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AT WHAT LEVEL IS INFLATION LEAST DETRIMENTAL TOWARDS FINANCE-GROWTH ACTIVITY IN SOUTH AFRICA?

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ABSTRACT

This study is concerned with determining the level of inflation which is least detrimental towards finance-growth activity for the South African economy. This objective is attained by estimating an inflation threshold in a nonlinear finance-growth regression for quarterly data collected between the period February 2000 and July 2010. The econometric model is estimated using Ordinary Least Squares (OLS) technique whilst robustness checks are confirmed by re-estimating the model using the two-stage least squares instrumental variable (2SLS-IV) method. The presented findings of the study are two-fold: firstly, inflation is found to have an adverse effect on finance-growth activity at all levels of inflation. Secondly, the least adverse effects of inflation on finance-growth activity are established at an inflation level of 8 percent. Above and below this level, real activity losses gradually begin to be magnified the further one moves from the threshold. In relevance to policy conduct, this evidence advocates on the South African Reserve Banks (SARB) 3-6 percent inflation target as being too restrictive on the sustainment of real economic activity through financial intermediary channels.

Keywords: Inflation, finance-growth, threshold

INTRODUCTION

The investigation into the effects of inflation on economic activity is an important and expanding topic in the macroeconomic academic paradigm. The significance of inflation as a macroeconomic variable in the literature comes from its ability to reflect the economic stability of a nation, or the ability of the government to control the economy through its monetary policies. Hence, its importance is reflected in a simple realization; if inflation can be established to be significantly correlated with economic activity, then sustainable development within an economy can be effectively influenced through monetary policy conduct.

Attainment of a low and stable inflation rate is the fundamental objective of monetary policy worldwide, with South Africa bearing no exception to this rule. During the past decade or so, Central Banks worldwide have placed increasing emphasis on price stability as a macroeconomic policy strategy directed towards the achievement of higher levels of economic growth through financial stability. Banks and financial activity within an economy contribute to the operation and development of

the economy by mobilizing and pooling savings; providing payment services that facilitate the exchange of goods and services; producing and processing information about investors and investment projects in order to enable efficient allocation of funds; monitoring investments and exerting corporate governance after these funds are allocated; and helping to diversify, transform and manage risk (Demirguc-Kunt, 2008).

Taking the above-mentioned into consideration, low inflation is deemed as a necessary condition for the attainment of increased economic growth and development through the establishment of a stable financial environment. This statement in itself gives rise to a critical question; how low should policymakers keep inflation within a particular economy? Ideally, policymakers would opt to choose an inflation rate which maximizes efficient economic activity through the financial sector. In this regard, an inflation threshold established in the inflation-finance-growth correlation can be thought of as the optimal level of inflation at which monetary policy should strive to keep inflation at (Mubarik, 2005). Determining threshold effects in the data can be useful for policy analysis, even though the policy implications associated with the established inflation thresholds are rather stringent. They suggest that if monetary policy within an economy were to achieve sufficient economic development through the financial sector, the implemented policy objectives should be concerned with keeping inflation at or below a specific threshold level.

From February 2000 up to date, the South African Reserve Bank (SARB) adopted and is currently utilizing an inflation-target regime as its main policy instrument. This monetary policy strategy entails that the Reserve Bank should keep inflation within a target range of 3-6 percent. Given such a unified and unchallenged policy objective, the lack of academic evidence supporting the economical welfare benefits derived from implementation of such policy strategy remains both surprising and thought provoking. Despite the numerous claimed economical gains associated with emerging economies in adopting inflation targeting (IT) regimes, such claims seem to be embodied in politically motivated editorial statements rather than in the academic paradigm. For instance, Weeks (1999), Nell (2000), Akinboade, Niedermeier and Siebrits (2001) and Bonga-Bonga and Kabundi (2009) have shown that the stringent monetary policies undertaken by the South African Reserve Bank (SARB) are inappropriate for the sustainment of maximum possible economic welfare. The implication in these studies is that economic activity could be higher under policies tolerating moderately higher inflation rates; a result which places vigorous criticism on the orthodox, instrument-based policy rule approach of the Central Bank in the conduction of monetary policy.

Overall, the underlying theme of the presented criticisms on the effectiveness of the adopted inflation-target regime can be formally directed towards the issue of whether the current inflation target range set by the Reserve Bank may be below or above some established threshold level of inflation. The paper is concerned with filling the void in the debate by estimating thresholds in the inflation-finance-growth correlation exclusively for South African data for periods subsequent to the adoption of the inflation-targeting regime.

REVIEW OF THE EXISTING LITERATURE

The theoretical and empirical propositions associated with the existence of an inflation threshold integrates contradictory arguments advanced by structuralist and monetarist economists, by suggesting that low levels of inflation may initially be supportive of growth gains, but once the economy achieves faster growth then inflation will become detrimental towards the sustainability of such growth (Ahmed & Mortaza, 2005). The idea of the existence of an inflation threshold relates to the nonlinear correlation between inflation and economic activity. Empirical evidence including South African data in the analysis of existing nonlinearities in the inflation-growth correlation are provided in the panel data studies of Fischer (1993), Bruno & Easterly (1995), Sarel (1996), Khan & Senhadji (2001), Rousseau & Wachtel (2002), and Barnes & Duquette (2006).

Using spline (continuous piecewise) regression functions, the early empirical works of Bruno and Easterly (1995), and Fischer (1993) were the first to empirically identify such nonlinearities by observing that the marginal effects of inflation on economic welfare fluctuate across escalating bands of inflation ranges. In particular, these studies concluded that a number of economies can withstand moderate inflation rates of about 20 to 30 percent without suffering any undesirable consequences on growth, but once inflation reaches some critical high level (which the authors approximate to be 40 percent) then inflation may prove unfavorable for economic growth. However, the policy implications associated with the obtain results proved to be vague as these authors were unable to determine a specific inflation point at which economic welfare can be maximized or similarly, the level of inflation where economic welfare losses are minimized.

This empirical flaw was overcome in the seminal paper of Sarel (1996) and later methodologically refined by Khan and Senhadji (2001) who, by using sample-splitting econometric techniques estimated exact inflation thresholds of 8 percent and 11 percent, respectively. Above the determined thresholds, inflation was found to significantly impede economic activity whilst below the threshold, inflation was found to either have a positive or an insignificant effect on economic growth. The studies of Sarel (1996) and Khan and Senhadji (2001) set a 'trend' for publications that aimed at attaining an inflation threshold for country specific data (see Ahmed & Mortaza, 2005, for Bangladesh; Frimpong & Oteng-Abayie, 2010, for Ghana; Mubarik, 2005, for Pakistan; Salami & Kelikume, 2010, for Nigeria; Sweidan (2004) for Jordan). According to Hayat and Kalrajan (2009) the recent increasing surge of interest in conducting country specific case studies for developing economies is attributed to two factors. Firstly, the grouping of economies with vast differences in 'inflation experiences' and generalizing the estimated threshold for the entire group of observations may result in a biased threshold estimate which is driven by the inclusion of high inflation outliers. Secondly, the longer time periods employed in panel data studies tend to include high inflation periods associated with data from the 1970's which may influence the obtained threshold estimates.

A noteworthy shortcoming associated with the aforementioned empirical studies, is their inability to draw the working mechanism of inflation thresholds directly from growth theory. Advances in growth theory have identified the financial intermediary channel as a plausible channel in transmitting the nonlinear effects of inflation through to economic activity. The model frameworks of Bose (2002), and Huybens and Smith (1999) more formally describe the theoretical functioning of inflation threshold nonlinearities. Drawing directly from these frameworks, the panel data empirical studies of Barnes and

Duquette (2002), as well as, Rousseau and Wachtel (2002) identify clear-cut theoretically guided macroeconomic variables which are included as explanatory variables in describing the growth process of an economy. Barnes and Duquette (2002), and Rousseau and Wachtel (2002) establish respective inflation thresholds of 14 and 13 percent, of which below these levels; financial activity is helpful towards economic development.

ANALYTICAL FRAMEWORK

The empirical analysis presented in this paper draws the theoretical underpinnings from the works of Huybens and Smith (1999). In the theoretical model, the transmission mechanism for the nonlinear operation of inflation on economic growth is induced through the financial markets and capital accumulation. Financial market activity is identified through banking lending activity (CREDIT) and volume of trading in equity markets (EQUITY), whereby both channels influence real economic activity. When levels of capital accumulation (INV) are high, the equity markets and bank lending activity are highly correlated through internal projected finance and this exerts a significant influence on economic activity whilst at low levels of capital accumulation, little or no financial activity transpires and the relevance of bank lending activity to equity market activity decreases.

Inflation (π) within the model is induced through increases in money supply which lowers the rate of return on both money and assets. Under low inflation regimes, inflation does not distort the flow of information or interfere with resource allocation and economic activity up to a certain threshold. Beyond such a level, an increase in the inflation rate aggravates credit market frictions through a distorted flow of information. Consequentially, this causes less efficient resource allocation in the banking sector and equity markets resulting in lower capital accumulation and long-run activity. Hence, a negative relationship between inflation and real activity becomes more pronounced at higher levels of inflation above the threshold. Denoting Y as output productivity, real activity within the economy is captured in the following production technology:

$$Y = f(\pi, INV, CREDIT, EQUITY) \quad (1)$$

In linearizing equation (1), the following specification is derived:

$$Y = \beta_0+\beta_1\pi+\beta_2 INV+\beta_3 CREDIT_t+\beta_4 EQUITY_t+\varepsilon_t \quad (2)$$

Based on the presented theoretical model, positive coefficients are expected to be associated with β_2, β_3, and β_4. The sign on the coefficient β_1 is, however, unambiguous as inflation is a threshold variable depicted to having two opposing effects on real activity below and above a certain threshold. The sign on the coefficient β_1 is thus subject to scrutiny in the empirical analysis. It has become standardized practice in the literature to econometrically quantify inflation thresholds in the inflation-growth nexus by making use of Sarel's (1996) threshold econometric specification. This econometric model is informed by the theoretical inflation threshold growth model and can be best thought of as a reliable representation of the theories predictions (Barnes and Duquette, 2006). The econometric assumption underlying inflation threshold models is that observed data of inflation, growth and other growth determinant variables can be segregated into two regimes; one regime capturing the dynamics of the data below an established inflation threshold level whilst the second regime analyzes the effects of the

data above the threshold. In its base form, the Sarel's (1996) model framework assumes the following nonlinear inflation-growth regression function:

$$Y = \beta_0+\beta_{11}\pi+\beta_{12}[\pi-\pi^*](D)+ \beta_x X_t+\varepsilon_t \quad (3)$$

Where X_t is the vector of control (explanatory) growth variables derived from the theoretical model which are included in the threshold regression; π^* is the inflation threshold; D is a dummy variable taking the value of 0 when $\pi \leq \pi^*$ and 1 when $\pi > \pi^*$; and ε_t is the iid error term. Deriving from the theoretical foundations set forth in the model of Huybens and Smith (1999) as depicted in equations (1) and (2), the study employs measures of banking lending activity, volume of trading in equity markets and investment as explanatory growth variables. In addition, the studies of Hodge (2005) and Weeks (1999) have emphasized the importance of accounting for measures of openness in empirical inflation-growth investigations for South African data. The study hence advocates the use of the exchange rate (REER) as a measure of openness as this variable simultaneously captures both the financial institutional arrangement and openness of the economy. Rousseau and Wachtel (2002) note that exchange rate measures are deemed as one of the most crucial financial institutional arrangements in the context of stimulating economic growth in an open economy. The expected coefficient on the exchange rate is thus expected to be positive. Incorporating the suggested explanatory variables into Sarel's (1996) econometric specification (3) results in the following empirical econometric testing model:

$$Y = \beta_0+\beta_{11}\pi+\beta_{12}[\pi-\pi^*](D)+ \beta_2 INV+\beta_3 CREDIT_t+\beta_4 EQUITY_t+\beta_5 REER_t+\varepsilon_t \quad (4)$$

Since the inflation threshold, π^*, is unknown, equation (4) is sequentially estimated for different ascending values of π^* i.e. $\{\pi^*_{min}, \ldots, \pi^*_{max}\}$ to produce a series of regression estimates. From the series of threshold regression estimates, the optimal inflation threshold value is associated with the regression estimate which produces the highest regression explanatory power through the minimization of the sum-of-squared residuals (SSR). The t-statistic of the coefficient β_{12} tests whether or not the structural break effect is significantly valid (Sarel, 1996). In re-arranging equation (4), the regression can be denoted as $Y=\beta_0+(\beta_{11}+\beta_{12})\ \pi-\ \beta_{12}\pi^*+\beta_2 INV_t+\beta_3 CREDIT_t+\beta_4 EQUITY_t+\beta_5 REER_t+\varepsilon_t$ and the sum of the coefficients $\beta_{11}+\beta_{12}$ is proved to effectively measure the effect of inflation on economic growth as a result of a unit increase experienced in the inflation rate.

DATA DESCRIPTION AND EMIPIRICAL ANALYSIS

Data

In order to estimate an inflation threshold in the finance-growth relationship for South Africa, the study employs quarterly data collected from the South African Reserve Bank (SARB) website. The empirical analysis is concerned with estimating an inflation threshold for periods subsequent to the adoption of the inflation targeting mandate and hence employs quarterly data collected from February 2000 to July 2010. The following data variables are used in the empirical investigations and their codes as issued on SARB website are provided in {}:

- The dependent variable economic growth (Y) is measured as the percentage change in the real gross domestic product {KBP6006S}

- Inflation (π) being the main threshold independent variable of interest is measured as a percent change in the total consumer prices {KBP7170Q}
- Capital accumulation (INV) is measured as the ratio of gross fixed capital formation to gross domestic product {KBP6282l}
- Banking lending activity (CREDIT) is measured as the percentage change in total domestic credit extension in all monetary institutions {KBP1368A}
- Volume of trading in equity markets (EQUITY) is complementary to banking lending activity (CREDIT) in accounting for financial activity within the economy and is measured as the percentage change in total value of shares traded on the Johannesburg Stock Exchange {KBP2093A}
- The exchange rate (REER) has been included as a measure of openness and is represented by real effective exchange rate average for South Africa's main trading partners in manufacturing goods {KBP5377M}

Hodge (2005) highlights the volatility complexities associated with South African inflation-growth data, whereas Mubarik (2005) advocates the use of the Hodrick-Prescott (HP) filter on smoothing inflation-growth data in estimation process of inflation thresholds. In consideration of the above-mentioned, the Hodrick-Prescott (HP) filter was applied to the time series variables of economic growth (Y) and inflation (π) as a means of smoothing volatility before incorporating the data into the econometric analysis. The HP filter works by decomposing an observed time series into its permanent trend and its cycle, while extracting the permanent trend. For the given time series, this decomposition transpires through minimization of the following penalty functions:

$$\text{Min}_{Y} = \sum(Y - {}^{\text{trend}}Y)^2 + \lambda\sum[({}^{\text{trend}}Y_{t+1} - {}^{\text{trend}}Y_t) - ({}^{\text{trend}}Y_t - {}^{\text{trend}}Y_{t-1})]^2 \qquad (5.1)$$

$$\text{Min}_{\square} = \sum(\pi - {}^{\text{trend}}\pi)^2 + \lambda\sum[({}^{\text{trend}}\pi_{t+1} - {}^{\text{trend}}\pi_t) - ({}^{\text{trend}}\pi_t - {}^{\text{trend}}\pi_{t-1})]^2 \qquad (5.2)$$

The first term in the penalty functions (5.1) and (5.2), are the sum of the squared deviations which penalizes the cyclical component. The second term is a multiple (λ) of the sum squares of the trend components second difference. This second term penalizes variations in the rate of change of the trend component. The larger the value of λ, the higher the penalty. Bearing in mind that the study uses quarterly inflation-growth data, λ is set at 1600 before the transformation is applied to inflation and economic growth data.

Empirical Results

The econometric analysis of inflation thresholds is conducted in a two-stage procedure. Sarel's threshold model as depicted in equation (4) is first estimated using ordinary least squares (OLS) technique, and thereafter a sensitivity analysis is performed by re-estimating equation (4) with by the two-stage least squares instrumental variable (2SLS-IV) method. The empirical results are reported in Tables 1 and 2, respectively. The t-statistics for the regression coefficients estimates, as well as, their associated probability values and standard errors are also reported. Searching for an inflation threshold (π^*) is

conducted over the range of $\pi^*_{min}=5$ and $\pi^*_{max}=10$ resulting in the inspection of six regressions for each of the employed estimation techniques.

For all OLS regressions, the t-statistics on the inflation coefficients π_{11} and π_{12} confirm significant coefficient estimates. The coefficients of INV, CREDIT, EQUITY AND REER under the regressions produce their expected positive signs, a result which is consistent with the supporting growth theory and in accordance with the panel data empirical analysis of Rousseau and Wachtel (2002) and Barnes and Duquette (2006). However, differing from these studies, an increase in inflation has a negative effect on economic growth through financial institutional activity as $\pi_{11}+\pi_{12} < 0$ for all the obtained regression estimates. This result does not support the structuralist argument that inflation may initially have positive effects on economic growth. Besides the inflation rate, banking lending activity is found to be the strongest correlated financial activity variable to growth, hence stressing the significance of credit market activity in stimulating growth through the financial sector in South Africa. This result can be alligned with that obtained in Khamfula (2005) who identifies the credit channel as an important transmission mechanism of the effects of monetary policy to real economic activity. The effect of equity activity on economic growth tends to be unaffected regardless of what the inflation rate is. Ndako (2009) suggests that this occurs since the effects from equity markets to economic growth can only be established in the short-run and not in the long-run.

The sum-of-squared residuals (SSR) is minimized when equation (4) is estimated for $\pi^*=8$, a result mimicking that obtained in the study of Sarel (1996). At this level, the sum of coefficients $\beta_{11}+\beta_{12}$ indicates that a unit increase in inflation decreases the rate of economic growth by 0.566. Above and below this inflation threshold level, economic growth losses are amplified, hence implying a concave (inverted U-shaped) relationship between the sum of coefficients $\beta_{11}+\beta_{12}$ and the inflation rate with the upper extremity of this relationship found at $\pi^*=8$. Furthermore, above the established threshold, the coefficient on investment is found to be insignificantly correlated with economic growth, whilst openness as measured by the exchange rate becomes increasingly significant for economic growth. This implies that at high levels of inflation, investment becomes less significant towards economic growth and the strength of financial openness of the economy becomes increasingly important for growth.

The described results support the following theoretical propositions put forth by Bose (2002), and Huybens and Smith (1999):

- An overall negative long-run relationship exists in inflation-finance-growth nexus.
- At low inflation levels, a rising inflation rate gradually stimulates economic activity through financial market activity up to a certain threshold, of which beyond this level, the adverse effects of inflation are magnified.
- When inflation highly impedes economic growth, investment and financial market activity (which is prominently observed in bank lending activity) are lowly correlated with economic growth, and vice versa.

Table 1: OLS Estimates of Threshold Model

Inflation threshold		REGRESSION VARIABLES						EXPLNATORY POWER
		π	π-π*	INV	CREDIT	EQUITY	REER	SSR
5	Coefficient	-0.748 (0.05)**	0.077 (0.03)**	0.011 (0.01)*	0.042 (0.01)***	0.004 (0.00)**	0.011 (0.00)*	0.2066
	t-stat	-16.49 [0.00000]	3.01 [0.00504]	2.19 [0.03629]	5.82 [0.00000]	3.03 [0.00468]	2.70 [0.01088]	
6	Coefficient	-0.754 (0.05)***	0.059 (0.02)**	0.007 (0.01)*	0.044 (0.01)***	0.005 (0.00)***	0.005 (0.00)*	0.2053
	t-stat	-16.38 [0.00000]	3.09 [0.00407]	1.45 [0.01581]	6.22 [0.00000]	4.55 [0.00001]	1.56 [0.02882]	
7	Coefficient	-0.561 (0.06)***	-0.029 (0.01)*	0.009 (0.01)*	0.046 (0.01)***	0.006 (0.00)***	0.006 (0.00)*	0.2272
	t-stat	-9.76 [0.00000]	-1.32 [0.0196]	1.938 [0.06144]	5.93 [0.00000]	4.54 [0.00007]	1.62 [0.0116]	
8	Coefficient	-0.505 (0.04)***	-0.061 (0.02)**	0.012* (0.01)	0.042 (0.01)***	0.005 (0.00)***	0.007 (0.00)*	0.1977
	t-stat	-12.38 [0.00000]	-3.59 [0.00107]	2.26 [0.03047]	6.20 [0.00000]	4.06 [0.00028]	1.98 [0.05608]	
9	Coefficient	-0.549 (0.04)***	-0.049 (0.02)**	0.004 (0.01)	0.043 (0.01)***	0.004 (0.00)**	0.008 (0.00)*	0.2095
	t-stat	-15.17 [0.00000]	-2.80 [0.00841]	1.07 [0.29244]	5.88 [0.00000]	3.31 [0.00228]	2.12 [0.04193]	
10	Coefficient	-0.577 (0.03)***	-0.061 (0.02)**	0.001 (0.01)	0.036 (0.01)***	0.005 (0.00)***	0.012 (0.00)**	0.2081
	t-stat	-19.98 [0.00000]	-2.90 [0.00655]	0.53 [0.60146]	4.61 [0.00005]	4.22 [0.00018]	2.81 [0.00829]	

Significance Level Codes: '***', "**' and '*' denote the 1%, 5% and 10% significance levels respectively

Standard errors of coefficient estimates are reported in () and the probability values of the t-statistics are given in [ ]

To check for a specification bias, equation (4) is re-estimated using the two-stage least squares instrumental variable (2SLS-IV) method as suggested in the studies of Frimpong and Oteng-Abayie (2010), Mubarik (2005). The study employs lagged values of economic growth, investment, credit, equity, and the exchange rate as instrumental variables in the estimation process. All instruments are significantly defined with one lag, with the exception of investment and exchange rate in which two lags are found as being compatible. The comparison of OLS and 2SLS-IV estimated models depict a similar threshold level of inflation and the associated coefficients in both models are not significantly different from each other, to a point in which the results obtained from the 2SLS-IV estimates can be interpreted with similar implications as with the conclusions drawn from the OLS estimates. Hence, an inflation rate of 8 percent can be deemed as a significant and robust threshold estimate.

Table 2: 2SLS-IV Estimates of Threshold Model

		REGRESSION VARIABLES						EXPLNATORY POWER
Inflation threshold		π	π-π*	INV	CREDIT	EQUITY	REER	SSR
5	Coefficient	-0.719	0.059	0.011	0.042	0.005	0.004	0.2147
		(0.05)**	(0.03)**	(0.01)*	(0.01)***	(0.00)**	(0.01)*	
	t-stat	-13.32	3.01	1.29	5.62	3.10	0.59	
		[0.00000]	[0.07994]	[0.01648]	[0.00000]	[0.00397]	[0.05601]	
6	Coefficient	-0.7543	0.060	0.011	0.043	0.006	0.003	0.2147
		(0.05)***	(0.02)**	(0.01)*	(0.01)***	(0.00)***	(0.01)*	
	t-stat	-15.65	2.94	1.24	5.79	4.52	-0.11	
		[0.00000]	[0.00600]	[0.02239]	[0.00000]	[0.00001]	[0.09113]	
7	Coefficient	-0.570	-0.025	0.010	0.045	0.006	0.003	0.2302
		(0.06)***	(0.01)*	(0.01)*	(0.01)***	(0.00)***	(0.01)*	
	t-stat	-9.49	-1.08	1.07	5.75	4.51	0.39	
		[0.00000]	[0.0288]	[0.02921]	[0.00000]	[0.00008]	[0.06967]	
8	Coefficient	-0.515	-0.056	0.016	0.041	0.005	0.002	0.2016
		(0.04)***	(0.02)**	(0.01)*	(0.01)***	(0.00)***	(0.00)*	
	t-stat	-11.47	-2.99	1.83	5.53	4.05	-0.32	
		[0.00000]	[0.00519]	[0.07699]	[0.00000]	[0.00029]	[0.7545]	
9	Coefficient	-0.568	-0.038	0.009	0.042	0.005	0.002	0.2319
		(0.04)***	(0.02)**	(0.01)	(0.01)***	(0.00)**	(0.01)*	
	t-stat	-13.89	-1.89	1.05	5.23	3.49	-0.38	
		[0.00000]	[0.06712]	[0.2997]	[0.00000]	[0.00141]	[0.7067]	
10	Coefficient	-0.586	-0.050	0.004	0.037	0.005	0.007	0.2112
		(0.03)***	(0.03)**	(0.01)	(0.01)***	(0.00)***	(0.01)**	
	t-stat	-17.28	-1.72	0.38	4.51	4.02	0.88	
		[0.00000]	[0.09496]	[0.7091]	[0.00008]	[0.00032]	[0.3842]	

Significance Level Codes: '***', '**' and '*' denote the 1%, 5% and 10% significance levels respectively
Standard errors of coefficient estimates are reported in () and the probability values of the t-statistics are given in [ ]

CONCLUSION

Drawing directly from growth theory, this paper conducted an assessment of threshold effects in the inflation-finance-growth nexus under the empirical framework of Sarel (1996). In line with the results obtained in the study of Sarel (1996), the empirical analysis for South African data confirms an optimal inflation rate of 8 percent. However, the results presented in this study primarily differ from those presented in Sarel (1996) in two aspects. Firstly, inflation is not found to be helpful towards economic growth at any level of inflation. Secondly, the further inflation drifts away from its threshold level of 8 percent (regardless of whether the drift is below or above the established threshold) the more magnified are the adverse effects of inflation on economic activity. Consequentially, these results put into question as to whether the South African Reserve Banks 3-6 percent inflation target mandate would be more efficient in the sustainment of real economic activity if the target width-band be revised to accommodate higher levels of inflation.

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