Inflation and Economic Growth: An Empirical Analysis Sri Lankan Economy

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Abstract : *Among the macroeconomic situation in the economy inflation and economic growth is one of the controversial issues in the country, policy makers, and the economic literature. These concepts are debatably discussion in the different economic conditions during the last two decades. The conclusion of most of these findings are centered in levels of inflation rates stimulate the development process of the economy, and hence economic growth. Moderate inflation rate increasesyield to savings side, enriches investment side, and ultimately, favorable conditions are prevailing economic growth of the country and inflation levels. This study empirically examines the present effects of inflation and economic growth in the Sri Lankan context. Empirically analyzing the monthly data on real Gross Domestic Product and Inflation Rate for the period of 2008 to 2015, it extensively analysis the empirical evidence has assimilatedover the Granger Causality test , Co-integration test, and Error correction models. The empirical evidence establishes that there exists a statistically significant long-run negative relationship between inflation and economic growth for the country as indicated by a statistically significant long-run negative relationship running from Inflation rate to Gross Domestic Product. Further the evidence shows that there exists a statistically significant long-run positivecausality running from Gross Domestic Production to inflation rate and economic growth influence inflation rate positively. Differently when increase in the rate of inflation prevails beyond the edge inflation level then inflation influence economic growth negatively. The study examines to further discussion of the important macroeconomic policy implications of the results.*

Keywords: *Granger Causality test Macroeconomic Policy, Inflation Rate, Gross Economic Growth, Long Run*

I. INTRODUCTION

Most important objective of macroeconomicpolicies among the policy makers is to endure sustainable economic growth among the entire sector among the economy together with manageable inflation rate in this economic environment leads to long term economic sustainability. Precisely, the related economic issuesin the economy that whether manageable inflation is one of the favorable atmosphere in the economy for economic growth.On the other economic policy debates, it is harmful generates asignificant debate both theoretically and empirically. Someconclusions existsthe macroeconomic stability,defined as low inflation rate, and are positively related toeconomic growth.Scholars in the field of economy, Central Bank, Financial advisors, and policymakers haveoften highlighted the costs and social cost associated with fluctuation of inflation. Inflation enforces negative externalities on theeconomy and the vulnerably sectors when it interferes with an economy's efficiency and resources allocation.Fluctuation of inflation can lead to uncertainty about the futureprofitability of investment projects, price vulnerability, and foreigndirect investment;reduceeconomy'sglobal competitivenessand risk. On the other hand these indications to more conservative investment strategies rather than moderate investment strategies other thanwould be the event, ultimately indication to lower levelsof investment and economic growth. Inflation may also be vulnerableeconomy's global competitiveness, by making itsexports relatively expensive, thus effects on foreign trade deficit.If inflation rate is indeed unfavorable to economic activity andgrowth, then how low should inflation be? Number ofempirical studies and theories has been investigatedinflation and economic growth found inconclusive evidences (Wai,1959; Johansen1967. Fisher,1993; De Gregorio ,1993;Barro,1995; Brunno and Easterly ,1995; Malla ,1997; Fariaand Carneiro ,2001; Dewan& Hussein ,2001). This study willtest whether a meaningful behaviorthesevariables exists in Sri Lankan context. To achieving this targets this study is organized five sections.

II. Literature Review

Most of the scholars in the field of economic have been investigated in the many aspects between Gross Domestic Production (GDP) growth and inflation. The actuality and nature of the relation between

economic growth and inflation have extensively been examined in the empirical and theoretical environment. Most of this research has been conducteddevelop economic system and its prevailing disciplined monetary system. In this study have been reviewed some of theseimportant empirical findings. Further to analyze it to conclude someimportant conclusions.

The conclusion of Barro (1995) reported that the significantnegative relationship between inflation and economic growth exists. This framework is based on an expanded view of theneoclassical growth model as stated by Barro and Martin (1995). Bruno and Easterly (1995) revealed that the economic growth determinants ofinflation which estimated inflation crises during the period from1961 to 1992. In their empirical analysis, higherinflation rate is considered as the threshold level for aninflation crisis. They find inconsistent relationship between inflation and economicgrowth.Further, theempirical analysis noted that there is a temporalnegative relationship between economic growth and inflation above this threshold level. Finally, they found that economy of the country improves their pre-crisiseconomic growth rates following successfullymanaging highinflation and withoutadverse effect to economicgrowth.According to Sarel (1996) explain the non-linear effectsof inflation on economic growth rate and inflation and found a significantstructural discontinuity which admitted at inflation rate.It showsthat below that structural break,inflation has slightly positive effect on economic growth but higher the inflation rate, it has aggressive negative effect on economic growth rate.

Another interest empirical finding, using the annual time series data Khan and Qasim (1996) found the key determinants ofinflation and they disaggregate inflation into food andnon-food inflation it results divided intorole of money supplyin accelerating inflation rate. Other determine factors causinginflation, investigated by the researchers, are currencydevaluation, value addition in agriculture sector, import prices and price of electricity.The crucialfinding of this empirical analysis suggests that the crosscountryrelationship between inflation and long-term economicgrowth involvements some fundamental problems.Finally,inconclusive relationship between inflation and economicgrowth rate can be estimated from matching cross country timeseriesregressions with different regions and time periods.Ghosh and Phillips(1998)and Aitken and Harrison (1999) revealed that the short-run consequences of rapid disinflationare found and starting fromlower inflation rates; a rapid disinflation is closely associated with decreesin economic growth by using large panel data set coveringthe period 1960–1996. Researchers found twoimportant nonlinearities in the inflation growth relationship. Atvery low inflation rates, inflation and growth are positively correlated. Otherwise,inflation and growth are negatively correlated, so that the decline in growth associatedwith an increase prevailing higher rate of inflation ismuch larger than that associated with moving from higher rate than economic growth rate. Research finding from Shitundu and Luvanda (2000) the empirical results suggest thatinflation has been negatively affect to economic growth.Nell (2000) suggests the issue whether inflation is negatively effect to growth or downturn?.Study conclusion related the South AfricanEconomyand dividing it intofour fillers, using Vector Auto Regressive (VAR) technique,his empirical results findings that inflation within the singledigitzone may beneficial to growth, while inflation in thedouble digit zone appears to impose costs in terms of slowergrowth.Faria and Carneiro (2001) examine the relationshipbetween inflation and output for the economy with wherepermanent inflationary shock has been observed for the lastmany years and noted output growth and the change in inflation has long run influenceon output. They also use the data to estimate the short run relationship between inflation and realoutput. Their findings confirm the neutrality ofmoney supply has no real effect onoutput and productivity in the long-run but real effect on short run exists.

On the other aspect of the issues of the Asian context,Mallik and Chowdhury (2001) examined the short-runand long-run economic issues. By employing cointegrationand error correction models they found important findings. First finding, the relationship between inflation andeconomic growth is positive and statistically significant and Second, growth to changes ininflation rates is smaller than that of inflation to changes ingrowth rates. These results have showed that the moderate inflation promotes economic growth, aggressive economic growth grips into inflation by inefficiency of the economy. Research was conducted by Khan and Senhadji (2001) using developed and developing country data they examine threshold effects ofinflation on economic growth.Level of threshold beyond the inflation exerts has showed anegative effect on growth and lowinflation for sustainable growth is strongly supported.Parks (1978)introduced an econometricmodel to test the behavior of these two variables and found that inflation rate reducing the returnto capital.Level of Inflation is includedas main variable and the theory is related with the concept ofequilibrium that is implicitlyincludes transitional approaches to the balanced growth rate.When inflation rate going from weak range economic growthis negatively affected.

Sweidan (2004) examined whether the relationshipbetween inflation and economic growth has a structuralbreakpoint effect. His findings were noted that it was positive and significant below an inflation rate

and the structural effect occurs at aninflation rate prevailing weak levels. Beyond this threshold levelinflation affects economic growth negatively. When it is estimated the threshold level of inflationfor economyit can used the Granger Causalitytest as anapplication tocalculate the threshold.The estimationof thethreshold model suggests that an inflation rate beyond the determine rate is detrimental for the economic growth.This in turn, suggests that inflation rate below the estimatedlevel is favorable for the economic growth.Khan and Schimmelpfenning (2006) construct a simpleinflation model to find that monetaryfactors determine inflation. They examine long runrelationship between the inflation rate and private sector credit and theirresults show that there may be no trade-off between inflationand growth in the short run but it certainly exists in themedium and long run. Their estimated results suggest moderate level inflation rate target for sustained economic growth andmacroeconomic stability for the economy.According to Kemal (2006) noted that an increase in money supplyover the long-run imposes to source of inflation.The long-run excess money supply is the mainfactor for inflation. This study denieswith Hussain (2005) his conclusion noted that inflation is not only behave a monetary phenomenon it also influenced many other factors.Saaed (2007) revealed the relationship between inflationand economic growth, using annualdata. The estimated result of the relationship shows a long-run andstrong inverse relationship between inflation and   real Gross Domestic Production. Erbaykal and Okuyan (2008) examined the relationshipbetween the inflation and the economic growth hasbeen data covering 1987 and 2006. The existence of the long term relationship between these variables was examined by employing Bound Test (Pesaran et al. ,2001), and results showed existence of a cointegrationrelationship between the two series was identified no statistically significant long term relationshipwas found but andstatistically significant negative short term relationship has been showed.The results of causality relationship wasexamined and no causality relationship wasfound from economic growth to inflation, a causalityrelationship was found from inflation to economic growth.

III.   Econometric Approach

To study the impact of Economic growth and inflation empirically tested by Ahmed and Mortaza (2005) andAlfred (2007)have used Error correction model and Co integration (Johansen ,1988) test toexamine the empirical results. By employing two models it is ability to test thelong and short runimpact of economic growth and inflation furtherto test direction of causality between two variables is to identify by the Granger causality. In this study mainly focus to identify the long term and short term relationship between economic growth and inflation, finally examine the direction of causality.

3.1. Analysis Model Specification
Achieving primary objective of this study it is test to identify the relationship between Economic growth and Inflation is modeled thus:

$$Economic\ Growth\,(EG) = f\,(\inf lation)....(1)$$

$$Economic\ Growth\,(EG) = \alpha_0 + \alpha_1 \inf lation_t + \varepsilon_t........(2)$$

Gross Domestic product changes are calculated as proxy for Economic growth and Grater Colombo Consumer Price index is calculated as proxy for inflation. α_0 is the constant value of the model, t is the trend and 'ε' is therandom error term in the specific model

3.2. Variable Description and Data Collection
To study the long term and short term effect on inflation on the country economic development identified variable calculated from the Central bank of Sri Lanka monthlydata from the period of 2002 to 2015 and 156 variables observation are used to examine by using EViews statistical software to test the relationship between economic growth and Inflation,Economic growth variables arereported on Quarterly basis from Central Bank of Sri Lanka and its converted in to the monthly basis. Economic Growth variable aretransformed in their natural logarithms in order to avoid theproblems of heteroscedasticity.

3.3. Estimation Technique
In this study following statistical technique are used to estimate the study parameters to examine the study observations in many aspects. Examine the economic indication in the country it is important to study the macroeconomic data in various aspect and it is help to understand the behavior of the economic indicators as it expected and finally policy makers would be manage the economy as they estimated in which they achieve their final desires,

3.3.1. Unit Root Test

In the module of the research design the first step is involved to testing the order of integration ofthe individual data series under identified in this study. To achieve this target study haveAugmented Dickey-Fuller (ADF) test toexaminethedata series are stationary or not. Augmented Dickey-Fuller test resulted on rejecting a nullhypothesis of unit root (the series are non-stationary) inaccepting the alternative hypotheses of data stationary. The testsare conducted with and without a deterministic trend (t) foreconomic growth and inflation data series. The following regression modelis estimated ADF test in this study.

$$\Delta Y = \alpha_0 + \alpha_1 Y_{t-1} + \sum_{t-1}^{n} \alpha \Delta Y_t + \varepsilon_t \ldots\ldots\ldots(3)$$

$$\Delta Y = \alpha_0 + \alpha_1 Y_{t-1} + \sum_{t-1}^{n} \alpha \Delta Y_t + \delta_t + \varepsilon_t \ldots\ldots\ldots(4)$$

Where: Variable Y data is a time series, Δ is thefirst difference operator in the variable Y, t is a time trend, α_0 is a constant parameter of the function, n is the optimumnumber of lags in the dependent variable (first difference Y) and ε is the randomerror term in the regression,further similar modification of equation (1) the equation(2) is formulated, the first equation includes simple behavior of the regression and, however, the secondequation includes both simple and linear time trend effect. Equation (5) is core term of the model.

$$\Delta Y = \alpha_0 + \alpha_1 Y_{t-1} + \varepsilon_t \ldots\ldots\ldots(5)$$

3.3.2. The Cointegration Test

Parameter of a unit root has been verified the tested data for a series, thenext process is to test whether there exists a long-runequilibrium signal among variables. The existence oflong-run equilibrium (stationary) relationships amongidentified economic variables is recognizedthere is cointegration which is very significant to avoid the risk ofspecious regression. The basic idea behind cointegration isthat if, in the long-run, two or more series move closelytogether, even though the series themselves are trended, thedifference between them is constant. It is possible to regardthese data series as identifying a long-run equilibrium relationshipare exists,as the difference between them is stationary (Hall and Henry,1989). A lack of cointegration suggests that such variableshave no long-run relationship: in principal they can arbitrarily far away from each other (Dickey et. al., 1991).We employ the Vector Auto Regression (VAR)model based on co-integration test using themethodology developed in Johansen (1991, 1995).Johansen's methodology takes its starting point in theVAR model of order P calculated by following Equation (6).

$$Y_t = \mu + \alpha_1 Y_{t-1} + - - - - - - + \Delta p y_{t-p} + \varepsilon_t \ldots\ldots\ldots(6)$$

Where $Y_t$is an nx_1 vector of study variables that are integratedof order commonly denoted (1) and $\varepsilon_t$is an nx_1 vector ofinnovations.This VAR model can be rewritten as

$$\Delta Y_t = \mu + \eta_{yt-1} + \sum_{i-1}^{p-1} \tau_i \Delta Y_{t-1} + \varepsilon_t \ldots\ldots\ldots(7)$$

Where

$$\Pi = \sum_{i=1}^{p} A_{i-1} \ and \quad \tau = - \sum_{j=i+1}^{n} Aj + \varepsilon_t \ldots\ldots\ldots(7)$$

To calculate the number of co-integration vectors suggested the trace test statistic, and the maximum eigenvalue test statistic. The trace test statistic can be formulated by :

Trace Test Statics

$$\tau_{trace} = -T \sum_{i=r+1}^{k} \log(1-\lambda_i) \ldots\ldots\ldots\ldots(8)$$

Where, λ_i is the ith largest eigenvalue of matrix Π and T is the number of observations. In the trace test, the null hypothesis assumes that the number of distinct cointegrating vector(s) be less than or equal to the number of cointegration relations (r).

Maximum Eigenvalue Test

The maximum eigenvalue test examines the null hypothesis of exactly r cointegrating relations against the alternative of $r+1$ cointegrating relations with the test statistic calculated by:

$$\tau_{max} = -T \log (1 - \lambda_{r+1}) \dots\dots\dots\dots(9)$$

where λ_{r+1} is the $(r+1)^{th}$ largest squared eigenvalue. In the trace test, the null hypothesis of r = 0 is tested against the alternative hypothesis of r + 1 cointegrating vectors.

Johansen's cointegration test is highly sensitive to calculate the lag length of data series. Therefore a VAR model is modify to formulate the time series data in order to test lag structure of data series. The Likelihood Ratio (LR) test, Schwarz Criterion (SC) and Akaie Information Criterion (AIC) are used to find the number of lags required in the cointegration test. Therefor these tests are benefit to the study to examine the study objectives in order to answer the research questions.

3.3.3. Granger-Causality Test

After the testing of the Cointegration relationship, it is tested causality between economic growth and inflation. If the economic growth and inflation variables are co-integrated, an Error Correction term(ECT) is required to be included (Granger, 1988) in the following Bivariate Autoregression;

$$EG_t = \alpha_0 + \sum_{i=1}^{n} \alpha_{1t} EG_{t-1} + \sum_{i=1}^{m} \alpha_{2t} IN_{t-1} + \delta_1 ECT_{t-1} + \varepsilon_{1r} \dots\dots\dots(9)$$

$$IN_t = \beta_0 + \sum_{i=1}^{m} \beta_{1t} EG_{t-1} + \sum_{i=1}^{n} \beta_{2t} IN_{t-1} + \delta_2 ECT_{t-1} + \varepsilon_{1r} \dots\dots\dots(10)$$

Where:$EG_t$is Economic Growth IN is inflation used as a proxy for inflation. The term ECT_{t-1} is the error correction term derived from the long-run cointegrating relationship in equation 3. Study identified that the estimate δ_1 and δ_2 can be introduce as the variable of speed of adjustment. According to, the existence of cointegration denotes the existence of the causality relation between the EC and IN(Johansen and Juselius ,1987) under the limit $(\delta_1) + (\delta_2) > 0$. If cointegration relationship between the variables EG_t and IN_t does not occur, the term ECT will be exclude then the bivariate autoregression equation 9 and 10 modified as follows;

$$EG_t = \alpha_0 + \sum_{i=1}^{n} \alpha_{1t} EG_{t-1} + \sum_{i=1}^{m} \alpha_{2t} IN_{t-1} + \varepsilon_{1r} \dots\dots\dots(11)$$

$$IN_t = \beta_0 + \sum_{i=1}^{m} \beta_{1t} EG_{t-1} + \sum_{i=1}^{n} \beta_{2t} IN_{t-1} + \varepsilon_{1r} \dots\dots\dots(12)$$

3.3.4 Hypotheses testing

Study hypotheses testing and rejecting or accepting H0; $\alpha_{21} = \alpha_{22} = \dots\dots = \alpha_{2m}$ in equation (9 and 10) or equation (11 and 12) suggests that Growth do (do not) Granger cause Inflation. On the other hand, rejecting (accepting) H_0; $\alpha_{11} = \alpha_{12} = \dots\dots.=\beta_{1m}$ confirm that Inflation do or do not Granger Cause (influence) on Economic Growth.

IV.   Data and Empirical Results

The following section is devoted to discuss the empirical results of the study in several aspect of the analysis test under Descriptive statistics Unit root test, Cointegration and Granger causality tests are used to examine the study.

4.1. Descriptive Statistics

Descriptive statistics use to explain basic information about data set as well as the test helps to find out normality of data series. Hence, following descriptive statistic table 4.1 illustrates basic descriptive values of the study.

Table 4.1: Descriptive Statistics

Statistics	Inflation	Economic Growth
Mean	0.6395	1.3754
Median	0.5922	-0.3100
Maximum	3.5939	8.4246
Minimum	-2.4038	-5.2900
Std. Dev.	0.9062	4.5243
Skewness	0.1655	0.2351
Kurtosis	3.7683	1.4763
Jarque-Bera	4.4916	16.314
Probability	0.1058	0.0002
Sum	98.4836	211.8251
Sum Sq. Dev.	125.6686	3131.8650

As above table 4.1 shown, Maximum inflation changers of Sri Lanka was 3.593 and minimum was -2.40 while the maximum Economic growth rate of Sri Lanka was 8.424 and minimum was -5.29 during the period. Both mean and median value of inflation changers were 0.63 and 0.59 respectively. Mean value of Economic growth rate was 1.37 and median value of economic growth rate was -0.31. Standard deviation of the inflation changers and economic growth rate were 0.90 and 4.52 respectively.

4.2. Unit Root Test

Unit Root Test encompasses testing for theeconomic growth and inflation variablesstationery using the ADF test to examine the existence of unit root ineach of the time series. The statistical results of the ADF test are shown in the table 4.1 and 4.2 both stationary test at levels and first difference. Table 4.1 and 4.2 reported levels and first difference respectively.

Table 4.1: ADF stationary test at Levels

Variables	ADF model						Remark
	Intercept		Intercept & Trend		None		
EG	-2.851	-3.475*	-2.352	-4.022*	-0.804	-2.580*	
		-2.881**		-3.440*		-1.943**	Non stationary
IN	-8.269	-3.437*	-8.593	-4.018*	-2.557	-2.580*	
		-2.88**		-3.439**		-1.942**	Non stationary

* and ** denotes Significance at 1% & 5% level, respectively. Figures within parenthesis indicate critical values. Mackinnon (1991) critical value forrejection of hypothesis of unit root applied.

Table 4.2: ADF stationary test at first Difference

Variables	ADF model						Remark
	Intercept		Intercept & Trend		None		
EG	-5.233	(-3.476)*	-5.353	(-4.023)*	-5.267	(-2.581)*	
		-(2.881)**		(-3.441)**		(-1.943)**	Stationary
IN	-	(-3.473)*	-12.985	(-4.019)*	-13.071	(-2.580)*	
	13.026	-(2.880)**		(-3.439)**		(-1.942)**	Stationary

* and ** denotes Significance at 1% & 5% level, respectively. Figures within parenthesis indicate critical values. Mackinnon (1991) critical value forrejection of hypothesis of unit root applied.

To avoid the imitation regression results at the first step verify the stationaryof the economic and inflation variables. In this context ADF Test has used. The table 4.1 and 4.2 tabled ADF result.Table 4.1 and 4.2 results are with intercept,intercept & trend and none (intercept nor trend in themodel). Based on the reported results it is concluded all the variables were not presentedin the level of stationary. Thiscan be proved by comparing the observed values of the ADF test statistics with the critical values of the test statistics at the 1%, and 5% level of significance. Result from table 4.1 provides strongevidence with significant of non-stationary. Hence, the formulated null hypothesis isaccepted and it is sufficient to confirm that there is aexistence of unit root in the economic growth and inflation variables at levels. It is noted that the above result, all the variables weredifferenced once and the ADF test was conducted on them as. The results of Johansen test for cointegrationreported in table 4.2.

The coefficients parameter compared with thecritical values (1%, 5% and 10%) confirm that all the economic growth and inflation variables were stationary at first difference. It is on the basis of formulated null hypothesis of non-stationary is rejected and itis safe to conclude that the economic growth and inflation variables are stationary. Thisimplies that the variables are integrated at order one.

4.2. Cointegration Test Analysis

The statistical result of the cointegration values shows theexistence of a long term linear relation is explained in Table4.3 and 4.4 Maximum Eigenvalue explain hypothesis of no integration between the economic growth and inflation variables in the study.

Table 4.3: Unrestricted Cointegration Rank test- Trace

Hypothesized		Trace	0.05	
No of CE	Eigenvalue	Statistics	Critical Value	Prob**
None *	0.1786	41.4664	15.4947	0.0000
At most 1 *	0.0782	12.1365	3.84146	0.0005

Trace test indicates 2 cointegrating equation(s) at the 0.05 level, * denotes rejection of the hypothesis at the 5% level
 **MacKinnon-Haug-Michelis (1999) p-values

Table 4.4:Unrestricted Cointegration Rank test- - Maximum Eigenvalue

Hypothesized		Trace	0.05	
No of CE	Eigenvalue	Statistics	Critical Value	Prob**
None *	0.1786	29.3299	14.2646	0.0001
At most 1 *	0.0782	12.1365	3.84146	0.0005

Max-eigenvalue test indicates 2 cointegratingequation(s) at the 5%level , * denotes rejection of the hypothesis at the 0.05 level
 **MacKinnon-Haug-Michelis (1999) p-values

These findings are important to discuss in this study statistic of trace and maximum eigenvalue and respective corresponding critical values prevailing under the rejection value of 5% significant levels therefore null hypotheses both trace test and maximum eigenvalue are rejected. These results explore the situation of the most important macroeconomic policy of the Sri Lankan context. Implication of this findings is empathized there is a long term relationship between economic growth and inflation.

Further analysis of the related statistics of Vector Error Correction Model (VECM) has emphasized several advantages of time series analysis and these macroeconomic policies. Assuming that the these two variables are co integrated it has revealed that the VECM includes
Economic growth and inflation are associated with both the long term and short term effect in the economy. Further VECM results are noted to test the impact of inflation and economic growth can be formulated by designing the standard regression model (Harris,1995). Following table 4.5 shows the estimated coefficients of the VEC term which represent the long run effect of these macroeconomic variables. Further the lagged value of the two variables of time series are revealed the short run effect of economic growth and inflation.

Table 4.5: Vector Error Correction Estimate

Error Correction	D(Economic Growth)	D(Inflation)
Economic Growth(-1)	0.6029	0.2039
	(0.0759)	(0.1688)
	[7.9377]	[1.2078]
Economic Growth(-2)	-0.0016	-2.0690
	(0.0682)	(0.1516)
	[-0.0241]	[-13.6454]
Economic Growth(-3)	0.3866	0.9076
	(0.0679)	(0.1510)
	[5.6896]	[6.0079]
Inflation(-1)	0.6924	0.5096
	(0.0346)	(0.0770)
	[19.9789]	[6.6137]
Inflation(-2)	-0.3007	-0.1017
	(0.0399)	(0.0889)
	[-7.52034]	[-1.1443]
Inflation (-3)	0.0008	0.1092
	(0.0342)	(0.07611)
	[0.0258]	[1.4358]
C	0.0352	1.3082
	(0.1256)	(0.2792)
	[0.2803]	[4.6843]
R-squared	0.9460	0.9284
Adjusted R-squared	0.9438	0.9255
F-statistic	426.626	315.7158
Mean dependent	1.3996	0.0728
S.D. dependent	4.5203	8.7265

4.3 Granger Causality Test Analysis

Table 4.6 Pairwise Granger Causality test (lag 3)

Null Hypothesis:	Obs	F-Statistic	Probability
LIN does not Granger Cause LEG	153	224.876	1.6E-54
LEG does not Granger Cause LIN		147.091	6.3E-44

Table 4.6 Pairwise Granger Causality test (lag 3)

Null Hypothesis:	Obs	F-Statistic	Probability
LIN does not Granger Cause LEG	152	119.229	1.6E-44
LEG does not Granger Cause LIN		37.0824	3.0E-21

V.   Conclusion

This study empirically examines the relationshipbetween economic growth and inflation in the Sri Lankan context. The study analysisreported that there is a statistically significant long-run negativerelationshipbetween economic growth and inflation.Further, the empirical evidence supported to thereis a statistically significant long-run *positive* causalityrunning from economic growth to inflation. Moreover the existence of cointegrationprevailing betweeneconomic growth and inflation, further effort was made tocross check the causality relationship that noted between the economic growth and inflation variables by testing the VAR-Granger causality approachat three lag periods as could be estimated in Table 4.5 to Table4.6. The first test was conducted using lag three (3) and inthe result bi-directional causality was seen betweeneconomic

growth and inflation.. Further test atlag four (4) was carried out and it supported the first byindicating a bi-directional causality between economicgrowth and inflation of Sri Lankan context.

In conclusion, the finding of this studyIn conclusion, the finding of this study is that economic
growth affects inflation positively. But when increase in therate of inflation goes beyond the threshold inflation level theninflation affects economic growth negatively.Low or moderate inflation is an indicator of macroeconomicstability and creates an environment conducive for investment.Countries with low or moderate rates of inflation have highergrowth rates over the long-term compared with countries withhigh inflation rates. However, low inflation does not constitutea sufficient condition for growth. To promote growth and keepinflation low, the government needs to control budget deficits.This can be achieved by switching public expenditure fromconsumption to investment, this may be a difficult policy topursue, especially in a developing country with a multipartydemocracy. It may be more realistic to choose 'tolerable' levelsof inflation rate and achieve the maximum possible growthgiven that rate, by deficit-financed public investment.

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