The Impact of Workers' Remittances on Macro Indicators:
The case of the Gulf Cooperation Council

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ABSTRACT

This paper aims to explore the potential role of the GCC states on their way to recovery, with a special reference to potential impact of remittances on their macroeconomic indicators. In effect, this study attempts to investigate the direction of causality between main macro indicators and remittances, and to identify whether the latter helps or hinders economic recovery of the GCC states. In the past, the economic costs and benefits of expatriates have been rather overlooked in the mainstream economics. However, as remittances have become an increasingly attractive source of external funding for many developing countries, research in this area has now grown a new momentum. As the economic theory suggests, the long run net benefits from the employment of foreign workers is expected to be positive for all parties involved. Remittances generate a number of positive contributions to economic development of the recipient countries by reducing poverty, as well as increasing aggregate investment and promoting growth. Today remittances out of GCC states amount to nearly $35 billion per annum, comparable to FDI flows and significantly larger than ODA. In particular, out of 12 million expatriates living and working in the GCC, nearly 3.5 million come from four Middle Eastern developing economies: Egypt, Jordan, Syria and Yemen. According to the World Bank (2009) figures, Egyptian and Yemeni workers in GCC together have remitted around $5-$7 billion per annum to their respective home countries. Amongst many, a recent study on GCC by Naufal and Termos (2009) on the determinants of remittances has brought to surface a number of issues. In the light of this study and the previous ones, this research uses several macro indicators (real GDP, real money supply, real interest rates, real effective exchange rates, and real remittances) based on a time-series data analysis of the six states of GCC over the period 1990-2010. Our preliminary findings tend to partly support the view that oil prices do cause variations in remittances, and that in turn acts as a decelerating factor on appreciation of local currency. However, there appear to be a one-way causality from remittances to most macro indicators, indicating that GCC macroeconomy tools are not powerful enough to reduce the outflow of remittances. Furthermore, the preliminary results, based on the application of vector autoregressive modelling, tend to indicate that anticipated size of remittances can be deflationary and have no serious effect on economic recovery. However, any unanticipated levels of remittances can reduce money velocity, hence slowing down the process of economic recovery.

1.   Introduction

Over the past twenty years or so there has been a marked rise in the value of world-wide remittances. The increase in the stock of international migrants and the reduction in the cost of transferring money have been regarded as the two major factors behind such significant surge in the international flow of migrant's remittances. Recent estimates by the World Bank indicate that, based on official estimates through Central Banks and other monetary agencies, remittances flows by the end of 2009 have exceeded $300 billion. The monetary transfers that are not channelled through financial institutions and other formal channels (such as Western Union) go undocumented. Therefore the official values are generally an underestimate of the actual remittances. It is however roughly estimated that allowing for the unofficial channels of money transfer, the total world remittances may currently stand at around $400 billion per annum (Factbook, 2010).

As the economic theory suggests, the long run net benefits from the employment of foreign workers is expected to be positive for all parties involved. Remittances generate a number of positive contributions to economic development of the recipient countries by reducing poverty, as well as increasing aggregate investment and promoting growth. Moreover, the impact of immigration on host countries, as documented in the literature, covers a wide range of issues and effects on a number of macro indicators such as relative wages and prices, market segmentation, government spending, investment and money supply, factor productivity, competitiveness, and real effective exchange rates.

Whilst a large number of academic research outputs in this area has been dedicated to the role of immigrants' remittances on the development of the recipient countries, to date very little work has been conducted on the potential impact of remittances upon the macroeconomy of the host countries.[1]   The main reason behind this unbalanced research activity is that remittance flows are the second largest stable source – behind FDI – of external funding for most developing countries; hence such flows are being treated as one of the major sources of economic growth, public debt management, and economic development of the recipient countries.[2]

However, over the past few years, some interesting papers have emerged, aiming to examine the real potential roles that remittance flows can play on the macroeconomy of the host countries. In particular, one of the earlier works in this area by El-Sakka and McNabb (1999) identifies a set of macro indicators of the host country which would be directly or indirectly affected by the magnitude of remittance flows. Sayan (2004) has extended this type of analysis by examining output fluctuations that remittances can cause in both the host and the home countries. On measuring the extent of remittance flows upon the GCC economies, Razgallah (2008) has used the Dutch Disease framework to argue that remittances contribute significantly to lowering the appreciation of the host nation's real effective exchange rate. Finally, a more comprehensive analysis of remittances effects on the GCC has been conducted by Naufal and Termos (2009). Their analysis, primarily based on a single equation for the panel data relating to 1971-2004, show that the oil price, and GDP per capita of remittance receiving nations are highly significant in determination on flow of remittances from the GCC countries.

In this paper I aim to investigate the possible dynamic inter-relationships which may exist between the outflow of remittances and the macro indicators of the GCC countries, enabling us to evaluate the real net benefits of remittances on economic recovery and sustained growth of the region. In effect, the research's objectives are in line with that of Naufal and Termos (2009), but the econometric approach will be different. It can be argued that through this research I will be able to test the validity of the reported findings from Naufal and Termos (2009). In furnishing our analysis, I have used the data relating to outflow of remittances and macro indicators of GCC over the period 1990-2010.

2.   Remittances in GCC: an evaluation of deterministic factors

The demand by the GCC states for foreign workers is a derived demand, primarily driven by oil revenues and other related retail/service activities. Moreover, the GCC labour market is highly segmented in that the public sector being the major employer of local workers, whilst the private non-oil sector being primarily engaged in recruiting foreign workers at lower wages.[3] Foreign workers to GCC mainly come from three sub-regions of Asia: Middle East and North Africa (primarily from Egypt, Jordan, Syria and Yemen), Near East (India, Pakistan and Bangladesh), and Far East (Indonesia and Philippines). By the end of 2009, it is estimated that a total sum of around $32 billion were remitted out of GCC by all the 12 million workers, producing a per capita remittance of $2,700, and that being nearly twice the size of the average of these countries income per capita.[4] Since the new millennium, outflow of remittances has been growing steadily at an average rate of 10% per annum. Currently, the share of GCC out of total world's outflow of remittances stands at around 12%.

Table 1 gives the breakdown of the shares of remittances out of GCC over the period 1990-2010, based on the origin of immigrant workers. As these figure suggest, up to 1995, the workers from MENA states had up to 45% of the total share of the remittances, followed by the Philippines and Indians/Pakistanis. However, as this table shows, since 1995 the share of MENA has been declining rapidly, currently standing at a mere 10%. On the other hand, between 1990 and 2010, the shares of each of the Near East and Far East workers have nearly doubled. These figures tally with the estimates of MENA workers population in the GCC, indicating that their share out of total population of foreign workers has dropped from 55% in 1990 to 25% in 2008. One of the main reasons behind this marked change in demand for MENA workers, and hence reduction in their share of remittances, relates to the fact that the customer-based service industry - particularly retail and hospitality sectors – in GCC has grown and transformed over time, requiring the kind of skilled quality customer care service that could not be offered by the unskilled/semi-skilled MENA workers. On the other hand, this transformation has allowed the GCC employers to demand for more skilled Near/Far Eastern workers, who have shown to be more capable of offering quality customer-care service.

Table 1: Share of Remittances out of GCC, by origin of foreign workers

	MENA	Near East	Far East
1990 – 1995	45.0	24.0	31.0
1995 – 2000	23.0	27.0	50.0
2000 – 2005	15.0	36.0	49.0
2005 - 2010	10.0	44.0	46.0

Source: World Bank.

The scale of annual remittances is highly significant as it represents around 4%-5% of the GCC's average incomes. Moreover, Saudi Arabia – ranked as the second in world ranking of remittance providing nation - alone is responsible for about one-half of the total annual outflow of remittances. However, given that the total stock of foreign workers being about 50% of total population of GCC, their size of remittances does not appear to be large.[5] Assuming that all the outflows of remittances would be saved in the foreign workers' homes, then it means that 50% of population of GCC (foreign workers) exhibit a small saving ratio of around 5%. In contrast, the historic saving ratio of the average GCC indigenous household is around 40%, and that being 8 times that of the foreign workers.

Assuming rationality in part of the foreign workers, it is theoretically valid to postulate that, *ceteris paribus*, real interest rate differentials between the immigrant workers' home and that of the host country can act as a deterministic factor behind outflow of remittances. This is to say that if the foreign worker realises that in real terms he would be offered a higher returns if he kept his funds in the host country, he would, as the theory suggests, remit less in favour of investing in his host country. As figure 1 show, the real interest rate differential – GCC real interest rates minus the weighted average of real interest rates of the nine recipients of remittances – has been positive up to 2002. However, since then, mainly due to GCC's deliberate policy of closing up the gap with the US Federal funds rate, the historic picture has reversed; hence pushing up outflow of remittances rather than absorbing them into the banking system.

Figure 1: Real Interest Rates Differential
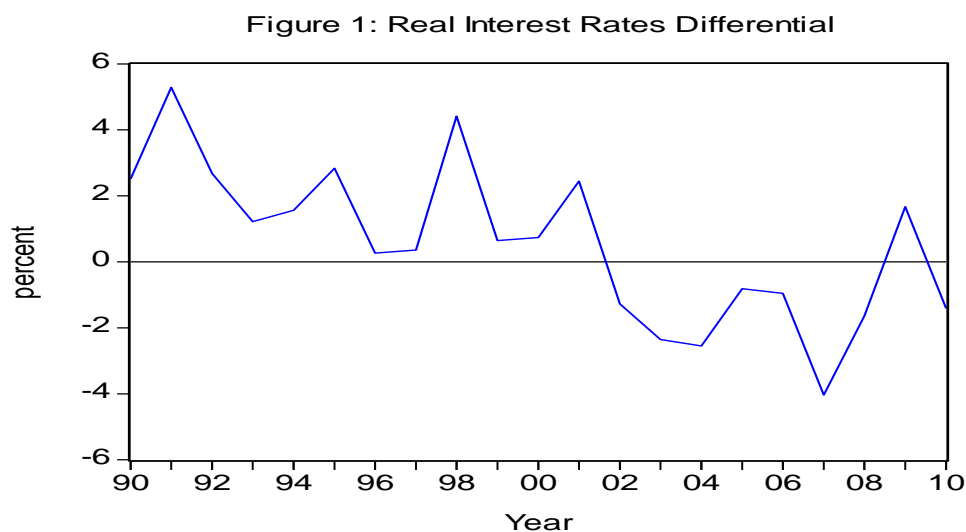
As the pre 2002 records for GCC suggest, foreign workers saving in the host countries have never been significant, despite such attractive real interest differentials. In effect, it can be argued that the GCC banking system has failed to efficiently attract such funds. Moreover, as has been highlighted in Ratha and Sirkeci (2010), non-economic factors such as low labour mobility, visa restrictions, workers attitude to consumption and savings, and cultural characteristics tend to be responsible for such large and significant rates of remittances. In the light of this finding, it is fair to assume that in the case of GCC, changes in macro indicators aiming to reduce remittances may fail to work, as other non-economic factors appear to be more powerful. On the other hand, remittances can directly or indirectly affect macro indicators, implying that there is a one-way direction of causality from remittances to GCC macro indicators.

Therefore, it can be said that once outflow of remittances has occurred, then the macro indicators need to be re-adjusted, if wish so, to maintain the steady-state equilibrium. The immediate negative effect of remittances is on the broad money supply, as the wages which are supposed to add to the total money supply is otherwise drawn out of circulation and sent abroad. This process, therefore acts as a

contractionary monetary policy, hence has the power to keep inflation in check. However, as remitters demand for more foreign currencies from the host country's central bank, the demand for such currencies would go up, placing downward pressure on the value of local currency. In the short run, however, if the central bank wishes to keep the value of the local currency intact, then some forms of financing through reserves must occur. On the whole, *ceteris paribus*, this process turns out to place downward pressure on local currency, reducing the real effective exchange rate, hence improving the economy's competitiveness.

On the other hand, such transactions would increase the supply of local currency in the central bank. These funds can be transferred back to the economy if the central bank wishes to offset the remittances effect, using treasury bonds. Given that there are very limited government securities in GCC for which the central banks can use, the overall effect of remittances will remain to be contractionary, hence reducing the money multiplier in the economy. Large remittances over the past few years may have well been responsible for the recent decline in money velocity in the GCC.

3.   Data, Variables and Econometric Approach

Several sources have been consulted in collecting the relevant data for this study. The main source of data on the outflow of remittances and population of remitters comes from the World Bank data site. Apart from the series of GDP per capita (at current US$), most macro data have been collected from the GCC countries' respective central banks. In contrast to other studies which have used remittances per capita as a measure of impact, here I have used remittances-GDP ratio, shown as REM, as the real impact of remittances on the economy.

Moreover, and in contrast with Nauffal and Termos (2009), I will not be using the oil price variable in my analysis, since the aim of research here is to analyse the effects of remittances on economic indicators, and not the impact of oil prices on remittances. In building the real interest rate differential (RIRD) series, I have calculated a series of weighted average of the annual real interest rates of the nine major foreign working participants, and deducted it from the each GCC countries' real interest rates. Inflation rates (INF) in GCC countries may be regarded as probably the only macro indicator which could affect remittances, as large unanticipated rates of inflation may force foreign workers to remit more. At the same time, it may be argued that large magnitudes of remittances can have impact on inflation rates through money supply.

Furthermore, I plan to consider government spending (GS) as another variable in my analysis, since it is expected that remittances may have an adverse effect on spending, the extent of which needs to be estimated. As has been discussed in Nauffal and Termos (2009), the continuous remittances can seriously reduce the government spending multiplier, hence weakening the effectiveness of fiscal policy. Finally, in testing for the extent of effectiveness of remittances on the price of local currency, I have constructed the real effective exchange rates (REER) for each and every GCC country over the period.

To evaluate the extent of relationship between REM and our macro indicators in GCC, I present Table 2, showing the simple partial long run elasticities over 1990-2010. In the case of Bahrain, as these estimates suggest, REM appears to affect all macro indicators adversely, and that they are all being statistically significant at the 1% level. The main impact is exhibited by REER, as 1% increase in REM tends to

reduce the effective exchange rate by 2.918%. Money supply and government spending, as shown in this table, also exhibit significant elasticities but they are less than unity. Qatar and Kuwait also show similar elasticities for MS and GS, but with lower values for REER and RIRD. In the case of Oman, with the exception of MS elasticity, the rest show small and insignificant values, indicating that Oman's economy appear not to be seriously affected by the outflow of remittances. As for Saudi Arabia, apart from the inflation elasticity, the other partial elasticities have turned out to be small and insignificant; and that being primarily due to the large size of Saudi's economy not being affected by outflow of remittances. With the exception of GS and INF elasticities, the other estimates, for the case of UAE, have turned out to be insignificant. On the whole, as shown in table 2, in most cases the partial elasticities relating REM to INF, to GS and to MS have turned out to be negative, relatively large and statistically significant.

Table 2: Partial Elasticities of Macro Indicators to REM, 1990-2010

	GS	MS	REER	RIRD	INF
Bahrain	-0.303*	-0.854*	-2.198*	-0.453*	-0.073*
Kuwait	-1.521*	-0.152*	-1.477*	-0.310*	-0.091*
Oman	-0.049	-0.588*	-0.188	-0.018	-0.026
Qatar	-0.882*	-0.628*	-0.035	-0.039*	-0.029*
S Arabia	-0.017	-0.034	-0.014	-0.017	-0.031*
UAE	-0.847*	-0.155	-0.015	-0.009	-0.049*
GCC	-0.604*	-0.412*	-0.687	-0.132	-0.036*

* Statistically significant at the 1% level.

Most studies in the area of remittances have used single equations, regressing remittance per capita on a series of supposedly independent variables, such as government spending, GDP, oil prices, interest rates. Such studies tend to assume that macro indicators of the host economies may have potential effects on the magnitude of remittances. However, as stated earlier, the extent of the impact of non-economic factors on remittances is so immense that macro economic indicators can not possibly match with. Moreover, the direction of causality is the reverse: remittances cause changes in macro indicators, not the other way around. Prior to proceeding with our econometric approach, I present table 3 which shows the results of the Ganger causality test between remittances and macro economic indicators for all the six GCC countries over the period 1990-2010.

Table 3: Granger Causality - Remittances and Selected Macro Indicators

Bahrain
    REM‹=› INF   REM=› MS   REM=› GS   REM#›RIRD   REM#› REER

Kuwait
    REM‹=› INF   REM=› MS   REM#› GS   REM=›RIRD   REM=› REER

Oman
    REM=› INF   REM=› MS   REM=› GS   REM=›RIRD   REM=› REER

Qatar
    REM‹=› INF   REM‹=› MS   REM=› GS   REM#›RIRD   REM=› REER

Saudi Arabia
    REM=› INF   REM #› MS   REM #› GS   REM=›RIRD   REM=› REER

UAE
    REM‹=› INF   REM #› MS   REM =› GS   REM #›RIRD   REM=› REER

As this table indicates, apart from the inflation series (INF), in only one case (Qatar) there is a bi-causal relationship between remittances and money supply (MS). However, in all other cases, remittances are shown to be causally determining macro indicators, and not the other way around. Interestingly, as the table shows, inflation has turned out to be influenced by remittances for all cases. Moreover, in four cases there is a bi-causal relationship between remittances and inflation, indicating that higher inflation could lead to changes in remittances.

Prior to making a decision on the choice of our econometric method, one more test is required: the unit-root test for stationarity. A series is said to be stationary if the mean and auto-covariances of the series remain independent of time. Most economic time series are normally first-order [I(1)] stationary, meaning that once being first-differenced then they become stationary. In the spirit of the so-called cointegration, if X and y both exhibit I(1), then there may exist a long run linear relationship running from X to y. In short, in any given non-spurious equation, the dependent variable and independent variables must be of the same order of stationarity. However, if X and y exhibit different order of stationarity, then according to cointegration any linear relationship between the two variables is unstable, unreliable and spurious. There are several types of unit-root tests for which Dickey-Fuller is the most commonly used test. An appropriate test here for this study with a relatively small sample size, however, is offered by Kwiatkowski-Phillips-Schmidt-Shin (1996), known as KPSS test for stationarity.

Table 4 here presents the statistically significant results of orders of stationarity, using KPSS method, for our macro indicators for the six GCC countries, over the period

1990-2010. Apart from INF variable which consistently exhibits I(1) across countries, the other variables tend to possess different orders of stationarity. Note that REM appears to be the most volatile and unstable variable in so far as stationarity goes. Moreover, MS and REER tend to be less stationary than others. Based on the rules of cointegration, for any given GCC countries, according to this table, one cannot run any single equation consisting of REM, INF, MS. This is because the order of differencing of these variables, for any given country, is not identical.

Table 4: Results of unit-root test using KPSS method: GCC, 1990-2010

	REM	INF	GS	MS	RIRD	REER
Bahrain	I(1)	I(1)	I(1)	I(2)	I(1)	I(2)
Kuwait	I(1)	I(1)	I(1)	I(0)	I(0)	I(2)
Oman	I(2)	I(1)	I(1)	I(2)	I(0)	I(1)
Qatar	I(1)	I(1)	I(1)	I(1)	I(1)	I(2)
S Arabia	I(2)	I(1)	I(1)	I(2)	I(2)	I(1)
UAE	I(2)	I(1)	I(2)	I(2)	I(1)	I(2)
GCC	I(2)	I(1)	I(1)	I(2)	I(1)	I(2)

In consideration of the findings from tables 3 and 4, it is now evident that no single equation can serve to fully determine the impact of remittances on the GCC macro indicators. The only way one can see the overall impact of remittances on all these macro indicators is to consider a dynamic system of simultaneous equations capable of delivering all the inter-relationships.

In the absence of any theoretical structure vis-à-vis the relationship between remittances and the macro indicators, one resorts to a non-theoretical but dynamic simultaneous system of equations, known as vector autoregressive (VAR) model. The

advantage of VAR over competing models is that it allows modeller to build a dynamic multivariate simultaneous system of equations consisting of all the variables in question. Unlike the OLS or any generalised linear models, VAR assumes possible correlations amongst random error terms generated by each and every equation in the system; hence offering the final results based on reduced form.[6] Moreover, a useful by-product of VAR is the so-called impulse-response functions, implying the response over time of each and every variable in the VAR to a one-time shock in any given variable. Here, I will be interested to examine the responses registered by our macro indicators in each and every GCC state, following a one standard deviation increase in their respective outflows of remittances.

4.   Evaluation of Estimated Findings

In consideration of what has been said earlier, the way forward is to apply the VAR method to our data. As indicated earlier, we are interested to observe the extent of potential influences that REM can have on GCC's economies. In building a VAR model, one needs to establish the order of appearance of variables in the system. Based on our earlier evidence it is fair to argue that once REM has occurred, then it is expected to firstly affect MS and REER, followed by GS, INF. Following several trials, it was noticed that RIRD had shown no significant changes, and so it was removed from our model. This ordering may be, then, presented as {REM, MS, REER, GS, INF}.

In furnishing this objective, one needs not to report the reduced form estimated elasticities derived form application of VAR; but to examine and analyse the impulse-response functions as they do exhibit the macro indicators responses to a one-off

shock to REM.[7] The impulse-response functions are derived on the basis of standard deviation increase in REM across board, and are shown in figures 2 to 8 for each and every country and for the overall GCC. The extent of significance of these functions is shown by their respective confidence intervals, built on basis of twice the standard errors of the estimated impulses.

Figure 2 shows the responses made by our four macro indicators in Bahrain, following a 1 SD of REM. As the MS and GS responses are concerned, a shock of 1 SD in REM may disturb money balances and government spending for years. However, the elasticities relating MS and GS to REM are rather small in the range of 0.2-0.5. Similarly, INF is shown to be reduced but it takes much shorter time to arrive at its original level.

Figure 2: Responses to One S.D. Innovations, BAHRAIN
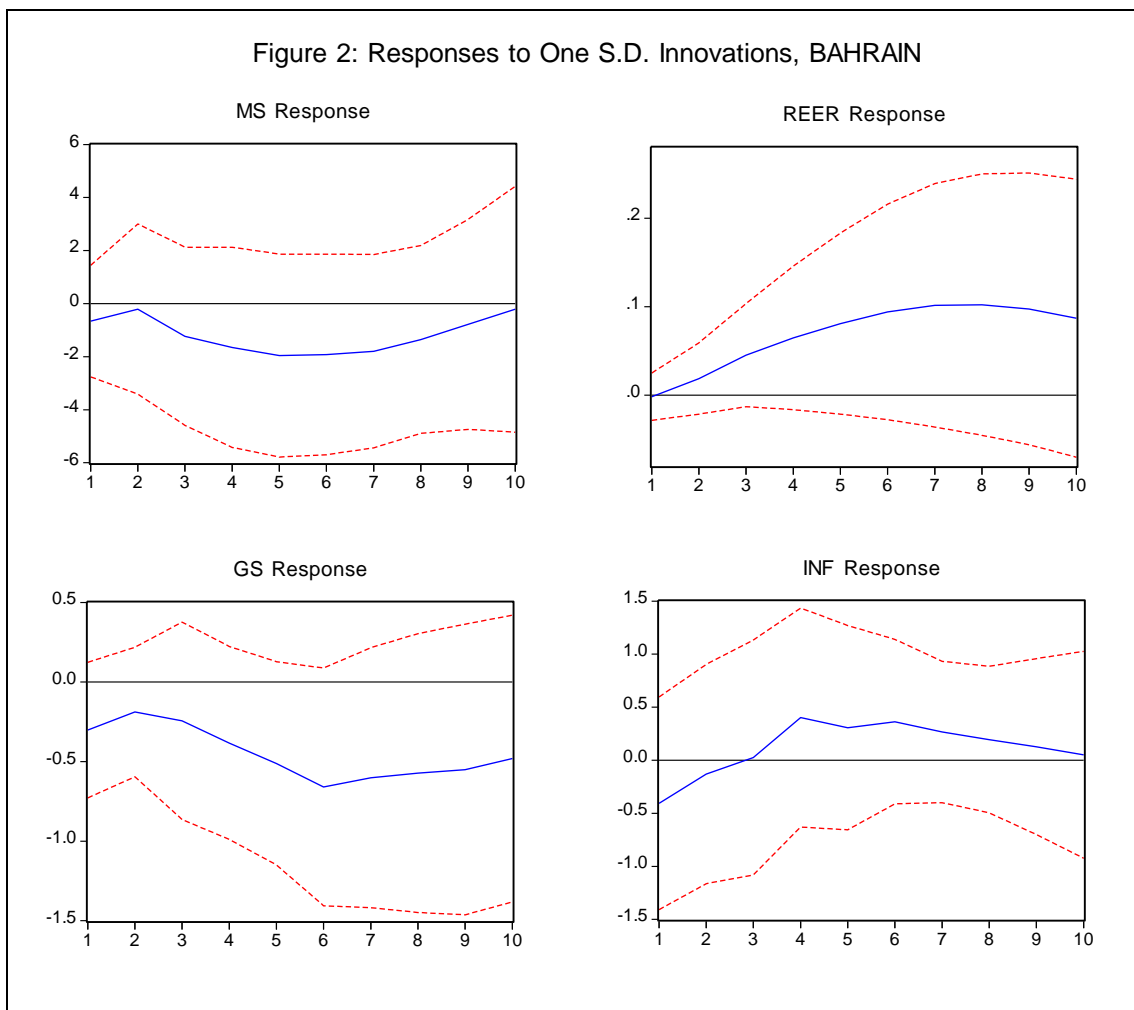
In the case of Kuwait, shown in figure 3, similar picture emerges for MS, but exhibiting much lower elasticity. REER exhibits a high value of elasticity of around 3.5% initially, but dropping fast over time. GS response also shows small values but oscillates over time. The impact of REM on INF as shown in here is sharp, but with further oscillation.
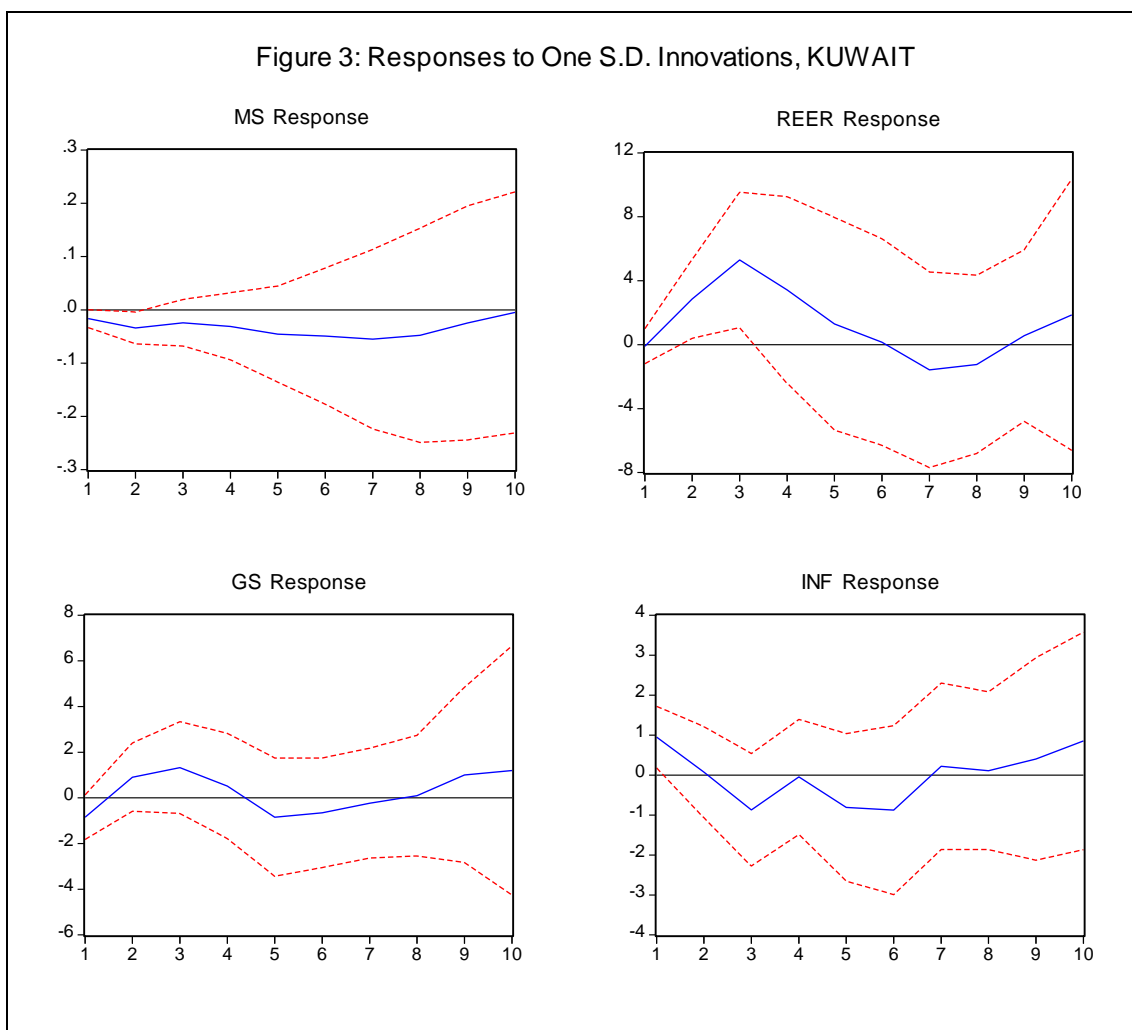
Figure 3: Responses to One S.D. Innovations, KUWAIT

Figure 4 presents the response functions of our four variables for Oman. MS elasticity shows to be positive but very small and insignificant. The response by GS is shown to be around zero and insignificant, but tend to be varying at higher rates over time. The elasticity attached to REER here appears to be negative but very small and insignificant. Nevertheless, the INF response shows sharp decline following an impulse to REM, but returning to origin within 4-5 years.

Figure 4: Responses to One S.D. Innovations, OMAN
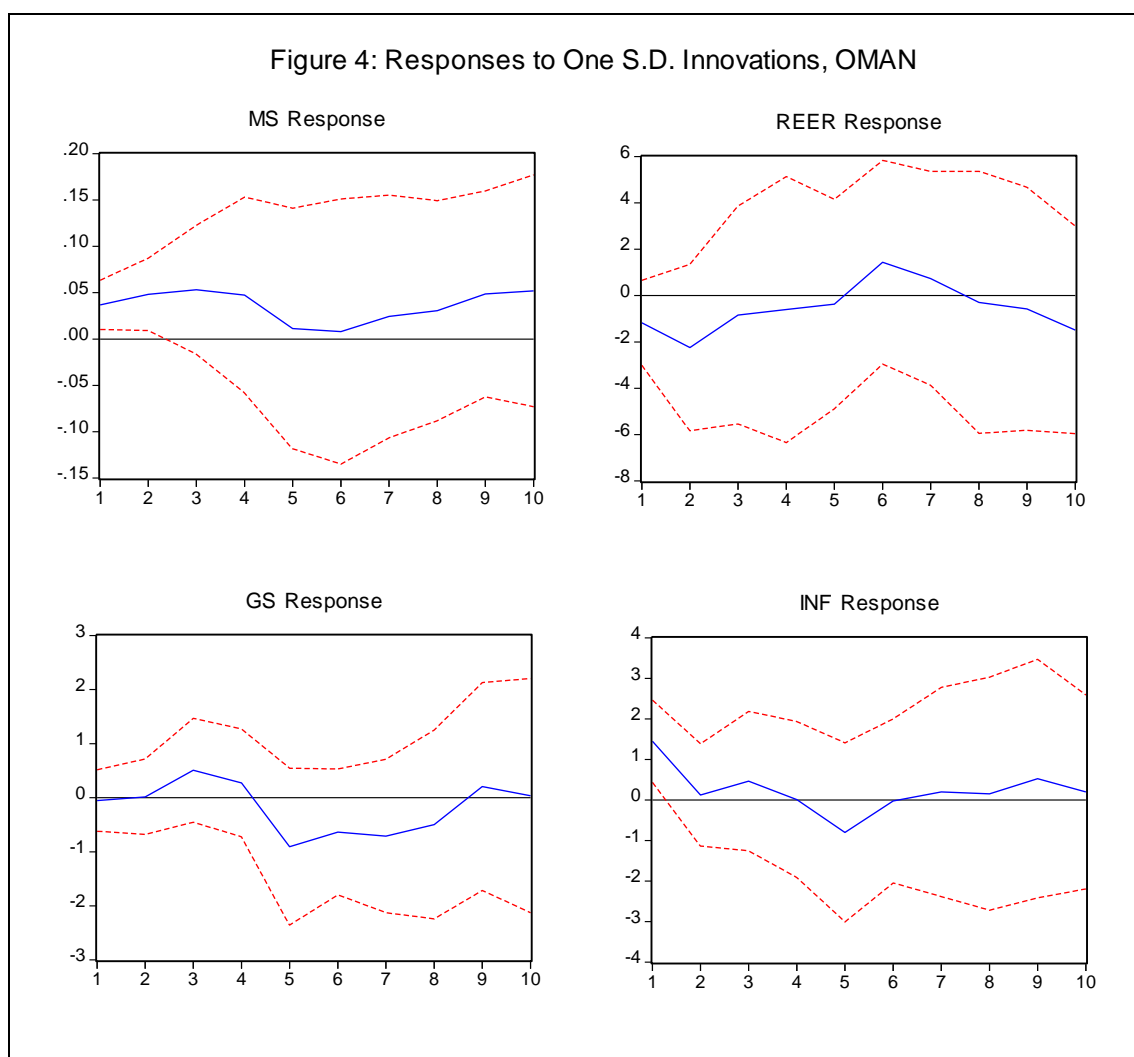
As for Qatar, the response shown by MS and GS appear to be hardly significant and returning to equilibrium quite fast. REER shows large negative elasticity but tend to return to equilibrium within two years. Finally, the inflation response to impulse of REM is by falling slowly but oscillating gradually around the initial value.

Figure 5: Responses to One S.D. Innovations. QATAR
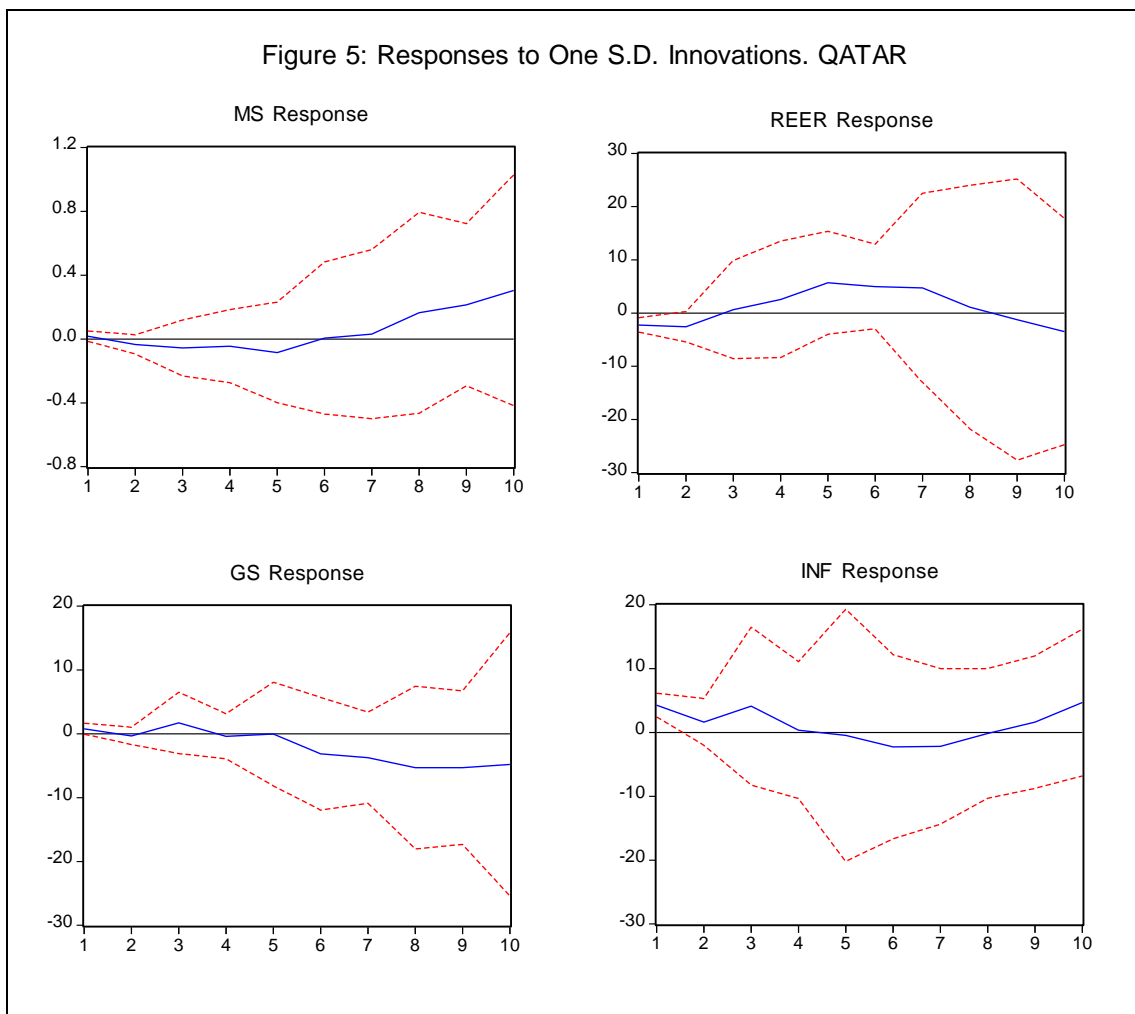
In the case of Saudi Arabia, INF response is very prominent with relatively large elasticity, declining sharply following a one SD increase in REM. The response picture for REER is not clear as it shows to increase following a one SD increase in REM – contrary to our theoretical stance.

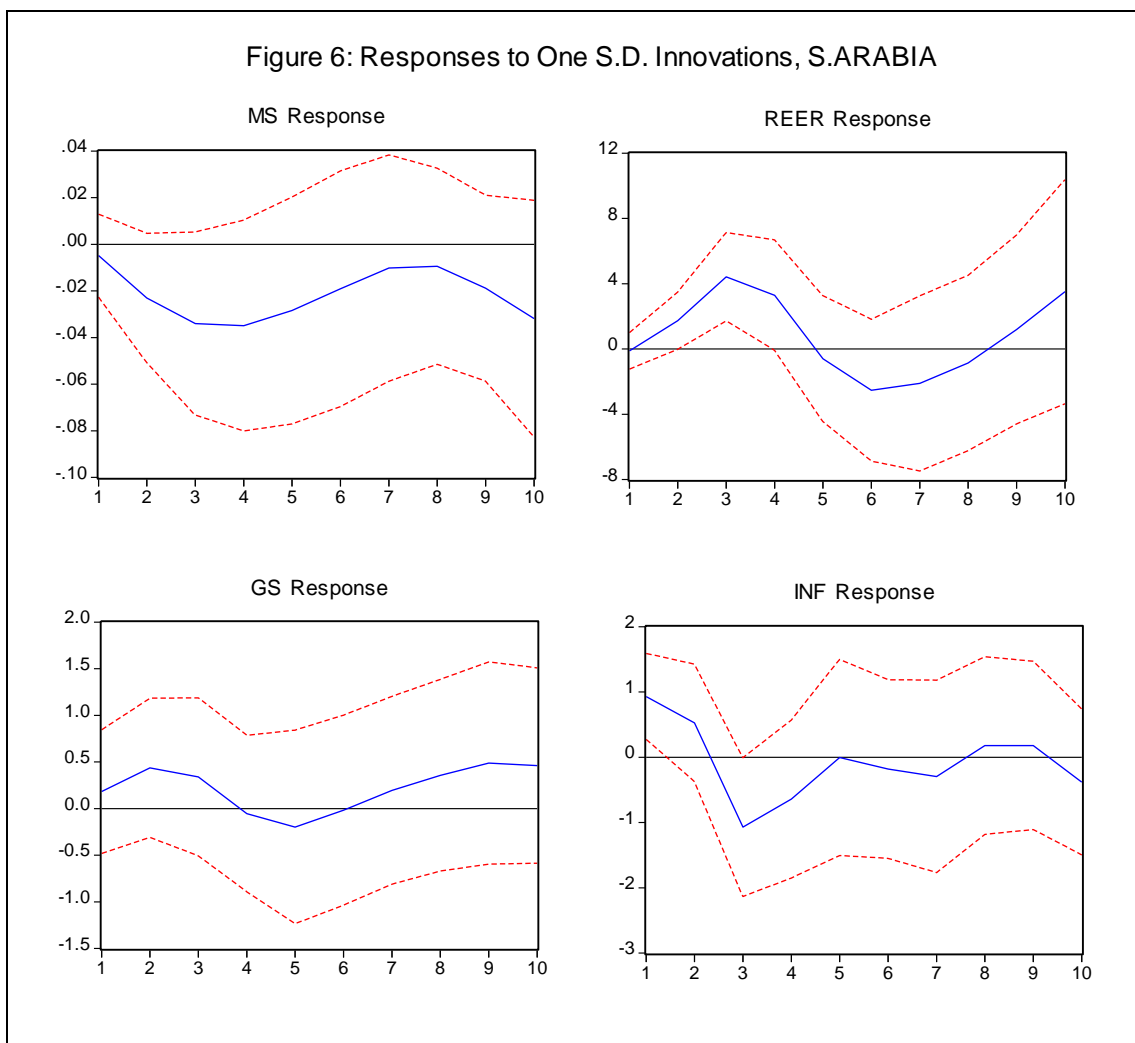Figure 6: Responses to One S.D. Innovations, S.ARABIA

Figure 6 presents the impulse functions of macro indicators for UAE. MS and GS show decline following the REM shock, but at very small degrees. INF response function shows decline following the shock but after 2-3 years. As the picture for

REER response indicates, it is appreciated following the shock and follows a slow

return to equilibrium.

Figure 7: Responses to One S.D. Innovations, UAE
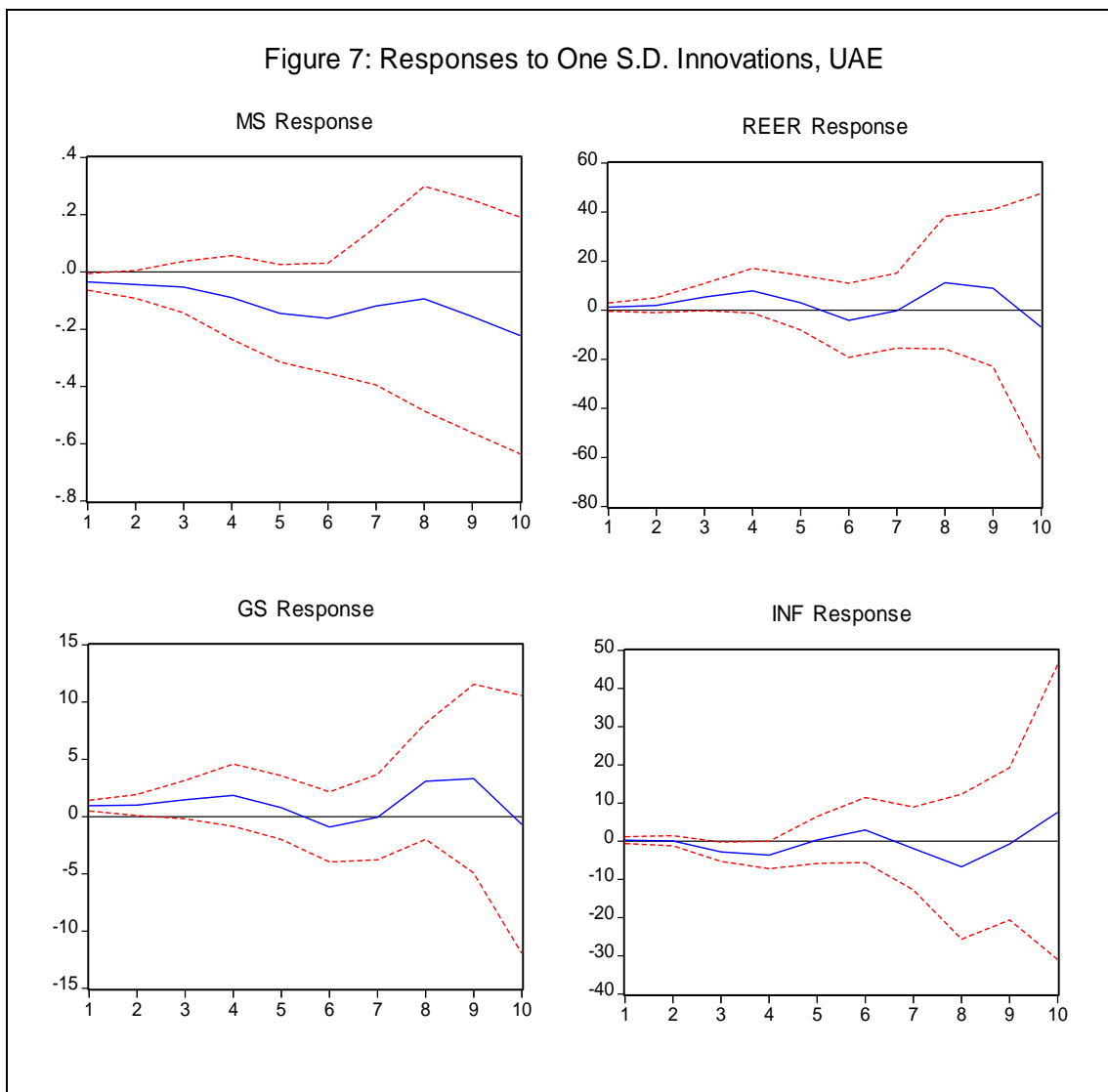
On the whole, as the responses for the entire GCC in figure 8 is concerned, MS, GS

and INF show declines following a one SD increase in REM, but to varying degrees.

The impulse function for REER does not offer any meaningful picture, as it remains

almost unchanged in the first two years, but moves upward gradually.

Figure 8: Responses to One S.D. Innovations. GCC
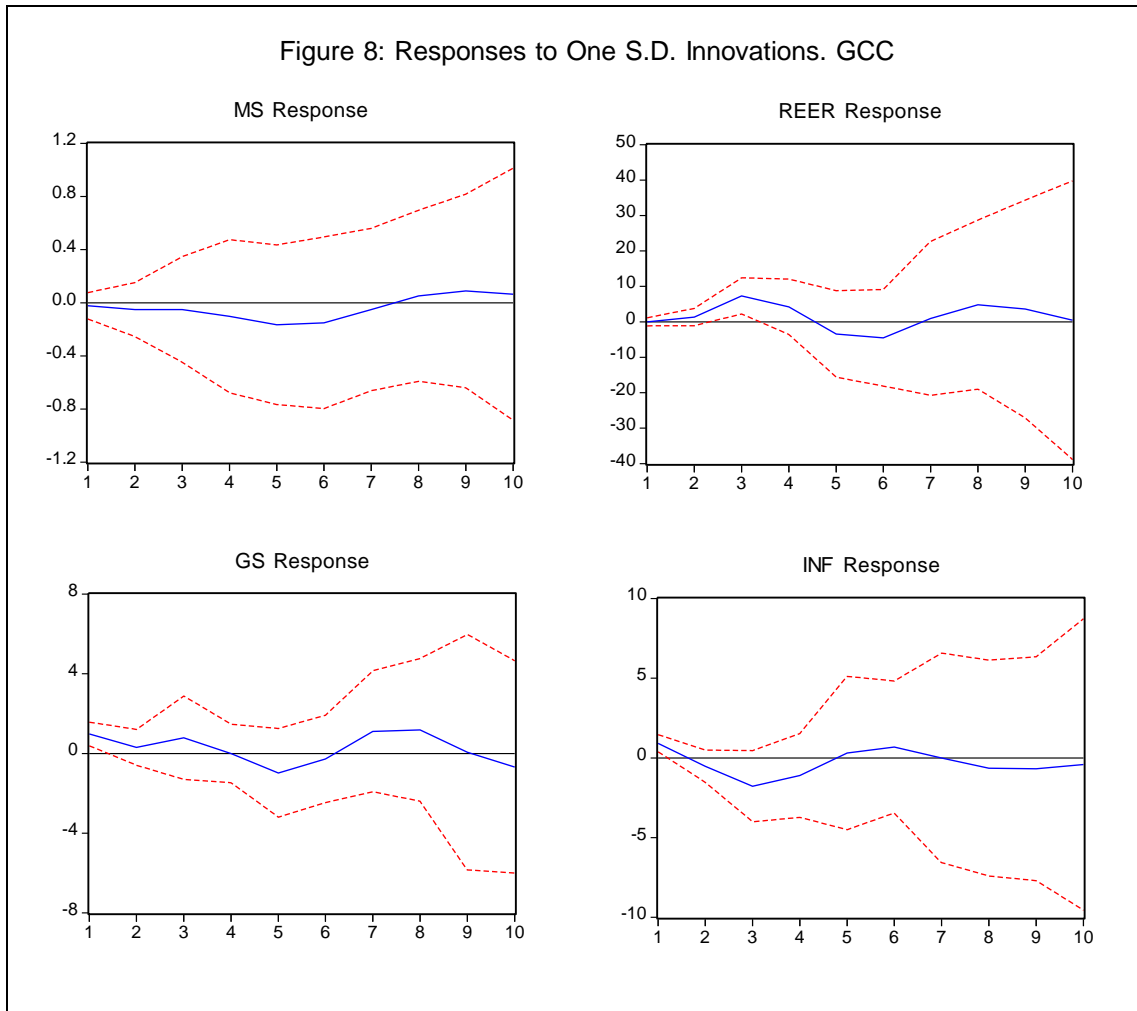
5. Summary and Conclusions

At the times where most countries of the world strive to cope with the pains of global recession, remittances have shown to be rather resilient to economic downturn. In particular, despite the slow growth rates seen in the Middle East, the GCC countries – thanking steadily rising oil prices - as one of the main sources of remittance have been able to maintain the standards for which the foreign workers have enjoyed in the past. It is vitally important for the developing economies to receive the steady streams of such outflows. However, the potential adverse impact which remittances can have on the economy of the host country should not be ignored.

In an attempt to measure the extent of remittances on the macro indicators of GCC, I have demonstrated the serious weaknesses of the previous models. In this paper I have shown that remittances must be treated as an independent variable, affecting the macro indicators, not the other way around. In so doing, it was shown that any single equation based on application of OLS or GLS, may fail to deliver the true extent of remittances on the economy. In so doing, I resorted to the application of a more dynamic, versatile and workable system of simultaneous equations – vector autoregression model. The paper has demonstrated that the use of VAR would lead to the construction of a policy tool, known as impulse-response functions.

The estimated response functions for the four main macro indicators in each and every country of GCC were presented. As has been predicted by the theory, the findings show that money supply and government spending tend to be adversely affected following the remittances shock. However, the extent of impact on these two macro variables appear to be limited, and in some cases, insignificant. There is, according to response function, no clear cut vis-à-vis the impact on real effective

exchange rates through remittances. Conversely, in almost all cases, remittances have demonstrated to cause inflation to fall immediately, but it would return to initial level within a short period.

In conclusion, according to our observations and estimated findings, it seems that the GCC have been able to cope with short run shocks to the economy following outflows of remittance. In the light of this recent worldwide recession, however, massive remittances can cause further burden on the economy, where more funds are required to finance the targeted government spending and the pegged currencies. Against all this, it is believed that the GCC countries have been lucky enough to be in a position, envied by others, to enjoy high oil prices offsetting the burden of economic downturn.

Endnotes

[1] For example, amongst many, see the following for their research works on the role of remittances on economic development of recipient countries. Massey et al. (1998), Ratha (2003), Koc and Onan (2004), Cohen and Rodriguez (2005), Chami et al. (2005), Cohen (2010).

[2] See Ratha (2003) and Chami et al. 2008.

[3] On average, the share of nationals in the public sector is about 80%; whilst only 10% of local workers are recruited in private sector. This is mainly to do with the low levels of skills of the nationals failing to match with the private sector's requirements. For more details, see Razgallah (2009).

[4] The average figure of $1,450 per annum has been calculated by the author using the 2009 World Bank data on GDP per capita (at current prices) for the nine countries involved.

[5] World Bank, several years.

[6] Taghavi (2000), p.162.

[7] For the process of application and derivation of VAR see, amongst many, Watson (1994) and Stock and Watson (2001). The process of derivation and interpretation of response-impulse functions can be found in Eviews software.

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