfer Agencies (MTAs) and informal channels have been a subject of intense debate (UNICEF, 2009) <sup>[10]</sup> The predominant use of informal channels, and the fact that some of the remittances are in kind, creates immense problems of measurement. Makina (2007) <sup>[5]</sup> posited that only two percent of Zimbabwean migrants in South Africa used formal channels to send money home, while the majority used a variety of informal channels. One reason for the poor capital inflows into the formal financial institutions was the policy shift displayed by the Reserve Bank of Zimbabwe (RBZ) on the receipt of remittances. When the MTAs were established in 2004, remittances could be received in foreign currency, but from 2005, recipients had to get their money in Zimbabwe dollars, at an exchange rate that was usually unfavourable relative to that on the parallel market. This naturally encouraged people to use informal channels, resulting in a decline in foreign-currency inflows through MTAs. What is required, therefore, are policies that improve remittance flows into formal channels in order to strengthen their developmental impact. This paper, therefore, sought to determine the nature of the relationship between diaspora remittances and economic growth in Zimbabwe.

#### 1.1 Background of the Study

The crisis that hit the western financial markets in 2008 has led to a severe global economic recession, which impacted and is still impacting migrants and migration policies worldwide. Despite the growing vulnerability of migrants, remittances have remained stable during and after the global economic downturn. Indeed, they continue to be a significant source of income for families and play a crucial role of co-insurance or risk mitigation in times of hardship. Moreover, remittances have proven to be a more sustainable source of foreign currency for developing countries than other capital inflows such as foreign direct investment, public debt or official development assistance.

However, the nexus between remittances and growth remains complex, especially with regards to the movement of people, which contributes to the spread of global interdependence at all levels-social, economic and political. Diasporas' remittances are a new economic occurrences and one of the core sources of incomes based on their size and economic effect in the world. Diasporas are now remitting back to their relatives in developing countries at levels above US\$441 billion, a figure three times the volume of official aid flows. These inflows of cash constitute more than 10 percent of GDP in some 25 developing countries and lead to increased investments in health, education, and small businesses in various communities (World Bank, 2016).

In the Zimbabwe context, remittances are extremely important to household survival and sustainability in Zimbabwe (Bracking & Sachikonye, 2006) <sup>[3]</sup>.

In the recent past, Zimbabwe has been concerned about the informal channels of diaspora remittances. This forced the government to devise ways of harnessing remittances even from the illegal emigrants through formal channels. Infact, the Zimbabwean government sought to reap the benefits of remittances through the Reserve Bank of Zimbabwe (RBZ)'s subsidiary, the Homelink, Mukuru, World Remit amongst others. These institutions were established with the purpose of mobilizing remittances from both legal and illegal emigrants. For instance, through the Homelink, emigrants were to send remittances to the RBZ and in turn have houses built for them (Tevera & Chikanda,

2009) [8].

Despite all the government efforts to formalise the inflow of diaspora remittances, there is little evidence to suggest how diaspora remittances are related to economic growth. This paper's results would enable policy makers to come up with strategies that would enhance the increased inflow of diaspora remittances to Zimbabwe.

The following figure 1.1 exhibits the trend followed by diaspora remittances in Zimbabwe for the period 2004 to 2019. This seeks to bring out a picture on how the flows of the remittances have been affected by the illegal channels.

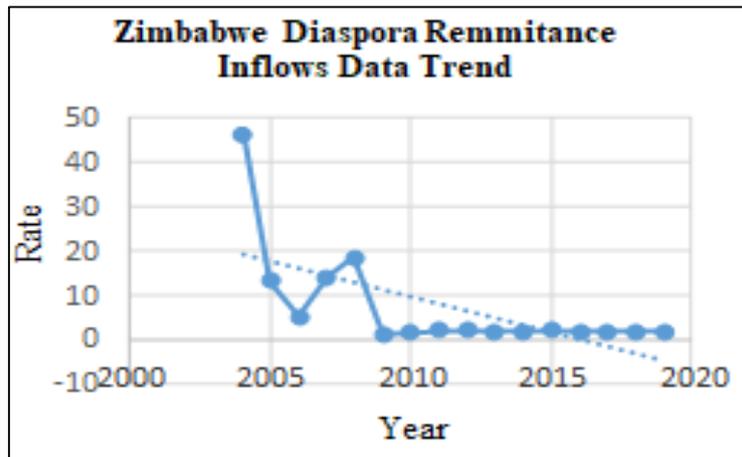


Fig 1: Zimbabwe Remittance flows Data Trend (Adapted from Zimbabwe Statistical Agency Database)

Information depicted above suggests a downward trend with the highest inflows recorded in 2004 and the least in 2009. This could be that during the period 2009, Zimbabwe was using United States dollar, which is one of the strongest currency in the world, hence the currency could sustain the livelihood of citizens in the absence of diaspora remittances. Furthermore, it could be that people used informal means of

sending remittances home due to the unfavourable laws during the time, regarding the management of diaspora remittances.

Figure 1.2 below exhibits the trend followed by GDP data of Zimbabwe for the period 2004 to 2019. The real GDP data have been used as a proxy variable for economic growth.

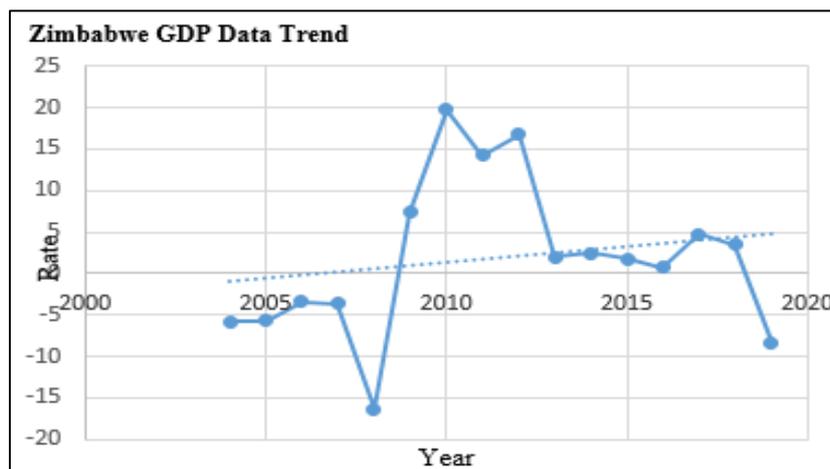


Fig 2: Zimbabwe GDP Data Trend (Adapted from Zimbabwe Statistical Agency Database)

The information depicted above suggests an upward trend of GDP though being insignificant. This maybe as a result that the country's economic soundness was heavily affected during the period. During the period 2009 to 2013, the country was using multi-currency and this propelled growth.

Considering that the study is premised on determining the relationship between diaspora remittance and economic growth, Figure 1.3 exhibits trends for both diaspora remittances and GDP of Zimbabwe for the period 2004 to 2009.

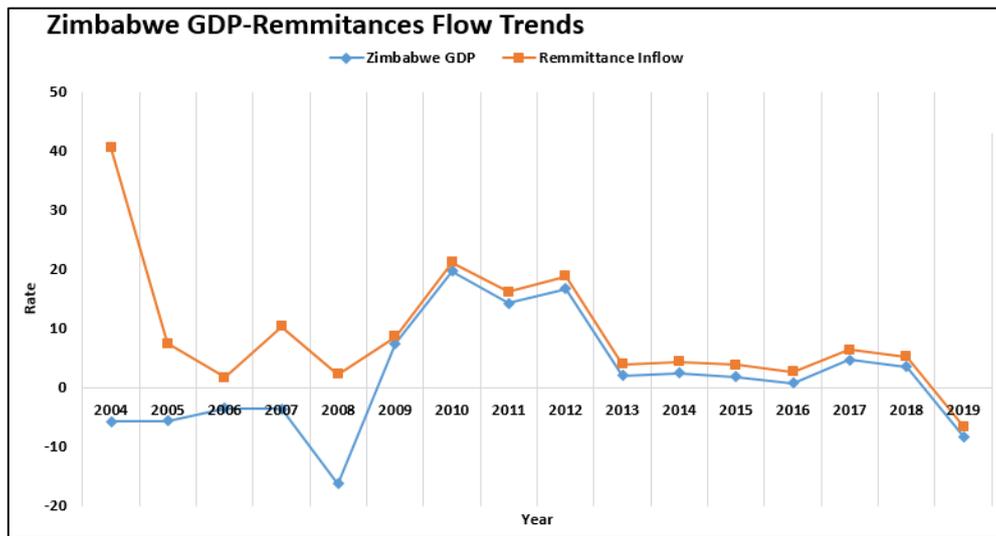


Fig 3: Zimbabwe GDP-Remittances flows Data Trend (Adapted from Zimbabwe Statistical Agency Database)

Information depicted in Figure 1.3 suggests that diaspora remittances and GDP seem to be associated. For instance, from the period 2007 to 2019, when diaspora remittances increased, GDP also increased and vice-versa. This brings us to an interesting conclusion that diaspora remittances may be related to economic growth. This study, therefore, seeks to determine the nature of relationship between the two variables.

## 2.0 Review of Related Literature

A recent study on by Stratan et al., (2013) <sup>[7]</sup> found that remittances contribute to reducing the severity of poverty, as migrants' relatives directly receive remittances. Adams and Cuechuecha (2010a) indicate that international remittances have the greatest impact on reducing the depth and severity of poverty, rather than on reducing its scale. Analysing 71 developing countries, Adams and Page (2005) found a relationship between remittances and poverty reduction, statistically demonstrating that a 10 per cent increase in international remittances from each remitter will lead to a decrease of 3.5 per cent in the share of people under poverty. Similarly, Anyanwu and Erhijakpor (2010), who analysed remittance flows for a sample of 33 African countries for the period 1990-2005, excluding Zimbabwe, found that the depth and severity of poverty were declining. Billmeier and Massa (2009) studied the relationship between remittances and stock market development using a fixed-effects model. They looked at data from 17 Middle East and Central Asia Regions and found a positive and significant relationship.

Demirguc-Kuntetal (2011) investigated the effect of remittances on banking sector depth and breadth in Mexico, and found that remittances increased the number of bank branches and accounts and the amount of deposits. Other studies have found that remittances help households to set up small commercial enterprises and facilitate business activity (Yang, 2004; Woodruff & Zenteno, 2001), which eventually leads to an increase in private investment. This engagement in business activity has a direct effect on banking institutions, because banks offer households as place to store their liquidity (Demirguc-Kuntetal., 2011).

However, other scholars such as Aggarwal et al. (2006) <sup>[2]</sup> are sceptical about the effect of remittances on the banking sector; they argue that remittances may help to relax financing constraints, which implies a reduced demand for

bank credit that affects the development of the banking sector.

Massey and Parrado (1998) studied the link between international remittances and business formation in Mexico and concluded that receipt of remittances increases the likelihood that a household will form a business and increases productive investment. However, the latter was more influenced by personal, household and community characteristics than remittances or migration as such. They also find that remittances received during a household migrant's absence had little impact on business formation, but rather, following the migrants' return, remittances increased business investment.

World Bank (2006) through a panel data of 67 countries, with a data set over the period of 1991 -2005, determined a presence of positive and significant relationship between remittances to GDP ratio and per capita GDP growth. The study further concluded that one of the main channels through which remittances work is through increasing domestic investment. The other question:

'...does migration reshape expenditure in rural households?' were also attempted to be answered in a study by Mora and Taylor (2006) <sup>[6]</sup>...

Authors suggested that this may occur through remittances but choose to separate their (Mexican) sample into households with a migrant and those without whilst controlling for any potential selection bias using Inverse Mill's Ratios. Results showed that households with international migrants dedicate a larger marginal budget share to investments than non-migrant households (0.21 compared with 0.10). Households with United States of America migrants also spend more at the margin on consumer durables than other households (0.22 against 0.12) and more on services than non-migrant households (0.23 versus 0.16). However, households with internal migrants exhibit a lower marginal propensity to invest than non-migrant households (0.06 compared with 0.10).

Udah (2011) <sup>[9]</sup> in the paper '...Remittances, Human Capital and Economic Performance in Nigeria', revealed that remittances affect economic performance in Nigeria through its interaction with human capital and technology diffusion. Philippines study by Yang (2005) indicated that increased household's remittances enhance human capital accumulation by increasing the number of children going to

school, reducing child labour and increasing expenditure on education in origin of households.

Similarly, Aggarwal, Demirgüç-Kunt Asli, and Maria Soledad Martínez Pería (2010) study on data of remittance flows for 109 developing countries during 1975-2007 were used to determine the link between remittances and financial sector development; a positive, significant, and robust link between remittances and financial development in developing countries was evident.

Fullenkamp, and Jahjah (2003) [4] conducted a study on aggregate remittance data for a sample of 83 countries over a period from 1970-1998, to examine the relationship between workers' remittances and per capita GDP growth. It was found that, the investment to GDP and net private capital flows to GDP ratio were positively affecting growth but workers' remittances to GDP ratio either was not significant or negatively related to growth.

Study on the relationship between remittance and economic growth in China and Korea was done by Jawaid and Raza (2012) who used time series data from 1980 to 2009 and co-integration methodology. It was confirmed that there exists significant long-run relationship between remittances and economic growth in Korea, while significant negative relationship exists in case of China. The Error correction model showed that there is significant positive short-run relationship of workers' remittances with economic growth in Korea, while the result in China is insignificant.

Available empirical evidence is highly conflicted, some studies conclude on positive growth effects of diaspora remittances, some on negative growth effects of diaspora remittances, while some maintain that remittances have no impact on economic growth. Furthermore, there was little evidence to suggest that a study of this nature was done for Zimbabwe. In fact, this paper assumes that in the case of Zimbabwe, there is a positive effect of diaspora remittances on economic growth (see figure 1.3).

**3. Materials and Method**

**4.1.1 Sample of the Study**

The sample comprises of time series data for real GDP and Diaspora Remittances, Unemployment, Inflation and Foreign Direct Investment. The data covers period 1990 to 2019. The period was chosen on that basis that it gives the dynamic social-economic environment relevant to predict the current as well as the future economic trends.

**4.1.2 Data Sources**

Data for the study were collected from World Bank database.

**4.1.3 Methodology Adopted**

This section explores the methodology applied in the study to determine the relationship between diaspora remittances inflow and economic growth. This study, therefore, adopted an Error Correction Model (ECM) after the data came stationary at different levels, as well as the short-run dynamics on the relationship between diaspora remittance and economic growth. Eviews Version (8) Statistical Package was used. Before, the ECM was conducted, diagnostic tests were carried out and the results of the test are presented below.

**(a) Normality Test**

**Table 1:** Normality Test Results with the data covering period 1990 to 2019

	Real GDP	Remittances	Inflat.	Unempl.	FDI
Mean	2.338333	4.052197	12.19567	5.177000	1.534000
Median	1.885000	0.633000	0.645000	5.130000	1.085000
Maximum	1.968000	1.361000	255.2900	6.930000	6.940000
Minimum	1.767000	0.000000	-72.73000	3.840000	0.030000
Std. Dev	8.561395	5.056762	61.56123	0.637009	1.714815
Skewness	0.066133	0.697524	2.615685	0.699797	2.047673
Kurtosis	2.862365	1.695803	10.20175	3.932665	6.840437
Jarque-Bera	0.045547	4.558859	99.04058	3.535906	3.940101
Probabil.	0.977484	0.102343	0.000000	0.170682	0.000000
Obs.	30	30	30	30	30

Source: Secondary data: Eviews Version (8) Statistical Package Output

In using the Jarque-Bera Probability Test to determine if the data are normally distributed, the underlying assumption is that probability values greater than 0.05 are normally distributed. The results show that economic growth data for real GDP, diaspora remittances and unemployment are normally distributed as depicted by the Jarque-Bera p-values greater the 0.05. However, data for inflation and FDI are not normally distributed as shown by the Jarque-Bera p-value of less than 0.05. Given these results, the study proceeded to test for the correlation between the variables.

**(b) Correlation Test**

**Table 2:** Correlation Test Results with the data covering period 1990 to 2019

	Real GDP	Remit	Unemp	Inflat	FDI
Real GDP	1.000000	0.475673	0.195168	-0.373097	-0.061924
Remit	0.475673	1.000000	0.099011	0.097359	0.335524
Unemp	0.195168	0.099011	1.000000	-0.185898	0.315616
Inflat	-0.373097	0.097359	-0.185898	1.000000	0.358921
FDI	-0.061924	0.335524	0.315616	0.358921	1.000000

Source: Secondary data: Eviews Version (8) Statistical Package Output

**Real GDP**

The results show a relatively strong positive association between real GDP and diaspora remittances as indicated by the co-efficient 0.475673. Similarly, there was a positive linear association between real GDP and unemployment, though weak in nature as indicated by the coefficient 0.195168. Also, real GDP revealed a negative linear association with inflation as depicted by a coefficient of -0.373097. Furthermore, the results exhibits a negative linear association with FDI as shown by the coefficient of -0.061924.

**a. Diaspora Remittances**

The results depict a relatively strong positive association between diaspora remittances and real GDP as indicated by the co-efficient 0.475673. There was, however, a weak positive linear association between diaspora remittances and unemployment, as indicated by the coefficient 0.099011. This was the same with inflation where a coefficient of 0.097359 was recorded. Also, diaspora remittances revealed

a negative linear association with FDI as shown by a coefficient of 0.335524.

**b. Unemployment**

The results shows a positive association between unemployment and real GDP as indicated by the co-efficient 0.195168. Similarly, there was a positive linear association between unemployment and diaspora remittances, though weak in nature as indicated by the coefficient 0.099011. Also, unemployment revealed a negative linear association with inflation as depicted by a coefficient of -0.185898. Furthermore, the results exhibits a positive linear association with FDI as shown by the coefficient of 0.315616.

**c. Inflation**

The results shows a relatively strong negative association between inflation and real GDP as indicated by the co-efficient -0.373097. Similarly, there was a weak positive linear association between inflation and diaspora remittances as indicated by the coefficient 0.097359. Also, inflation revealed a negative linear association with unemployment as depicted by a coefficient of -0.185898. Furthermore, the results exhibits a positive linear association with FDI as shown by the coefficient of 0.358921.

**d. Foreign Direct Investment (FDI)**

The results shows a weak negative association between FDI and real GDP as indicated by the co-efficient -0.061924. However, there was a positive linear association between FDI and diaspora remittances, as indicated by the coefficient 0.335524. Also, FDI revealed a positive linear association with unemployed as depicted by a coefficient of 0.315616. Furthermore, the results exhibits a positive linear association with inflation as shown by the coefficient of 0.358921. Generally, the results suggest that the variables of the study have a linear association running from the positive to the negative. The section that follows explains the results of unit roots that were conduct to determine stationarity of data which is a prerequisite when dealing with time series data. Regressions carried out on data that are non-stationary results in spurious results.

**(c) Unit Root Tests**

**Table 3:** Unit Root Test Results with the data covering period 1990 to 2019

Variable	t-ADF Statistic	Critical 1%	Critical 5 %	Critical 10 %	Concl
Real GDP	-4.392754	-3.679322*	-2.967767	-2.622989	I(0)
Remit	-5.601803	-3.689194*	-2.971853	-2.971853	I(1)
FDI	-6.783274	-3.689194*	-2.971853	-2.625121	I(1)
Unemp	-4.653361	-3.752946*	-2.998064	-2.638752	I(0)
Inflat	-4.646964	-3.679322*	-2.967767	-2.622989	I(0)

Source: Secondary data: Eviews Version (8) Statistical Package Output

\*, \*\*, \*\*\* Indicates Significance at 1%; 5%; 10%

In interpreting the data Augmented Dickey Fuller test technique was adopted. Real GDP data became stationary at levels that is [I (0)]. This was supported by the p-value of 0.017, which is less than 0.05. However, diaspora remittances

failed to become stationary at levels. After differencing, that is, [I (1)], the data became stationary at 1 percent critical value of -3.689194, being greater than the t-statistic of -5.601803. This was supported by the p-value of 0.0001, which is less than 0.05.

Similarly, foreign direct investment (FDI) data failed to become stationary at levels. After differencing, the data became stationary [I (1)], that is, at 1 percent critical value of -3.689194, being greater than the t-statistic of -6.783274. This was supported by the p-value of 0.0000, which is less than 0.05.

Furthermore, unemployment data became stationary at levels [I (0)], that is, at 1 percent critical value of -3.752946, being greater than the t-statistic of -4.653361. This was supported by the p-value of 0.0013, which is less than 0.05. Lastly, inflation data also became stationary at levels [I (0)], that is, at 1 percent, with a critical value of -3.679322, being greater than the t-statistic of -4.646964. This was supported by the p-value of 0.0009, which is less than 0.05.

The results suggest that all the variables data are stationary though at different level. This has serious implications on the regression model that the study adopted. If the variables' data are all stationary at levels, ordinary least squares (OLS) is used, and when variables data are stationary at different levels, as is the case for this study, error correction model (ECM) is used. Infact, it is convention in estimation regression that variables' data are subjected to cointegration test to determine the long-run relationship. Working with data that do not move together in the long-run results in false regressions, thus, giving incorrect results. The following section, therefore, presents results for cointegration tests.

**(d) Cointegration Test**

**Table 4:** Cointegration Test Results with the data covering period 1990 to 2019

	Hypothesised No. of CE (s)	Trace Value	5% Critical Value	Prob.**
None*	0.683319	70.43014	69.81889	0.0447
Atmost 1	0.560945	38.23408	47.85613	0.2919
Atmost 2	0.323304	15.18644	29.79707	0.7679
Atmost 3	0.140375	4.251498	15.49471	0.8822
Atmost 4	0.000580	0.016244	3.841466	0.8784

Source: Secondary data: Eviews Version (8) Statistical Package Output

Trace test indicates three cointegrating equation(s) at the 0.05 level.\* denotes rejection of the hypothesis at the 0.05 level.

\*\*MacKinnon-Haug-Michelis (1999) p-values.

The null hypothesis of no cointegration amongst variables is tested against alternative hypothesis of existence of cointegration. In interpreting the data Trace values have been used. The results for the study variables' data confirm existence of cointegration amongst variables, as supported by Trace value of 70.43014, with a calculated p-value of 0.0447, falling within the 5 percent significance level, making it statistically significant. These results are enough to motivate the study to conduct its estimation using the error correction model (ECM). The choice for the estimation procedure is as a result that data became stationary at different levels as well as to determine the short-run dynamics on the relationship of the variables as alluded to in the preceding sections of this paper.

**(e) Error Correction Model (ECM)**

**Table 5:** Error Correction Model Test Results Dependent Variable: Real GDP

Indep-Variable	Coefficient	Std. Error	t- Statistic
Remittances	0.027481	0.07386	0.37205
Inflat	-3.127307	1.17461	-2.66243
Unemp	-0.002046	0.00848	0.24115
FDI	-0.069789	0.05012	-1.39254
C	0.142046	0.52337	0.27141

**Source:** Secondary data: Eviews Version (8) Statistical Package Output  
R-Squared = 0.8643

According to the estimated model, the relationship between variables is both positive and negative. This is shown by a negative and positive coefficients. On the variables of interest, real GDP and diaspora remittance, the results showed a positive relationship. This is depicted by a coefficient of 0.027481. This suggests that a unit increase in diaspora remittance inflow results in 0.027 percent increase in real GDP in Zimbabwe.

Basing, on the theoretical assumptions on GDP-diaspora remittances relationship, the figure of 0.027 is insignificant. This could have been attributed by the dominants of informal or illegal channels of remittances in Zimbabwe, resulting in the government failing to tap the flows. This assertion is in support of Orozco and Lindley, (2007) who stated that

**3.2.1 Normality Test**

**Table 6:** Normality Test Results: Jarque-Bera: Cholesky Lutkepohl

Component	Skewness	Chi-Sq	df	Prob.
1	0.939078	3.968406	1	0.0464
2	0.211206	0.200736	1	0.6541
3	-0.146475	0.096547	1	0.7560
4	0.669596	2.017617	1	0.1555
Joint		6.283305	4	0.1790
Component	Kurtosis	Chi-sq	df	Prob.
1	5.077976	4.857734	1	0.0275
2	3.910410	0.932453	1	0.3342
3	7.453160	22.30946	1	0.0000
4	4.044407	1.227135	1	0.2680
Joint		29.32679	4	0.0000
Component	Jarque-Bera	df	Prob.	
1	8.826140	2	0.0121	
2	1.133189	2	0.5675	
3	22.40601	2	0.0000	
4	3.244752	2	0.1974	
Joint	35.61009	8	0.0876	

**Source:** Secondary data: Eviews Version (8) Statistical Package Output  
\*Jarque-Bera Joint P-Value was used for interpreting the Results

In order to test normality of the model a VEC Residual Normality Tests, Orthogonalization: Cholesky (Lutkepohl) was conducted and the results obtained that the series are jointly normal distributed as depicted by the p-value of Jarque

informal channels of remittance flows impact negatively on economic growth.

However, the relationship between real GDP and inflation is inverse as shown by a coefficient -3.127307. This suggests that a unit increase in inflation results in 3.12 percent decrease in real GDP in Zimbabwe. Similarly, real GDP and unemployment has a negative relationship. A unit increase in unemployment results in 0.002 percent decrease in real GDP in Zimbabwe. It is, also the same with foreign direct investment (FDI) where an inverse relationship has been record. The results sounds ambiguity, where a unit increase in FDI results in 0.069 percent decrease in real GDP.

The value of the R-squared for the model is 86 percent, suggesting that 86 percent variations in dependent variable are accounted for by the independent variables.

Having presented the results of the study, stability tests are carried out to determine if the model used was well specified. This is done to find out the extent to which the results can be validated and relied upon. To that end, Cholesky Lutkepohl normality test, Breusch-Godfrey Serial Correlation LM Test and Breush- Pegan- Godfrey Tests Residuals heteroskedasti city test results are presented below.

**3.2 Stability tests of the study**

Validity of the model gets proved by tests applied on residuals. Residuals' series must be normally distributed, with no serial correlation and homoscedastic. The following are the results.

Berra component of 0, 0876 percent, more than 5 percent relevance interval. The section that follows explains the Breush-Godfrey Serial Correlation LM test that the study undertook in its pursuit of stability test.

**3.2.2 Correlation Test**

**Table 7:** Correlation Test Results: Breusch- Godfrey Serial Correlation LM Test

Lags	LM-Stat	Prob
1	20.44691	0.2008
2	31.53684	0.0115
3	18.10569	0.3177
Probs from Chi-square with 16 df.		

Source: Secondary data: Eviews Version (8) Statistical Package Output

\*LM Lag 3 P-value Result was used

The test was undertaken to test for serial correlation. The presents of serial correlation would mean that incorrect conclusions would be drawn from other tests or that sub-optimal estimates of the model parameters would be obtained. Basing on the results, there is absence of serial correlation as shown by the p-value of 0.3177 under the third lag that the Akaike Information Criterion selected for this

study. The p-value is greater than 0.05 the accepted significance level.

**3.3. Heteroscedasticity-ARCH**

This section explains the Breush - Pagan - Godfrey test that the study undertook in its pursuit of stability test.

**Table 8:** ARCH Test Results: Breush - Pagan- Godfrey Test

Joint test:					
Chi-sq	Df	Prob.			
193.0066	200	0.6257			
Individual components:					
Dependent	R-squared	F(20,6)	Prob.	Chi-sq(20)	Prob.
res1*res1	0.978141	13.42413	0.0020	26.40980	0.1527
res2*res2	0.945450	5.199498	0.0246	25.52714	0.1820
res3*res3	0.530126	0.338469	0.9687	14.31341	0.8143
res4*res4	0.799846	1.198846	0.4422	21.59584	0.3628
res2*res1	0.707303	0.724951	0.7293	19.09719	0.5155
res3*res1	0.664166	0.593299	0.8236	17.93248	0.5919
res3*res2	0.642138	0.538312	0.8615	17.33772	0.6309
res4*res1	0.775987	1.039206	0.5250	20.95164	0.4000
res4*res2	0.936027	4.389462	0.0372	25.27272	0.1912
res4*res3	0.657001	0.574639	0.8367	17.73904	0.6046

Source: Secondary data: Eviews Version (8) Statistical Package Output

\* Joint Test P-Value was used for interpreting the Results

This test has been used to determine heteroskedasticity in the regression model that this study used. The test assumes that the error terms are normally distributed. It was undertaken to test whether the variance of the errors from a regression is dependent on the variables of the independent variables. The results shown indicate that there is homoscedasticity as indicated by the p-value of 0.6257, which is greater than the 0.05 significance level. These results suggest that the study is valid and that the results can be relied upon. In essence, the model used for the study is well specified.

**4. Conclusions**

The aim of this paper was to determine the relationship between diaspora remittances and economic growth for Zimbabwe. The tests confirmed that there exists relationship between diaspora remittances and GDP. The results finally confirmed the positive relationship between diaspora remittances and real GDP in Zimbabwe. The stability tests conducted confirmed that the ECM is well specified.

**5.0 Recommendations**

a) Zimbabwe should put formal structures to tap in all flows from diaspora remittances. Not much has been done on this area considering the increased remittances that find their way in the country through informal channels. The introduction of formal channels seeks to enhance increased accountability and better use of remittances.

- b) Tax charged on remittances should not be discouraging for those who intend to send in their remittances. High taxes scares away those in the diaspora as they feel robbed of their hard earned income.
- c) A clear policy be put in place and be made open to the public on the spending of income earned as a result of remittances. This should be the responsibility of the Zimbabwe Reserve Bank Governor to include it in the annual and by-annual monetary policies.
- d) A significant share of expenditure of remittances earned should be directed towards social amenities. This will go a long way in drumming support from both those in the diaspora and recipients of the remittances. This would eliminate wastage of resources as has been the case where remittances are spent on recurrent expenditure.
- e) The Reserve Bank of Zimbabwe should endeavour to eliminate bottle necks in the processing of remittances as this acts to the negative of remittances inflow.

It is, the hope of this paper that if the suggested recommendations are put in place, significant coefficient on Remittances-GDP nexus maybe realised.

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