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Does Domestic Saving Matter for Economic Growth: in case of Chinese Economy

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Abstract: *The objective of this paper is to find the causal relationship between economic growth (GDP) rate and domestic saving growth (GDS) rate by applying the Harrod Domar growth modelin the case of the Chinese economy. This paper took an analysis of Harrod Domar growth model by using the Autoregressive Distributed Lag (ARDL) model. This ARDL model was developed by Pesaran, Shin and Smith (2001) with Chinese annual data from 1964 to 2014. The ARDL bound test demonstrates that there was a long run relationship between domestic saving and economic growth. Furthermore, ARDL error correction model shows that a cointegration relationship does exist between domestic saving growth and economic growth in the Chinese economy. Therefore, there was a stable and a positive long run relationship among the domestic saving growth rate and the economic growth rate of the Chinese economy.*
Keywords: *ARDL Model, Economic growth, Growth Model, Saving, Chinese economy*

I. Introduction

Harrod Domar growth model explained that the growth rate of an economy is being influenced by the saving rate of the economy. Thus, this means that high savings rates create high capital formulation, and it canstimulate the economic growth of the economy.This model was named after two well-known economists, Sir Roy Harrod (1939) and Professor Evesey Domar (1946),and they built their theoryindependently. Based on this theory, Solow (1956) also suggested that higher savings led to high capital accumulation, which is turn led to the economic growth of the economy. Therefore, this study applied Harrod Domar model to test the theory in the economy of China. Consequently, China'sdomestic saving rate was highest in the world;recently, it became the second largest economy in the world (World Bank, 2016). In addition, China plays an important role in the global economy.

When compared to people of other countries, the Chinese people save a lot. Therefore, the gross domestic savings in China have climbed to over 50 percent of its Gross Domestic Product (GDP) from 2008 to 2013. In addition, in 2014,it slightly dropped to 48.9 percent. The gross capital formulation of China is over 40 percent from 2003 to 2014 according to the database of the world development indicators of World Bank. According to Harrod Domar growth model, the Chinese economy has grown due to the high rate of domestic saving.

Based on analysis, this study showsa relationship between domestic saving rate and GDP growth rate through the use of annual data. Therefore, the objective of this paper is to find the causal relationship between economic growth (GDP) rate and domestic saving growth (GDS) rate by applying the Harrod Domar growth model for the case of Chinese economy. Subsequently, the paper analysis of Harrod Domar growth model was conducted using the Autoregressive Distributed Lag (ARDL) model which was developed by Pesaran, Shin and Smith (2001) with Chinese annual data from 1964 to 2014.

II. Literature Review

Many researchers have conductedvarious studieson examining the relationship between the growth of domestic saving and economic growth. Most of the studies focused on applied empirical analysis using various tests. However, the results and conclusions differ from each other in different countries. This study review the literature in two ways: one is the empirical evidence of the Chinese economy, while the second one is the empirical evidence of other countries economy. Accordingly, this paper analyses the literature of other countries first. Sinha D (1996) analyses the relationship between gross domestic product (GDP) and gross domestic saving (GDS) in India. Also, he performs two types of econometric analyses, cointegration tests and causality tests, to find the relationship among the GDP and GDS. Therefore, his study found that gross domestic product was cointegrated with gross domestic saving as well as with gross domestic private saving in Indian economy.

Aghion et al. (2006) studied about the relationship between saving and economic growth based on a cross-country sample of 118 countries panel data over the period from 1960 to 2000. They found a strong effect of lagged average savings on productivity growth in the poor countries, but a significantly smaller effect on productivity growth in rich countries.Sajid et al. (2008) investigate the causal relationship between the savings and output of Pakistan economy by using a quarterly data for the period of 1973:1 to 2003:4. Consequently, they employed two techniques to explore causal relationship between savings and economic growth. These techniques include the co-integration and the vector error correction techniques. The Researchers found that there is single direction long run causality from public savings to both measures of output (GNP and GDP). In addition, there is a mutual short-run causality between GDP and domestic savings.

Further, Ciftcioglu et al. (2010) studied about correlation between domestic savings and economic growth from a sample of Central and East European countries using the Neo-classical model. They estimated the econometric model by using the "Pooled Classical Regression" model, and their study found that domestic saving rate has exerted a statistically significant effect on the growth rate of GDP over the sample period. AbuAl-Foul, B. (2010) analysis shows the long-run relationship between GDP and GDS in Morocco (1965-2007) and Tunisia (1961-2007). This was done using a newly developed ARDL model. He found that in the case of Morocco, a long-run relationship exists between the variables. On the other hand, there was no evidence of long-run relationship that existed in the case of Tunisia. However, he further tested the Granger causality test whichshows the bidirectional causality between economic growth and saving growth in Morocco. In addition, it also showsthat there is a unidirectional Granger causality between GDP and GDS.Also, it runs from saving growth to economic growth in Tunisia.

Furthermore, Sekantsi et al. (2015) examines the relationship among the saving, investment, and economic growth in Lesotho for the period of 1970 to 2012. This was done using two types of techniques, which were autoregressive distributed lag (ARDL) bounds testing approach and vector error correction model (VECM) based on Granger causality test. Thus, they found the existence of cointegration among the variables and short-run causal flow from economic growth to saving. Subsequently, in the long-run, the study provides evidence of ranger causality from saving to economic growth.Dritsaki, C.(2015) deliberated about the relationship between saving and investment rates in Greece using an annual time series datafrom the period of 1980-2012. He used ARDL bound test technique approach and VECM Granger Causality approach for analyzing the relationship. Therefore, his study found that both were in the short and long run in the one direction causal relationship among the saving and investment.

Additionally, Budhedeo S H. (2015) empirically analysed the association between savings and economic growth in India over the period from 1950-2013 by engaging Granger causality estimation technique and Engle-Granger cointegration test technique. His analysis found that a long-run equilibrium exists between domestic savings and national income. However, this was achieved using Engle-Granger cointegration test. Thus, there was a definite long-run relationship between savings and growth for India. Additionally, the Granger causality tests yielded different causality outcomes in the short-run when compared to the long-run in the Indian economy. At the same time, Jagadeesh (2015) examine the role of savings in Economic growth in Botswana, and she used the ARDL technique to estimate the model. Secondly, she used the DOLS model for analysing the relationship between gross domestic savings and economic growth in Botswana. Consequently, she found that there is a considerable relationship between savings and economic growth in Botswana.

In the second part of the empirical evidence of the Chinese economy, some researchers have conducted various studies about the Chinese economy. Lean et al. (2009) examines the relationship between domestic savings growth rate and economic growth in the Chinese economy based on the general Solow Growth Model. Furthermore, this study investigates two types of savings: one is the household saving (HHS) and the other is the enterprise saving (EPS). They made use of the data for the whole country, as well as data for four representative provinces which were used as samples of the study. However, they employed the Johansen-Juselius cointegration test which was used for analysing the long-run relationship between the saving growth and economic growth in China.The Granger causality procedure based on a Vector Error Correction Model (VECM) was used to determine the direction of Granger causality of the study. Based on their result, they found that long-run cointegration relationship exists between both growths of domestic savings with economic growth. In the Chinese economy, the economic growth can stimulate the household saving growth in the short-run and the enterprise saving growth in the long run.

On the other hand, Bonham et al. (2012) studied about the dynamic relationship between China's saving rate and the economic growth using the one lag structural VAR model. They have debated that popular justifications for China's saving rate increase do not fit the historical facts. The Chinese saving rate did not take up economic growth until the 2000s and certainly was falling through the late 1990s. Furthermore, they found that saving rate dropped in 2010 as the dependent share falls and as the GDP growth moderates.

III. Data and Methodology

The data used in this paper is the Chinese economy annual time series data which covers the fifty year period from 1964 to 2014 for this study. However, all the data series were directly obtained from the database of World Development Indicators of the World Bank. The first variable is GDP annual percentage growth rate, which is calculated at market prices based on constant local currency. The second variable is Gross domestic savings (GDS) annual percentage growth rate which is calculated as GDS amount US$ compare to previous

year. The third variable is Gross capital formation (GCF) annual percentage growth rate which is calculated as the GCF annual growth rate of gross capital formation based on constant local currency.
Therefore, the theoretical framework used in this paper is based on the Harrod - Domar dynamic growth model:

$$Y = \left({}^{1}/_{\gamma}\right)K \qquad (1)$$

Capital-output ratio is K/Y = γ, total output is Y and proportional to the stock of capital is K.

$$\Delta Y = \left({}^{1}/_{\gamma}\right)\Delta K \qquad (2)$$

Changes in output are proportionally to change in the capital stock.

$$S = \sigma Y - I = \Delta K \qquad (3)$$

Assuming that the saving rate is a constant σ, and all saving are invested productively,then combining the results from equations (1), (2) and (3), we have:

$$\Delta Y = \left({}^{1}/_{\gamma}\right)\Delta K = \left({}^{1}/_{\gamma}\right)\sigma Y = \left({}^{\sigma}/_{\gamma}\right)Y \qquad (4)$$

Dividing both sides of equation (4) by Y leaves a very simple formula for the rate of growth of the economy, which is donated as G_Y:

$$G_Y = {}^{\Delta Y}/_{Y} = {}^{\sigma}/_{\gamma} \qquad (5)$$

Harrod - Domar dynamic growth model suggests that the rate of economic growth is constant and equal to the ratio of the saving rate to capital output. A simplified theoretical proof on the impact of domestic saving on economic growth could be derived using the above dynamic growth models;

$$GDP = {}^{\Delta Y}/_{Y} = f(GDS, GCF) \qquad (6)$$

Therefore, $$GDP = f(GDS, GCF) \qquad (7)$$

Where, GDP is economic growth rate, GDS donates gross domestic saving, and GCF is gross capital formation. Subsequently, economic theories confirm the existence of certain long-term equilibrium relationship between these economic variables. The co-integration test is to find out whether a long-term equilibrium relationship exists between variables. Therefore, Johansen (1988) approach provides the number of co-integration equations among the variables.

However, former studies have stated that the Autoregressive Distributed Lag (ARDL) Bounds test approach has several advantages over the Johansen's cointegration method. Firstly, the ARDL efficiently determines the cointegrating relation in small sample cases, whereas Johansen's method requires a large sample for validity. Secondly, Johansen's method requires that the variables must be integrated with variables of the same order for the cointegration test, while the ARDL approach can be applied irrespective of whether the regressors are I(1) and I(0) or mutually cointegrated. Here, the dependent variable must be I(1). Therefore, this study employed the Autoregressive Distributed Lag (ARDL) model which was developed by Pesaran, Shin and Smith (2001).

Furthermore, this study tests the stationary using Augmented Dickey-Fuller (ADF) and Philip-Perron (PP) tests. Said et al. (1984) augment that the basic autoregressive unit root test to accommodate general ARMA (p, q) models with unknown orders and their test is referred to as the Augmented Dickey-Fuller (ADF) test. The ADF test tests the null hypothesis that a time series Y_t is I(1) against the alternative that it is I(0), assuming that the dynamics in the data have an ARMA structure. Thus, the ADF test involvesthe estimation of the test regression.

$$Y_t = \beta_0 D_t + \emptyset Y_{t-1} + \sum_{j=1}^{p} \varphi_j \Delta Y_{t-1} + \varepsilon_t \qquad (8)$$

Where D_t is a vector of its deterministic terms (constant, trend etc.); the p is the lagged difference terms; ΔY_{t-1} are used to approximate the ARMA structure of the errors; and the value of p is set so that the error $\varepsilon_t$is serially uncorrelated.

Further, Phillips et al. (1988) developed a number of unit root tests that have become popular in the analysis of financial time series. The Phillips-Perron (PP) unit root tests differ from the ADF tests mainly based on how they deal with serial correlation and heteroskedasticity in the errors. In particular, where the ADF tests use a parametric autoregression to approximate the ARMA structure of the errors in the test regression, the PP tests ignore any serial correlation in the test regression. Therefore, the test regression for the PP tests is as follows:

$$\Delta Y_t = \beta_0 D_t + \pi Y_{t-1} + u_t \qquad (9)$$

Here $u_t$is I(0),which might be heteroskedastic. The PP tests correct any serial correlation and heteroskedasticity in the errors u_t of the test regression by directly modifying the test statistics $t_{\pi=0}$. Furthermore, researchers normally use the above two stationary tests to find out the stationary of time series data. Therefore, this paper also uses the above two tests to diced the stationary or non-stationary of the time series data. Here, when determined, the time series data is stationary,I(0) or I(1), by using Augmented Dickey-Fuller (ADF) and Philip-Perron (PP) tests.

Pesaran and Shin (1999) showed that cointegrating systems can be estimated in ARDL model. This is with the advantage that the variables in the cointegrating relationship can be either I(0) or I(1). The unrestricted error correction model (ECM) for cointegration analysis developed by Pesaran et al. (2001) and the ARDL derived from unrestricted Error correction model (ECM) are useful for investigating the short run dynamics with long run equilibrium relationship. For estimation of the economic growth, Eq. (7) can be expressed in the ECM version of the ARDL model as follows;

$$\Delta GDP_t = \beta_0 + \sum_{i=1}^{n} \beta_{1i} \Delta GDS_{t-i} + \sum_{i=1}^{n} \beta_{2i} \Delta GCF_{t-i} + \beta_{4i} ECT_{t-1} + \varepsilon_t (10)$$

Where, ECT_{t-I} is the error-correction term lagged for one period.

Furthermore, Pesaran et al. (2001) describe a methodology for testing whether ARDL model contains a long-run relationship between independent variable and the regressors. From equation (9), the Bound test procedure transforms can berepresented as shown in the equation below:

$$\Delta GDP_t = \beta_0 + \sum_{i=1}^{n} \beta_{1i} \Delta GDS_{t-i} + \sum_{i=1}^{n} \beta_{2i} \Delta GCF_{t-i}$$
$$+ \beta_{4i} InGDS_{t-1} + \beta_{5i} InGCF_{t-1} + \varepsilon_t \qquad (11)$$

The ARDL bound testing approach is based on F-statistic. Pesaran et al. (2001) computed two sets of critical values for the given level of the significance. One set assumes that all the variables are I(0) referred to as lower bound and the other set assumes that they are all I(1) referred to as upper bound. The bound test was used for checking the long-run relationship of the dependent and independent variables. The test statistic based on the above equation has a different distribution under the null hypothesis. This depends on whether the regressors are all I(0) or all I(1), or the variables are mixed with I(0) and I(1).Furthermore, optimal lag lengths selection may choose between the Akaike Information Criterion (AIC), Schwarz Criterion (SIC), Hannan-Quinn Criterion (HQ), or the Adjusted R-squared.

Finally, it is important to investigate whether the above results are stable for the entire period of the study. The disturbance in the error correction model is assumed to be autocorrelated. If there are autocorrelation in a model, then that model has misspecification (Greene, 2008). Therefore, this study is aimed atinvestigating whether there is any autocorrelation in the model.This paper uses two tests, one is Residual Diagnostics Correlogram - Q-Statistics test was perform to test the serial correlation. On the other hand,the second test is the Lagrange Multiplier (LM) test. However, both tests are suitable for testing for autocorrelation. Furthermore, we have to test the stability of the above model and the stability test of the model based on the cumulative sum (CUSUM) tests proposed by Brown et al. (1975). The CUSUM test uses the cumulative sum of recursive residuals based on first observations. Then, itwas updated recursively and plotted against break point.

IV. Estimations

This paper employed ARDL model to analyze the dynamic relationship between domestic saving growthand the economic growth of the Chinese economy. The estimation of the equations which were mentioned in the previews section, were explained in this section. The ARDL model can be analysis which is stationary I(0) or I(1), or I(0) and I(1) variable together.However, I(2) variables cannot be the analysis of an ARDL model. Therefore, this study need to check whether all variables are in line with stationary I(0) and I(1) which was used in equation (8) and (9). The equation (8) usesAugmented Dickey-Fuller (ADF) stationary test,while equation (9) uses Philip-Perron (PP) stationary test. For the ADF test, the lag length selected criteria is Schwarz Info Criterion (SIC), whilethe selected maximum lags (10)was done automatically. Table 1 below explains the result of ADF and PP stationary tests of the GDP, GDS, and GCF.

Table 1. Stationary Test Results

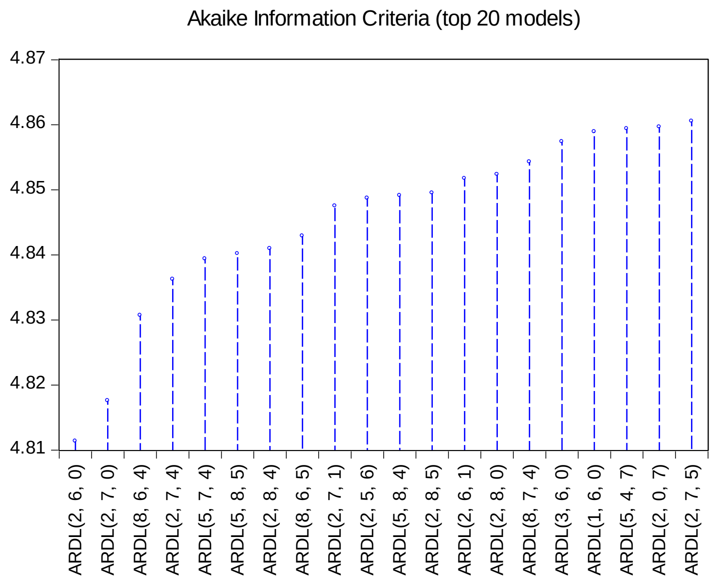
Variables	**Test**	**Levels**
		t-statistics
GDP	ADF	-5.017820*
	PP	-4.888054*
GDS	ADF	-4.274697*
	PP	-5.686076*
GCF	ADF	-5.957412*
	PP	-5.914258*

*Significant at 1% level

The table 1 indicates that GDP is stationary in their level at ADF and PP tests. Therefore, GDP is a I(0) variable. Furthermore, GDS is also stationary in their level at ADF and PP tests. Thus, GDS is a I(0) variable. Finally, GCF is stationary in their level at ADF and PP tests. Therefore, GCF is also a I(0) variable. Hence, in the time series data, all variables are stationary [I(0)] and there are no other variable as the I(2) variable. Accordingly, this study can now estimate the ARDL model. Therefore, the econometrics estimation of this study uses E-views 9 software for the analysis of the ARDL model.

The econometrics of both equations (10) and (11) were analyzed by ARDL estimation. The initial important factor is lag selection. Here, I have been selected the maximum number of lag for both dependent variable and regressor variable to be 8, and the lag selection criteria is Akaike Information Criterion (AIC)which is commonly used by researchers. The 8 lags were selected for this ARDL analysis. Therefore, during the analysis, 648 different ARDL models specifications were considered and the most suitable model for this study was selected.

Graph 1



The Graph 1 showsthe summary of the top 20 model selection.In total, 648 ARDL model specification were considered and ARDL (2,6,0) model was finally selected. Thus, this study uses ARDL (2,6,0) model for the analysis of the dynamic relationship between domestic saving growth and economic growth in theChinese economy. In this model, GDP was the dependent variable, C was the fixed regressors, and GDS & GCF were the dynamic regressors. Consequently, an ARDL (2,6,0) model has GDP with 2 lags, GDS with 6 lags, and GCF with no lags. Thus, the ARDL (2,6,0) regression result is given in table 2 below.

Table 2.ARDL (2,6,0) model result

Dependent variable GDP

Variables	**Coefficient**	**t-Statistic**	
GDP(-1)	0.570262	4.038672	*
GDS(-2)	0.088486	1.865162	**
R-squared		0.66	
F-statistic		6.742500*	
DW –Statistic		1.764485	

** Significant at 5% level, * significant at 1% level

The table 2 shows that GDP lag 1 variable has a positive sign and is significant at 1%. GDS lag 2 also has a positive sign and is significant at 5% level. According to this result, if GDS will increase by 1%, GDP will be increased by 0.08%. However, these results clearly illustrate that GDS and GDP has a positive relationship in the Chinese economy. In the econometrics analysis,R^2 is analyzing the Goodness of fit of the model. If any model such as R^2 is 0.5 to 0.99, then that model shows goodness of fit with the situation of the series. However, here, R^2 is 0.66. Thus, this showsthe ARDL model goodness of fit with the situation of the series.In the econometrics model,if the F-statistic is significant at 1% level, then that model is a good model. In addition, the ARDL model F-statistic was also significant at 1% level. These all suggests that the above ARDL (2,6,0) model fits the data reasonably well.

Furthermore, the testing of a long-run relationship in an ARDL (2,6,0) model is to be used as the basis for applying the "ARDL Bounds Test." The null hypothesis of ARDL bound test shows that there are no long-run relationships between the GDP and GDS, GCF. Therefore, the bounds test result is given in the table 3 below.

Table 3. Bounds Test

ARDL Bounds Test		
Date: 09/09/16 Time: 17:00		
Sample: 1970 2014		
Included observations: 45		
Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	8.761641	2
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36

The bounds test result evidently described that the F-statistic value of 8.76 is greater than I0 bound values and I1 bound values at 10%, 5%, 2.5%, and 1% levels. Hence, null hypothesis was rejected at 10%, 5%, 2.5%, and 1% levels. Accordingly, it was confirmed that there were two long-run relationships between GDP and domestic saving, and GDP and the Capital formulations of the Chinese economy. Therefore, this study illustrate that Chinese domestic saving growth has a long run relationship with the Chinese GDP growth rate.

Subsequently, the ARDL model have cointegrating form to support the use of an error correction model mechanism (ECM) representation in order to investigate the dynamic analysis of the relationship between GDP and domestic saving. The ECM coefficient should be statistically significant with negative sign. Also, it shows how quickly variables do return to equilibrium. This significant lagged error term serves as evidence that the established long-run relationship is stable. Therefore, this paper needs to analyze the ECM version of ARDL (2,6,0) model. It also tests the long run equilibrium between GDP and domestic saving. The estimated result of ARDL (2,6,0) model Cointegrating and Long Run form is given in table 4 below.

Table 4. Cointegrating Form

Variables	**Coefficient**	**t-Statistic**	
D(GDP(-1))	0.285983	2.341047	**
D(GDS(-5))	0.116153	3.679847	*
ECM(-1)	-0.715721	-4.761693	*

** Significant at 5% level, * significant at 1% level

Table 4 explain that the ECM is significant at 1% level with negative sign. Therefore, there is a stablelong-run relationship between GDP and domestic saving. The speed of adjustment implied by the coefficient of lagged ECM, accordingly here, shows that the speed of adjustment is 72 percent. This result suggests that the deviation from short run to long run is corrected by 72% each year. Furthermore, GDP lag 1 variable show a positive sign and is significant at 5%. GDS lag 5 variablesalso show a positive sign and is significant at 1% level. Therefore, this explained that in the above model, there is a cointegration relationship between GDP growth rate and domestic saving growth rate in the Chinese economy.

Furthermore, the diagnostic tests were performed to find out the stability of the model. Initially, the test of this ARDL (2,6,0) model was serially independent or not. Residual DiagnosticsCorrelogram - Q-Statistics test was performed to test the serial correlation. Thus, theserial correlation test result is given in the table 5 below.

Table 5. Serial Correlation Test Result

Date: 09/09/16 Time: 17:21
Sample: 1964 2014
Included observations: 45
Q-statistic probabilities adjusted for 2 dynamic regressors

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob*
		1	0.109	0.109	0.5761	0.448
		2	0.058	0.047	0.7430	0.690
		3	0.132	0.122	1.6190	0.655
		4	-0.012	-0.042	1.6267	0.804
		5	0.031	0.026	1.6777	0.892
		6	0.011	-0.009	1.6839	0.946
		7	0.117	0.126	2.4518	0.931
		8	0.091	0.060	2.9216	0.939
		9	0.137	0.121	4.0206	0.910
		10	-0.085	-0.156	4.4553	0.924
		11	-0.040	-0.038	4.5570	0.951
		12	-0.244	-0.289	8.3807	0.755
		13	0.012	0.130	8.3901	0.817
		14	0.113	0.108	9.2644	0.814
		15	0.101	0.196	9.9861	0.821
		16	0.062	-0.068	10.262	0.853
		17	-0.055	-0.094	10.493	0.882
		18	0.038	-0.035	10.609	0.910
		19	-0.070	0.051	11.009	0.924
		20	-0.086	-0.034	11.630	0.928

*Probabilities may not be valid for this equation specification.

The p-values are only approximate. It was strongly suggested that there is no evidence of autocorrelation in the model's residuals. Therefore, this model is serially independent.

Furthermore, Breusch-GodfreyLagrange Multiplier (LM) test was performed to test the serial correlation. Serial correlation test result was given in the table 6 below.

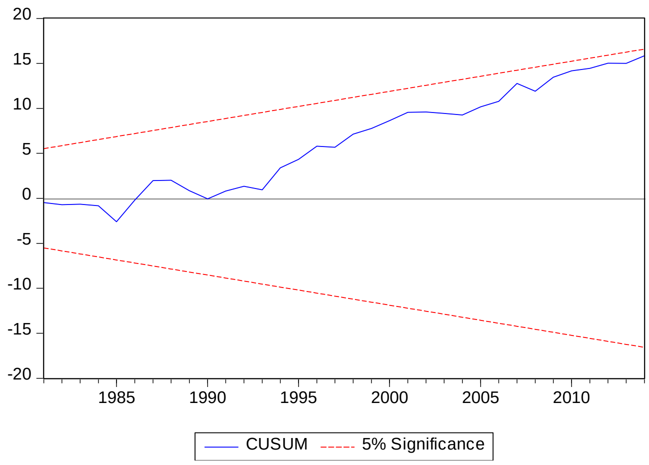
Table 6. Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.765354	Prob. F(2,32)	0.4735
Obs*R-squared	2.054293	Prob. Chi-Square(2)	0.3580

Breusch-Godfrey Serial Correlation LM Test F-statistic p-value was 47%. Therefore, this shows that there were no serial correlation in the ARDL (2,6,0) model. Therefore, the above ARDL (2,6,0) model bound test results and the co-integrating long-run form results were stable for the entire period of the study.

Finally, this study is important to investigate whether the above long run relationships are stable for the entire period of the study. For this purpose, one needs to test the cumulative sum (CUSUM) tests. Thus, the test results are given in the graph 2 below.

Graph 2: CUSUM



CUSUM test result lines are within the 5 percent critical bound.Thus, this provides evidence that the factors of the model do not suffer from any structural instability over the period of the study. Therefore, long run relationship between domestic saving growth and GDP growth were stable for the entire period of the study.

V. Conclusion

China's domestic saving rate was the highest in the world. This was at the same time that the Chinese economy recently became the second largest economy in the world. Thus, it is playing an important role in the global economy. Therefore, we need to analyze how Chinese highest saving rate has helpedthe growth of the Chinese economy. However, this paper analyses the relationship between gross domestic saving and economic growth by using the ARDL empirical methods. Also, this paper found that a positive relationship exists between savings and economic growth. Furthermore, ARDL bound test demonstrate that there was a long run relationship between domestic saving and economic growth. Furthermore, ARDL error correction model show that the cointegration relationship does exist between domestic saving growth and the economic growth of the Chinese economy.

In addition, ARDL error correction modelillustrate that long-run relationship was stable between domestic saving growth and economic growth. Therefore, this paper's overall finding was a stable and positive long run relationship among the domestic saving growth rate and economic growth rate in the Chinese economy during the year 1964 to 2014. However, this result has codirected with the study of Bonham et al. (2012).It shows that the Chinese saving rate did not take up economic growth until the year 2000s. At the same time, this paper result is consistent with the study of Lean et al. (2009).It was explained that long-run cointegration relationship exists between both growths of domestic savings with economic growth.

In view of the above, in countries especially in developing countries, economy policy makers could focus on domestic saving and build up their domestic saving. This is because it will help to improve those countries economic growth. At the same time, Chinese policy makers should continually maintain their domestic saving rate at higher level in the future. Thus, this is for the purpose of obtaining a high economic growth in the future.

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