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The Impact of Remittances on Economic Development in Zimbabwe (2000-2015): An Econometric Model (OLS)

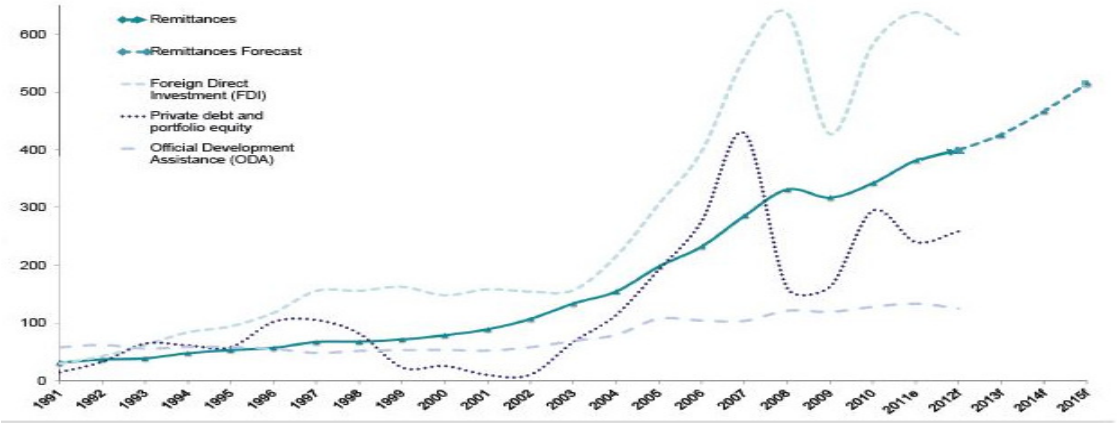
Priority Mubhawu Victoria Masere Primrose Gurira
Midlands State University Box; P Bag 9055; Gweru; Zimbabwe
E-mail of the corresponding author prioritymubhawu@gmail.com

Abstract
This paper probes the impact of remittances on economic development in Zimbabwe using semi-annual time series data. Applying the Ordinary Least Squares (OLS) method in the study, the research found that remittances positively impact on economic development in Zimbabwe for the period under review. The results did confirm to other empirics except exports. Other important drivers of economic growth include Foreign Direct Investments, Unemployment; National Debt and Exports were also included in the model. The research confirmed that FDI's has a negative effect on economic development and inflation had to be confirmed a positive effect. Recommendations were also given basing on the findings in this study.
Key terms: Economic Development, Remittances

1 Introduction

Global remittances are being witnessed to be the most probable largest channel of external finance in developing countries. Formally chronicled remittance streams to developing countries surpassed US$125 billion by 2004 (Ratha 2005). Remittances have insinuations in the economies of remitting country as well as the recipient country. Following Foreign Direct Investments (FDIs), remittances are to play a vital role in apprehending some poverty detrimental which might affect the socio-economic being of a country. However, many developing countries through the Millennium Development Goals (MDG) to reduce poverty are working out to impress remittances (Tambama 2011). Many views witnessed that remittances are consolation which can be realised due to migration.

The flow of remittances is profoundly growing importance to impact on the economies of many less economically developed (LEDCs) countries. Though it was difficult to aggregate remittance data in the late 1980's as there is an anecdotal that developing countries received more than US$20 billion from USA and other developed countries. In late 1990 remittances were crystalized with the effects of oil prices which subsided economic growth of many countries and this was later repealed by the Asian Financial Crises of 1998 as there was a reduction in private capital movement (Ratha 2004). In early 2003, remittances to developing countries were chronicled to be 3.3 % of Gross Domestic Product (GDP) and 18.5 % of total imports (World Bank Report 2004)



Source: Ratha 2013
Figure 1.1: Remittances flows to Developing Countries from 1991-2015.

Whereas remittances to developing countries dropped discreetly by 5.27%, there were seemed to be less volatile than Foreign Direct Investments which fell by 32.94 in 2007-2009. This was due to the onset of global financial crisis. In 2011 remittances continued to be resilient more than other private investments and thus when FDIs regained its previous toehold though it was a sluggish change.

For Zimbabwe, it's not something which is conjunctional but real documented by the SAMP (2012) that migration had been taken place since late 1990's when people went abroad for better. According to the SAMP (2012) they presented that 28% of migrants which were on 17.8% total migrants moved to South Africa since 1997. This implies that 72% of all the migrants were scattered abroad in other countries like UK, Canada and Botswana among others. Typically, these migrants were doing circular migration. Inclination of remittances started during this period but it was imperatively to pucker up the total remittances into the country since most of them were through informal channels and they were no records for them (Tambama 2011).

Prognosis shows an increase in the impact of remittances to economic development following an incentive (Diaspora Remittance Incentive Scheme) which imposed by the Zimbabwean government, the DRIS which offers a 5% incentive to all remittances through formal channels (RBZ 2016). The incentive benefits both agents (banks) and the receiver of remittances on basis of 2%/3% split respectively. Also other agencies like Econet also introduced Cassava Remit, telecel also imposed a 10% bonus to all international telecash remit.

2 Theoretical Review

There are some division in theories on migration and development which reflects a proficient paradigmatic in social theory that is functionalist versus structuralist archetypes and development theory that is stable growth versus unstable development (De Haas 2010). In the same division, this reflects philosophical and ideological partitions between the Neoliberal and the State-Centrist outlooks (International Migration Review 2010). Englama (2009) postulated that an exacerbation of this explored that they are two views which served as the pillars in the development of theories on remittances which the study encroached into their views. These two views are Optimistic view and Pessimistic view. Optimistic view examines remittances as with a positive implication to both the sending and receiving households and their nations and was pioneered under the Laws of migration by Ravenstein in 1889. The view explicitly elucidates that remittance can alleviate poverty in the receiving country and also promote economic development. It also expounds that it ease pressure and compression on governments which faced with huge peripheral deficits to engross in problematic structural reforms (De Haas 2010).

Pessimistic view contradicts the optimistic view and seen to be aggravating challenges of underdevelopment. This is because in the sending economies migration most probable causes evolvement of uncontrolled depletion especially of the labour with proficiency and some productive members. So this view (pessimistic view) fits well into the views by Cumulative Causation Theory expounded by Myrdal (1957). Cumulative causation theory states that the capitalist development is unavoidably marked by increasing spatial welfare inequalities. De Haas (2010) postulates that given disparity growth occurred, internal economies of scale and external economies of scale (multiplier effects and agglomeration) perpetuate and increase the bipolar form which considered in the spiteful cycle of deficiency in some of the margin areas (periphery). In turn some activities in countries will encourage migration of the most proficient population from the peripheral areas.

This view explicitly expounds that migration (remittances) ought not to be fortified. This parasitic view to remittances elucidates that remittances are detrimental especially to the well-being, growth and development of the receiving economies. This ascertains that remittances are responsible for unwarranted and excessive consumption in the receiving economies. Englama (2009) postulates that this view impresses that remittances import dependency or unproductive investments in housing and land. So in other words this view explains that remittances exacerbate the over reliance and dependency of the receiving economies. There is another third hybrid view on the effects of remittances. This hybrid (Pluralist view) approach concurrently account for both agency and structure. This hybrid acknowledges and recognises non-deterministic and heterogeneous nature of the impacts of migration and remittances on development. Taking into account a balanced view of both agency

and structure gives out a better understanding and an empirically evidence to support the heterogeneity view on migration, that it also gives a positive result through remitting which have an impact to economic development.

2.1 Empirical Review

Over past 3 to 4 decades all mounting empirical evidence has contained a supreme support of a pessimistic view on the effect of remittances on development. Studies show that remittances have a positive role to play in economic, political and social transformation of the receiving country. So also the studies show a plausible evidence of the improvement in economic and social position of the receiving country, annihilation of income risks and obliteration of some developmental constrains.

Glytsos (2005) studied the impact which remittances have on economic development, investment, consumption and imports in Jordan, India, Bangladesh and Egypt and acknowledged that their impact is country specific. In this study Glystsos identified that remittances are country specific in terms of their effects.

By applying the Auto-Regressive Distributed Lagged model (ARDL), Odionye and Emerole (2015) identified that remittances positively impact the economic development of the receiving country. The study postulated that proper utilisation of international remittances flow enhances development of the receiving economies and this can be achieved through diversification of proceeds into productive purposes.

In 2015 Saad investigated the impact of remittances on the key macro-economic variables in Palestine using a Keynesian type econometric model. The results of this research presented that remittances which flows into Palestine are significantly impacted the macroeconomic variables and the study was markedly contributed to economic growth. The study proved that an increase in remittances by US$1 immediately increases imports, consumption, income and investment by $US0.479, $US0.552, $US1.328 and $US0.255 respectively in Palestine.

Githiga (2014) investigated on the implications with remittance flows on economic development in Kenya from 1970. The study presented that percentage of remittances to GDP changed from 0.45% in 1970 to 3.01% by 2012 which shows the growing significance of remittances to economic growth of Kenya.

However Chami *et al* (2003) carried a study on the effects of remittances to development in Lebanon, Tonga, El-Salvador and Tunisia from 1970 to 1998 and the results showed that remittance negatively affects developing in the recipient country. The study expressed that the main reason for the negative effects of remittances is that they cause severe moral hazards to the receiving country. Also remittances causes the society loses out by the displacement effect of young adults as they migrating to richer countries leaving the upheaval of their original country. Finally, remittances may not be transferred to the very poorest and peripheral areas in developing economies meaning that remittances still leave a gap, which may need to be funded by other capital flows like aid. Mayer and Shera (2016) also argued that remittances have a potential to generate resource mis-allocation from a tradable sector to a non-tradable sector.

3 METHODOLOGY

The study adapted the multiple linear regression model which was also used by Meyer and Shera (2016). The model is specified as:

$$\boldsymbol{GDP = \beta_0 + \beta_1 REM + \beta_2 INF + \beta_3 EXP + \beta_4 UNEMPLOY + \beta_5 DEBT + \beta_6 FDI + \xi} \qquad (1)$$

Where **GDP** = Real Gross Domestic Product
Rem = Remittances
INF = Inflation
EXP = Exports receipts

UNEMPLOY = Unemployment rate
DEBT = Government debt
FDI = Foreign Direct Investment
ξ = Error term
$\boldsymbol{\beta_1, \beta_2, \beta_3 \ldots}$ = Regression coefficients
$\boldsymbol{\beta_0}$ = Intercept

Variables in the above specified model were chosen because they have impact on the economic development and national output of Zimbabwe. The researcher made significant adjustments through the inclusion of relevant variables such as unemployment rate (UNEMPLOY), inflation rate (INF) and exports receipts (EXP) in the model by Mayer and Shera (2016). Tambama (2011), Mawanza (2006) and Chikanda and Tevera (2009) also included these variables when they carried a research on the effects of remittances in Zimbabwe.

3.1 Estimation Procedures and Data Source

Econometric packages such as E-View 8 have been used to enable time series analysis and to determine the impact which remittances have to economic development. Ordinary Least of Squares (OLS) was used to estimate the variables in the regression model. Descriptive analysis was used to describe the behaviour of the individual variables over the period under review. Correlation analysis was also conducted to see the relationship among the independent and dependent variables in testing for multcollinearity. This would help to get an initial picture as to the nature of the relationship among the variables before proceeding to regression analysis.

Secondary data was used to get relevant demographic and economic statistics for the impact of remittances to economic development. Various sources of data were used which include ZIMSTATS, WITS and RBZ website to source the data of remittances and other components of capital flows from 2000 to 2015

4 Regression Results Analysis.

The regression outcomes were achieved after regressing Real Gross Domestic Product GDP with the applied independent variables as shown in Table 4.7 below. Subsequently to the results in Appendix 2, the below regression model was estimated as:

$$\boldsymbol{GDP = 1180.024 + 10.40099REM + 0.290507INF - 1.358357FDI + 8.774269EXP01 - 3.306639DEBT - 4.338695UEMPLOY}$$

The above estimated model is displaying the relationship between Real Gross Domestic Product (GDP) and the independent variables. The results for the regression were interpreted based on the signs of the variable coefficients and the *t statistics* shown in below above. Remittances (Rem), Inflation (Inf), Foreign Direct Investments (FDI), Debt (DEBT) and Unemployment (UNEMPLOY) proved to be significant, whilst Exports proved to be insignificant though positively relate to GDP (Appendix 3 for more details).

R squared in this study was 0.87629 which explains the disparity or variation in Real Gross Domestic Product that is being described by all exogenous variables encompassed in the above model. The statistic therefore entails that about 87.6298% of the total disparity or variation in Real Gross Domestic Product is described by the estimated model whereas the residual 12.3702% is being described by other variables which were not encompassed in the model. Adjusted R squared statistic in the model gives the impression that the true variation in Real GDP which is explained by the value of adjusted R^2 of 0.846609. The employed model in this study is said to be significant since the F-statistic of 29.51641 > 5.

In Appendix 2 the regression coefficient of Remittances is 10.40099. This specifies that *ceteris-paribus*, an upsurge in Remittances by 1% will results to an increase in Real Gross Domestic Product by 10.40099 units. As per the results above, it can be identified that Remittances has a positive and statistically significant effect on

GDP output and level. The outcomes were consistent with the findings of Tambama (2011), Mawanza (2006) and Saad (2015) as well as the developmentalism view on remittances. So as according to the findings, to a greater extend remittances affect economic development as an increase in remittances will positively impact economic development.

In addition, Ratha (2013) also elucidated that remittances have positive spill over effects as there is some positive investments which can be made by households in the developing economies. Also the Developmentalist theory also points out that remittance is countercyclical as they may be used as insurance and also assisted the community to evade both internal and external shocks. Another merit for remittances to economic development lies more on the increase in the levels of income to the households. Ratha (2013) also elucidated that remittances can lead to financial development which then result to economic development. Ratha argued that remittances reduce financial constraints as they increase the issuing of diaspora bonds and other remittance backed securities which then tend to develop the whole financial sector.

Moreover, remittances might also be used for educational purposes (paying school fees that is for human capital development) in which this is a long run investment whose returns directly impact economic development. So also remittance income might be used to purchase other durable goods, real estate, and building of houses which also resulted in development of the whole community. Srivastava and Chandhary (2007) also supported this and elucidated that overall, the positive contribution of remittances lies welfare and an improved living of the receipt household which expressed in basic needs, better education and health and in terms of savings.

Inflation has a coefficient of 0.290507 (Appendix 2) which states that it has a positive impact on economic development. Higher inflation increases economic development as it shifts the income distribution in favour of higher saving capitalists and this impact on savings and private investments as well as profits. This was also explained by the Harrod-Domar model which exudes the effects of inflation to economic growth through savings and accumulation in capital formation. Primarily economic development depends on the rate of capital formation, in which capital formation depends on the rate of savings and investments (Datta and Kunar 2011). So as savings and investments increased by inflation it then catalyse the rate of capital formation which in turn to increase development. FDI has a negative coefficient of -1.358357 (Appendix 2) which shows that there is a possibility of having a negative impact with FDI to economic development. FDIs have a negative wage spill-over effect in which all the domestic firms will be left with low-quality labour. The second effect is that FDIs result in crowding out effect which ultimately impact investment spending usually reduces private investments (Mayer and Agosin 2000). Another effect is that FDI has also a bidirectional interconnection with imports were an increase in FDI result in an increase in imports as MNC wants to maintain their relationship with their traditional suppliers and this have a negative effect to the BOP of the hosting country. FDIs pauses a serious social, political and cultural unrest as well as divisiveness as they introduce an unacceptable-chart values, policy dependability and pause a threat on political sovereign of the host country (Dunning 1995).

5 Summary

The study investigated the impact of remittances on economic development proxied by Real GDP in Zimbabwe using semi-annual time series data covering the period of 2000 to 2015. The problem statement and objectives of the study were given in chapter one. All the theories on the possible effect of remittances to economic development were given in chapter two above. Also the existing empirics which supports that remittances have a positive effect and those who do not support were clearly presented in chapter two.

The relationship between the explanatory variables and Real GDP was tested and E-Views 8 was employed to analyse the relationship between variables of interest. An Ordinary Least of Squares regression was assumed and conducted to estimate the econometric model presentation chapter four. Numerous diagnostic tests have been performed in the study to establish the significance and predictability of the results.

The study analysed the stochastic characteristics of each time series by Stationarity using Augmented-Dickey-Fuller (ADF) test. Several interesting conclusions can be drawn from the study. The research problem for this study was to find the impact which remittances have on economic development in Zimbabwe. Subsequently, remittances have been proved to have positive impact on real GDP (as a proxy to economic development) in Zimbabwe and this was further steel-clad by the presence of long-term equilibrium interconnectedness as evidenced by the test for cointergration. Nonetheless, FDIs were proved to be significant but with a negative sign in which the main accusation for this is in their relationship with imports which reduces national output and is also associated with profit repatriation which encompass poor capital outflows management and resulted in a serial perpetual cash shortage in Zimbabwe as well as depletion of resources without any identifiable development.

5.1 Conclusion

Following results of the study; remittances had a positive impact on economic development in Zimbabwe. Remittances impact economic development as it catalyse the rate of capital formation through increase capital inflow, also remittances increase investments and savings, also reduce poverty in some peripheral and rural areas, aids to banking development, increase financial inclusion and reduce the dependability of households on aid. The null hypothesis which was stated in chapter one which states that remittances do not significantly impact on economic development was rejected. The rejected decision was due to the findings of the study which impose the positive effect which remittances have on economic development.

Policy makers ought to understand that the country's economic house must be in order before considering a specific police to boost remittances. This is a prerequisite so as to maximise benefits accrued from a particular policy suggested to achieve remittance flow. This is because uncertain macro-economic conditions which include inflation, unfavourable exchange rates, high black-market premiums which might implicate on remittance flow must be corrected first before the maximisation of policies.

For the government there is need for better macroeconomic policy reformation which is favourable for remittance. This was also implemented by the Bangladesh government from 2013 and increased remittance flows into the country. This can be achieved through relaxation of foreign currency transaction controls, allowing authorised dealers to transact internationally and through the liberation of the exchange rate policy allowing the market to decide the exchange rate (even offering of premiums on exchange rates). This will also increase the remittance transaction significantly. There is also need for the government, central bank (RBZ) and the Ministry of Finance to develop more rudimentary but attractive investment instruments and a better provision for financial products and services which also incorporate remittance market. The government also ought to encourage the entry of other non-traditional players into the remittance market. Finally, the government also need to create a workable environment for the banks where we have many NCBs (Nationalised Commercial Banks). This networking will increase and smoothen remittances transaction and reduces the bureaucratic procedures which many remitters encountered when they remit back home.

The government also ought to provide educational facility to the remittances end users in the country about better ways of utilising the funds. Education matters as it is of greater essence to understand that it's only a meaningful utilisation of remittance income which can produce a better way to attain better standards of the whole nation. The government must know that a mere collection of remittances through banks and other outlays cannot bring forth a desirable progress in the economy but those funds must be utilised properly in the economy so as to sustainably develop the economy of Zimbabwe and for poverty alleviation purpose. So the government ought to have the certainty of better use of remittance income.

Finally, this study recommends policy makers to make remittances mandatory for those workers who are abroad. This will increase inflow volumes of remittances. This was once used by the government of Philippine through the Executive Order Number 857 which was issued in 1982. This required all workers who work outside the country of Philippians to remit back seventy percent of their monthly salary through banks. Compliance of the

order was compulsory before the worker's passport could be renewed. So policy makers ought to apply this order in Zimbabwe so as to increase the volumes of remittance flows into the country. So by either considering one of the above mention policies of amalgamation of all these policies may increase remittance flows and formalisation of remitting into the country.

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APPENDICES

Appendix 1: Data Set

Year	Real GDP growth	Rem	INF	EXPO	UNEMPLOY	DEBT	FDI
2000	844.7	7.27	60	1.8	50	31.4	149
2000	848.7	7.48	73.2	1.8	40.1	31.4	122
2001	856.9	8.5	100	1.9	46.3	53.4	85
2001	810	8.51	122.2	1.9	54.4	58.3	85
2002	780.6	8.533	134.5	2.1	60	62.5	85
2002	689.3	8.6003	236.5	2.1	66.6	83.6	73
2003	648	8.6	384.7	1.57	70	83.8	76
2003	629	8.9	200.1	1.3	73.6	88.09	78
2004	610.4	8.91	133	1.26	77.7	89	87
2004	590	8.81	142	1.3	78.6	93.5	83
2005	575.6	9.02	193.3	1.41	80	94	74
2005	565.8	9.1	209	1.503	83	101	72
2006	555.5	8.8	266.8	1.64	84.3	109.9	70
2006	540	8.3	328	1.644	82.3	109.8	78
2007	535.3	7.4	563	1.77	80	110.5	99
2007	498.6	5.3	563	1.78	86.3	123.5	83
2008	440.7	4.5	563	1.32	97.3	147.7	78
2008	450.1	5.3	592	1.3	97	147.7	54
2009	467.1	6.21	5.1	1.21	95	75.4	90
2009	490	7.35	6.2	1.9	66.4	73.9	92
2010	520.2	7.83	5.03	2.54	60.7	69.3	163
2010	576.9	12	5.4	2.8	60.7	69	183
2011	582.1	13.5	5.4	2.93	60.7	67.4	227
2011	626.8	14.5	3.5	3.01	60.7	61	203
2012	643.7	16.3	3.7	3.31	60.7	60.1	172
2012	660	16.5	3.5	3.201	60.7	64.4	169
2013	672.5	17.3	3.2	3.14	63	66.2	163
2013	689.9	17.9	1.2	4.3	63	73	163
2014	698.4	18.03	0.8	5.3	63	77	157
2014	710	18.05	0.3	5.83	60	60	163
2015	720	19.62	-1.1	8.06	60	60	171
2015	728	20.12	-2.47	8.9	70.5	77	171

Source: (ZIMSTAT (FDI, INF, DEBT & UNEMPOL), RBZ, WITS, INDEXMUNDI (REM), World Bank (EXPO1))

Appendix 2: Regression results.

Dependent Variable: RGDP
Method: Least Squares
Date: 03/07/17 Time: 21:56
Sample: 2000S1 2015S2
Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
REM	10.40099	4.383982	2.372499	0.0257
INF	0.290507	0.105819	2.745327	0.0110
FDI	-1.358357	0.284949	-4.767022	0.0001
EXP01	8.774269	8.507446	1.031364	0.3122
DEBT	-3.306639	1.080142	-3.061300	0.0052
UNEMPLOY	-4.338695	1.536987	-2.822857	0.0092
C	1180.024	71.88705	16.41497	0.0000

R-squared	0.876298	Mean dependent var	632.9625
Adjusted R-squared	0.846609	S.D. dependent var	116.3670
S.E. of regression	45.57526	Akaike info criterion	10.66725
Sum squared resid	51927.61	Schwarz criterion	10.98788
Log likelihood	-163.6760	Hannan-Quinn criter.	10.77353
F-statistic	29.51641	Durbin-Watson stat	1.406014
Prob(F-statistic)	0.000000		

2.3 Correlation matrix.

	RGDP	REM	INF	FDI	EXP01	DEBT	UNEMPLOY
RGDP	1.000000	0.360224	-0.468543	0.246764	0.332561	-0.769153	-0.829004
REM	0.360224	1.000000	-0.633167	0.749310	0.856682	-0.421812	-0.407518
INF	-0.468543	-0.633167	1.000000	-0.670787	-0.471528	0.824971	0.657737
FDI	0.246764	0.749310	-0.670787	1.000000	0.626028	-0.562978	-0.545810
EXP01	0.332561	0.856682	-0.471528	0.626028	1.000000	-0.311884	-0.314423
DEBT	-0.769153	-0.421812	0.824971	-0.562978	-0.311884	1.000000	0.902448
UNEMPLOY	-0.829004	-0.407518	0.657737	-0.545810	-0.314423	0.902448	1.000000

2.2 Johansen Cointegration Test Results.

Date: 03/07/17 Time: 22:03
Sample (adjusted): 2001S1 2015S2
Included observations: 30 after adjustments
Trend assumption: Linear deterministic trend
Series: RGDP REM INF FDI EXP01 DEBT UNEMPLOY
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.964772	243.4828	125.6154	0.0000
At most 1 *	0.818043	143.1052	95.75366	0.0000
At most 2 *	0.796079	91.98560	69.81889	0.0003
At most 3	0.456340	44.28497	47.85613	0.1041
At most 4	0.417834	26.00205	29.79707	0.1286
At most 5	0.257857	9.772044	15.49471	0.2987
At most 6	0.027146	0.825631	3.841466	0.3635

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.964772	100.3776	46.23142	0.0000
At most 1 *	0.818043	51.11960	40.07757	0.0020
At most 2 *	0.796079	47.70063	33.87687	0.0006
At most 3	0.456340	18.28292	27.58434	0.4717
At most 4	0.417834	16.23001	21.13162	0.2117
At most 5	0.257857	8.946413	14.26460	0.2906
At most 6	0.027146	0.825631	3.841466	0.3635

Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

2.3 Augmented Dickey-Fuller (ADF) Test Results.

Variable	ADF-Statistic	Critical-Values		Order of Integration
GDP	-2.679434**	1%	-2.644302	I(1)
		5%	-1.952473	
		10%	-1.610211	
REM	-3.034759**	1%	-2.644302	I(1)
		5%	-1.952473	
		10%	-1.610211	
EXPO	4.273909*	1%	-3.661661	I(0)
		5%	-2.960411	
		10%	-2.619160	
DEBT	-4.751971**	1%	-3.670170	I(1)
		5%	-2.963972	
		10%	-2.621007	
FDI	-4.578035**	1%	-3.670170	I(1)
		5%	-2.963972	
		10%	-2.621007	
INF	-5.245957**	1%	-3.670170	I(1)
		5%	-2.963972	
		10%	-2.621007	
UNEMPLOY	-3.945534**	1%	-3.670170	I(1)
		5%	-2.963972	
		10%	-2.621007	