IMPACT OF MACROECONOMIC FACTORS ON ECONOMIC GROWTH, AGRICULTURAL OUTPUT AND EXPORT IN NIGERIA

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ABSTRACT

The correct determinations of the macroeconomic factors would drive economic growth especially the agricultural output and export for a specific country. Thus, the main objective of the study is to ascertain the major macroeconomic factors that would drive Nigeria's economic growth and agricultural sector in terms of output and export. The long-run and short-run effects of the macroeconomic factors identified on economic growth, agricultural output and export are examined. In addition, the direction of Granger causality among oil export, agricultural export and economic growth is determined. This study used the data span from 1981 to 2014. Augmented Dickey Fuller (ADF) and Philips and Perron (PP) unit root test were employed to test for stationarity of the series. The bound testing was then used to examine the existence of long-run relationship, while Autoregressive Distributed Lag (ARDL) was used to examine the long-run and short-run relationship. Finally, the Granger causality was employed to test further relationship among oil export, agricultural export and economic growth. The results indicate that agricultural export and crude oil price have positive and significant impact on economic growth in the long-run but insignificant in the short-run. In the short-run, agricultural land and crude oil price hindered agricultural output with government spending on agriculture and unemployment rate being positive and significant on agricultural output. In the long-run, agricultural land and crude oil price have positive and significant impact on the agricultural output; though unemployment rate is negative and significant. Structural Adjustment Policy (SAP) has negative and insignificant impact both in the short-run and long-run on agricultural output but negative and significant on agricultural export. Hence, the study suggests that an increase in the quantity of agricultural export, government spending, improvement in SAP and the rise in the crude oil price will enhance the nation's agriculture and economic growth.

Keywords: agricultural export, agricultural output, crude oil price, economic growth, exchange rate

ABSTRAK

Penentuan faktor-faktor makroekonomi yang betul akan memacu pertumbuhan ekonomi khususnya pengeluaran dan eksport pertanian sesebuah negara. Oleh itu, objektif utama kajian ini adalah untuk menentukan faktor-faktor makroekonomi utama yang akan memacu pertumbuhan ekonomi Nigeria, pengeluaran serta eksport dalam sektor pertanian. Kesan faktor-faktor makroekonomi terhadap pertumbuhan ekonomi, pengeluaran dan eksport pertanian dalam jangka masa pendek dan panjang juga akan dianalisis di samping penentuan sebab akibat Granger antara eksport minyak, eksport pertanian dan pertumbuhan ekonomi. Kajian ini menggunakan data dari tahun 1981 hingga 2014. Ujian Augmented Dickey Fuller (ADF) dan Philips dan Perron (PP) telah digunakan untuk menguji kepegunan siri masa. *Bound testing* telah digunakan untuk memeriksa kewujudan hubungan jangka panjang, manakala *Autoregressive Distributed Lag* (ARDL) telah digunakan untuk mengkaji hubungan jangka masa panjang dan pendek. Akhir sekali, ujian sebab akibat Granger telah digunakan untuk menguji hubungan antara eksport minyak, eksport pertanian dan pertumbuhan ekonomi. Keputusan kajian menunjukkan bahawa eksport pertanian dan harga minyak mentah mempunyai kesan positif dan signifikan terhadap pertumbuhan ekonomi dalam jangka masa panjang, tetapi tidak signifikan dalam jangka masa pendek. Dalam jangka masa pendek, tanah pertanian dan harga minyak mentah memberi kesan negatif terhadap pengeluaran pertanian. Perbelanjaan kerajaan ke atas pertanian dan pengangguran mempunyai kesan positif terhadap pengeluaran pertanian dalam jangka pendek, namun kadar pengangguran adalah negatif dan signifikan dalam jangka masa panjang. Namun begitu, tanah pertanian dan harga minyak mentah mempunyai kesan positif dan signifikan terhadap pengeluaran pertanian dalam jangka masa pendek. *Structural Adjustment Policy* (SAP) memberi kesan negatif terhadap output pertanian, tetapi didapati tidak signifikan dalam jangka pendek dan panjang. Oleh itu, kajian ini mencadangkan kuantiti eksport pertanian serta perbelanjaan kerajaan untuk pembangunan pertanian perlu dipertingkatkan, manakala SAP perlu dikaji semula dan kenaikan harga minyak mentah akan meningkatkan pengeluaran pertanian serta pertumbuhan ekonomi negara.

Kata kunci: eksport pertanian, output pertanian, harga minyak mentah, pertumbuhan ekonomi, kadar pertukaran

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LIST OF ABBREVIATIONS

ACGSF	Agricultural Credit Guarantee Scheme Fund
ADF	Augmented Dickey Fuller
ADP	Agriculture Development Projects
AIC	Akaike Information Criterion
ARDL	Autoregressive Distributed Lag
BOP	Balance of Payment
BOT	Balance of Trade
CB	Commodity Boards
CBN	Central Bank of Nigeria
CBNAR	Central Bank of Nigeria Annual Reports
CBNSA	Central Bank of Nigeria Statement of Account
CBNSB	Central Bank of Nigeria Statistical Bulletin
CPI	Consumer Price Index
CUSUM	Cumulative Sum
CV	Critical Value
ECM	Error Correction Model
EU	European Union
FDI	Foreign Direct Investment
FPE	Final Prediction Error
GARCH	Generalized Autoregressive Conditional Heteroskedasticity
GDP	Gross Domestic Product
GNP	Gross National Product
GRP	Green Resolution Programme
HQ	Hannan-Quinn Criterion
IMF	International monetary Fund
IRF	Impulse Response Function
JV	Joint Venture
KSA	Kingdom of Saudi Arabia
KPSS	Kwiatkowski Philips Schmidt Shin
LDCs	Less Developing Countries

LEEDS	Local-level Economic Empowerment and Development Strategy
LR	Likelihood Ration
NACB	Nigerian Agricultural and Cooperatives Bank
NAFPP	National Accelerate Food Production programme
NAP	New Agricultural Policy
NEPAD	New Partnership for Africa's Development
NER	Nominal Exchange Rate
NNPC	Nigerian National Petroleum Corporation
NOM	Non-Oil Import
NSS	National Seeds Services
OECD	Organization for Economic Cooperation and Development
OFN	Operation Feed the Nation
OLS	Ordinary Least Square
OPEC	Organization of Petroleum Exporting Countries
PP	Phillips Perron
RBDAs	River Basin Development Authorities
RDSS	Rural Development Sector Strategy
RER	Real Exchange Rate
RMB	Renminbi
SAP	Structural Adjustment Program
SBC	Schwarz Bayasian Criterion
SEEDS	State-level Economic Empowerment and Development Strategy
SMES	Small and Medium Enterprises
TOT	Terms of Trade
US	United States
USD	United States Dollar
UK	United Kingdom
VAR	Vector Autoregressive Models
VECM	Vector Error Correction Model
WGI	Worldwide Governance Indicator

CHAPTER ONE

INTRODUCTION

1.1 Background

Economic growth is a worldwide concern of countries that can be mirrored in country's Gross Domestic Product (GDP). Economic growth is also linked with national economic size of a country (Brown *et al.*, 2011). Micro and macro-economic factors can determine economic growth of a country (Meade, 2013). However, GDP is largely influenced by macroeconomic factors which can determine the trend that a country's economy is positioned. Hence it is important to make further investigation of macroeconomic factors on economic growth; for improving and achieving rise in standard of living worldwide.

Many macroeconomic factors can be identified as the primary source of economic growth where export is one of the vital factors (Robertson, 1938). There have been a considerable number of studies in economic development and growth literature concerning the exports significance as an engine for economic growth. It has been widely acknowledged in theory as well as in practice that exportation leads to several economic benefits for a country. Such as income growth, foreign exchange earnings used to finance imported goods and advancement in technology (Dawson, 2005). Likewise, export commodity by a country represents one of the important sources of foreign income that ease pressure on balance of payments (BOP) and generate employment. Hence, these economic benefits made exportation significant for both developing and developed countries. Therefore improvement is needed in their outputs for export promotion (Vohra, 2001; Abou-Strait, 2005; Omotor, 2008; Mehdi & Reza 2011).

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APPENDIX

Dependent Variable: AGRICUTURAL OUTPUT
Method: ARDL
Date: 06/02/16 Time: 00:20
Sample (adjusted): 1983 2014
Included observations: 32 after adjustments
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Schwarz criterion (SIC)
Dynamic regressors (2 lags, automatic): EXCHANGE_RATE INFLATION_RATE INTEREST_RATE UNEMPLOYMENT_RATE CRUDE_OIL_RENT GOVERNMENT_SPENDING OPENNESS AGRICULTURAL_LAND
Fixed regressors: SAP C
Number of models evalulated: 13122
Selected Model: ARDL(2, 1, 2, 0, 2, 2, 2, 2, 2)
White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
AGRICUTURAL OUTPUT(-1)	1.059991	0.124328	8.525775	0.0001
AGRICUTURAL OUTPUT(-2)	-0.464949	0.189070	-2.459139	0.0435
EXCHANGE RATE	-0.142729	0.079768	-1.789287	0.1167
EXCHANGE RATE(-1)	0.274429	0.051515	5.327221	0.0011
INFLATION RATE	-0.233981	0.058230	-4.018203	0.0051
INFLATION RATE(-1)	0.183816	0.045285	4.059129	0.0048
INFLATION RATE(-2)	-0.110803	0.053182	-2.083465	0.0757
INTEREST RATE	0.228163	0.064992	3.510655	0.0099
UNEMPLOYMENT RATE	3.440858	0.583987	5.892011	0.0006
UNEMPLOYMENT RATE(-1)	-1.564127	0.497108	-3.146450	0.0162
UNEMPLOYMENT RATE(-2)	-3.237464	0.604220	-5.358086	0.0011
CRUDE OIL RENT	-0.450195	0.082108	-5.482997	0.0009
CRUDE OIL RENT(-1)	0.497683	0.073838	6.740176	0.0003
CRUDE OIL RENT(-2)	1.062755	0.181794	5.845946	0.0006
GOVERNMENT SPENDING	-2.395688	1.792645	-1.336399	0.2232
GOVERNMENT SPENDING(-1)	-14.96304	3.703593	-4.040140	0.0049
GOVERNMENT SPENDING(-2)	-27.53005	4.453262	-6.181996	0.0005
OPENNESS	-0.374143	0.063383	-5.902913	0.0006
OPENNESS(-1)	-0.097442	0.065200	-1.494521	0.1787
OPENNESS(-2)	0.229179	0.101663	2.254303	0.0588
AGRICULTURAL_LAND	-4.474861	0.732106	-6.112314	0.0005
AGRICULTURAL_LAND(-1)	-0.303433	0.324833	-0.934121	0.3813
AGRICULTURAL_LAND(-2)	5.988304	0.972839	6.155492	0.0005
SAP	-3.757025	3.623417	-1.036873	0.3343
C	-37.11576	23.86234	-1.555412	0.1638

R-squared	0.976475	Mean dependent var	33.19688
Adjusted R-squared	0.895816	S.D. dependent var	6.688193
S.E. of regression	2.158782	Akaike info criterion	4.419639
Sum squared resid	32.62237	Schwarz criterion	5.564745
Log likelihood	-45.71423	Hannan-Quinn criter.	4.799210
F-statistic	12.10630	Durbin-Watson stat	2.942140
Prob(F-statistic)	0.001177		

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

ARDL Bounds Test
Date: 06/02/16 Time: 00:22
Samrpte: 1983 2014
Included observations: 32
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	4.484450	8

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	1.85	2.85
5%	2.11	3.15
2.5%	2.33	3.42
1%	2.62	3.77

Test Equation:
Dependent Variable: D(AGRICUTURAL_OUTPUT)
Method: Least Squares
Date: 06/02/16 Time: 00:22
Sample: 1983 2014
Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AGRICUTURAL_OUTPUT(-1))	0.358838	0.182030	1.971310	0.0893
D(EXCHANGE_RATE)	-0.128039	0.092133	-1.389710	0.2072
D(INFLATION_RATE)	-0.278240	0.065943	-4.219424	0.0039
D(INFLATION_RATE(-1))	0.112613	0.066099	1.703699	0.1322
D(UNEMPLOYMENT_RATE)	1.472202	0.923813	1.593615	0.1551
D(UNEMPLOYMENT_RATE(-1))	2.346132	0.741034	3.166023	0.0158
D(CRUDE_OIL_RENT)	-0.290159	0.141049	-2.057146	0.0787
D(CRUDE_OIL_RENT(-1))	-0.668076	0.187404	-3.564898	0.0092
D(GOVERNMENT_SPENDING)	-2.772090	2.190435	-1.265543	0.2462
D(GOVERNMENT_SPENDING(-1))	23.84478	4.971587	4.796212	0.0020
D(OPENNESS)	-0.305722	0.097677	-3.129929	0.0166
D(OPENNESS(-1))	-0.165973	0.095597	-1.736184	0.1261
D(AGRICULTURAL_LAND)	-2.512200	0.997878	-2.517541	0.0400
D(AGRICULTURAL_LAND(-1))	-4.733286	1.113417	-4.251134	0.0038
SAP	-7.810888	5.445744	-1.434310	0.1946
C	-41.36488	35.09981	-1.178493	0.2771
EXCHANGE_RATE(-1)	0.023668	0.083196	0.284491	0.7843
INFLATION_RATE(-1)	-0.312533	0.088882	-3.516274	0.0098
INTEREST_RATE(-1)	-0.114499	0.055302	-2.070436	0.0772
UNEMPLOYMENT_RATE(-1)	-0.700454	0.640018	-1.094427	0.3100
CRUDE_OIL_RENT(-1)	0.761007	0.253298	3.004398	0.0198
GOVERNMENT_SPENDING(-1)	-30.05536	8.349468	-3.599674	0.0087
OPENNESS(-1)	-0.074001	0.109896	-0.673375	0.5223
AGRICULTURAL_LAND(-1)	1.176437	0.540242	2.177612	0.0659
AGRICUTURAL_OUTPUT(-1)	-0.379595	0.179245	-2.117744	0.0720

R-squared	0.943291	Mean dependent var	-0.381250
Adjusted R-squared	0.748858	S.D. dependent var	5.652601
S.E. of regression	2.832745	Akaike info criterion	4.963044
Sum squared resid	56.17113	Schwarz criterion	6.108150
Log likelihood	-54.40871	Hannan-Quinn criter.	5.342614
F-statistic	4.851516	Durbin-Watson stat	2.078709
Prob(F-statistic)	0.019189		

ARDL Cointegrating And Long Run Form
Dependent Variable: AGRICUTURAL_OUTPUT
Selected Model: ARDL(2, 1, 2, 0, 2, 2, 2, 2, 2)
Date: 06/02/16 Time: 00:23
Sample: 1981 2014
Included observations: 32

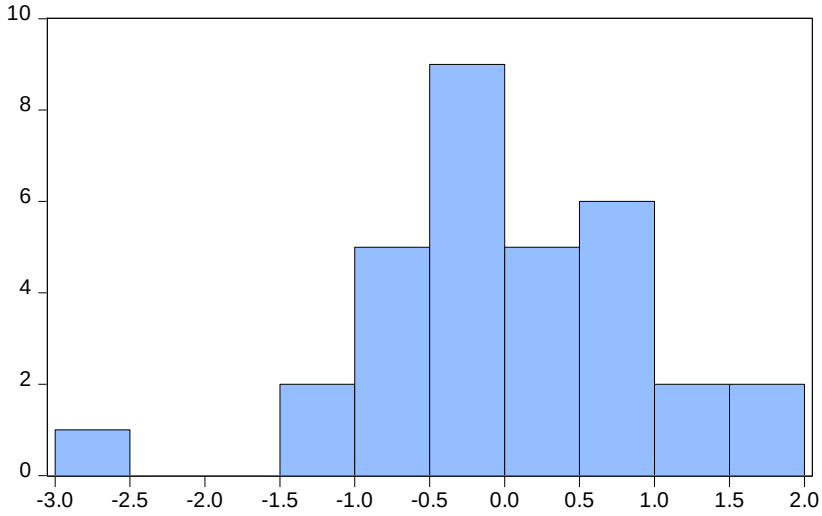
Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AGRICUTURAL_OUT...	0.476634	0.071006	6.712611	0.0003
D(EXCHANGE RATE)	-0.140284	0.029413	-4.769535	0.0020
D(INFLATION_RATE)	-0.232594	0.025700	-9.050302	0.0000
D(INFLATION RATE(-1))	0.111530	0.020710	5.385305	0.0010
D(INTEREST_RATE)	0.233248	0.022528	10.353822	0.0000
D(UNEMPLOYMENT R...	3.467666	0.379372	9.140542	0.0000
D(UNEMPLOYMENT_R...	3.207012	0.283086	11.328755	0.0000
D(CRUDE OIL RENT)	-0.452583	0.055640	-8.134165	0.0001
D(CRUDE_OIL_RENT(-1))	-1.057761	0.085533	-12.366627	0.0000
D(GOVERNMENT SPE...	-2.284892	0.827608	-2.760840	0.0281
D(GOVERNMENT_SPE...	27.314639	1.681586	16.243377	0.0000
D(OPENNESS)	-0.373896	0.034158	-10.946086	0.0000
D(OPENNESS(-1))	-0.232570	0.037755	-6.159904	0.0005
D(AGRICULTURAL LA...	-4.526628	0.484283	-9.347069	0.0000
D(AGRICULTURAL_LA...	-5.985414	0.410813	-14.569676	0.0000
D(SAP)	-3.191992	2.063189	-1.547115	0.1658
CointEq(-1)	-0.405151	0.030172	-13.428096	0.0000

Cointeq = AGRICUTURAL_OUTPUT - (0.3252*EXCHANGE_RATE -0.3975
*INFLATION RATE + 0.5634*INTEREST RATE -3.3602
*UNEMPLOYMENT_RATE + 2.7416*CRUDE_OIL_RENT -110.8481
*GOVERNMENT SPENDING -0.5986*OPENNESS + 2.9880
*AGRICULTURAL_LAND -9.2776*SAP -91.6534)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXCHANGE RATE	0.325221	0.180014	1.806642	0.1138
INFLATION_RATE	-0.397492	0.211553	-1.878924	0.1023
INTEREST RATE	0.563424	0.198145	2.843491	0.0249
UNEMPLOYMENT_RATE	-3.360185	0.962797	-3.490024	0.0101
CRUDE OIL RENT	2.741625	1.028892	2.664638	0.0322
GOVERNMENT_SPEND...	-110.848053	39.118453	-2.833651	0.0253
OPENNESS	-0.598597	0.263627	-2.270619	0.0574
AGRICULTURAL_LAND	2.987991	1.543129	1.936319	0.0940
SAP	-9.277573	10.808253	-0.858379	0.4191
C	-91.653429	82.093324	-1.116454	0.3011



Series: Residuals	
Sample 1983 2014	
Observations 32	
Mean	3.53e-14
Median	-0.004371
Maximum	1.769248
Minimum	-2.984044
Std. Dev.	0.962819
Skewness	-0.579837
Kurtosis	4.326324
Jarque-Bera	4.138637
Probability	0.126272

Heteroskedasticity Test: Harvey

F-statistic	2.397726	Prob. F(27,4)	0.2052
Obs*R-squared	30.13787	Prob. Chi-Square(27)	0.3080
Scaled explained SS	117.5540	Prob. Chi-Square(27)	0.0000

Test Equation:
Dependent Variable: LRESID2
Method: Least Squares
Date: 04/10/16 Time: 10:17
Sample: 1983 2014
Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-86.12958	39.91708	-2.157712	0.0971
AGRICUTURAL OUTPUT(-1)	0.535188	0.225035	2.378247	0.0761
AGRICUTURAL OUTPUT(-2)	-0.161388	0.263641	-0.612151	0.5735
EXCHANGE RATE	-0.221207	0.109702	-2.016426	0.1140
EXCHANGE_RATE(-1)	0.000562	0.125789	0.004466	0.9967
EXCHANGE_RATE(-2)	0.264418	0.121994	2.167464	0.0961
INFLATION_RATE	0.010980	0.076135	0.144218	0.8923
INFLATION_RATE(-1)	0.171694	0.119436	1.437546	0.2239
INFLATION RATE(-2)	0.080410	0.087321	0.920848	0.4092
INTEREST RATE	0.077819	0.139336	0.558500	0.6063
INTEREST RATE(-1)	0.209212	0.127220	1.644490	0.1754
INTEREST RATE(-2)	0.106934	0.085700	1.247780	0.2802
GOVERNMENT SPENDING	-0.173061	2.367984	-0.073084	0.9452
GOVERNMENT SPENDING(-...	-22.43518	8.758331	-2.561582	0.0625
GOVERNMENT SPENDING(-...	-12.42299	6.998334	-1.775135	0.1505
UNEMPLOYMENT_RATE	4.301433	1.702646	2.526322	0.0649
UNEMPLOYMENT_RATE(-1)	-2.828769	1.270122	-2.227163	0.0899
UNEMPLOYMENT_RATE(-2)	-1.678884	1.591398	-1.054974	0.3509
CRUDE_OIL_RENT	-0.249622	0.178963	-1.394825	0.2355
CRUDE_OIL_RENT(-1)	0.392243	0.191529	2.047951	0.1099
CRUDE OIL RENT(-2)	0.314856	0.314699	1.000499	0.3737
OPENNESS	-0.033612	0.116132	-0.289424	0.7866
OPENNESS(-1)	-0.108321	0.123705	-0.875644	0.4307
OPENNESS(-2)	0.079498	0.109962	0.722958	0.5097
AGRICULTURAL LAND	-4.336073	1.670414	-2.595808	0.0603
AGRICULTURAL LAND(-1)	2.226891	0.835619	2.664959	0.0561
AGRICULTURAL_LAND(-2)	3.578657	1.538297	2.326376	0.0806
SAP	-14.14567	8.145408	-1.736643	0.1575

R-squared	0.941809	Mean dependent var	-2.599003
Adjusted R-squared	0.549016	S.D. dependent var	4.457501
S.E. of regression	2.993450	Akaike info criterion	4.701289
Sum squared resid	35.84297	Schwarz criterion	5.983807
Log likelihood	-47.22062	Hannan-Quinn criter.	5.126407
F-statistic	2.397726	Durbin-Watson stat	3.429896
Prob(F-statistic)	0.205167		

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.340910	Prob. F(27,4)	0.9610
Obs*R-squared	22.30638	Prob. Chi-Square(27)	0.7217
Scaled explained SS	0.579674	Prob. Chi-Square(27)	1.0000

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 04/10/16 Time: 10:15
Sample: 1983 2014
Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.591267	34.00033	0.252682	0.8130
AGRICUTURAL OUTPUT(-1)	0.115434	0.191679	0.602228	0.5795
AGRICUTURAL_OUTPUT(-2)	-0.134755	0.224563	-0.600079	0.5808
EXCHANGE RATE	0.035013	0.093442	0.374701	0.7269
EXCHANGE_RATE(-1)	0.032313	0.107144	0.301586	0.7780
EXCHANGE RATE(-2)	0.061747	0.103911	0.594230	0.5843
INFLATION_RATE	0.012343	0.064850	0.190327	0.8583
INFLATION RATE(-1)	0.017493	0.101732	0.171954	0.8718
INFLATION_RATE(-2)	0.024847	0.074378	0.334063	0.7551
INTEREST RATE	0.069415	0.118683	0.584879	0.5900
INTEREST_RATE(-1)	0.053710	0.108362	0.495652	0.6461
INTEREST_RATE(-2)	0.006679	0.072997	0.091498	0.9315
GOVERNMENT SPENDING	0.512698	2.016987	0.254190	0.8119
GOVERNMENT_SPENDING(-...	-5.241687	7.460118	-0.702628	0.5210
GOVERNMENT SPENDING(-...	-2.068211	5.960998	-0.346957	0.7461
UNEMPLOYMENT_RATE	0.473202	1.450270	0.326286	0.7606
UNEMPLOYMENT RATE(-1)	-0.563732	1.081857	-0.521078	0.6298
UNEMPLOYMENT_RATE(-2)	-0.733761	1.355511	-0.541317	0.6170
CRUDE OIL RENT	0.022468	0.152436	0.147395	0.8900
CRUDE_OIL_RENT(-1)	-0.031469	0.163140	-0.192893	0.8564
CRUDE OIL RENT(-2)	0.161992	0.268052	0.604329	0.5782
OPENNESS	-0.027343	0.098918	-0.276415	0.7959
OPENNESS(-1)	-0.051695	0.105368	-0.490613	0.6494
OPENNESS(-2)	-0.083155	0.093663	-0.887811	0.4248
AGRICULTURAL LAND	-0.676101	1.422815	-0.475185	0.6594
AGRICULTURAL_LAND(-1)	0.007876	0.711759	0.011066	0.9917
AGRICULTURAL LAND(-2)	0.683274	1.310281	0.521471	0.6296
SAP	1.292728	6.938047	0.186324	0.8613

R-squared	0.697074	Mean dependent var	0.898051
Adjusted R-squared	-1.347673	S.D. dependent var	1.664093
S.E. of regression	2.549743	Akaike info criterion	4.380420
Sum squared resid	26.00475	Schwarz criterion	5.662939
Log likelihood	-42.08672	Hannan-Quinn criter.	4.805539
F-statistic	0.340910	Durbin-Watson stat	3.098291
Prob(F-statistic)	0.961011		

Dependent Variable: AGRICULTURAL_EXPORT
Method: ARDL
Date: 06/20/16 Time: 09:10
Sample (adjusted): 1983 2014
Included observations: 32 after adjustments
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Schwarz criterion (SIC)
Dynamic regressors (2 lags, automatic): EXCHANGE_RATE
INTEREST_RATE INFLATION_RATE GOVERNMENT_SPENDING
OPENNESS CRUDE_OIL_RENT
Fixed regressors: SAP C @TREND
Number of models evalulated: 1458
Selected Model: ARDL(2, 2, 2, 0, 2, 2, 2)
White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
AGRICULTURAL_EXPORT(-1)	-0.432393	0.138125	-3.130441	0.0096
AGRICULTURAL_EXPORT(-2)	-0.527614	0.176564	-2.988240	0.0123
EXCHANGE_RATE	-0.712868	4.441552	-0.160500	0.8754
EXCHANGE_RATE(-1)	9.736385	4.674846	2.082718	0.0614
EXCHANGE_RATE(-2)	-14.06580	4.321325	-3.254974	0.0077
INTEREST_RATE	-1.422470	4.015021	-0.354287	0.7298
INTEREST_RATE(-1)	4.344762	2.869047	1.514357	0.1581
INTEREST_RATE(-2)	-7.057461	2.496794	-2.826609	0.0165
INFLATION_RATE	3.033056	2.961119	1.024294	0.3277
GOVERNMENT_SPENDING	-324.3186	145.0855	-2.235362	0.0471
GOVERNMENT_SPENDING(-1)	185.9328	156.7042	1.186521	0.2604
GOVERNMENT_SPENDING(-2)	-653.3879	190.6239	-3.427628	0.0056
OPENNESS	-2.243262	4.665131	-0.480857	0.6400
OPENNESS(-1)	9.050982	5.067868	1.785955	0.1017
OPENNESS(-2)	-11.93150	4.715718	-2.530157	0.0280
CRUDE_OIL_RENT	0.795611	4.944148	0.160920	0.8751
CRUDE_OIL_RENT(-1)	-8.421722	6.328920	-1.330673	0.2102
CRUDE_OIL_RENT(-2)	14.27116	7.307721	1.952888	0.0767
SAP	-552.8755	201.0700	-2.749667	0.0189
C	-54.54823	221.7797	-0.245957	0.8102
@TREND	98.33990	31.65731	3.106388	0.0100

R-squared	0.874561	Mean dependent var	49.68406
Adjusted R-squared	0.646491	S.D. dependent var	268.8285
S.E. of regression	159.8363	Akaike info criterion	13.23084
Sum squared resid	281024.2	Schwarz criterion	14.19273
Log likelihood	-190.6934	Hannan-Quinn criter.	13.54968
F-statistic	3.834615	Durbin-Watson stat	3.194656
Prob(F-statistic)	0.013010		

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

ARDL Bounds Test
Date: 06/20/16 Time: 09:12
Sample: 1983 2014
Included observations: 32
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	11.19667	6

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.33	3.25
5%	2.63	3.62
2.5%	2.9	3.94
1%	3.27	4.39

Test Equation:
Dependent Variable: D(AGRICULTURAL_EXPORT)
Method: Least Squares
Date: 06/20/16 Time: 09:12
Sample: 1983 2014
Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AGRICULTURAL_EXPORT(-1))	0.435659	0.169073	2.576756	0.0257
D(EXCHANGE_RATE)	-0.677725	4.122404	-0.164400	0.8724
D(EXCHANGE_RATE(-1))	12.83344	3.877209	3.309968	0.0070
D(INTEREST_RATE)	-5.295840	3.443284	-1.538020	0.1523
D(INTEREST_RATE(-1))	8.603558	2.869608	2.998165	0.0121
D(GOVERNMENT_SPENDING)	-330.3148	107.1803	-3.081860	0.0104
D(GOVERNMENT_SPENDING(-1))	669.3205	139.2709	4.805888	0.0005
D(OPENNESS)	-3.764266	3.677014	-1.023729	0.3280
D(OPENNESS(-1))	9.966595	3.970831	2.509952	0.0290
D(CRUDE_OIL_RENT)	2.798686	6.636186	0.421731	0.6813
D(CRUDE_OIL_RENT(-1))	-12.13036	7.381989	-1.643237	0.1286
SAP	-511.7283	185.4613	-2.759219	0.0186
C	-158.4917	288.7486	-0.548892	0.5940
@TREND	95.62056	23.46636	4.074794	0.0018
EXCHANGE_RATE(-1)	-5.125219	2.552202	-2.008156	0.0698
INTEREST_RATE(-1)	-12.78308	7.458134	-1.713978	0.1145
INFLATION_RATE(-1)	-2.142606	3.236613	-0.661990	0.5216
GOVERNMENT_SPENDING(-1)	-759.4466	184.1516	-4.124029	0.0017
OPENNESS(-1)	-2.860039	4.621753	-0.618821	0.5486
CRUDE_OIL_RENT(-1)	8.560494	8.795382	0.973294	0.3513
AGRICULTURAL_EXPORT(-1)	-1.800105	0.281784	-6.388254	0.0001

R-squared	0.936361	Mean dependent var	0.183748
Adjusted R-squared	0.820654	S.D. dependent var	386.5719
S.E. of regression	163.7102	Akaike info criterion	13.27873
Sum squared resid	294811.4	Schwarz criterion	14.24062
Log likelihood	-191.4597	Hannan-Quinn criter.	13.59757
F-statistic	8.092525	Durbin-Watson stat	3.285485
Prob(F-statistic)	0.000514		

ARDL Cointegrating And Long Run Form
Dependent Variable: AGRICULTURAL_EXPORT
Selected Model: ARDL(2, 2, 2, 0, 2, 2, 2)
Date: 06/20/16 Time: 09:13
Sample: 1981 2014
Included observations: 32

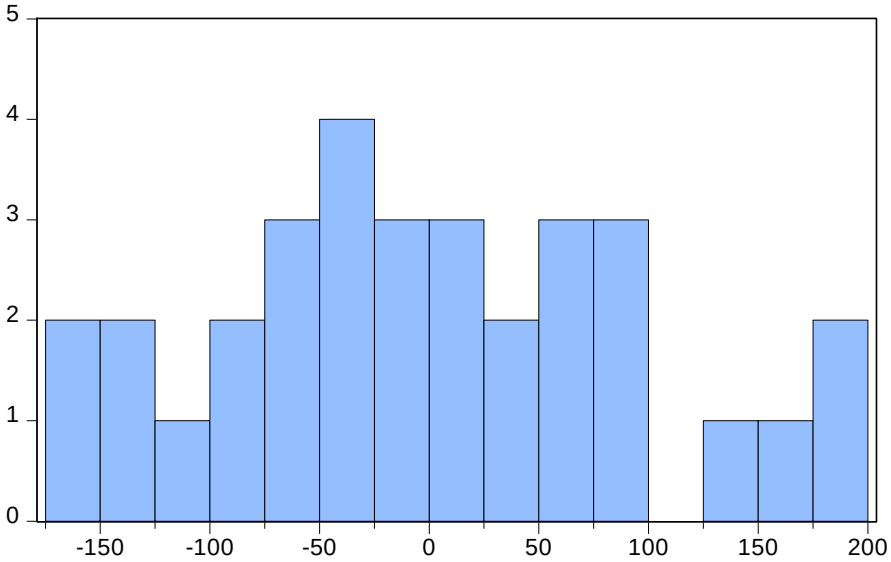
Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AGRICULTURAL_EX...	0.528568	0.100861	5.240570	0.0003
D(EXCHANGE_RATE)	-0.717793	2.274957	-0.315519	0.7583
D(EXCHANGE_RATE(-1))	13.938657	2.403117	5.800242	0.0001
D(INTEREST_RATE)	-1.300915	1.532250	-0.849023	0.4140
D(INTEREST_RATE(-1))	7.213034	1.284037	5.617465	0.0002
D(INFLATION_RATE)	3.786796	1.498789	2.526570	0.0281
D(GOVERNMENT_SPE...	-331.190347	61.988675	-5.342756	0.0002
D(GOVERNMENT_SPE...	645.998455	81.597561	7.916884	0.0000
D(OPENNESS)	-2.119786	2.292223	-0.924773	0.3749
D(OPENNESS(-1))	12.172266	2.271864	5.357833	0.0002
D(CRUDE_OIL_RENT)	2.042229	3.593622	0.568293	0.5813
D(CRUDE_OIL_RENT(-1))	-14.245885	3.513304	-4.054840	0.0019
D(SAP)	-431.800773	142.737924	-3.025130	0.0115
C	41.434916	28.200036	1.469321	0.1698
CointEq(-1)	-1.957960	0.157441	-12.436177	0.0000

Cointeq = AGRICULTURAL_EXPORT - (-2.5726*EXCHANGE_RATE
-2.1098*INTEREST_RATE + 1.5475*INFLATION_RATE -403.9647
*GOVERNMENT_SPENDING -2.6142*OPENNESS + 3.3903
*CRUDE_OIL_RENT -282.0783*SAP + 50.1732*@TREND)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXCHANGE_RATE	-2.572584	1.323934	-1.943137	0.0780
INTEREST_RATE	-2.109772	3.745453	-0.563289	0.5845
INFLATION_RATE	1.547472	1.463360	1.057479	0.3130
GOVERNMENT_SPEND...	-403.964658	115.521800	-3.496869	0.0050
OPENNESS	-2.614166	2.666945	-0.980210	0.3480
CRUDE_OIL_RENT	3.390319	3.862284	0.877802	0.3988
SAP	-282.078298	100.507165	-2.806549	0.0171
@TREND	50.173232	10.624490	4.722413	0.0006



Series: Residuals	
Sample 1983 2014	
Observations 32	
Mean	1.29e-13
Median	-5.886970
Maximum	187.9755
Minimum	-157.1728
Std. Dev.	95.21184
Skewness	0.237282
Kurtosis	2.288049
Jarque-Bera	0.976115
Probability	0.613818

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.361569	Prob. F(2,8)	0.7074
Obs*R-squared	2.652761	Prob. Chi-Square(2)	0.2654

Test Equation:
Dependent Variable: RESID
Method: ARDL
Date: 04/27/16 Time: 11:50
Sample: 1983 2014
Included observations: 32
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AGRICULTURAL_EXPORT(-1)	0.060295	0.184174	0.327381	0.7518
EXCHANGE_RATE	-0.154417	2.637470	-0.058547	0.9547
INFLATION_RATE	0.814547	5.546425	0.146860	0.8869
INFLATION_RATE(-1)	-0.822871	4.274270	-0.192517	0.8521
INFLATION_RATE(-2)	0.394028	4.552914	0.086544	0.9332
INTEREST_RATE	-0.917956	4.968245	-0.184765	0.8580
INTEREST_RATE(-1)	-0.526524	4.729572	-0.111326	0.9141
INTEREST_RATE(-2)	-0.286163	3.290760	-0.086960	0.9328
GOVERNMENT_SPENDING	-3.145672	129.9801	-0.024201	0.9813
GOVERNMENT_SPENDING(-1)	42.33331	164.2802	0.257690	0.8032
GOVERNMENT_SPENDING(-2)	-10.70557	166.5580	-0.064275	0.9503
CRUDE_OIL_RENT	-0.390811	8.031134	-0.048662	0.9624
CRUDE_OIL_RENT(-1)	-0.693621	8.693161	-0.079789	0.9384
CRUDE_OIL_RENT(-2)	-1.250003	8.245159	-0.151604	0.8833
OPENNESS	-0.543714	5.696759	-0.095443	0.9263
OPENNESS(-1)	0.675555	5.553353	0.121648	0.9062
OPENNESS(-2)	-0.082310	6.408226	-0.012844	0.9901
AGRICULTURAL_LAND	15.91271	43.37819	0.366837	0.7233
AGRICULTURAL_LAND(-1)	-8.336402	47.89507	-0.174056	0.8661
AGRICULTURAL_LAND(-2)	-4.705886	44.41524	-0.105952	0.9182
SAP	-38.96974	309.8177	-0.125783	0.9030
C	-145.0137	1591.908	-0.091094	0.9297
RESID(-1)	-0.322972	0.445897	-0.724319	0.4895
RESID(-2)	-0.276477	0.503598	-0.549004	0.5980

R-squared	0.082899	Mean dependent var	-1.92E-12
Adjusted R-squared	-2.553767	S.D. dependent var	98.90782
S.E. of regression	186.4555	Akaike info criterion	13.40797
Sum squared resid	278125.1	Schwarz criterion	14.50727
Log likelihood	-190.5275	Hannan-Quinn criter.	13.77236
F-statistic	0.031441	Durbin-Watson stat	2.015097
Prob(F-statistic)	1.000000		

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.900197	Prob. F(21,10)	0.1475
Obs*R-squared	25.58771	Prob. Chi-Square(21)	0.2226
Scaled explained SS	2.544156	Prob. Chi-Square(21)	1.0000

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 04/27/16 Time: 11:51
Sample: 1983 2014
Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-115839.5	90929.16	-1.273953	0.2315
AGRICULTURAL_EXPORT(-1)	-9.592237	9.609807	-0.998172	0.3417
EXCHANGE_RATE	-52.06933	151.4251	-0.343862	0.7381
INFLATION_RATE	570.3431	268.7353	2.122323	0.0598
INFLATION_RATE(-1)	-277.9620	241.2859	-1.152003	0.2761
INFLATION_RATE(-2)	-137.9054	252.2611	-0.546677	0.5966
INTEREST_RATE	562.8276	274.7961	2.048164	0.0677
INTEREST_RATE(-1)	125.6601	249.2070	0.504240	0.6250
INTEREST_RATE(-2)	-319.8576	187.0984	-1.709568	0.1181
GOVERNMENT_SPENDING	-5710.797	7229.018	-0.789982	0.4479
GOVERNMENT_SPENDING(-1)	-8589.530	8967.100	-0.957894	0.3607
GOVERNMENT_SPENDING(-2)	10869.72	9140.816	1.189141	0.2619
CRUDE_OIL_RENT	676.9400	465.6079	1.453884	0.1766
CRUDE_OIL_RENT(-1)	-837.3264	478.4885	-1.749941	0.1107
CRUDE_OIL_RENT(-2)	284.3164	465.7321	0.610472	0.5552
OPENNESS	-281.1598	298.3556	-0.942365	0.3682
OPENNESS(-1)	412.5365	306.6952	1.345102	0.2083
OPENNESS(-2)	-316.5445	362.9653	-0.872107	0.4036
AGRICULTURAL_LAND	3278.605	2248.774	1.457952	0.1755
AGRICULTURAL_LAND(-1)	-195.4854	2699.994	-0.072402	0.9437
AGRICULTURAL_LAND(-2)	-1134.867	2407.824	-0.471325	0.6475
SAP	-9349.145	17749.08	-0.526740	0.6099

R-squared	0.799616	Mean dependent var	9477.046
Adjusted R-squared	0.378809	S.D. dependent var	13740.05
S.E. of regression	10829.31	Akaike info criterion	21.62975
Sum squared resid	1.17E+09	Schwarz criterion	22.63744
Log likelihood	-324.0760	Hannan-Quinn criter.	21.96377
F-statistic	1.900197	Durbin-Watson stat	2.559486
Prob(F-statistic)	0.147519		

Heteroskedasticity Test: Harvey

F-statistic	0.907261	Prob. F(21,10)	0.5956
Obs*R-squared	20.98545	Prob. Chi-Square(21)	0.4598
Scaled explained SS	46.92015	Prob. Chi-Square(21)	0.0010

Test Equation:
Dependent Variable: LRESID2
Method: Least Squares
Date: 04/27/16 Time: 11:52
Sample: 1983 2014
Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.37761	29.27124	0.627838	0.5442
AGRICULTURAL_EXPORT(-1)	-0.006449	0.003094	-2.084553	0.0637
EXCHANGE_RATE	-0.009881	0.048746	-0.202713	0.8434
INFLATION_RATE	0.069124	0.086509	0.799038	0.4428
INFLATION_RATE(-1)	-0.051400	0.077673	-0.661750	0.5231
INFLATION_RATE(-2)	-0.023236	0.081206	-0.286132	0.7806
INTEREST_RATE	0.069583	0.088460	0.786598	0.4498
INTEREST_RATE(-1)	0.000630	0.080223	0.007854	0.9939
INTEREST_RATE(-2)	-0.082861	0.060229	-1.375764	0.1989
GOVERNMENT_SPENDING	0.550548	2.327112	0.236580	0.8178
GOVERNMENT_SPENDING(-1)	-1.085374	2.886622	-0.376001	0.7148
GOVERNMENT_SPENDING(-2)	2.610930	2.942544	0.887304	0.3958
CRUDE_OIL_RENT	0.053314	0.149885	0.355699	0.7295
CRUDE_OIL_RENT(-1)	-0.114155	0.154031	-0.741112	0.4757
CRUDE_OIL_RENT(-2)	-0.031644	0.149925	-0.211062	0.8371
OPENNESS	-0.036735	0.096044	-0.382481	0.7101
OPENNESS(-1)	0.023015	0.098729	0.233111	0.8204
OPENNESS(-2)	0.087626	0.116843	0.749947	0.4706
AGRICULTURAL_LAND	0.109192	0.723909	0.150836	0.8831
AGRICULTURAL_LAND(-1)	-0.071424	0.869162	-0.082176	0.9361
AGRICULTURAL_LAND(-2)	-0.268773	0.775109	-0.346755	0.7360
SAP	3.938659	5.713651	0.689342	0.5063

R-squared	0.655795	Mean dependent var	7.385112
Adjusted R-squared	-0.067035	S.D. dependent var	3.374812
S.E. of regression	3.486092	Akaike info criterion	5.547289
Sum squared resid	121.5284	Schwarz criterion	6.554982
Log likelihood	-66.75662	Hannan-Quinn criter.	5.881311
F-statistic	0.907261	Durbin-Watson stat	2.919632
Prob(F-statistic)	0.595588		

Dependent Variable: GDP
Method: ARDL
Date: 06/20/16 Time: 11:31
Sample (adjusted): 1982 2014
Included observations: 33 after adjustments
Maximum dependent lags: 1 (Automatic selection)
Model selection method: Schwarz criterion (SIC)
Dynamic regressors (1 lag, automatic): EXCHANGE_RATE INTEREST_RATE INFLATION_RATE UNEMPLOYMENT_RATE AGRICULTURAL_EXPORT CRUDE_OIL_RENT AGRICUTURAL_OUTPUT
Fixed regressors: C
Number of models evalulated: 128
Selected Model: ARDL(1, 0, 0, 1, 1, 1, 0, 1)
White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDP(-1)	-0.373573	0.146321	-2.553105	0.0189
EXCHANGE_RATE	0.108320	0.042648	2.539847	0.0195
INTEREST_RATE	0.278470	0.079888	3.485740	0.0023
INFLATION_RATE	0.004742	0.069517	0.068213	0.9463
INFLATION_RATE(-1)	0.098445	0.055865	1.762210	0.0933
UNEMPLOYMENT_RATE	-2.183584	0.771447	-2.830504	0.0103
UNEMPLOYMENT_RATE(-1)	2.180632	0.642135	3.395908	0.0029
AGRICULTURAL_EXPORT	0.001389	0.001883	0.737256	0.4695
AGRICULTURAL_EXPORT(-1)	-0.007640	0.002467	-3.097140	0.0057
CRUDE_OIL_RENT	0.153848	0.093345	1.648163	0.1149
AGRICUTURAL_OUTPUT	-0.689918	0.259913	-2.654416	0.0152
AGRICUTURAL_OUTPUT(-1)	1.012727	0.310314	3.263556	0.0039
C	-18.28316	10.33465	-1.769113	0.0921

R-squared	0.787152	Mean dependent var	4.211058
Adjusted R-squared	0.659444	S.D. dependent var	7.306283
S.E. of regression	4.263743	Akaike info criterion	6.025276
Sum squared resid	363.5901	Schwarz criterion	6.614809
Log likelihood	-86.41705	Hannan-Quinn criter.	6.223636
F-statistic	6.163654	Durbin-Watson stat	2.473551
Prob(F-statistic)	0.000197		

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

ARDL Bounds Test
Date: 06/20/16 Time: 11:32
Sample: 1982 2014
Included observations: 33
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	4.613949	7

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	1.92	2.89
5%	2.17	3.21
2.5%	2.43	3.51
1%	2.73	3.9

Test Equation:
Dependent Variable: D(GDP)
Method: Least Squares
Date: 06/20/16 Time: 11:32
Sample: 1982 2014
Included observations: 33

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INFLATION_RATE)	-0.082625	0.088865	-0.929774	0.3636
D(UNEMPLOYMENT_RATE)	-1.543702	0.873282	-1.767701	0.0924
D(AGRICULTURAL_EXPORT)	0.001518	0.005535	0.274289	0.7867
D(AGRICUTURAL_OUTPUT)	-0.221872	0.281601	-0.787895	0.4400
C	-9.537604	12.93600	-0.737292	0.4695
EXCHANGE_RATE(-1)	0.114944	0.061628	1.865135	0.0769
INTEREST_RATE(-1)	-0.057891	0.090408	-0.640333	0.5292
INFLATION_RATE(-1)	0.008283	0.106198	0.077995	0.9386
UNEMPLOYMENT_RATE(-1)	-0.286184	0.622522	-0.459717	0.6507
AGRICULTURAL_EXPORT(-1)	-0.002485	0.009135	-0.271997	0.7884
CRUDE_OIL_RENT(-1)	-0.028860	0.193174	-0.149400	0.8827
AGRICUTURAL_OUTPUT(-1)	0.334476	0.268275	1.246766	0.2269
GDP(-1)	-1.133201	0.209627	-5.405793	0.0000

R-squared	0.676541	Mean dependent var	0.589018
Adjusted R-squared	0.482466	S.D. dependent var	9.237961
S.E. of regression	6.645777	Akaike info criterion	6.912944
Sum squared resid	883.3269	Schwarz criterion	7.502477
Log likelihood	-101.0636	Hannan-Quinn criter.	7.111304
F-statistic	3.485969	Durbin-Watson stat	2.167403
Prob(F-statistic)	0.006702		

ARDL Cointegrating And Long Run Form
Dependent Variable: GDP
Selected Model: ARDL(1, 0, 0, 1, 1, 1, 0, 1)
Date: 06/20/16 Time: 11:33
Sample: 1981 2014
Included observations: 33

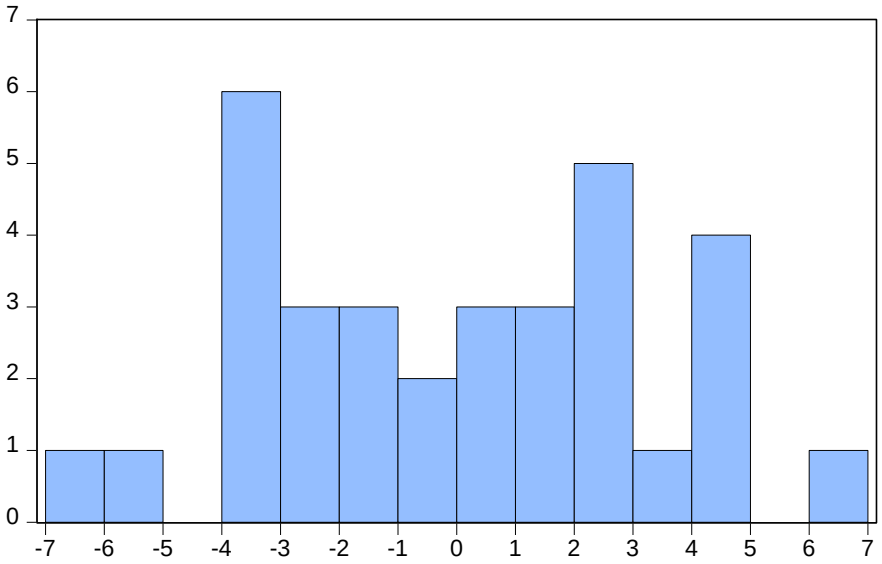
Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXCHANGE RATE)	0.111972	0.062323	1.796628	0.0875
D(INTEREST RATE)	0.271620	0.033554	8.094986	0.0000
D(INFLATION_RATE)	-0.000060	0.043769	-0.001378	0.9989
D(UNEMPLOYMENT R...	-2.214750	0.516604	-4.287133	0.0004
D(AGRICULTURAL_EX...	0.001413	0.002023	0.698801	0.4927
D(CRUDE OIL RENT)	0.144419	0.086562	1.668396	0.1108
D(AGRICUTURAL OUT...	-0.683991	0.141761	-4.824979	0.0001
CointEq(-1)	-1.391797	0.119810	-11.616695	0.0000

Cointeq = GDP - (0.0789*EXCHANGE RATE + 0.2027*INTEREST RATE + 0.0751*INFLATION_RATE -0.0021*UNEMPLOYMENT_RATE -0.0046 *AGRICULTURAL EXPORT + 0.1120*CRUDE OIL RENT + 0.2350 *AGRICUTURAL OUTPUT -13.3107)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXCHANGE RATE	0.078860	0.025783	3.058617	0.0062
INTEREST RATE	0.202734	0.055718	3.638587	0.0016
INFLATION_RATE	0.075123	0.044481	1.688872	0.1068
UNEMPLOYMENT RATE	-0.002150	0.226283	-0.009499	0.9925
AGRICULTURAL EXPORT	-0.004551	0.002354	-1.933707	0.0674
CRUDE_OIL_RENT	0.112006	0.065043	1.722018	0.1005
AGRICUTURAL OUTPUT	0.235014	0.178885	1.313771	0.2038
C	-13.310654	7.463409	-1.783455	0.0897



Series: Residuals	
Sample 1982 2014	
Observations 33	
Mean	-1.48e-15
Median	0.022435
Maximum	6.963001
Minimum	-6.984004
Std. Dev.	3.370785
Skewness	0.036616
Kurtosis	2.270605
Jarque-Bera	0.738897
Probability	0.691115

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.150824	Prob. F(2,18)	0.3386
Obs*R-squared	3.741293	Prob. Chi-Square(2)	0.1540

Test Equation:
Dependent Variable: RESID
Method: ARDL
Date: 06/20/16 Time: 11:35
Sample: 1982 2014
Included observations: 33
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	0.128414	0.168064	0.764079	0.4547
EXCHANGE_RATE	-0.020063	0.042016	-0.477508	0.6387
INTEREST RATE	0.005181	0.060758	0.085279	0.9330
INFLATION RATE	0.015273	0.067437	0.226485	0.8234
INFLATION_RATE(-1)	-0.004239	0.057073	-0.074275	0.9416
UNEMPLOYMENT RATE	0.347304	0.726449	0.478084	0.6383
UNEMPLOYMENT RATE(-1)	-0.225065	0.595615	-0.377869	0.7099
AGRICULTURAL_EXPORT	-0.000823	0.003678	-0.223839	0.8254
AGRICULTURAL EXPORT(-1)	0.000372	0.003725	0.099755	0.9216
CRUDE_OIL_RENT	0.004713	0.116383	0.040498	0.9681
AGRICUTURAL OUTPUT	-0.002491	0.192863	-0.012918	0.9898
AGRICUTURAL OUTPUT(-1)	-0.014552	0.188129	-0.077354	0.9392
C	-0.184666	8.782646	-0.021026	0.9835
RESID(-1)	-0.419587	0.279106	-1.503325	0.1501
RESID(-2)	-0.007498	0.269678	-0.027805	0.9781

R-squared	0.113373	Mean dependent var	-1.48E-15
Adjusted R-squared	-0.576227	S.D. dependent var	3.370785
S.E. of regression	4.231949	Akaike info criterion	6.026157
Sum squared resid	322.3690	Schwarz criterion	6.706388
Log likelihood	-84.43160	Hannan-Quinn criter.	6.255034
F-statistic	0.164403	Durbin-Watson stat	2.068108
Prob(F-statistic)	0.999325		