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The Impact of Foreign Remittances on Economic Growth: Evidence from Zimbabwe

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Abstract: Purpose – This article examined the impact of foreign remittances on economic growth in Zimbabwe. **Approach –** Secondary data collected from the World Bank`s World Development Indicators database, was employed to empirically examine the nature of the relationship between the two variables, for the period 1960-2020. The autoregressive distributed lag model was used. **Findings -** The major findings reveal both unidirectional and bi-directional causality linkages between foreign remittances and economic growth during the three periods under review. Foreign remittances showed a positive and significant influence on gross domestic product in Zimbabwe. The period before dollarization gave a strong negative influence on Zimbabwe's economic growth. The dollarization period showed a strong positive correlation between the two variables under study in Zimbabwe. The error correction gave a very strong negative statistical relationship with the rate of economic growth in Zimbabwe. **Practical implications –** This article has practical implications especially for policy formulation and implementation at individual and government levels. **Originality/value –** The article closed the gap in knowledge by drawing attention to the nature of the relationship between foreign remittances and economic growth in Zimbabwe during the three different economic cycles examined.

Keywords: Diaspora Remittance; Personal Remittance; Foreign Remittance; Economic Growth; Gross Domestic Product; Zimbabwe

JEL Classification: G21; F22; F24; F43; O11; O47

1. Introduction

Foreign remittances have been considered a panacea to foreign currency shortages and are being considered a critical component for economic growth and development especially in developing countries such as Zimbabwe. According to Knomad (2022), remittances reached an estimated amount of USD689 billion worldwide with USD529 billion going to developing countries in 2018. This was a sharp increase from USD125 billion in 2004 (Maimbo & Ratha, 2005) (see Figure 1). Previous research has shown the growing importance of foreign remittances on the country`s economic growth and development (Maimbo & Ratha, 2005; Aggarwal & Spatafora, 2005; Chami, Jahjah & Fullenkamp, 2005; Giuliano & Ruiz-Arranz, 2005; Giuliano, 2006; Srivastava & Chandhary, 2007; Giuliano & Ruiz-Arranz, 2009; Yaseen, 2012; Ratha, 2013; Githiga, 2014; Meyer & Shera, 2016; Mugano, 2016). Giuliano and Ruiz-Arranz (2009), however, argue that, "despite the increasing importance of remittances in total international capital flows, the relationship between remittances and growth has not

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been adequately studied [especially in Zimbabwe]. This contrasts sharply with the extensive research on the relationship between growth and other sources of foreign capital, such as foreign direct investment (FDI) and official assistance flows." According to Batool, Haroon, Ali and Ahmad (2022), researchers have also noted the importance of a well-functioning financial system in increasing migrant transfers. A well-developed financial system improves service availability through lowering costs. In Zimbabwe, because the majority of people have lost trust and confidence with the financial system, a huge chunk of foreign currency transactions are done through the informal market thereby causing financial instability. The terms foreign remittances, personal remittances, and diaspora remittances are taken to mean the same as defined by the World Bank (2022) and are used interchangeably for the purposes of this study.

According to the World Bank (2022), "foreign remittances comprise personal transfers and compensation of employees. Personal transfers consist of all current transfers in cash or in kind made or received by resident households to or from non-resident households. Compensation of employees refers to the income of border, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by non-resident entities." Gross domestic product is defines as "the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products" (World Bank, 2022).

Zimbabwe`s economy over the past decades has been faced with a number of economic challenges. Most of these challenges became visible soon after the government instituted the land reform programme in 2000 to correct the imbalances caused during the colonial era. This resulted in the imposition of economic sanctions by the USA and the Western powers causing detrimental effects to the economy since then. The situation was further exacerbated by the effects of global financial crises of 2007/2008 that resulted in the collapse of many local financial institutions. The effects of the economic sanctions and the financial crisis among other factors negatively affected the macro-economic fundamentals and the results were; high unemployment, hyperinflation, trade deficits, brain drain, collapse of the manufacturing/industrial base, and disruption of agriculture activities. The financial flows were disrupted causing an influx of foreign currency on the black market resulting in an unstable currency. Diaspora remittances together with revenue from mineral and tobacco exports helped to sustain the economy during the same period. However, what is not known is the impact of the diaspora remittances on the growth of the Zimbabwean economy.

The number of Zimbabweans in the diaspora varies significantly from four to seven million people. However, it is accepted that over five million people about 30% of the total population live in the diaspora with SA accounting for the majority followed by the UK, Australia, Canada, New Zealand, and the USA. Zimbabweans in the diaspora trace their origins to several waves of emigration since 1965 with the most significant one resulting from the socio-political crisis that began in 2000. Most importantly is the literacy rate and highly skilled adult population of the Zimbabwean diaspora as this has a positive impact on revenue generation.

According to the data provided by the World Bank (2022), diaspora remittances flows to Zimbabwe were insignificant as a percentage of GDP from 1977 to 1994 with the highest being USD44 million against a GDP of USD6.9 billion. However, from 1995 to 2008 there is no data provided by World Bank`s WDI regarding personal remittances as a result of disruptions in the macro-economic fundamentals. In 2020, remittances were 10% of the GDP estimated at USD1.8 billion (World Bank,

2022). However, this figure is far below the actual estimates as much of these funds are in the informal sector of the economy hence the difficulty in accounting the actual figures. The formal economy is thus failing to tap these funds due to lack of trust and confidence on the current structure of the financial system by the diaspora. There is lack of cooperation and collaboration between the diaspora and the stakeholders due to widespread government corruption, nepotism, and ineptitude among other accusations. Foreign currency inflows have remained subdued during the period understudy despite the engagement and reengagement efforts by the current administration. Furthermore, programmes like the Homelink remittance network were instituted to encourage investment by non-resident entrepreneurs with limited success. Diaspora remittances continue to flow through the informal channels further fuelling the black market as well as causing accounting challenges.

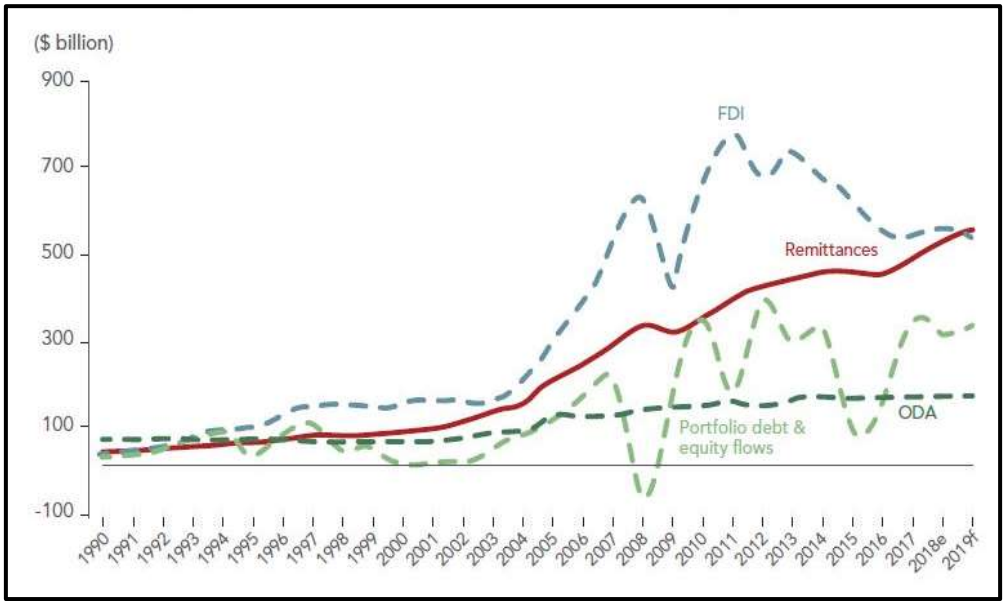

Figure 1. Remittance Flows to Low- and Middle-Income Countries are Larger than Official Development Assistance and More Stable than Private Capital Flows, 1990-2019

Notes: FDI – foreign direct investment; ODA – official development assistance; e – estimates; f – forecasts.
Source: KNOMAD, April 05, 2022 https://knomad.org/sites

Figure 2 shows the foreign inflows Zimbabwe received during the period 1977-2020, with personal remittances taking the lead since 2009 when the economy dollarized. From 2009 to 2020, Zimbabwe received a record estimate of USD20 billion in personal remittances (World Bank, 2022).

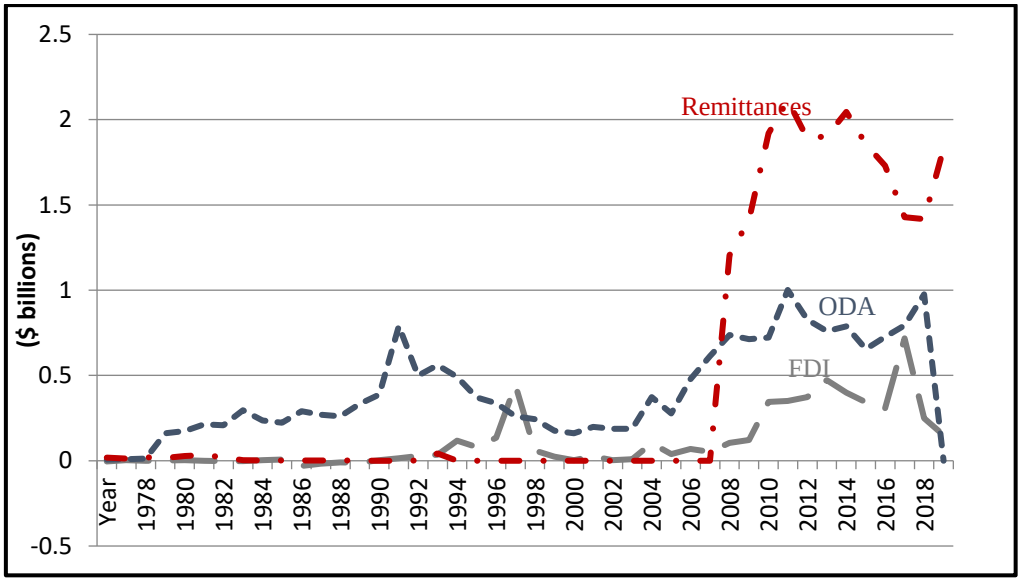

Figure 2. Remittances, official development assistance, and foreign direct investment inflows to Zimbabwe, 1977- 2020.

Notes: FDI – foreign direct investment, net inflows; ODA – net official development assistance and official aid received; Remittances – personal remittances received.
Source: Data collected from World Bank`s WDI (2022)

Giuliano and Ruiz-Arranz (2009) provide an insight from conventional wisdom to the effect that since remittances are mostly for consumption, their effect on long-term economic growth is therefore minimal.

This article attempts to close the gap existing in literature regarding the influence of remittances on the Zimbabwean economy. This was done through analysing data from 1977 to 2020. The impact of remittances on economic growth was assessed through different periods in the economy, that is, pre-dollarization, dollarization, and post-dollarization. In this regard, we examined how remittances influenced the country`s economic growth using the autoregressive distributed lag (ARDL) approach/technique.

The relationship between remittances and economic growth has long been established. Remittances have acted as alternative sources of finance especially for entrepreneurs and the rural populations who were ignored by the traditional sources of finance due to lack of collateral, high lending costs, and financial exclusion. Many developing countries have managed to attract diaspora remittances through crowdfunding. Crowdfunding has become a major alternative source of finance for start-ups and SMEs especially in Africa with donation-based crowdfunding taking the lead (Maune, 2022a & b). Our empirical analysis has shown some linkages between remittances and economic growth in Zimbabwe (Chetsanga & Muchenje, 2003; Maphosa, 2004; Bracking & Sachikonye, 2006; Maphosa, 2007; Muponda, 2009; UNDP, 2010; Tambama, 2011; Mugano, 2016). Major studies have also shown the increasing role of remittances in financing SMEs and start-ups in developing countries including Zimbabwe. Woodruff and Zenteno (2007) and Yang (2008) found remittances to be a crucial source of savings that affects entrepreneurship and capital investments that ultimately results in economic growth. However, no studies to the best of our knowledge have focused on the impact of diaspora remittances on the growth of the Zimbabwean economy covering pre-dollarization, dollarization, and post-dollarization periods. This article is therefore, the first of its own to take that approach.

Our empirical analysis suggests that diaspora remittances helped sustain the Zimbabwean economy through financing SMEs and start-ups that were neglected by the traditional financiers. Remittances helped the economy through the creation of 'FinTechs' that eased the financial flows to the once marginalised groups previously excluded from the financial system due to a number of factors. These groups include the rural forks and women among others.

The ARDL technique was used to assess the impact of diaspora remittances on economic growth in Zimbabwe from 1977 – 2020. In our analysis we used personal remittances and GDP data collected from the World Bank`s WDI. We employed regressions to study the impact of the interaction between the two variables. The result that diaspora remittances have a strong influence on GDP holds true especially during dollarization period. We also provide evidence that dollarization of Zimbabwe improved the economic prospects for the country and improved personal remittances. First, pre-dollarization contributed negatively to economic growth. The pre-dollarization had significant influence on the country's economic growth, implying that it reduced the GDP prospects for Zimbabwe. It is widely acknowledged that remittances have directly transformed the living standards of Zimbabweans as well as generating meaningful development through multiplier effects. Second, dollarization had a positive and statistically significant relationship with Zimbabwe's economic growth in Zimbabwe. Third, post-dollarization negatively affected the economic prospects and personal remittances into the Zimbabwean economy (Figure 2), although the overall effect was not statistically significant.

The remainder of the article will be as follows: section 2 describes the methodology used. Section 3 estimates and discuss the results of ARDL technique. Section 4 model estimation and diagnosis. Section 5 concludes with recommendations.

2. Methodology

The study used an autoregressive distributed lag (ARDL) model to examine the impact of personal remittances on gross domestic product (GDP) of Zimbabwe for the period under review. An ARDL is an ordinary least square (OLS) based approach or model which is applicable for both non-stationary time series and times series data with mixed order of integration. Multiple Linear Regression models based on ARDL have been in use for decades, but in more recent times they have been shown to provide a very valuable vehicle for testing for the presence of long-run relationships between economic time-series data. ARDL models are useful when data at hand have only one independent series, that is an ARDL model of order p and q is usually denoted by ARDL (p;q). This model consists of p and q lags of independent and dependent series respectively. The lags of the dependent series of the data make the model autoregressive.

The panel ARDL method can be utilised to account for long- and short-run relationships among dependent and independent variables, and even for the case of non-stationary variables but without co-integration. The ARDL approach allows us to perform tests on stationary or non-stationary variables (endogenous and exogenous) as long as the data do not exceed integrated 2, or I (2) after differencing if the data are non-stationary. We would then check the stationarity of every model variable with the root test. The main advantages of the ARDL test are that it is more robust and performs better for small sample sizes of data, making it suitable for most quantitative researches. The research study was carried out under the following hypothesis:

Null hypothesis (H_0): Personal remittances have no impact on GDP.

Alternative hypothesis (H_1): Personal remittances have impact on GDP.

2.1. Estimation Results using ARDL Technique and Discussion

These results suggest that the lag of the dependent variable is positive and significant at the 1% level of significance. Personal remittances (LPRR) were negative and not significant to influence economic growth in Zimbabwe. The period before dollarization (PBD) was negative and significant to influence economic growth in Zimbabwe, suggesting that this period reduced the economic growth prospects for Zimbabwe. The period during dollarization (PDD) had a positive and statistically significant relationship with economic growth in Zimbabwe. This suggested that dollarization improved the economic prospects for the Zimbabwean economy. The period after dollarization (PAD) has seen it negatively affecting the economic prospects for the Zimbabwean economy although this was statistically insignificant. As if that is not enough, the constant term had a positive and statistically significant relationship with economic growth of gross domestic product (GDP) in Zimbabwe in the period under review.

Table 1. Estimation Results using Autoregressive Distributed Lag Technique

Dependent Variable: LGDPC
Method: ARDL
Date: 03/28/22 Time: 10:49
Sample (adjusted): 2 44
Included observations: 43 after adjustments
Dependent lags: 1 (Fixed)
Dynamic regressors (0 lag, fixed): LGCF LPRR PBD PDD PAD
Fixed regressors: C

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.**
LGDPC(-1)	0.568947	0.068843	8.264386	0.0000
LPRR	-0.004762	0.016679	-0.285478	0.7769
PBD	-0.158309	0.087292	-1.813561	0.0781
PDD	0.651601	0.100891	6.458450	0.0000
PAD	-0.030497	0.068514	-0.445118	0.6589
C	9.712554	1.475384	6.583070	0.0000

R-squared	0.956459	Mean dependent var	22.87245
Adjusted R-squared	0.949202	S.D. dependent var	0.464750
S.E. of regression	0.104747	Akaike info criterion	-1.526639
Sum squared resid	0.394989	Schwarz criterion	-1.239932
Log likelihood	39.82274	Hannan-Quinn criter.	-1.420910
F-statistic	131.8018	Durbin-Watson stat	1.580395
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection.

3. Model Estimation and Diagnosis

3.1. Stability Test

The Ramsey RESET test was used for testing the stability of our econometric model and the results suggests that the model was stable, even in the long-run as suggested by the non-significant result of the statistical test.

Table 2. Ramsey Reset Test

Ramsey RESET Test
Equation: UNTITLED
Specification: LGDPC LGDPC(-1) LPRR PBD PDD PAD C
Omitted Variables: Squares of fitted values

	Value	Df	Probability
t-statistic	0.932022	35	0.3577
F-statistic	0.868664	(1, 35)	0.3577

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	0.009566	1	0.009566
Restricted SSR	0.394989	36	0.010972
Unrestricted SSR	0.385423	35	0.011012

Unrestricted Test Equation:
Dependent Variable: LGDPC
Method: ARDL
Date: 03/28/22 Time: 10:51
Sample: 2 44
Included observations: 43
Dependent lags: 1 (Fixed)
Dynamic regressors (0 lag, fixed):
Fixed regressors: C

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.**
LGDPC(-1)	5.524710	5.317666	1.038935	0.3060
LPRR	-0.052863	0.054248	-0.974479	0.3365
PBD	-1.465133	1.404864	-1.042900	0.3041
PDD	6.272387	6.031593	1.039922	0.3055
PAD	-0.279108	0.275433	-1.013340	0.3179
C	-6.044530	16.97084	-0.356172	0.7239
FITTED^2	-0.188566	0.202319	-0.932022	0.3577

R-squared	0.957514	Mean dependent var	22.87245
Adjusted R-squared	0.949016	S.D. dependent var	0.464750
S.E. of regression	0.104939	Akaike info criterion	-1.504643
Sum squared resid	0.385423	Schwarz criterion	-1.176978
Log likelihood	40.34983	Hannan-Quinn criter.	-1.383811
F-statistic	112.6849	Durbin-Watson stat	1.578562
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection.

3.2. Normality Tests

As a precondition, the residuals of the estimated model should be normally distributed. Hence the results in the figure below are indicating that the residuals are normally distributed as indicated by the non-significant probability of the Jarque-Bera test of normality. This research result implies that we accept the null hypothesis that the residuals of our model are normally distributed.

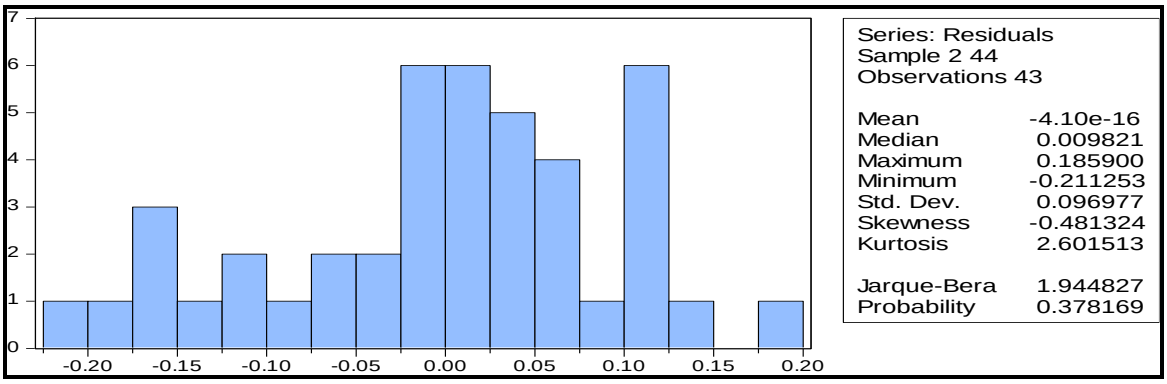

Figure 3 Jarque-Bera test of normality

3.3. Serial Correlation Tests

In order for the estimated model to be reliable, the residuals should not be serially correlated, hence our results suggests that the residuals are not serially correlated, making the results reliable for decision making. The non-significant F-Statistic suggests that the residuals of the variables are not serially correlated.

Table 3 Breusch-Godfrey serial correlation LM test

F-statistic	1.499748	Prob. F(2,34)	0.2376
Obs*R-squared	3.485949	Prob. Chi-Square(2)	0.1750

Test Equation:
Dependent Variable: RESID
Method: ARDL
Date: 03/28/22 Time: 10:54
Sample: 2 44
Included observations: 43
Presample missing value lagged residuals set to zero.

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
LGDPC(-1)	-0.020975	0.076830	-0.273009	0.7865
LPRR	0.002469	0.016553	0.149160	0.8823
PBD	-0.008095	0.087768	-0.092232	0.9271
PDD	0.015283	0.105885	0.144332	0.8861
PAD	0.004019	0.068441	0.058717	0.9535
C	0.410150	1.652748	0.248163	0.8055
RESID(-1)	0.219321	0.185715	1.180954	0.2458
RESID(-2)	-0.233189	0.172629	-1.350810	0.1857
R-squared	0.081069	Mean dependent var		-4.10E-16
Adjusted R-squared	-0.135151	S.D. dependent var		0.096977

S.E. of regression	0.103322	Akaike info criterion	-1.518160
Sum squared resid	0.362968	Schwarz criterion	-1.149536
Log likelihood	41.64043	Hannan-Quinn criter.	-1.382223
F-statistic	0.374937	Durbin-Watson stat	1.986965
Prob(F-statistic)	0.926562		

3.4. Heteroskedasticity Test

Further, the results indicate that the residuals of the estimated model are homoskedastic, which suggests that there is no problem of heteroskedasticity on the residuals of this model. This means that the results are reliable, valid and consistent, even for forecasting purposes.

Table 4. Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.417483	Prob. F(6,36)	0.2349
Obs*R-squared	8.217311	Prob. Chi-Square(6)	0.2226
Scaled explained SS	4.612095	Prob. Chi-Square(6)	0.5944

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 03/28/22 Time: 10:57
Sample: 2 44
Included observations: 43

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	0.092262	0.160944	0.573251	0.5700
LGDPC(-1)	-0.003044	0.007510	-0.405390	0.6876
LPRR	-0.001503	0.001819	-0.826096	0.4142
PBD	0.001598	0.009522	0.167842	0.8676
PDD	0.000912	0.011006	0.082901	0.9344
PAD	0.002778	0.007474	0.371693	0.7123

R-squared	0.191100	Mean dependent var	0.009186
Adjusted R-squared	0.056284	S.D. dependent var	0.011762
S.E. of regression	0.011426	Akaike info criterion	-5.957868
Sum squared resid	0.004700	Schwarz criterion	-5.671161
Log likelihood	135.0942	Hannan-Quinn criter.	-5.852140
F-statistic	1.417483	Durbin-Watson stat	2.277791
Prob(F-statistic)	0.234889		

3.5. The Long-Run Results

In the long-run, the results indicate that personal remittances had a negative and insignificant statistical relationship with economic growth in Zimbabwe in the period under review. This is in line with findings by Rodrik (2000), Chami, Fullenkamp and Jahjah (2005), Singh, Haacker, Lee and Le Goff (2011), Lacheheb and Ismail (2020), Sutradhar (2020). The period before dollarization had a negative and

statistically significant relationship with economic growth in Zimbabwe. This suggests that the events before dollarization were damaging the Zimbabwean economic prospects. Further, the results indicated a positive and statistically significant relationship with economic growth, a result which meant that dollarization supported the economic prospects even into the long-run. The positive relationship between remittances and economic growth is also supported by the findings of Giuliano and Ruiz-Arranz (2009), Fayissa and Nsiah (2010), Nsiah and Fayissa (2013), Meyer and Shera (2017), and Fayissa and Nsiah (2018). The period after dollarization had a negative and statistically non-significant relationship with economic growth in Zimbabwe. Interestingly, the error correction had a negative and statistically significant relationship with economic growth in Zimbabwe. The results suggest that in the long-run, this system will go back to equilibrium, hence in the event of structural shocks the system will go back to equilibrium as shocks die away. Further, the error correction model suggests that there is the possibility of some co-integration relationship among the variables employed in our model.

Table 5. ARDL Co-Integrating and Long Run Form

Dependent Variable: LGDPC
Selected Model: ARDL(1, 0, 0, 0, 0, 0)
Date: 03/28/22 Time: 11:01
Sample: 1 44
Included observations: 43

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LPRR)	-0.004762	0.016679	-0.285478	0.7769
D(PBD)	-0.158309	0.087292	-1.813561	0.0781
D(PDD)	0.651601	0.100891	6.458450	0.0000
D(PAD)	-0.030497	0.068514	-0.445118	0.6589
CointEq(-1)	-0.431053	0.068843	-6.261370	0.0000

Cointeq = LGDPC -0.0110*LPRR -0.3673*PBD + 1.5116 *PDD -0.0707*PAD + 22.5322)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LPRR	-0.011046	0.039296	-0.281103	0.7802
PBD	-0.367261	0.196164	-1.872218	0.0693
PDD	1.511650	0.248100	6.092899	0.0000
PAD	-0.070750	0.163762	-0.432028	0.6683
C	22.532160	0.785373	28.689759	0.0000

3.6. Bounds Tests

In order to determine the existence of some long-run relationship among our variables, the F-statistic from the ARDL Bounds tests was compared with the critical values of the lower and upper bounds. The

results suggested the existence of some co-integration at the 5% level of significance as the F-statistic was between the lower and upper bounds at that level of significance. These results indicated that there is some long-run association among our variables in the long term.

Table 6. ARDL Bounds Test

Date: 03/28/22 Time: 11:06
Sample: 2 44
Included observations: 43
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	3.436307	5

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Test Equation:
Dependent Variable: D(LGDPC)
Method: Least Squares
Date: 03/28/22 Time: 11:06
Sample: 2 44
Included observations: 43

3.7. Residuals Graph

The graphs for the residuals confirms that there is a long-run association among the residuals of our model as both fitted and actual residual are moving together in the long-run (Figure 4).

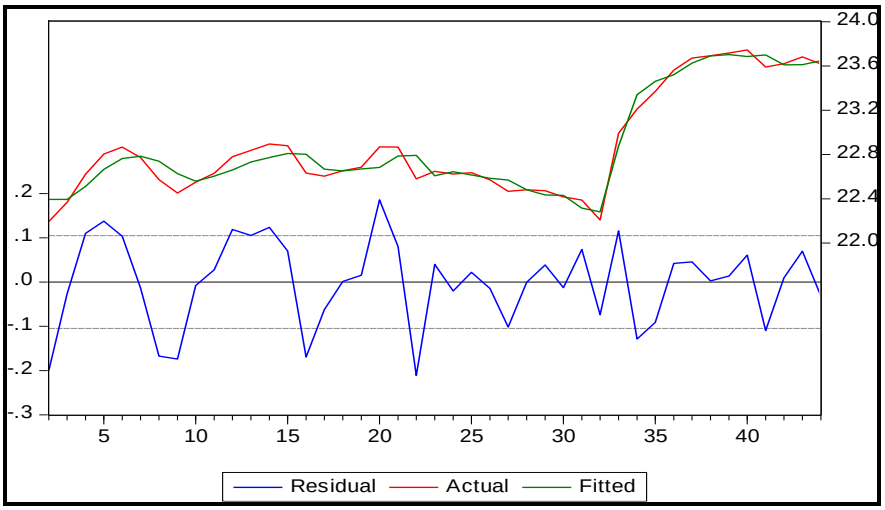

Figure 4. Residual Graph

3.8. Granger Causality Tests

In order to craft robust policy recommendations, Dumitrescu-Hurlin Granger causality tests were performed. These causality results suggested that there is a unidirectional causality between the period before dollarization and real GDP per capita; real GDP per capita and the period during dollarization; real GDP per capita and the period after dollarization; the period before dollarization and the period during dollarization; the period during dollarization and the period after dollarization. The results were reflective of the findings by Depken, Nikšic Radic and Paleka (2021). There was also bidirectional causality with respect to real GDP per capita and the period during dollarization.

Table 7. Pairwise Granger Causality Tests

Date: 03/28/22 Time: 12:04
Sample: 1 44
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
LPRR does not Granger Cause LGDPC	42	NA	NA
LGDPC does not Granger Cause LPRR		NA	NA
PBD does not Granger Cause LGDPC	42	33.2084	6.E-09
LGDPC does not Granger Cause PBD		0.36929	0.6937
PDD does not Granger Cause LGDPC	42	7.81366	0.0015
LGDPC does not Granger Cause PDD		3.58573	0.0377
PAD does not Granger Cause LGDPC	42	0.37894	0.6872
LGDPC does not Granger Cause PAD		4.38342	0.0196
PBD does not Granger Cause LPRR	42	NA	NA
LPRR does not Granger Cause PBD		NA	NA
PDD does not Granger Cause LPRR	42	NA	NA

LPRR does not Granger Cause PDD		NA	NA
PAD does not Granger Cause LPRR	42	NA	NA
LPRR does not Granger Cause PAD		NA	NA
PDD does not Granger Cause PBD	42	0.00000	1.0000
PBD does not Granger Cause PDD		1.2E+33	0.0000
PAD does not Granger Cause PBD	42	0.00000	1.0000
PBD does not Granger Cause PAD		2.08647	0.1385
PAD does not Granger Cause PDD	42	0.00000	1.0000
PDD does not Granger Cause PAD		3.11579	0.0562

4. Conclusion and Recommendations

Based on the findings of the study above, we conclude that the lag of the dependent variable (GDP) is positive and significant at the 1% level of significance. The long–run personal remittances (LPRR) made in the economy were negative over the period under review and did not influence Zimbabwe's economic growth (or GDP) significantly. The study also concludes that the period before dollarization (PBD) contributed negatively to economic growth. The PBD had significant influence on the country's economic growth, implying that it reduced the GDP prospects for Zimbabwe. The study also concludes that the period during dollarization (PDD) had a positive and statistically significant relationship with Zimbabwe's economic growth in Zimbabwe. This implies that the dollarization of Zimbabwe improved the economic prospects for the country and improved personal remittances. The period after dollarization (PAD) negatively affected the economic prospects and personal remittances into the Zimbabwean economy, although the overall effect was not statistically significant. The constant term of the model had a positive and statistically significant relationship with economic growth of gross domestic product (GDP) in Zimbabwe in the period under review. The study recommends that the government of Zimbabwe should not politicise economic variables such as currency issues, demand and supply policies if the country is to lure both domestic and foreign investments needed to realise economic growth and sustainable development. Finally, the Reserve Bank of Zimbabwe and its affiliates must make concerted efforts to lobby the Government of Zimbabwe through the Ministry of Finance and Economic Development for independence, democratisation and liberalisation of the financial system if the country is to be sincere in its service delivery to the citizens and corporate world.

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APPENDICES

Appendix 1.

T	Year	GDP	PRR	GDPC	GDPG	GCF	PDD	PBD	PAD
1	1977	5.19E+09	1232820	4.36E+09	-6.8607	17.1857	0	0	0
2	1978	5.35E+09	1472026	4.35E+09	-2.70692	10.69518	0	0	0
3	1979	5.52E+09	1757645	5.18E+09	3.297035	11.40963	0	0	0
4	1980	5.69E+09	2098684	6.68E+09	14.42068	16.93698	0	0	0
5	1981	5.87E+09	2505894	8.01E+09	12.52542	20.8159	0	0	0
6	1982	6.06E+09	2992117	8.54E+09	2.634297	19.05374	0	0	0
7	1983	6.25E+09	3572682	7.76E+09	1.585305	14.30516	0	0	0
8	1984	6.44E+09	4265895	6.35E+09	-1.90736	17.0355	0	0	0
9	1985	6.65E+09	5093613	5.64E+09	6.944388	17.81998	0	0	0
10	1986	6.86E+09	6081934	6.22E+09	2.099029	18.05636	0	0	0
11	1987	7.07E+09	7262021	6.74E+09	1.150737	14.93616	0	0	0
12	1988	7.3E+09	8671082	7.81E+09	7.552375	18.70172	0	0	0
13	1989	7.53E+09	10353545	8.29E+09	5.199766	15.03798	0	0	0
14	1990	7.76E+09	12362459	8.78E+09	6.988553	17.37694	0	0	0
15	1991	8.01E+09	14761166	8.64E+09	5.531782	19.1034	0	0	0
16	1992	8.26E+09	17625297	6.75E+09	-9.01557	20.23726	0	0	0
17	1993	8.52E+09	21045160	6.56E+09	1.051459	22.77489	0	0	0
18	1994	8.79E+09	25128584	6.89E+09	9.235199	23.72906	0	0	0
19	1995	9.07E+09	30004322	7.11E+09	0.158026	19.66019	0	0	0
20	1996	9.35E+09	35826106	8.55E+09	10.3607	18.54194	0	0	0
21	1997	9.65E+09	42777499	8.53E+09	2.680594	18.1339	0	0	0
22	1998	9.95E+09	51077682	6.4E+09	2.885212	20.75046	0	0	0
23	1999	1.03E+10	60988361	6.86E+09	-0.81782	14.39628	0	0	0
24	2000	1.06E+10	72822025	6.69E+09	-3.05919	13.56942	0	0	0
25	2001	1.09E+10	86951793	6.78E+09	1.439615	10.26647	0	0	0
26	2002	1.13E+10	1.04E+08	6.34E+09	-8.89402	5	0	0	0
27	2003	1.16E+10	1.24E+08	5.73E+09	-16.9951	7.999999	0	0	0
28	2004	1.2E+10	1.48E+08	5.81E+09	-5.80754	4.509115	0	0	0
29	2005	1.24E+10	1.77E+08	5.76E+09	-5.71108	1.525177	0	0	0
30	2006	1.28E+10	2.11E+08	5.44E+09	-3.4615	1.571161	0	0	0
31	2007	1.32E+10	2.52E+08	5.29E+09	-3.65333	7.109753	0	1	0
32	2008	1.36E+10	3.01E+08	4.42E+09	-17.6689	5.127906	0	1	0
33	2009	1.4E+10	3.59E+08	9.67E+09	12.01956	12.7468	1	1	0
34	2010	1.44E+10	4.29E+08	1.2E+10	19.67532	18.7633	1	1	0
35	2011	1.49E+10	5.12E+08	1.41E+10	14.19391	17.39777	1	1	0
36	2012	1.54E+10	6.12E+08	1.71E+10	16.66543	9.856977	1	1	0
37	2013	1.59E+10	7.3E+08	1.91E+10	1.989493	9.209479	1	1	0
38	2014	1.64E+10	8.72E+08	1.95E+10	2.376929	9.639224	1	1	0
39	2015	1.69E+10	1.04E+09	2E+10	1.779873	10.03564	1	1	0
40	2016	1.74E+10	1.24E+09	2.05E+10	0.755869	9.861371	1	1	1
41	2017	1.79E+10	1.48E+09	1.76E+10	4.709492	9.700147	1	1	1
42	2018	1.85E+10	1.77E+09	1.81E+10	4.824211	9.687734	1	1	1
43	2019	1.91E+10	2.12E+09	1.93E+10	-6.14424	7.408702	1	1	1
44	2020	1.97E+10	2.53E+09	1.81E+10	-6.24875	7.45147	1	1	1