

PART 1:

Journal Name:	British Journal of Economics, Management & Trade
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Title of the Manuscript:	IS INFLATION IN SOUTH AFRICA A STRUCTURAL OR MONETARY PHENOMENON?

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
Thanks for revising the manuscript. I have not given a final mark because the manuscript still needs some minor revisions before I can recommend it for publication. Mr. Adusei has done very well by providing the TSLS estimates in table 7 to compare with the performance of the FMOLS regression. However, he needs to re-run the TSLS regressions with the suggestions listed below in mind to improve the performance of the model. See also the hand-written notes attached. Include the lagged dependent variable ($LSINFL_{t-i}$) amongst the explanatory variables on the right hand side (RHS). Inflation expectations are usually formed by aggregating new information and past experience. Thus, the LSINFL in the previous period(s) captures the effects of inflation inertia. Also, experiment with lags in the other explanatory variables in the TSLS regression. For table 8 – include lags in the other explanatory variables in the ECM reported. See Eqs. (3) and (4). I suspect including lags (more dynamics) will improve your estimates. Table 9 – see hand-written notes attached. Lines 376-380: see hand-written notes attached. Checking with a basic econometrics or statistics textbook can help in shedding more light on the issues raised herein. I am available if more help is needed.	

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2nd. Run OLS and perform diagnostic tests.
 3rd - Based on experience with OLS regression model, Run TSLS Regression

related to inflation. This suggests that the bigger the government of South Africa becomes the more likely that the economy will experience price increases. One reason may be crowding out effect which results from competition between government and the private sector for funds in the financial markets. This competition usually favors government and as a consequence the private sector is denied financial resources for productive ventures. This negatively affects economic growth and, when demand for goods and services either remains constant or increases, supply-driven inflation ensues.

1st - Perform correlation analysis (Correlation matrix) gives you idea about the association b/w variables.

Table 7: Sensitivity Analysis: Two-Stage Least Squares Regression Based on Equation 1

Dependent variable = LSINFL				
Variable	Coefficient	t-statistic	Prob.	
Constant	19.0066	1.4578	0.1543	
LXRATE	1.2370	1.1246	0.2689	
LGDP	-0.9515	-1.5953	0.1202	
LPLR	0.3419	0.4997	0.6206	
LUSINFL	1.2873	2.0872	0.0447**	
LM3	-2.4934	-1.4713	0.1507	
LGS	4.9463	2.6400	0.0126**	
Adjusted R ² = 0.4 F-Statistic = 8.2186 (0.000018) ARCH Test 1.3863 (0.2390)* N=40				
Breusch-Godfrey LM Test = 11.4013 (0.1220)*				

LSINFL_{t-i} captures the effects of inflation in the period under investigation

Instrument list: log(SINFL(-1)); log(XRATE(-1)); log(GDP(-1)); log(PLR(-1)); log(USINFL(-1)); log(M3(-1)); log(GS(-1))
 *Figures in parenthesis are probability values. Note ***, **, * represent 1%, 5% and 10% significance levels respectively

The ECM results are presented in Table 8. The adjusted R² is 0.38. The results of Breusch-Godfrey LM and Autogressive Conditional Heteroscedascity (ARCH) Tests suggest that there is no serial correlation in the series as well as no autoregressive conditional heteroskedasticity (ARCH) in the residuals. The disequilibrium error term is significant and negative confirming the already made assertion that the variables are cointegrated. The error term of approximately -0.89 indicates that there is about 89% feedback from the previous year disequilibrium into the short run dynamic process, and that errors or residuals within the estimated equation are corrected 89% in a year.

In Table 8 it can be observed that except GDP none of the variables has a significant short-run relationship with inflation. In the short run, GDP is positively related to inflation. This finding supports the view that in South Africa the effects of higher real income on raising the price level outweigh the impact that the increased supply of goods and services can have on curbing price rises. This is certainly plausible in a developing country like South Africa because a large proportion of output such as commercial agriculture and manufacturing in Africa is strongly geared towards production for export, and hence growth in these sectors does not provide additional goods and services for the domestic economy. This finding lends credence to the initial Keynesian explanation of inflation that evolved from Keynes' analysis of effective demand. According to the theory, inflation occurs when demand exceeds the potential output of the economy. In Keynes' analysis, the difference between aggregate demand and potential level of output at full employment is termed the inflationary gap. The positive impact of real income on inflation smacks of oligopolistic or monopolistic environment in South Africa. Imperfectly competitive firms tend to ask a higher price for their products than highly competitive firms. In other words, prices that are determined under imperfectly competitive conditions are less sensitive to changes in demand than prices determined in more competitive markets. This calls for more radical reforms in the economy. Promotion of more entrepreneurship development programmes coupled with financial and logistical support is one of the policy options that could address this phenomenon. Pursuit of productive foreign direct investment in the South African economy is another policy initiative that could be explored.

Table 8: Results of ECM of version of Equation 1

Dependent variable = ΔLSINFL				
Variable	Coefficient	t-statistic	Prob.	
Constant	-0.6499	-2.9292	0.0063***	
ΔLXRATE	-0.0582	-0.1302	0.8972	
ΔLGDP	4.7123	2.9764	0.0056***	
ΔLPLR	0.2067	0.5816	0.5650	
ΔLUSINFL	0.0880	0.5513	0.5854	
ΔLM3	1.4274	0.8721	0.3899	
ΔLGS	1.4525	1.3266	0.1943	

See Eqs. (3) and (4) - I suspect including lags (more dependent) will improve your estimates.

Δ LSINFL(-1)	0.2884	1.8024	0.0812*
CR (-1)	-0.8862	-4.8558	0.0000***
F-statistic 4.0479 (0.002173)			
Adjusted $R^2 = 0.38$ ARCH Test = 0.9090(0.340382)* Breusch-Godfrey LM Test=3.6907 (0.1596)*			
N=40			

*Figures in parenthesis are probability values. Note: ***, **, * represent 1%, 5% and 10% significance levels respectively

The results of the Granger Causality Tests are presented in Table 9. As can be observed, there is uni-directional causality from inflation in the USA to inflation in South Africa. The results also indicate that there is uni-directional causality from inflation to broad money supply.

Table 9: Pairwise Granger Causality Tests. Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
LUSINFL does not Granger Cause LSINFL	40	3.32203	0.047753
LSINFL does not Granger Cause LUSINFL		0.08003	0.923264
LGS does not Granger Cause LSINFL	40	0.22636	0.798597
LSINFL does not Granger Cause LGS		0.51676	0.600937
LM3 does not Granger Cause LSINFL	39	0.80153	0.456947
LSINFL does not Granger Cause LM3		3.78492	0.032801
LPLR does not Granger Cause LSINFL	40	0.32396	0.725437
LSINFL does not Granger Cause LPLR		1.72769	0.192515

4. CONCLUSION

The paper seeks to ascertain whether inflation in South Africa is a structural or monetary phenomenon. The findings suggest that in the short-run, nominal exchange rate, nominal prime lending rate, consumer price index in the USA, broad money supply and size of government are not likely to influence prices in South Africa. Contrary to the position of the quantity theory of money, income has been found to be positively related to prices in South Africa in the short run but insignificantly, negatively related to prices in the long run. In the long run, whereas nominal exchange rate, inflation in USA, and government spending are positively related to inflation, broad money supply is negatively related to inflation. The study, therefore, concludes that inflation in South Africa is both structural phenomenon and monetary phenomenon. Evidence also supports the conclusion that South Africa is import-dependent, resulting in about 43% of her inflation explained by inflation in the USA. One policy recommendation that may be in the best interest of consumers is that South African government should provide more incentives to domestic producers so that they can produce more and compete effectively in the global market. Another policy option (that may be the last resort) is import substitution industrialization (ISI). The government of South Africa should embark upon ISI aimed at reducing the import dependence. As a short-run measure, subject to international treaties/accords to which South Africa is a signatory, the government can impose higher tariffs on those imports which the local industries have the capacity to produce. This may bring prices down. There appears to be monopolistic or oligopolistic markets in South Africa which make prices increase even in the midst of increases in goods and services. The government should break these markets through effective and efficient reforms including encouraging more firms into such markets to prevent price fixing.

One obvious weakness of this paper is that it has relied on the data from survey reports gathered by the World Bank (<http://www.worldbank.org>). Thus, the validity of our conclusions is limited to the extent to which these data are credible. We would, therefore, recommend a follow-up study using a different dataset. Another weakness of the paper which could be an agenda for future research is its failure to undertake data disaggregation to further explore the data.

Have you ever considered the fact that maybe you're using (have used) the wrong model. World bank data is highly credible. Revise your regressions.

see P-values
0.047753
this gives you a clue that you should include the lagged dependent variable in the R.H.S. and also introduce lags in some variables in the R.H.S.