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Crude Oil Price, Monetary Policy and Output: The Case of Pakistan

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I. INTRODUCTION

Rapid rises in the prices of crude oil in the decade of 2000s have raised concerns among policy-makers around the world, as the theoretical and empirical literature has established that oil price shocks may have an adverse impact on the macro economy of the country. In particular, for the oil importing developing countries like Pakistan, this upward trend in the price of oil can have serious repercussions in terms of creating inflationary pressures in the economy, increasing budget deficit and balance of payment problems, and thus affecting the GDP growth.

Pakistan was on the path of rising GDP growth in the first seven years of this decade. But in the year 2007-08, the situation has changed. This oil price shock could possibly be one of the reasons. As an impact of rising growth rate of GDP, demand for energy has also gone up rapidly in this period. In the energy mix for the year 2005-06, oil accounts for 32 percent of the total energy used in Pakistan, and it is the second largest source of energy used after natural gas, which accounts for 39 percent. With oil being the second largest source of energy used along with almost constant rate of its production Pakistan is heavily dependent on oil imports from Middle East exporters (Saudi Arab playing the lead role). Almost 82 percent of the demand for petroleum products in the country is met through imports.[1] Pakistan spent about 44 percent of export earnings on oil imports in 2006-07. This percentage was only 27 percent in 2004-05. Therefore, the international oil price increase has a direct impact on the macro economy of the country, especially on the oil price GDP relationship.

The share of net oil imports in GDP is an indicator of the relative importance of the oil price rise to the economy in terms of the potential adjustments needed to offset it. For Pakistan over the last few years, this ratio has risen from –3.13 in 1990-91 to –5.24 in 2005-06 [Malik (2007)]. With such a high ratio, unless country is running in surplus, or has extremely large foreign exchange reserves, high oil price is dealt by severe macro economic adjustments.

The objective of this study is to empirically analyse the impact of oil price on the output growth of Pakistan, using the simple model derived while employing monetary

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[1]For detailed discussion on the state of the oil sector in Pakistan, see Malik (2007).

policy function to an open economy. Secondly, this study will examine the non-linear relationship between oil prices and output. If there exists a non-linear relationship then what is the threshold level after which it becomes negative. Plan of the paper is this introduction is followed by an overview of literature. Section III will describe the methodology and data and Section IV will explain the empirical findings. Finally Section V is the conclusion.

II. AN OVERVIEW OF LITERATURE

The analysis of the impact of oil price shocks on the macroeconomic variables has long been the subject of empirical literature. There is a consensus between macroeconomists that oil price shock reduces economic activity and increases inflation simultaneously. There are many studies on the subject. Bruno and Sachs (1982) have analysed in detail the effects of oil prices of the 1970s on output and inflation. They took the case of UK manufacturing and developed a theoretical model and concluded that higher input prices have played a significant role in the slowdown since 1973 throughout the OECD. On the other hand, Hamilton (1983) established empirically a negative relationship between oil prices and macroeconomic variables. Further, Hamilton in a series of studies on the subject (in 1983, 1996, 2000, and 2008) ascertained a vital role for oil price increase in most of US recessions. He stressed the importance of oil prices on the macroeconomic activities.

Later many researchers further supporting and extending on Hamilton's earlier work, while using different estimation procedures and data tested the relationships between an oil price increase and different macro-economic variables [e.g., Burbidge and Harrison (1984); Gisser and Goodwin (1986); Mork (1984); Hoover and Perez (1994); Federer (1996); Lee, *et al.* (1995)]. Most of the studies have focused on the developed countries, restating that oil prices may be an important factor in affecting economic growth in the US and elsewhere. These studies present numerous theoretical perspectives on the oil price shock hypothesis, as well as empirical evidence on the estimated magnitude of such shocks impacting on growth through some of the direct and indirect channels.

In addition, empirical literature has been shown an asymmetric relationship between oil price shocks and economic recession. That is, an increase in oil price led to a decline in GDP while the decrease in oil price does not encourage the economic activity. For instance, Federer (1996) focused on three possible ways to focus on the asymmetric relationship: counter inflationary monetary policy, sectoral shocks, and uncertainty, besides some direct channels that includes the models of real balances (supposes that oil price increases lead to inflation which lowers the quantity of real balances in the systems), the income transfer model (describing income transfer between oil importing and oil exporting countries) and the potential output model (suggesting that oil and capital are complements, so that an increasing oil price decreases the economy's productive capacity). He presumed that since the last three models have a symmetric relation between oil price changes and output growth, therefore they can be excluded as there is asymmetry in the oil prices. He finds a significant relationship between oil price increases and counter inflationary policy responses. At the same time oil price increases help predict output growth irrespective of monetary policy variables. In addition,

monetary policy response to decrease in real oil prices closely resemble to the monetary policy response to oil price increase. Therefore, asymmetric monetary policy responses can only explain a part of the asymmetric oil price-output relationship. Further, sectoral shocks and uncertainty channels could account for part of the asymmetry effects.

Similarly, Lee, *et al.* (1995) also revealed the stability of asymmetric effects in the period before and after 1985 and whether or not it depended on other variables. The implication of this literature is that indirect transmission mechanisms may be the crucial means by which oil price shocks have macroeconomic impacts. In addition, Mork (1989), Mork, *et al.* (1994), Huang, *et al.* (2005), Sadorsky (1999) also emphasised the asymmetry of the impact of oil price shocks on economic activities. The basis for their argument was the oil price declines of the mid-1980s during which the world price of oil halved and the linear relationship between oil prices and economic growth appeared to break down.

On the similar grounds, Hooker (1996) challenged Hamilton's findings that sample stability is important. Oil prices are endogenous, and that linear and symmetric specifications misrepresent the form of the oil price interaction. He found that oil prices do Granger cause a variety of US macroeconomic indicators in data up to 1973 but not in the data afterwards. Oil prices were exogenous before 1973, but not afterwards.

Guo and Kliesen (2005) also found the negative and significant effect of oil future prices on future gross domestic product, and this effect becomes more significant after oil price changes are also included in the regression to control for the symmetric effect. His findings were in confirmation with the Hamilton (1996, 2003), that is, increase in the price of oil matters less as compared to the future uncertainty about the direction of prices. As the oil price volatility is mainly driven by exogenous events such as significant terrorist attacks and military conflicts in the Middle East. His findings provide economic rationales for Hamilton's (2003) non-linear oil shock measure, as it captures overall effects (both symmetric and asymmetric) of oil shocks on output. Hsing (2007, 2008) focused on the non-linear relationship between real output and real oil prices applying the monetary policy function to an open economy and found the critical value of oil prices for Germany and US.

Major portion of research carried out so far is in the context of developed economies. Extremely limited research has been done so far to study the impact of oil price shocks on the economic activity of developing countries. There are few recent studies. Rafiq, *et al.* (2008) examined the impact of oil price volatility on key macroeconomic indicators of Thailand. Kumar (2005) assessed the oil price macro economy relationship for India. Cunado, *et al.* (2005) focused on six Asian countries including Thailand, Singapore, South Korea, Malaysia, Phillipines and Japan and studied the impact of oil price shocks on both economic activity and consumer price indexes. Finally, the objective of Jbir, *et al.* (2008) study was to examine the oil price-macro economy relationship by analysing the role of subsidy policy in Tunisia. These studies in general, confirmed the negative impact of real oil prices on output and other macro variables (e.g., price index).

By and large these empirical studies have suggested the negative impact of oil price increase on oil importing economies. However, the extent of this impact depends on the structure of various economies [Gounder, *et al.* (2007)]. Now coming to the case of

Pakistan, no serious attempt has been made so far to empirically examine the effect of oil prices. To my knowledge this is the first study empirically testing the direct impact of oil price shocks for Pakistan.

III. METHODOLOGY AND DATA ISSUES

An increase in oil prices is expected to affect macro economy through various channels. Theoretically, there are different reasons why an oil shock should affect macroeconomic variables, some of them demand a non-linear specification of the oil price–macro economy relationship. For example, the oil shock can lead to lower aggregate demand as the oil price increase leads to a transfer of income from importing to exporting countries [Hamilton (2003); Federer (1996)]. It changes the balance of trade between countries and exchange rates. Net oil-importing countries normally experience deterioration in their balance of payments [Malik (2007)], putting downward pressure on exchange rates. As a result, imports become more expensive and exports less valuable, leading to a drop in real national income. These countries are expected to face a large import bill, which might leads to the reduction in total demand for all imported goods so as to restore balance of payments equilibrium. Or net exports are expected to decline if the amount of oil imports and other factors remain the same. The only exception is where the country is running in surplus or has extremely large foreign exchange reserves. Further, oil price increase reduces aggregate supply since oil is used as an input in the production process, to generate electricity and to transport output to the market. Higher crude oil price is expected to raise the price of petroleum products, thus increase in transport costs and electricity bills, etc. and it will leads to inflation, reduce non-oil demand and lower investment in net oil importing countries, consequently having a significant impact on employment and output as well. It would reduce real wealth and consumption spending.

Tax revenues fall and the budget deficit increases, due to rigidities in government expenditure which drives interest rates up.[2] For Barsky and Kilian (2004) it is not the rise of oil price that reduces the economic activity, but it is the response of the monetary policy to the oil price shock. Further nonlinear effect on economic activity could be through sectoral reallocations of resources or disappointing irreversible investment through their effects on uncertainty [Ferderer (1996)].

In addition, the adverse impact of higher oil prices on oil-importing developing countries is generally more evident for most indebted countries.[3] Fiscal imbalances would be aggravated in those developing countries that provide direct subsidies on oil products to protect poor households and domestic industry.[4] The burden of subsidies tends to grow as international prices rise, adding to the pressure on government budgets and increasing political and social tensions.[5]

[2]For detailed transmission mechanism through which oil prices have an impact on the real economic activity see IAE (2004).

[3]Pakistan is among the list of highly indebted countries [for details see Siddiqui and Malik (2001)].

[4]Government of Pakistan to provide subsidy to the consumers has particularly targeted kerosene and diesel [for details see Malik (2007)].

[5]Petroleum development levy (PDL) is a significant contributor to indirect taxes in Pakistan, and the government has made adjustments in PDL numerous times to absorb the impact of increase in international price.

This study inspired by the model used in Hsing (2005, 2006, 2007, 2008) (with some modifications) will examine the impact of crude oil price fluctuations on output growth for Pakistan based on an open economy IS function, an extended monetary policy rule (MP) Romer (2006) model and the Taylor rule (2001) and augmented Phillips curve,[6] including real effective exchange rate and oil prices as exogenous variables. In addition, given the Pakistan's economic conditions total outstanding debt and real foreign exchange reserves are also included as control variables. The macroeconomic model to be estimated for Pakistan is specified as:

$$Y = f(Y, I, G, R, S, \hat{E}, O_p, D, F) \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (1)$$

$$I = f(\mathrm{p} - \mathrm{a}, Y - ß, \hat{E} - \mathrm{d}, I^*) \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (2)$$

$$\mathrm{p} = \mathrm{p}^e + \lambda(Y - ß) - \theta\hat{E} + \rho O_p) \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (3)$$

where

Y = Real GDP
I = Real interest rate
G = Real Government spending
R = Real Government Revenue
S = Real stock price
D = Real Total Debt
$\hat{E}$ = Real effective exchange rate (REER)
O_p = Real crude oil price per barrel
F = Real foreign exchange reserves
I^* = Real world interest rate
p = Inflation rate
p^e = Expected inflation rate
a = target inflation rate
ß = potential output
d = target real effective exchange rate
θ, λ, ρ = positive parameters

Equation (1) is an open economy IS function, Equation (2) is a monetary policy function, and Equation (3) is an augmented Phillips curve. Applying the implicit-function theorem and solving for three unknowns Y, I, and p, equilibrium output is given by

$$Y = F(O_p, G, R, S, \hat{E}, I^*, D, F, \mathrm{p}^e ; \mathrm{a}, ß, \mathrm{d}, \lambda, \theta, \rho) \quad \ldots \quad \ldots \quad \ldots \quad (4)$$

As the real crude oil price rises, aggregate spending may or may not decline. To check if the relationship between oil prices and output is non-linear, a quadratic function for the real oil price will be used. However, if the relationship is nonlinear then we expect the coefficient of the squared-term to be negative. With the rise in oil prices inflation rate is expected to increase, Central Bank (that is the State Bank of Pakistan) is expected to raise real interest rate, which would lower aggregate spending. Further, government deficit is expected to increase. The impact of deficit spending is expected to be negative if deficit crowds-out public saving and resource inflow encourages corruption and resource outflow [Siddiqui and Malik

[6] For details see Hsing (2005, 2006, 2007, 2008).

(2001)]. Rise in the crude oil price has further aggravated the debt situation of the country. Rising current account deficit and a large fiscal deficit as a consequence of rising price of crude oil in the global market has increased the stock of total debt and liabilities in Pakistan [Malik (2007)] and this will have a negative impact on output.

At the same time the existence of foreign exchange reserves can help sustain the impact of rising oil prices thus having a positive impact on output. A higher real stock price is expected to cause households to increase consumption spending because of the wealth effect and business firms to increase investment spending. As an alternative to real stock price real investment spending (gross capital formation) is used in this study and is expected to have a positive effect on real output. Another channel though which oil prices can induce changes in real economic activity is though the exchange rates. Depreciation of Pakistani rupees is expected to have a negative influence on the real economic activity.

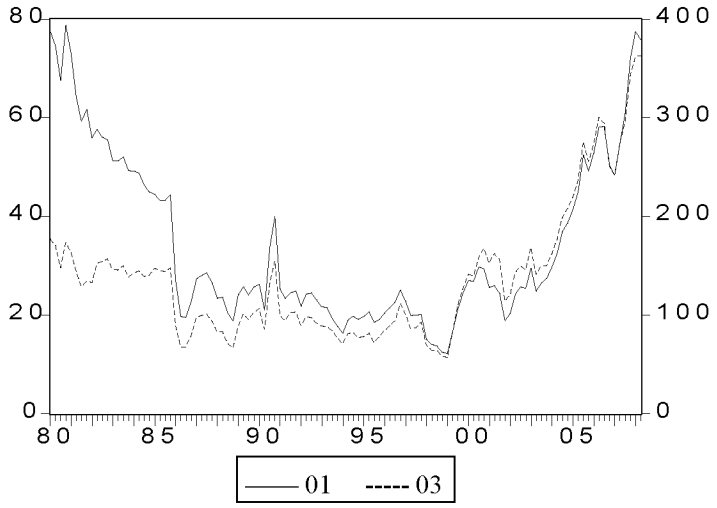
The selection of effective oil prices is difficult as it has the influence of price-controls, high and varying taxes on petroleum products, exchange rate fluctuations and the variations in the domestic consumer price index [Cunado, *et al.* (2005)]. Most of the empirical literature which analyse the effect of oil price shocks in different economies use either the world price of crude oil (in $ US) divided by the consumer price index in the US [e.g., Hsing (2007); Gounder and Bartleet (2007); Burbidge and Harrison (1984)], while some studies have used world oil price converted into respective country's currency by means of the market exchange rate [Mork, *et al.* (1994); Abeysinghe (2001); Kumar (2005)]. The main difference between the two variables is that only the second one takes into account the differences in the oil price that each country faces due to its exchange rate fluctuations or its inflation levels. Some of the studies have used both the variables in order to differentiate whether each oil price shock reflects the world oil price evolution or could be due to other factors such as exchange rate fluctuations or national price index variations [Cunado, *et al.* (2005)].

In this paper, for estimation purposes nominal crude oil price is converted into Pakistani currency and deflated by the domestic consumer price index to control for exchange rate fluctuations. For the sake of comparison real oil price variable in US dollars is also generated. Figure 1 shows the movement of real oil price expressed in $ US and in Pakistani rupees, except for the period 1980-85 (where may be as a result of high domestic prices) both the series have shown the same trend.

Real GDP is measured in million Rupees at the 1999-2000 price. Quarterly series is generated using the methodology adopted by Kemal, *et al.* (2004). Quarterly series for fiscal spending and total outstanding debt is generated using the Lisman and Sandee methodology.[7] For the quarterly series of investment spending methodology developed by Arby and Batool (2007) is used. The real effective exchange rate (REER) is a trade weighted exchange rate adjusted for relative prices. The real world interest rate is represented by the US federal funds rate minus the inflation rate in the US. Inflation rate is the growth rate of the consumer price index, and the expected inflation is the lagged inflation rate. Data is collected from International Financial Statistics and the Asian Development Bank Economic Indicators for various years. All variables are used in log form except for the oil price variable and the variables with negative values. The sample selected for the current analysis ranges from 1979-80 Q1 to 2007-08 Q2.

[7]Cited from Bloem, *et al.* (2001), Quarterly National Accounts Manual—Concepts, Data Sources, and Compilation, Chapter VII, Mechanical Projections, pp. 119-124.

Fig. 1.



Note: O1 is oil prices in US$ and O3 in domestic currency.

IV. EMPIRICAL RESULTS

First of all stationary of all the variables have been checked. According to the Augmented Dickey-Fuller (ADF) test all the variables have unit roots in the level form except for the expected inflation, but are stationary in the first difference at the 5 percent level (Table 1).

Table 1

Unit Root Test (Augmented Dickey-Fuller)

	Level		First difference	
	(i)	(ii)	(i)	(ii)
GDP	–1.63	–2.61	–17.55**	–17.49**
Oil Price in Rupees	0.73	–0.46	–9.28**	–8.98**
Oil Price in $ US	–1.42	0.003	–9.19**	–9.41**
Debt	–2.60	–2.68	–17.56**	–17.49**
Deficit Spending	2.06	–2.34	–3.43**	–3.88**
Reserves	–1.25	–2.99	–8.203**	–8.18**
Investment Spending	–1.37	–2.33	–5.45**	–5.36**
Expected Inflation	–4.077**	–3.99**	–12.96**	–12.98**
Interest Rate	–1.44	–2.73	–9.72**	–9.68**
REER	–1.44	–1.09	–9.72**	–8.76**

**Significant at 5 percent level.

(i) with an intercept, and (ii) with an intercept and trend.

According to the Johnson cointegration test allowing for a linear deterministic trend in data with intercept and no trend the null hypothesis of one cointegrating relationship between real output and the right hand sight variables (using oil prices in domestic currency) cannot be rejected at the 5 percent level, because the statistic of 392.76 is greater than the critical value of 239.24. The same test when applied for a linear deterministic trend in data with intercept and trend the null hypothesis of one cointegrating relationship between real output and the right hand sight variables cannot be rejected at the 5 percent level, because the statistic of 427.73 is greater than the critical value of 228.29. Thus, suggesting that the real output and the explanatory variables have a long run stable relationship. When oil prices in $US are used, Johnson cointegrating test again confirms the long run stable relationship between real output and right hand side variables.

Equation four is estimated using White method to correct for heteroscedasticity. First difference is not used to avoid the potential loss of valuable information and obscure outcomes [Hsing (2007)].

Table 2 presents the results. Equation 1 and Equation 2 are estimated using the oil prices in domestic currency (Rupees), Equation 3 and Equation 4 are estimated using oil

Table 2

Results of Estimated Equations Using White Heteroskedasticity-Consistent Standard Errors and Covariance, and Dependent Variable: Log of Real GDP

	Equation 1	Equation 2	Equation 3	Equation 4
Constant	2.984	14.883	3.617	13.808
	(1.296)	(6.366)	(1.748)	(5.332)
O_p	0.0006	0.0005	0.0277	0.012
	(2.209)**	(2.485)**	(2.638)**	(1.520)*
O_p^2	–0.0000003	–0.0000002	–0.00063	–0.0003
	(–2.094)**	(–2.588)**	(–2.88)**	(–2.023)**
Debt	–0.574	–0.759	–0.606	–0.703
	(–2.032)**	(–3.941)**	(–2.421)**	(–3.384)**
Deficit	–0.00002	–0.00002	–0.00002	–0.00001
	(–3.019)**	(–3.816)**	(–3.99)**	(–3.626)**
Reserves	0.168	0.149	0.176	0.148
	(4.536)**	(6.315)**	(4.807)**	(6.142)**
Investment	0.656	0.371	0.596	0.396
	(3.722)**	(2.808)**	(3.599)**	(2.808)**
Expected Inflation	0.043	0.019	0.043	0.0159
	(1.671)**	(1.147)	(1.791)**	(0.900)
Interest Rate	–0.037	0.0013	–0.028	0.0005
	(–2.053)**	(0.122)	(–1.816)*	(0.046)
REER		–1.797		–1.574
		(–5.288)**		(–4.326)**
Adjusted R^2	0.82	0.91	0.84	0.90

Note: Included observations are 92 after adjusting endpoints.

Value in parentheses is the *t*-statistics.

** Significant at 5 percent or 1 percent critical level.

* Significant at 10 percent critical level.

prices in $US. The coefficients of the oil price variable in linear (positive) as well as in square form (negative) have the expected signs, thus indicating the existence of non-linear relation between the oil prices and the GDP. In all cases coefficients are statistically significant. Nonlinear relationship indicates when the real crude oil price is relatively small and less than the threshold level, real output and real crude oil price have a positive relationship whereas when the real crude oil price is relatively high and above the threshold level, the relationship becomes negative.

Based on the estimated equations, the threshold level of crude oil price is found to be 22 ($s/bbl). Thus implying that when ever, the price crossed this level it starts hurting the economic output. In the sample period it was only in 1990s when the oil prices have remained below that level, otherwise they have remained above that level. The threshold level based on the estimated coefficients in which oil price data in Pakistani rupees is used is 1120 (Rs/bbl). In the sample, from mid 1980s to the end of 1990s, prices have remained below that level.

The coefficients of rest of the variables have expected signs, except for the expected inflation. Real investment spending (used as a replacement for real stock price[8]) has a positive and significant impact, supporting the findings of the earlier studies that capital formation is the main source of economic growth.

Debt variable as expected has a negative and highly significant impact on output. Increase in crude oil prices, further worsened the debt situation for Pakistan (among the highly indebted countries), thus having a negative impact on output growth. Similarly, the negative and significant coefficient of deficit spending suggests that the rising government deficit as a consequence of rise in the international price of crude oil in recent years may not help stimulate the economy and that fiscal discipline would be needed. As discussed in Malik (2007) the government introduced a Price Differential Claim (PDC) on August 16, 2004, the objective was to reimburse oil companies for the subsidy to consumers, thus having a negative impact on government exchequer. Secondly, oil and gas sector together accounts for a significant share of government revenues. Taxes on petroleum products are the largest source of indirect tax revenues in Pakistan. With the rise in global oil prices government adjusted its petroleum development levy (major source of indirect taxes) thus having a negative impact on total revenues.

Foreign exchange reserves as expected performed extremely well. Positive and highly significant variable suggests the existence of large foreign exchange reserves undermining the negative impact of rising crude oil prices. Pakistan has witnessed phenomenal annual growth rate of around 8 per cent prior to 2007-08, it can be attributed (although partly) to the large inflow of foreign exchange reserves after 9/11. Billions of dollars came in US aid to fight Islamic extremism, besides private transfers.

The difference between Equation 1 and Equation 2 and between 3 and 4 is the real effective exchange rate (REER). Its presence in Equation 2 and in Equation 4 has an impact on the significance of world interest rate and expected inflation (as coefficients of both variables become insignificant). Itself the coefficient of REER has as expected the negative sign and is statistically significant. Negative sign of REER indicates, in case of depreciation of Pakistani rupees the adverse impacts on import prices and other areas outweigh the positive benefits of exports thus having a negative impact on output.

[8]Real stock price does not perform well in the estimated equation.

Negative and significant effect of real world interest rate in Equations 1 and 3 suggests as the US Federal Reserve bank has continued to raise the federal funds rate, its impact on the Pakistan's economy needs to be monitored. Significant and positive influence of the expected inflation in the same two cases could possibly be because of the increase in the money supply—expansionary monetary policy followed by the State Bank of Pakistan prior to 2006 in order to boost economic growth. Government of Pakistan in order to boost economic growth was pursuing expansionary fiscal policy, too much of the development expenditure. Since there was no growth on the revenue side therefore monetisation of the fiscal deficit had taken place. As such oil price and consumer price relationship appears to be extremely limited or non-existent. Inclusion of REER outweighs the impact of world interest rate and inflation making them insignificant. Overall significance of the model also improved with the inclusion of REER. In other words, it can be concluded that when oil price goes up, exchange rate is a more significant channel to influence the economic output as compared to inflation.

Money supply function as a replacement of monetary function was also tried but the results were insignificant. Lagged dependent variable was also included to test the partial adjustment model. However, it was significant in some cases but not in all. Further its presence does not have any significant impact on the behaviour of rest of the variables.

V. CONCLUSION

In this paper an attempt is made to find the impact of crude oil prices along with other macro variables on output using the IS, monetary policy and augmented Phillips curve for Pakistan. Oil prices and output are found to be strongly related and this relationship is bell-shaped, that is, after a certain level increase in oil price start hurting the economy. Since the threshold level is quite low given the current trend in the price of crude oil; a serious commitment on the part of the government is needed to sustain this rising trend. Although oil prices are receding but still are high for Pakistan given the state of our economy.

GDP growth is regarded as the driver of oil demand besides its price. It has the tendency to reduce vulnerability as the share of oil imports decline as income rises. But this is possible only when the GDP is on the path of sustainable and long term growth. Sustainable growth is possible when there is a growth in the real sectors (manufacturing in particular). On the demand side, focus should be on the investment side. The rising trend in investment activity indicates strong investor confidence in the economy implying improvements in infrastructure, production capacities and productivity. This helped in sustaining the process of economic growth. Therefore, it should be the investment expenditure as the major contributor in GDP. In the last few years when GDP in Pakistan showed a growth of around six to eight percent, it was the consumption expenditure that had its influence, where credit flow to private sector in the form of consumer financing played a significant role.[9]

[9]Expansionary monetary policies have provided support to consumption growth in the past. Consequently consumer credit expansion has been strong, possibly raising the debt service burden of households.

For the last so many years policy makers have reiterated the demand for significant growth in our exports, but still it has not achieved. Obviously it also depends on the manufacturing growth, which is suffering from energy shortages besides other factors.

What the literature has suggested is that some countries may reduce oil consumption to balance the crude oil price increase and may reduce total expenditure on oil consumption. But this is possible only when other alternatives are available and when there are serious efforts towards the conservation of energy. At one end we are facing serious energy shortages but at the other end we are not saving available energy.

No doubt, our monetary and fiscal authorities are working hard to stabilise the economy, but still more efforts are needed to enhance the overall economic management of the economy.

Oil price risks can be eased and effectively tackled with the comprehensive national energy policy that stresses supply diversity, energy efficiency, and the use of renewable energy.

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