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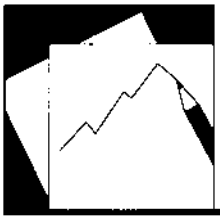

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Do the Gulf Oil-Producing Countries Influence Regional Growth? The Impact of Financial and Remittance Flows

Nadeem Ilahi and Riham Shendy

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Middle East and Central Asia Department

Do the Gulf Oil-Producing Countries Influence Regional Growth? The Impact of Financial and Remittance Flows

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Abstract

This paper tests the association between the Gulf Cooperation Council (GCC) countries' financial and remittance outflows and regional growth in the Middle East. The findings, based on 35-year panel data, indicate that growth rates of real GDP, private consumption and private investment in regional countries are strongly associated with remittance outflows from and the accumulation of financial surpluses in the GCC. Unlike in other developing and emerging market countries, growth in regional countries is not influenced by growth in the North, and is not export led. Linkages with the GCC could help sustain output growth in the regional countries in the face of the global economic slowdown and oil price shocks and could provide diversification gains to international capital seeking markets uncorrelated with Northern and emerging market countries.

JEL Classification Numbers: F15, F21, F42, F43, N15.

Keywords: Business cycle, emerging markets, growth linkages, North, South, Middle East, GCC, regional linkage, decoupling, divergence, convergence, remittances, capital flows.

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I. INTRODUCTION

This paper looks at the finance and growth linkages in the Middle East, in particular whether the oil-driven cycle in the Gulf oil producing countries—the Gulf Cooperation Council (GCC) countries—spills over to growth in the non-oil economies in the region.[2] While the GCC countries are not major trading partners of regional Middle Eastern countries their tendency to accumulate large balance of payments surpluses and their heavy reliance on guest workers from regional countries during oil booms suggests possible linkages through financial flows and remittances that could influence output growth in other economies in the region.

The findings, based on 35-year panel data from 8 regional economies—Egypt, Jordan, Morocco, Pakistan, Yemen, Sudan, Syria, and Tunisia—indicate that growth of real GDP in regional countries is strongly associated with that of remittance outflows from and the accumulation of financial surpluses in the GCC. This growth linkage comes through both private consumption and investment. Unlike in other developing and emerging market countries growth in regional countries is not influenced by growth in the North, and is not export led. The presence of such linkages could help sustain the growth of output in Middle Eastern countries in the face of the global economic slowdown and oil price shocks and could provide diversification gains to international capital seeking markets uncorrelated with markets in Northern and emerging market countries.

II. BACKGROUND

Economic theory is ambiguous about the direction of cross-country spillovers from trade, but points to a positive relationship as far as financial linkages are concerned. An investment and consumption boom in one country can spill over to others through a trade linkage, implying a positive correlation. However, if greater trade results in increased inter-industry specialization across countries, and industry-specific shocks drive business cycles, then output correlations may decline with greater trade (Kose and others, 2003b, 2003c).

Theory suggests greater financial linkages could increase co-movement in business cycles between countries. First, financial linkages could result in greater business-cycle synchronization by generating large demand side effects. If cross-border stock market exposure is high, then a decline in one country's stock market could induce a simultaneous decline in the demand for domestic consumption and investment goods in another (Kose and others, 2003a). Second, contagion effects that are transmitted through financial linkages could also result in heightened cross-country spillovers of macroeconomic fluctuations. Third, international financial linkages could stimulate specialization of production through the reallocation of capital in a manner consistent with countries' comparative advantage in the production of different goods. This implies that financial integration, in particular, should result in stronger correlation of consumption across countries.

The empirical evidence on the existence of linkages and cycle co-movement is quite convincing. Studies of inter-country growth cycle linkages, focusing on spillovers of Northern countries' growth on other Northern, emerging, and developing countries find that northern growth is

[2] The six countries of the GCC are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

strongly associated with growth in other countries. For example, Kouparitsas (2001) finds as high a correlation between North and South growth as between regions of the North, implying that the international business cycle also extends to the South. Arora and Vamvakidis (2004) find a U.S. growth slowdown reduces growth in the rest of the world by up to one-to-one. Lumsdaine and Prasad (2003) study the common component of international economic fluctuations and find evidence of a "world business cycle" as well as a distinct European common component.

Empirically, the role of trade as the channel of cycle co-movement is also clear. Pairs of industrialized countries that trade more with each other exhibit a higher degree of business cycle co-movement (see among others, Frankel and Rose (1998), and Kose and others (2003b, 2003c). More generally, Arora and Vamvakidis (2005) find a country's growth is strongly correlated with trading partner growth, even after controlling for common global and regional trends. In assessing the impact of U.S. downturn on global growth, the IMF (2007) argues for distinguishing between relatively benign mid-cycle slowdowns and serious U.S. recessions—indicated by a significant slowdown in U.S. non-oil import demand from the rest of the world.

Some empirical studies find that increasing globalization over the last two decades, including the rise of cross-border financial flows, have also played a role in spillovers, though the impacts are not all in one direction. While the degree of co-movement of business cycles of major macroeconomic aggregates across the G-7 countries has increased during the globalization period, which captures both trade and financial integration across the world (Kose, Otrok, and Whiteman, 2003b), growth in emerging markets countries is less and less reliant on northern growth and more on emerging South countries taken as a group (Akin and Kose 2007).

Growth spillovers from large regional countries to their neighbors have also been a focus in some studies. The Asian Development Bank (2007) finds China has emerged as an important nexus between intra- and inter-regional trade and financial linkages for Asia whereby economic interdependence arises between China and the rest of Asia at one end and between China and the G3 countries of the North at the other. Even though the share of G3 markets in Asia's total exports has been on a decline, Asia's intra-regional trade dynamics are tightly associated with the U.S. non-oil import cycle.

In their study of whether the countries traditionally linked to Russia decoupled from it after the 1998 crisis, Shiells and others (2005) find that Russian growth was indeed significantly associated with growth in regional economies, but that the link weakened after the crisis. However, they cannot directly ascribe the initial strong correlation and the subsequent weakening to changes in exports to Russia. Without formally testing, they posit that remittance and financial flows (including a slowdown in global financial flows to emerging markets in the wake of the Russian crisis) may have been important.

Arora and Vamvakidis (2005) find that South Africa is an "engine" of growth for the rest of Africa. There is a strong growth correlation, though it cannot be explained through an explicit trade linkage (i.e. through net bilateral exports to South Africa). They ascribe it to greater efficiency, economies of scale and technological gains associated with trade, as well as factors that go beyond trade—namely, economic sentiment and financial linkages.

This paper contributes to the literature on finance and growth relationships across countries in two ways. First, to our knowledge, this is the first study that explicitly tests the financial and remittance channel through which a large country, or group of countries, impact growth in dependent regional economies. Second, this study adds to the heretofore nonexistent literature on the externalities of the GCC's oil-related cycle on growth in regional countries. While there is recent evidence that financial flows from the GCC to regional countries have become important (see International Monetary Fund, 2008) there is little quantitative assessment of the role such flows play in growth in regional countries.

III. HYPOTHESES AND EMPIRICAL SPECIFICATION

This paper specifically tests the effect on growth in individual Middle Eastern countries of growth in GCC remittances and financial flows, while controlling for the effect of growth in the North (mainly OECD) and, emerging South countries.[3] A country's growth rate, $\Delta y_{i,t}$, is regressed on these aggregate group growth variables, $\Delta Y.R_t$, which are output-weighted and time varying and are given by:

$$\Delta Y.R_t = \sum_{i=1}^{L^R} (yw_{i,t-1}^R \Delta y_{i,t})$$

where:

$\Delta y_{i,t}$ = annual growth rate of constant local currency values of GDP for country *i* in period *t*.

R = aggregate group Northern countries (*North*) or emerging South (*EmSouth*);

$yw_{i,t-1}^R$ = time-varying, one period lag output weights for each country *i*, in group *R* at time *t* and is given by:

$$yw_{i,t}^R = \frac{Y_{i,t}^*}{\sum_{i=1}^{L^R} Y_{i,t}^*};$$

$Y_{i,t}^*$ = GDP, in PPP terms and;

L^R = number of countries in each group;

[3] **North**: Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, N. Zealand, Norway, Portugal, Spain, Sweden, Switzerland, UK and USA. **Emerging South**: Argentina, Brazil, China, Hong Kong, Colombia, Chile, Egypt, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Singapore, South Africa, Thailand, Turkey, Venezuela, Bolivia.

Financial and remittance flows from the GCC are expected to influence growth of countries in the region by financing consumption and investment. As there are no data on bilateral financial flows between the GCC and regional countries, we use the accumulated current account balance of GCC countries as a ratio of the combined GDPs of the regional economies as a proxy for the size of financial flows from these countries. To the extent that the financial channel of regional growth is likely to be both direct and indirect—i.e., in addition to bilateral flows of portfolio and direct investment, there may also be indirect intermediation through the global financial system—our current account variable may appropriately capture the strength of financial flows from the GCC.

The existing literature on the growth impacts of remittances on recipient countries is ambiguous. Theoretically, remittances can aid growth through enhancing investment in physical capital, facilitating human capital formation and deepening the recipient economy's financial system. But remittances can also dampen growth through Dutch disease effects on the real exchange rate (Chami and others, 2008, provide a detailed literature review). Empirical evidence does not strongly support the view that remittances spur investment and growth (Chami and others, 2008; Lucas, 2005). Evidence from countries that send labor to the GCC reveals that remittance inflows largely result in consumption booms, and are primarily channeled into housing construction and purchases of durables. (Taylor and others, 1996). However there is some evidence of indirect positive impact on financial development in recipient Middle East countries (Billmeier and Massa, 2007).

Detailed data on bilateral remittances from the GCC countries to others in the region are not available, nor is remittance outflow information for all GCC countries for the 1970s. We thus use remittances from Saudi Arabia as a proxy for GCC remittance outflows; Saudi Arabia accounts for three quarters of all GCC remittances during the years data for all 6 GCC countries are available.

The main driver of the link between the GCC and regional countries is, of course, oil prices. Sustained oil booms result in the accumulation of financial surpluses in the GCC and well as remittance outflows. Thus we expect a sustained drop in oil prices will impact GCC growth and dry up remittances and financial outflows from the GCC, adversely affecting growth in GCC-linked countries. Our hypothesis here is contrary to Roache and Gradzka (2007) who find that remittance outflows from the U.S. are not a function of the U.S. growth cycle. In a separate regression, we found GCC remittance outflows were strongly correlated with GDP growth in GCC countries. To independently control for the effect of oil price changes on regional growth, we also add the growth in real oil price in the specification.

The growth regression specification is then given by:

$$\Delta y_{i,t} = \beta_0 + \beta_1 \Delta Y.North_t + \beta_2 \Delta Y.EmSouth_t + \beta_3 \Delta GCC.REM_t + \beta_4 GCC.FinFlow_t + \beta_5 \Delta Poil_t + \beta_X X_{i,t} + \varepsilon_{i,t} \quad (1)$$

where:

$\Delta GCC.REM_t$ = annual real growth rate of outflow of GCC remittances (Saudi Arabia);

$\Delta GCC.FinFlow_t$ = GCC financial outflows proxied by the ratio of GCC current account balance to aggregate GDP of regional countries;

$\Delta Poil_t$ = annual real growth rate of oil prices and;

$X_{i,t}$ = standard growth controls, given by openness, investment, government spending, population, inflation and initial GDP per capita.

In our estimation, we employ both pooled time series and cross section ordinary least squares and fixed effects regressions. As the results are quite similar under the two specifications, we report only those for the former for reasons of brevity.

IV. DATA AND SUMMARY STATISTICS

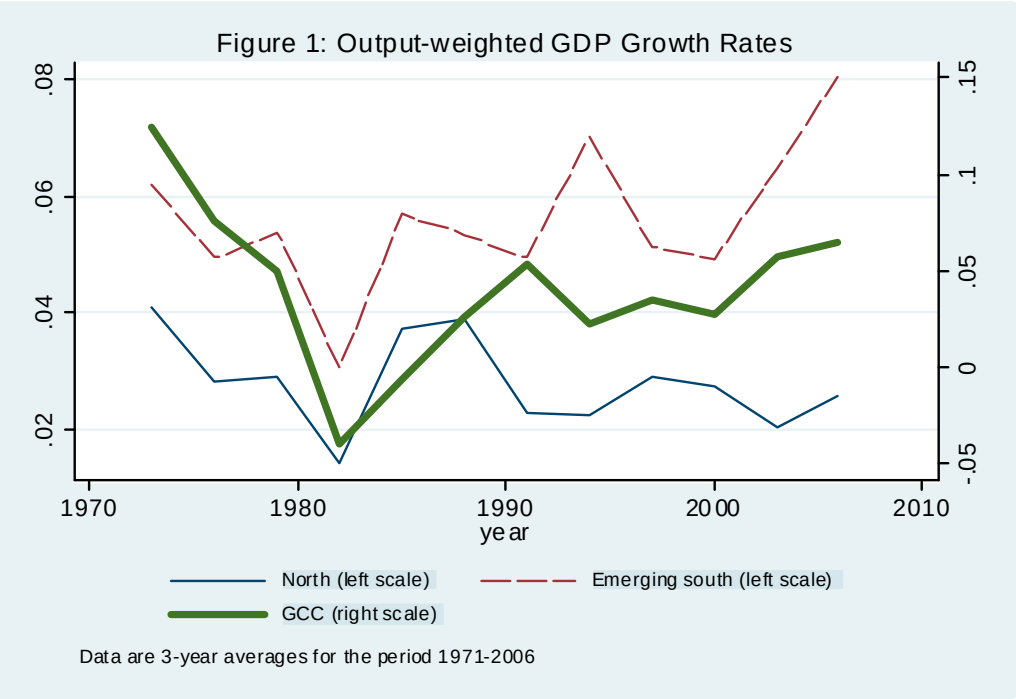
As mentioned earlier, our sample is based on 35-year annual panel data (1972-2006) of mainly oil importing Middle Eastern countries.[4] Our sample of countries was chosen by a priori knowledge of countries that have links to the Middle East. In this regard, Lebanon also appears as a natural candidate; however, we have not included it because of the long-standing civil and political turmoil in that country. Also to overcome the effects of high frequency annual movements on estimating determinants of GDP growth, we use 3-year averages of the data.

Prior to discussing our empirical results, we briefly look at the broad summary statistics. Table 1 shows the means and standard deviations of the variables used in the estimation. Among the dependent variables, average real GDP growth (Δy) in our sample of countries is 5 percent with a standard deviation of about 3 percent. It appears that despite taking 3-year averages of data there are some extreme values—the highest 3-year average growth rate of as much as 13 percent. Private consumption and investment growth also indicate the existence of possible extreme values. As such extreme values could unduly influence our estimation, we conducted robustness tests (discussed below). Aggregate output growth in the Northern and emerging South countries was on average 2.8 percent and 5½ percent respectively over the 35 year period (also see figure 1). It is interesting to note that these two variables exhibit a much smaller variance around the mean, with no values below zero. Oil prices have grown in real terms by about 10 percent on average, with a high degree of volatility—they have fallen by 24 percent in some years and risen sharply by 80 percent in other years.

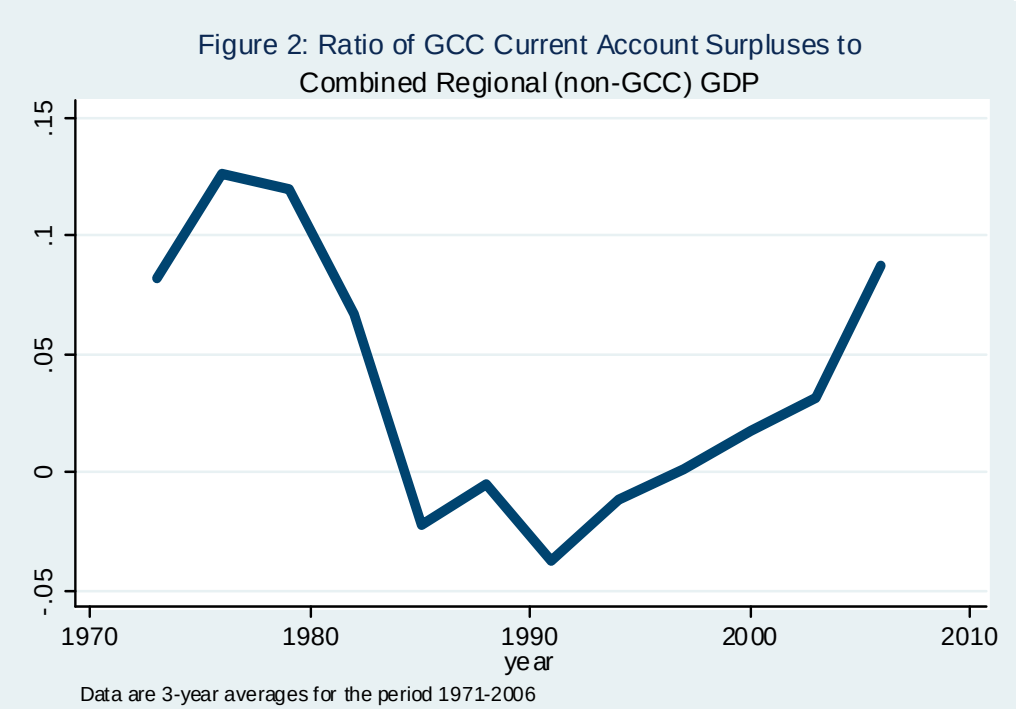
[4] Again, our sample comprises Egypt, Jordan, Morocco, Pakistan, Yemen, Sudan, Syria, and Tunisia.

Table 1. Summary Statistics

Variable	Description	Obs	Mean	SD	Min	Max
Δy	Growth rate of GDP (real)	96	0.050	0.029	-0.023	0.134
$\Delta Cpvt$	Growth rate of private consumption (real)	82	0.060	0.050	-0.087	0.199
$\Delta Ipvt$	Growth rate of private investment (real)	82	0.063	0.102	-0.152	0.347
$\Delta YNorth$	Aggregate output-weighted GDP growth rate of North (real, PPP terms)	96	0.028	0.008	0.014	0.041
$\Delta YEmSouth$	Aggregate output-weighted GDP growth rate of emerging South (real, PPP terms)	96	0.056	0.012	0.031	0.080
GCCFinFlow	Ratio of GCC current acct. balance to aggregate GDP of regional countries	96	0.038	0.054	-0.037	0.126
$\Delta GCCREM$	Growth rate of remittance outflows from Saudi Arabia (real)	96	0.070	0.142	-0.093	0.327
$\Delta Poil$	Growth rate of international oil prices (real)	96	0.098	0.279	-0.239	0.803



The financial flow variable, *GCCFinFlow*, has been sizable compared to the size of the regional (non-GCC) economies, averaging about 4 percent of combined regional GDP. Figure 2 shows the time profile of this variable. The combined GCC current account balance rose to near 13 percent of regional GDP during the 1970s oil boom and collapsed to -4 percent as real oil prices plummeted in the mid-1980s. Despite the high oil prices of the last few years and high current account surpluses in the GCC countries, this variable has only recently reached levels achieved in the early 1970s.



Remittances have grown 7 percent annually in real terms (Table 1), but like the financial flow variable, have also exhibited high volatility over time. There have been periods when remittances have grown by more than 30 percent or fallen by as much as 9 percent. In sum, our two key independent variables—financial flow and remittances—exhibit a large degree of volatility, largely explained by the high volatility in real oil prices, which have driven the Gulf boom-bust cycle.

V. Estimation Results

GDP growth

Estimation results for the determinants of GDP growth in regional countries are reported in Table 2. The estimated coefficient on the financial flow variable, *GCCFinFlow*, is large, positive, and statistically significant. It indicates that a 1 percent point increase in the current account balance-regional GDP ratio is associated with a 0.17-0.21 percent increase in individual country growth rate. While the coefficient on the remittance growth variable, $\Delta GCCREM$, is also positive and statistically significant, the magnitude of the estimated coefficient is not large. A 1 percentage point increase in this variable is associated with a 0.07-0.09 percentage point increase in growth. As both the current account and remittance variables are highly collinear, with a correlation coefficient near 0.7, they do not appear significant together (column 1).

Since the external environment can influence growth through net exports, it is important to control for these impacts in assessing the role of the GCC, particularly, as the GCC is not a major export destination for these regional countries. Many studies have found a strong positive effect of northern growth on growth in individual emerging and developing countries, ostensibly

through a trade linkage (see for instance, Akin and Kose, 2007). We control for growth in Northern and emerging market country groups; Table 2 shows that our results for the two key independent variables remain robust to the inclusion of northern and emerging market aggregate output growth on the right hand side—compare columns (1)-(3) with columns (4)-(6). While our estimated coefficient on northern growth is statistically insignificant in most regressions, it is puzzling that the estimated coefficient is negative and turns statistically significant in one (column 3).

We explored further by isolating the role of trade component of northern and emerging market growth. Instead of using aggregate GDP growth rates in Northern and emerging countries on the right hand side, we employed trade growth rates based on export shares (also time varying) of Northern and emerging countries. The results, which are not reported here, yielded a positive, though still insignificant estimated coefficients for the North and emerging markets and the estimated coefficient on the GCC financial and remittance variables did not change. In sum, our results on the role of northern growth on regional Middle East countries underscore the important role of the GCC. Unlike in other developing and emerging countries where northern growth has been found to be important—largely because of the northern demand for developing country exports—growth in countries in the Middle East region has not been export led and is not influenced by the North. Rather it is influenced by non-trade factors, including among other factors, regional remittance and financial links with the GCC.

Table 2. Regional Countries GDP Growth Regression

	(1)	(2)	(3)	(4)	(5)	(6)
Δ*YNorth*	-0.510	-0.262	-0.846**			
	(-1.05)	(-0.64)	(-2.10)			
Δ*YEmSouth*	0.051	-0.032	0.060			
	(0.23)	(-0.15)	(0.26)			
GCCFinFlow	0.132	0.197***		0.172**	0.209***	
	(1.35)	(2.68)		(2.09)	(3.15)	
Δ*GCCREM*	0.040		0.071***	0.025		0.062***
	(1.22)		(2.98)	(0.91)		(2.75)
Δ*Poil*	-0.009	-0.007	-0.001	-0.014	-0.011	-0.006
	(-0.54)	(-0.41)	(-0.05)	(-0.91)	(-0.75)	(-0.43)
Constant	0.054***	0.052***	0.065***	0.043***	0.043***	0.046***
	(2.83)	(2.72)	(4.00)	(12.57)	(12.38)	(16.70)
Observations	96	96	96	96	96	96
R-squared	0.15	0.13	0.12	0.14	0.13	0.08

Robust t statistics in parentheses; *** p<0.01, ** p<0.05, * p<0.1
Pooled OLS regression with robust standard errors
Regional country sample comprises Egypt Jordan Morocco Pakistan Tunisia Sudan Syria and Yemen
Dependent variable is real GDP growth rate
Sample period is 1971-2006. Data are 3-year averages

The overall coefficient of determination in our estimated GDP growth regressions appears low—an R-squared that is around 0.15. This may be partly because external factors such as the ones we have used here—northern and emerging markets growth, and GCC financial and remittances—do not adequately explain growth in regional countries and that other factors such as structural changes and reforms may have been important determinants (Dasgupta and others,

2002). However, it is worth noting that our coefficient of determination is within the range of that found in most of the studies on growth cycles and co-movement.

Consumption and investment growth

To explore further how financial and remittance flows influence growth in regional countries we look at the impact on components of private aggregate demand. We investigate whether the real growth of private consumption and private investment correlate with financial and remittance flows from the GCC. The results in Tables 3 and 4 suggest that growth of private consumption and private investment are indeed strongly associated with the GCC current account and remittance variables. A 1 percentage point increase in GCC current account-regional GDP ratio is associated with 0.4-0.6 percentage point increase in growth in private consumption and 0.4-0.9 percent increase in private investment growth.

Similarly for remittances, a 1 percentage point increase in growth is associated with a 0.1-0.2 percentage points rise in consumption and 0.2-0.4 percentage points rise in investment growth. Contrary to the evidence cited above, which finds Gulf migration has largely spurred consumption booms and has had little growth impact, our results point to broad based impacts not just on consumption but also investment, and these two together explain the strong GDP growth association.

Table 3. Regional Countries Private Consumption Growth Regression

	(1)	(2)	(3)	(4)	(5)	(6)
∆*YNorth*	0.027	0.735	-0.551			
	(0.05)	(1.25)	(-0.83)			
∆*YEmSouth*	-0.408	-0.252	-0.825**			
	(-1.11)	(-0.61)	(-2.32)			
GCCFinFlow	0.342***	0.626***		0.383***	0.622***	
	(3.63)	(7.04)		(3.80)	(8.42)	
∆*GCCREM*	0.146***		0.231***	0.141***		0.237***
	(3.94)		(7.96)	(3.56)		(8.79)
∆*Poil*	-0.017	-0.014	0.002	-0.023	-0.008	-0.014
	(-0.75)	(-0.59)	(0.07)	(-1.05)	(-0.35)	(-0.64)
Constant	0.061***	0.034	0.103***	0.040***	0.041***	0.044***
	(2.68)	(1.23)	(4.50)	(9.16)	(8.58)	(10.27)
Observations	82	82	82	82	82	82
R-squared	0.49	0.43	0.45	0.49	0.42	0.41

Dependent variable is real private consumption growth rate.
For definition of variables and other details, see notes at bottom to Table 2.

Table 4. Regional Countries Private Investment Growth Regressions

	(1)	(2)	(3)	(4)	(5)	(6)
Δ*YNorth*	-1.919	-0.508	-2.492**			
	(-1.47)	(-0.43)	(-2.08)			
Δ*YEmSouth*	0.456	0.767	0.044			
	(0.52)	(0.85)	(0.06)			
GCCFinFlow	0.339	0.905***		0.446	0.861***	
	(1.01)	(3.03)		(1.64)	(3.47)	
Δ*GCCREM*	0.291**		0.376***	0.244**		0.356***
	(2.62)		(4.11)	(2.39)		(4.01)
Δ*Poil*	0.045	0.052	0.064	0.031	0.058	0.042
	(0.96)	(1.04)	(1.50)	(0.79)	(1.50)	(1.06)
Constant	0.057	0.003	0.099**	0.029***	0.031***	0.034***
	(0.89)	(0.05)	(2.17)	(2.80)	(2.81)	(3.66)
Observations	82	82	82	82	82	82
R-squared	0.37	0.31	0.36	0.35	0.30	0.33

Dependent variable is real private investment growth rate.
For definition of variables and other details, see notes at bottom to Table 2.

The magnitude and statistical significance of the estimated coefficients in Tables 3 and 4 are also robust to the inclusion of northern and emerging markets aggregate growth.

Robustness checks

As our regression specification is fairly parsimonious, we employed a wider set of control variables typically used in growth studies to verify the robustness of our estimates. These included population, openness to international trade (measured by the ratio of sum of export and imports to GDP), inflation, investment as a share of GDP, government spending in percent of GDP and initial period GDP. The estimated coefficients of these control variables were not statistically significant, with the exception of that for inflation (negative in sign), while the estimated coefficients of the GCC current account-regional GDP ratio and the remittance growth variables did not change either in magnitude or in statistical significance when these control variables were introduced.

As further robustness checks, we used one period lag of the independent variables; employed a time dummy for 1991 and 1992 (the first Gulf war period); excluded data with extreme values of the dependent variable (more than +/- 2½ standard deviations from the mean); and controlled for the growth in remittance outflow from the North and emerging South groups. The findings, which are not reported here but are available from the authors upon request, indicate our original estimates are robust to these various checks.

VI. CONCLUSION

The paper provides a quantitative assessment of the extent to which the GCC's oil driven cycle influences growth in regional economies. Unlike earlier studies in the literature that analyze GDP or trade growth linkages of large regional economies with their neighbors, we explicitly test for and find evidence of specific channels that determine such linkages—financial flows and

remittances. The findings point to the existence of spillovers of the GCC's cycle on regional economies.

The results offer some useful insights on the determinants of growth in the non-oil economies of the Middle East. The existence of a linkage with the GCC and the lack of association with northern GDP and trade (export led) growth suggest that these regional economies may be insulated to some extent from a "global" cycle emanating from Northern countries. There may be potential diversification gains for international capital seeking markets uncorrelated with the markets in the North. At the same time, however, our results also indicate that the regional Middle Eastern countries may not have benefited as well as others from the unprecedented growth in global trade over the last two decades, and there may be an unfinished trade and structural reform agendas that policymakers in these countries will need to address.

Our findings also shed light on the nature of the effect of oil shocks on the regional, primarily oil-importing economies. Periods of high oil prices result in balance of payment pressures in oil-importing countries and, often, when the domestic fuel pricing mechanisms are ad hoc, cause fiscal shocks. However, in the case of GCC's neighbors, we find evidence of countervailing financial and remittance flows that may mitigate the effects of the oil price cycle on the external account. This may well explain why oil-importing countries in the region have been able to absorb the recent sharp increases in oil prices.

Appendix: Data Sources and Description

We check data from the following sources: World Economic Outlook (WEO), International Financial Statistic (IFS), World Development Indicators (WDI) and Penn World Table 6.1. The source of data chosen is such that to maximize the number of observations.

Variable Name	Description	Data Source
Dependant Variables:		
Growth of:		
*Y**	GDP measured in PPP terms.	WEO
Y	GDP at constant local currency values.	WEO
Real Consumption		Penn World Tables 6.1
Real Investment		Penn World Tables 6.1
Controls ($X_{i,t}$):		
Ln Initial GDP per Capital (GDPC)		WEO
Ln Inflation	Growth in CPI : Ln (1+ inflation (%))	WEO
Openness	(Exports + Imports)/GDP at current prices	WEO
Government	Government Share of Real GDP per capital.	Penn World Tables 6.1
Investment	Investment Share of Real GDP per capital.	Penn World Tables 6.1
Population	Population growth (%)	WEO
Real Remittances (Rem)	Remittances data deflated by CPI for OECD countries	Constructed by the World Bank from the IMF BOP data. (Worker Remittances+ Compensation of employees + Migrant Transfers)
Group Weighted Real Remittances Growth	$\Delta \mathrm{Re}m.R_t = \sum_{i=1}^{L^R} \left(\frac{\mathrm{Re}m_{i,t}}{\sum_{i=1}^{L^R} \mathrm{Re}m_{i,t}} * \Delta \mathrm{Re}m_{i,t} \right)$	
Real Oil Prices	Petroleum Average Crude Price deflated by OECD GDP deflator	IFS
Capital Flow Data:		
Current Account Balance		WEO
Change in Foreign Reserves		WEO
Net External Position		Lane & Milesi-Ferretti (2006)

Sample:

Regional Middle East Countries
Egypt, Jordan, Morocco, Pakistan, Yemen, Sudan, Syria, and Tunisia.

Groups:

North (n=23)
Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States.

Emerging South, ES, (n=23)

Argentina, Brazil, China: Mainland, China: Hong Kong, Colombia, Chile, Egypt, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Singapore, South Africa, Thailand, Turkey, and Venezuela.

GCC (n=6)

Kuwait, Saudi Arabia, Oman, UAE, Bahrain, and Qatar.

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