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Full Length Research Paper

The impact of fiscal policies on consumers' spending

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The economic impasse experienced in the UK is being counteracted by aggressive fiscal policies geared toward encouraging spending on consumables. Using the retail price index and data obtained from the Office of National Statistics, this paper assessed the effectiveness of the government's fiscal measures to stabilize the economy through spending. The article developed a consumer spending model (CSM) and assessed its impact on intrinsic fiscal policies such as bank rate, inflation, percentage earnings increase and mortgage rate. The study finds bank rate and annual inflation as most significant factors affecting consumer spending and suggests that fiscal measures targeted at reducing bank lending rates and controlling inflation should be the government's policy priority.

Key words: Bank rate, spending, mortgage rate.

INTRODUCTION

The recent slowdown in the economic activities of most countries left some ripples in the consumers spending pattern and the fiscal policy of the United Kingdom. The retail price index shrank as most shops suffered liquidation. The Government consistently revised the interest rates to cushion the economic crunch on consumers and encourage a spending rather than a thrift economy. For instance, at the onset of the recession, the major central banks introduced inertia in their interest rate targets relative to the cyclical decline in economic activities. The European Central Bank was not left out as it focused on higher wage settlements in parts of EU including Germany, Italy, and the Netherlands (Hetzel, 2009). Whether these measures produced the expected results have remained an issue of debate.

Inflationary targets have been used as a mechanism of reducing inflation rate volatility, interest rate and hence inject a transparent monetary policy in the economy. The United Kingdom, like many other countries had adopted this policy since 1992 and had maintained a target of 2%. This arguably had been used in mitigating the exchange volatility on the economy.

Lee (2009) outlined that 26 countries comprising of Canada, Peru, Chile, Sweden, Australia and Israel have also maintained inflationary targets. The adoption of inflation targets could have a significant impact on the stock market especially if it falls below the expected level. Conversely, interest rates provide alternative source and uses of fund which affect bank credit. Ezeoha and Amaeshi (2010) support this preposition and argued that the expectations theory of interest rate posits that banks invest in assets with higher rates as to maximise their returns. This could impact on inflation as the quantity theory suggests that inflation is caused by increase in money supply which exceeds the growth rate.

This paper examines some intrinsic variables that are predatory on the consumers spending. The consumers spending level on goods, as measured by the retail price index (RPI) can be affected by a range of factors. The consumer spending model (CSM) developed in this study uses 4 variables namely: Bank or interest rate (BR), annual inflation (AI), annual earnings increase (AEI) and mortgage rate (MR) respectively to explain the consumers spending and behavioural pattern particularly during economic melt down.

JEL Classification: G18, G21, G28.

LITERATURE REVIEW

Economic and financial studies have produced different models to explain effects of interest, mortgage, inflationary rates and earnings on spending. Ward (2008) expanded on the Hedonic pricing model to generate quality adjusted price indices and cautions against the removal of mortgage interest repayments from macro-economic inflationary target measures in the UK. Cansino et al. (2007) used the simple accounting matrix (SAM) model to estimate the impact of tax on retail sales and on

the prices indices in Spain. Others such as Llop and Manresa (2004) developed the computable general equilibrium (CGE) model to analyses indirect taxes on spending.

The retail price index (RPI) had been a very popular standard of measurement of inflation, household spending on consumables and includes mortgage interest repayments. Ward (2008) adds that the RPI in the UK is also considered as a suitable benchmark in assessing the cost of living and thus used as a reference point in wage negotiations. In this respect, it is more acceptable than the consumer price index (CPI) or the harmonised index of consumer prices (HICP) as introduced among EU countries.

The fiscal characteristic of inflation is anchored on the assumption that central banks determine the inflationary trends based on the inflation targets. This doctrine defies the exogenous strength of the market forces that influence market prices (Hetzel, 2009).

The extend of control of inflation by regulatory banks has been tested by Friedman (1969), using the natural rate hypothesis (NRH) who posit that while the unexpected inflation can stimulate economic activities, expected inflation cannot. The interest rate must also provide incentives for individuals to change their contemporaneous demand for resources relative to their future demands.

The UK introduced some fiscal policies including quantitative easing technique to ameliorate the harsh economic impasse. The bank lending rate including LIBOR was drastically reduced, as well as the VAT from 17.5 to 15%. These policies perhaps were in compliance with the suggestions of the European Monetary Union (EMU) on member countries to initiate fiscal measures that will facilitate a speedy adjustment to the macroeconomic shock (Colciago et al., 2008).

The focus was to encourage spending on goods as a measure of stimulating the economy. Some analysts believe that increase in bank rates and fall in fuel prices would help in stabilising inflation (Kirchhoff, 2008).

A key central policy of most countries is focused on addressing the imbalance in the fiscal policy, particularly the budget deficits.

Therefore, knowledge of the causes of fiscal imbalances offers vital information to domestic fiscal authorities in their efforts to either achieve fiscal balances.

Kollias and Paleologou (2006) outlined two alternative hypotheses of government spending and tax revenue; the spend tax and tax-spend hypotheses. While the former describes spending decisions prior to changes in tax, the latter explains how changes in government tax revenues lead to changes in expenditure.

These hypotheses have consistently produced mixed results. Payne (2003) attributes this to difference in the methodology, model specification and the time frame of the studies.

However et al. (1992) posit that the lack of causality between revenue and expenditure is because of the government structure.

CONSUMERS SPENDING MODEL

This study develops a consumers spending model (CSM) to examine the impact of some intrinsic variables on consumers spending. The retail price index (RPI) is applied as a proxy for consumers' spending, which is an acceptable standard for measuring the amount spent by households on consumables. The model is developed using the Hodrick and Prescott (1997) filter with a parameter lambda (λ) as the smoothing coefficient. The filter sets the potential component of output to minimise the loss function, *L* and represented in the function:

$$L = \sum_{t=1}^{s} (y_t - y_t^T)^2 + \lambda \sum_{t=2}^{s-1} (\Delta y^T_{t+1} - \Delta y^T_t)^2$$

The λ vector had all its elements equals to zero and therefore a non- negative scaler. The value of λ = 100 (for annual observations) and s = sample.

The assumption is that the RPI is dependent on bank rate, inflation, earnings increase and mortgage rate. The intrinsic potentials of these variables signify that they exert influential impacts on spending. The CSM therefore takes the following specifications:

$$RPI_t = \beta_0 + \beta_1 BR_t + \beta_2 AI_t + \beta_3 AEI_t + \beta_4 MR_t + \varepsilon_t$$

where *RPI* is the retail price index at any time *t*, β is the constant term, *BR* is the bank rate, *AI* is the annual inflation, *AEI* is the annual earnings increase percent, *MR* is the mortgage rate while the ε is the error term.

Hetzel (2009) maintains that sustained money creation by the central banks such as the ECB (European Central Bank) and BoE (Bank of England) will revive the spending of the public through a portfolio rebalancing mechanism. Thus the bank rate will rise with no increase in expected inflation as the increase in spending restores and revamps the confidence in the economy.

The decline in the annual earning increase had been less contentious. This is due largely to the fall in the demand for goods and services to the extent that profits from businesses cannot be further squeezed. Pay freezes which initially started with small firms particularly in housing related industries in the early quarter of 2008, gradually affected even the big firms (Hackworth, 2009).

EMPIRICAL FINDINGS AND CONCLUSIONS

The means of the variables and there standard deviations are shown in Table1.The means of BR,AI,AEI and MR are 4.49,3.07,3.60 and 6.24 respectively with standard deviations show that the mean of the variables are similar with a marginal value in their standard deviation.

Table 1 shows the mean of the variables with a marginal value in the standard deviation. First, the study established the correlation between the *RPI* and the other intrinsic consumer spending variables. The correlations in Table 2 shows that the bank rates and annual inflation have significant correlation with the *RPI*. While the *BR* has a negative correlation with the *RPI*, the *AI* had a positive correlation.

This implies that an increase in bank rate depletes

Table 1. Descriptive statistics.

Variables	Mean	Min.	Max.	Standard deviation	Obs.
RPI	177.67	144.14	214.83	22.38	16
BR	4.49	0.50	7.25	1.54	43
AI	3.07	-1.60	5.00	1.46	66
AEI	3.60	-2.00	5.70	1.25	53
MR	6.24	3.50	7.75	1.09	28

Table 2. Correlation matrix.

Variables	RPI	BR	AI	AEI	MR
RPI	1.000				
BR	-0.705**	1.000			
AI	0.791**	-0.416**	1.000		
AEI	-0.212	0.310*	-0.398**	1.000	
MR	0.035	0.257	0.289	0.165	1.000

**significant at 0.01 level *significant at 0.05 level.

Table 3. OLS cross sectional regression.

Variables	Model 1	Model 2	Model 3
Constant	13.955 (0.000)**	15.985 (0.000)**	18.313 (0.000)**
Bank rate (BR)	-0.705 (0.002)**	-0.491 (0.003)**	-0.452 (0.011)*
Annual inflation(AI)		0.668 (0.000)**	0.722 (0.001)**
Annual earning increase percent (AEI)		0.205 (0.144)	0.230 (0.128)
Mortgage rate (MR)			-0.095 (0.529)
Adj. r square	0.461	0.788	0.778
R square change	0.497	0.334	0.006

The bank rates (BR) and the mortgage rates (MR) comprise of the 2001 to 2009 rates regimes determined by the Bank of England (BoE) and the commercial and mortgage institutions. The annual inflation (AI), the percentage annual earnings increase (AEI) and the retail price index (RPI) comprise of data obtained from the UK Office of National Statistics (ONS) and other economic gazettes from 2004 -2009. Each model contains the beta value of the variables and their correspondent significant values in brackets. The constant depicts the standard error of the unstandardised coefficient values. Dependent variable: Retail price index (RPI). **significant at 0.01 and *significant at 0.05.

consumers spending while inflationary trend has an effect on spending. The table indicates that *RPI* has a significant correlation of -0.705 with *BR* and 0.791 with *AI* respectively.

The result of the OLS cross sectional regression shows that both *BR* and *AI* are significant factors in encouraging spending. The result in Table 3 contains 3 models to test the significant effect of the variables in stimulating consumers spending. The bank rate had a significant negative coefficient across the three models. Its significance tends to reduce with the introduction of other variables. The variable had a high coefficient of -0.705 and the R-square change indicates that it makes a 49.7% contribution to the consumers spending model. Arneric et al. (2009) admit that bank interest inadvertently affect economic activities.

Annual inflation showed the highest significant positive coefficient of 0.722. The R-square change in model 2 indicates that the variable makes a contributory impact of 33.4%. The various studies undertaken on the inflationary effect on retail prices accentuate its crucial role. Yet researchers are open to admit that much remains to be investigated about inflation (Hausman, 2004; Wynne and Rodriguez-Palenzuela 2004). This study however leans support to Colciago et al. (2008) that inflation has a stimulatory effect on spending.

Hunt (2009) highlights that the current UK inflation rate is not only a result of the globalisation, but a result of the foreign imports and appreciation of the pounds sterling. The study warns that caution must be exercised on over reliance on the trend of past interest rate as the guide for estimating future rates.

Both the annual earnings increase and mortgage rate showed no significance and are thus less forceful in

stimulating spending. However, their inclusion is essential for the model regression to be significant. Infact, both the AEI and MR are integral elements of the RPI.

Conclusion

The study had established intrinsic factors in the retail price index. The result had shown that while bank rate has a significant negative impact on spending, annual inflation exerts a positive impact on spending. Therefore, to stimulate the economy through consumer spending, the government fiscal policy should be geared towards stabilising the inflationary trend.

The annual earnings increase and mortgage rate showed no insignificance in stimulating consumer spending. This is not surprising as the UK Office of National Statistics also incorporates bank interest rates in the estimation of mortgage rate matrix (ONS, 2005).

The consumer spending model (CSM) highlights the importance of the intrinsic spending variables used in the study. Both the bank rate and annual inflation are highly correlated with the retail price index, which is a measure of consumers spending on consumables.

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