Growth Effects of Foreign Capital in Pakistan: An Empirical Investigation

Yong Lin [1] ,Jie Zhang [2]

([1]Maritime Silk Road Research Center, Fujian Academy of Social Science, 18 Liuhe Road, Fuzhou, Fujian, China)
([2] Institute of Overseas Chinese Studies, Fujian Academy of Social Science, 18 Liuhe Road, Fuzhou, Fujian, China)
Corresponding Author: Yong Lin

Abstract: This paper employed the regression analysis of Augumented Dickey Fuller (ADF) unit root test, Phillips-Perron (PP) unit root test, Johansen Cointegration test, VECM model, variance decomposition and impulse response function to examine the growth effects of foreign capital in the form of foreign remittances, foreign direct investment (FDI) , official development assistance (ODA) and external debt in Pakistan over the period 1976 to 2014. The results reveal that among all these foreign capital flows only foreign remittances can significantly promote economic growth both in the short run and in the long run while ODA, FDI and external debt yield significant negative effects on economic growth in the long run. What this findings suggest is that the growth effects of foreign capital are very limited in Pakistan. Our result differs from many other studies in stressing the importance of remittances while highlighting the ineffectiveness in utilizing the other foreign capital flows in Pakistan.


I. INTRODUCTION

Pakistani economy is characterized by insufficient financial resources, low GDP growth rates, low tax-to-GDP ratios and low savings investment rates（Ali,2014）. The government have tried best to seek foreign capital from overseas since 1992 and after the initiatives introduced in 1992, 1997 and 2000 respectively a massive amount of external debt, foreign aid, foreign direct investment and remittances have flowed into Pakistan (Rahman & Shahbaz, 2011). Therefore during the last decades foreign capital present crucial importance in making up for the savings-investment gap and boosting economic growth of the developing countries (Hussain, Sabri, Amjad & Tahir,2013; Nkoro, Emeka & Furo, 2012).

Like many other scholars, we disaggregate foreign capital flows into four main elements: external debt, foreign remittances, foreign direct investment and official development assistance (Papanek,1973;Oyinlola,1995) .Since 1976, external debt has always been Pakistan's most important source of foreign capital . External debt is an traditional important source for public financing in developing countries and it plays an important role in promoting economic growth (Azeez & Sulaiman,2012). It can boost economic growth by making up for the investment-savings gap and can provide adequate funding support for modern technology and the economic activities that increase labor productivity (Pattillo et al., 2002). External debt and foreign aid help Pakistani economy make up for the difference in savings and investment (Hameed et al., 2008). External debt provides funds for the development of economic infrastructure (Wang, 2009). For example, the construction of heavy industries, research institutes, dams, bridges, highways, highways, and strengthening institutions require large amounts of capital, and foreign capital may create a favorable investment environment for its economic development (Ali,2014). In 2013, Pakistan's external debt amounted to US$60.9 billion, which increased to US$65.4 billion in 2014 and US$73.1 billion in 2016. As of March 2017, external debt has increased to US$75.7 billion.

Corresponding author:
Yong Lin, Institute of Overseas Chinese Studies, Fujian Academy of Social Science, 18 Liuhe Road, Fuzhou, Fujian, China, 350001
Email:linyongsky@126.com

Like many other labor-exporting developing countries Pakistan is known for its overseas workers and their foreign remittances. Remittances have grown significantly in the last decade and have become a major source of revenue, surpassing the volume of FDI and ODA. In 1976, Pakistan's foreign remittances were only US$412 million and by 1979 it had increased to US$1.5 billion. However, it was relatively stable with little change throughout the 1980s . In 1980, it was 2.05 billion US dollars, and once increased to 2.94 billion U.S. dollars in 1983, but declined slightly since then, and dropped to 1.87 billion U.S. dollars in 1988. The decline continued throughout the whole 1990s, from US $2.01 billion in 1990 to US$ 996 million in 1999. Since the beginning of the 21st century, especially after 2002, foreign remittances have increased rapidly, from US$1.08 billion in 2000 to US$3.55 billion in 2002, and then to US$19.31 billion in 2015 and in 2016 to 20.3 billion U.S. dollars, an increase of about 20 times over 2000. Since the end of the 1970s, the amount of foreign remittances have consistently exceeded that of ODA or FDI, and became the second largest source of foreign capital in Pakistan only next to external debt.
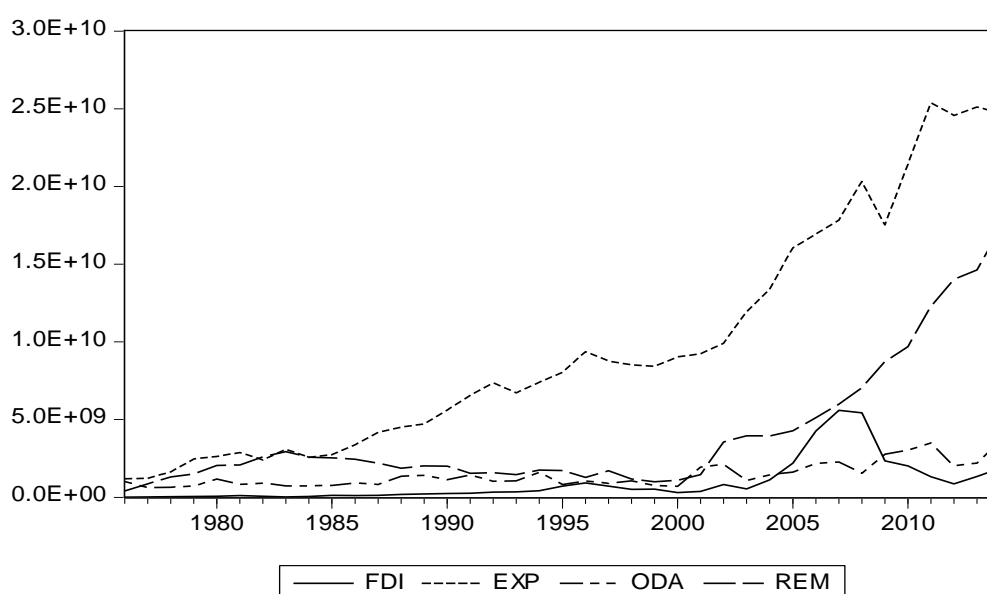
Pakistan's foreign remittances account for about 2% to 10% of GDP which can be comparable to many developing countries. In the 1970s and early 1980s, foreign remittances to Pakistan grew rapidly, and the percentage of foreign remittances of Pakistan's GDP continued to increase. The period from 1982 to 1983 was the peak period in which this percentage increased to 9.39%. In 1989 foreign remittances amounted to 37% of its total merchandize trade, accounting for 5.9% of GDP. At the end of the 1990s, foreign remittances accounted for only 1.5% of GDP. Although remittances have rapidly increased in recent years, and at the same time their total GDP has also grown rapidly. As a result, the percentage of foreign remittances to GDP is still modest. In 2008 foreign remittances accounted for only 4.2% of GDP, and by 2015 recovered to 7.2%. FDI constitutes another major source of foreign exchange for Pakistan.

Although FDI rose over the last decades, it remains relatively modest and has generally lagged behind that of many developing countries (Shahbaz & Rahman,2010). The FDI-to -GDP ratio in Pakistan was almost negligible before the 1990s and only after 1992 did FDI make significant progress. In 2001-02 FDI stood at US$ 823 million, but rose to $5.4 billion during 2006-07 accounting for approximately four percent of GDP. However, FDI has decreased sharply since 2008, and even decreased by 35 per cent from USD 1,308 million in 2011 to USD 854 million in 2012. For the reason of terrorism and government inefficiency it was very difficult for these countries to attract more FDI (Froot & Stein,1991).ODA is also an important form of foreign capital, and has experienced significant fluctuations in the past few decades. During 1991-1996 the net ODA received by Pakistan was approximately US$1.6 billion per year, but due to the 1997-1998 Asian financial crisis and the 1998 Pakistan nuclear test, ODA fell by 26.7% during 1997 to 2000. After 2001 ODA began to flow back into Pakistan again due to the Afghanistan War (Aning, 2007). Given such low amount of ODA, Pakistan economic growth is generally perceived not to be dependent on ODA (Mehmood & Muhammad, 2015).

II. LITERATURE REVIEW

External debt and economic growth

The studies on this topic in developing countries nowadays remains a debatable issue. On the basis of data for the period of 1994-2014 in South Asia, Khursheed & Siddiqui (2016) used multiple regression analysis technique and found in short run and long run significant positive linear relationship exists between external debt and GDP growth rate for South Asian economy. Their findings proved that external debt is a blessing for South Asian countries. Also, using Ordinary Least Square (OLS) method, Azeez & Sulaiman (2012) found that external debt contributed positively to the growth of the Nigerian economy. But Sachs (1989) questioned this view, saying that the country could not obtain economic recovery due to debt repayment. Additionally Malik (2009) used an OLS model to investigate the impact of external debt on economic growth in Pakistan for the period of 1972-2005 and found a significantly negative relation between external debt and economic growth.

Remittances and economic growth

Many studies confirmed that foreign remittances are an important source for economic growth in developing countries (Ratha,2003; Azam & Khan, 2011;Zhang & Lin, 2018). Burney (1987) used time-series data from 1969 to 1970 to 1986 to study the impact of foreign remittances on Pakistan economic growth. The conclusion is that foreign remittances can reduce the current account deficit ,release external debt burden and reduce external aid demand. Nishat and Bilgrami (1991) used Keynesian structural model to find that foreign remittances had a positive effect on consumption, investment, and imports. This is supported by the research work by Burki (1991), Adams (1998), Yasmeen, Anjum, Ambreen & Twakal (2011), and Ali, Mustafa & Shahbazi (2013). But on the contrary Waheed & Aleem (2008) argued that elasticity of foreign remittances are significant only in the short run but not in long run. The study result by Wakayama (2011) indicated that there is no relationship between foreign remittances and GDP per capita in Europe and central Asia. Ratha & Mohaparta(2007) concluded that to some extent foreign remittances obstruct export and help exchange rate to appreciate.

Foreign aid and economic growth

There exists so far great controversy over the research results of the impact of foreign aid on economic growth. Burnside & Dollar (2000) believed that ODA has a positive impact on economic growth. This is supported by the result of the study by Chenery & Strout (1966) which showed that ODA increased economic growth through increasing savings. A study by Hansen and Tarp (2000) also demonstrated a positive correlation between ODA and economic growth. However, Kaosar and Idrees used the LSDV model to explore the impact of ODA on South Asian economic growth. They found that the effectiveness of ODA depends on the policy environment, and without a proper policy environment, ODA can not promote economic growth. Similarly Boone (1996) analyzed the influence of foreign aid on investment, consumption and some welfare indicators by analyzing the panel data of 91 economies during 1971-1990 and found that aid did not stimulate the growth of investment. Similarly Ferreira and Simões(2013) used generalized method of moments and found negative association between foreign aid and growth in 44 economies of Sub-Saharan Africa and 31 Asian countries.

FDI and economic growth

Mohey-ud-Din (2006) believed that foreign direct investment stimulates Pakistan's economic growth. And Ahmad, Alam and Butt (2004) also believed that FDI are positive to domestic investment in Pakistan. Similar results are also presented by Falki (2009), Borensztein, Gregorio & Lee (1998), Gruben & Mcleod (1998) , Rachdi & Saidi (2011), Vita &d Kyaw (2009) and Khor 2000. In addition, FDI can also lead to the transfer of advanced knowledge and technology, and FDI-funded enterprises can also generate technology spillovers speeds up the rate of technical progress in the host country by hiring domestic labor (Haddad & Harrison1993; Wang, 1990). Some other studies found no relationship or even negative impact of FDI on economic growth (Rahman & Shahbaz, 2010; Singh, 1988). Saltz(1992) found that FDI might have adverse effects on the recipient economy. Accordingly, Borensztein et al. (1998) and Carkovic et al. (2002, 2005) applied panel data growth regressions and also found little evidence of positive impact of FDI on economic growth.

The literature is mostly on the basis of cross country panel data and the discussion about the growth effects of foreign capital is inconclusive. We take Pakistan,one of the important foreign capital-receiving countries in the world , for specific case study in view of individual country's specific characteristics. The following is the objectives of our study : 1. To identify the effects of official development assistance on economic growth;2. To investigate the effects of external debt on economic growth;3. To find the effects of foreign direct investment;4. To explore the effects of foreign remittances on economic growth;5.To bring about some policy recommendations.

The rest of the paper is organized as follows: section two explains the literature review, section three describes the data and methodology, section four shows the results and present our discussion, section five shows conclusion and policy recommendations.

III. EMPIRICAL ANALYSIS
Data, Variables and Methodology

The data of the variables for this study are all sourced from secondary sources of the World Bank's World Development Indicators. The variables include gross domestic production(GDP) as a dependent variable while official development assistance (ODA), foreign remittances, foreign direct investment(FDI)，external debt and exchange rate are collected as independent variables for the period of 1976 to 2014. All the independent variables are expressed as a percentage of GDP. The independent variables exchange rate are also taken from the WDI. We construct a time series of annual observations from 1976 to 2014 for Pakistan. The regression and verification calculations were performed by Eviews 8.0. Given the above discussion, the functional relationship between foreign capital and economic growth in Pakistan are expressed in the following way:

Growth = f (ODA,RMT, FDI, EXD,EXCH)   (1)

Where Growth represents economic growth (GDP per capita), and REM, FDI, EXD and EXCH represents official development aid, foreign remittances, foreign direct investment, and external debt respectively. Equation (1) can only be estimated in its econometric form which is stated as follows:

$GDP_t = \theta_0 + \gamma_1 ODA_t + \gamma_2 REM_t + \gamma_3 FDI_t + \gamma_4 EXD_t + \gamma_5 EXCH_t + \varepsilon_t$ (2)

θ_0 denotes the constant term, γ_1, γ_2, γ_3,γ_4 and γ_5 are slope coefficients representing parameters to be estimated and ε_t is the disturbance term assumed to be purely random. We can not, a priori, predict the direction of the effects of foreign capital on the economic growth of Pakistan based on the above discussions.

Cointegration Analysis

The results of the Augmented Dickey-Fuller Test and Phillips-Perron Test unit root test show that the horizontal sequence of variables has a unit root I(1) that is not stable （see Table no 1 and Table no 2） .

Table no 1 : Augumented Dickey Fuller Statistics of the Variables

VARIABLES	ADF STATISTICS	1%	5%	10%	ORDER OF INTEGRATION
LNGDP	-5.086550	-3.621023	-2.943427	-2.610263	I(1)
LNEXD	-4.659164	-3.626784	-2.945842	-2.611531	I(1)
LNODA	-7.021003	-3.626784	-2.945842	-2.611531	I(1)
LNFDI	-4.901645	-3.621023	-2.943427	-2.610263	I(1)
LNREM	-5.114784	-3.621023	-2.943427	-2.610263	I(1)
LNEXCH	-6.216334	-3.621023	-2.943427	-2.610263	I(1)

Source: Author's Computation using E-view 8.0.

Table no 2 : Phillips-Perron Statistics of the Variables

VARIABLES	PP STATISTICS	1%	5%	10%	ORDER OF INTEGRATION
LNGDP	-5.081540	-3.621023	-2.943427	-2.610263	I(1)
LNEXD	-3.625334	-3.621023	-2.943427	-2.610263	I(1)
LNODA	-17.34223	-3.621023	-2.943427	-2.610263	I(1)
LNFDI	-4.898767	-3.621023	-2.943427	-2.610263	I(1)
LNREM	-5.114820	-3.621023	-2.943427	-2.610263	I(1)
LNEXCH	-5.977948	-2.628961	-1.950117	-1.611339	I(1)

Source: Author's Computation using E-view 8.0.

Because of the unstable regression of the time series, a cointegration test is needed to verify whether there is a cointegration relationship among the variables, that is, whether there is a long-term equilibrium relationship between the variables.

Table no 3 : Results of the Johansen Co-integration Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value (0.05)	Prob.**
None *	0.710400	124.5967	95.75366	0.0001
At most 1 *	0.562127	78.74426	69.81889	0.0082
At most 2 *	0.494003	48.18872	47.85613	0.0465
At most 3	0.348511	22.98345	29.79707	0.2469
At most 4	0.174351	7.129166	15.49471	0.5627
At most 5	0.001093	0.040481	3.841466	0.8405

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level.
* denotes rejection of the hypothesis at the 0.05 level.
**MacKinnon-Haug-Michelis (1999) p-values.

The trace value and the Max-eigen value in Table no 3 show that there exists a long-term stable equilibrium relationship between the variables. And normalized cointegrating coefficients are reported as (standard error in parentheses):

$$LNGDP = 0.304002 LNREM - 0.776271 LNODA - 0.184850\ LNFDI - 0.067099 LNEXD + 1.457554\ LNEXCH$$
$$\quad\quad (0.02409)\quad\quad (0.08863)\quad\quad (0.052\ 66)\quad\quad (0.15741)\quad\quad (0.20901)$$

The results show that the signs of foreign remittances and exchange rate are positive and statistically significant but the coefficients of FDI, ODA and external debt present significant negative signs. This implies that among foreign capital flows only foreign remittances exerts positive effects on economic growth in Pakistan. In addition, exchange rate presents a significant positive sign.

Estimates of the Error-Correction Model
Next we proceed to apply vector error correction model to examine the short run dynamics of the model. An optimal lag length of two is chosen based on different information criteria in order to obtain reasonable dynamics. Two lags were sufficient to remove any serial correlation to satisfy the normality and stability tests, without losing too many degrees of freedom. Vector error correction model shows the adjustment speed of coefficients towards equilibrium and short run relationship among the variables. From Table no 4 we can see that coefficients for foreign remittances, ODA, FDI and external debt are positive, indicating they all can significantly accelerate the economic growth in the short run. And result also shows that elasticity of exchange rate is negative, indicating exchange rate produces obstructive effects on economic growth in the short run.

Table no 4 : Vector Error Correction Estimates

Error Correction:	D(LNGDP)	D(LNODA)	D(LNREM)	D(LNFDI)	D(LNEXD)	D(LNEXCH)
CointEq1	-0.355254	-1.013036	0.298136	-1.320018	0.138296	0.286506
	(0.13950)	(0.87882)	(0.43594)	(0.97301)	(0.11176)	(0.28249)
	[-2.54669]	[-1.15272]	[0.68389]	[-1.35664]	[1.23740]	[1.01423]
D(LNGDP(-1))	0.243373	0.932081	0.625473	0.343412	-0.377442	-0.358845
	(0.20209)	(1.27316)	(0.63156)	(1.40961)	(0.16191)	(0.40924)
	[1.20428]	[0.73210]	[0.99037]	[0.24362]	[-2.33115]	[-0.87685]
D(LNGDP(-2))	0.119642	0.385157	0.789207	0.154314	0.035225	-0.576869
	(0.16515)	(1.04041)	(0.51610)	(1.15192)	(0.13231)	(0.33443)
	[0.72446]	[0.37020]	[1.52917]	[0.13396]	[0.26622]	[-1.72494]
D(LNODA(-1))	0.228843	0.119888	0.171550	0.924700	-0.019972	-0.096654
	(0.08811)	(0.55509)	(0.27536)	(0.61459)	(0.07059)	(0.17843)
	[2.59722]	[0.21598]	[0.62301]	[1.50459]	[-0.28292]	[-0.54169]
D(LNODA(-	0.143897	-0.183428	-0.010577	0.115516	0.010562	-0.146698

2))	(0.04850)	(0.30552)	(0.15155)	(0.33826)	(0.03885)	(0.09821)
	[2.96724]	[-0.60038]	[-0.06979]	[0.34150]	[0.27183]	[-1.49378]
D(LNREM(-1))	0.001084	0.123092	0.056188	-0.419219	-0.059871	0.160588
	(0.05772)	(0.36363)	(0.18038)	(0.40260)	(0.04624)	(0.11689)
	[0.01878]	[0.33851]	[0.31150]	[-1.04127]	[-1.29467]	[1.37389]
D(LNREM(-2))	0.070477	-0.109108	0.140265	0.745081	0.046856	0.064561
	(0.04958)	(0.31236)	(0.15495)	(0.34584)	(0.03972)	(0.10041)
	[1.42143]	[-0.34930]	[0.90524]	[2.15442]	[1.17953]	[0.64301]
D(LNFDI(-1))	0.059330	0.139917	-0.020015	0.151448	0.015130	0.052608
	(0.03022)	(0.19039)	(0.09445)	(0.21080)	(0.02421)	(0.06120)
	[1.96319]	[0.73489]	[-0.21193]	[0.71845]	[0.62485]	[0.85961]
D(LNFDI(-2))	0.002844	0.021871	-0.088773	-0.075742	0.046745	0.061180
	(0.02774)	(0.17477)	(0.08669)	(0.19350)	(0.02223)	(0.05618)
	[0.10252]	[0.12514]	[-1.02399]	[-0.39144]	[2.10321]	[1.08907]
D(LNEXD(-1))	0.533207	0.103031	-1.506701	0.291739	0.186576	0.073913
	(0.27111)	(1.70799)	(0.84726)	(1.89104)	(0.21721)	(0.54902)
	[1.96675]	[0.06032]	[-1.77833]	[0.15427]	[0.85896]	[0.13463]
D(LNEXD(-2))	0.217258	0.987109	0.174752	-1.848096	-0.195674	0.120287
	(0.28793)	(1.81395)	(0.89982)	(2.00837)	(0.23069)	(0.58308)
	[0.75455]	[0.54418]	[0.19421]	[-0.92020]	[-0.84822]	[0.20630]
D(LNEXCH(-1))	-0.114633	-0.492271	0.294128	-0.343290	0.018855	0.068853
	(0.18261)	(1.15045)	(0.57069)	(1.27375)	(0.14631)	(0.36980)
	[-0.62774]	[-0.42790]	[0.51539]	[-0.26951]	[0.12887]	[0.18619]
D(LNEXCH(-2))	-0.111331	-0.503127	-0.320325	0.434545	0.081711	0.055841
	(0.12233)	(0.77066)	(0.38229)	(0.85325)	(0.09801)	(0.24772)
	[-0.91010]	[-0.65285]	[-0.83791]	[0.50928]	[0.83372]	[0.22542]
C	-0.005748	-0.055432	0.030460	0.079715	0.067207	0.098592
	(0.02860)	(0.18015)	(0.08937)	(0.19946)	(0.02291)	(0.05791)
	[-0.20101]	[-0.30769]	[0.34085]	[0.39965]	[2.93344]	[1.70255]
R-squared	0.595249	0.354259	0.567528	0.503023	0.627690	0.438960
Adj. R-squared	0.356078	-0.027316	0.311976	0.209354	0.407688	0.107437
F-statistic	2.488800	0.928413	2.220794	1.712894	2.853113	1.324069

Note:Sample (adjusted): 1979 2014.

Included observations: 36 after adjustments.

Standard errors in ( ) & t-statistics in [ ].

*Significant at 0.01 level. **significant at 0.05 level. ***significant at 0.10 level.

Moreover, we apply variance decompositions and impulse response functions for further inference. Both techniques serve a means for evaluating the dynamic relation between growth, ODA, remittances, external debt and FDI and show the strength of causal relations among variables.
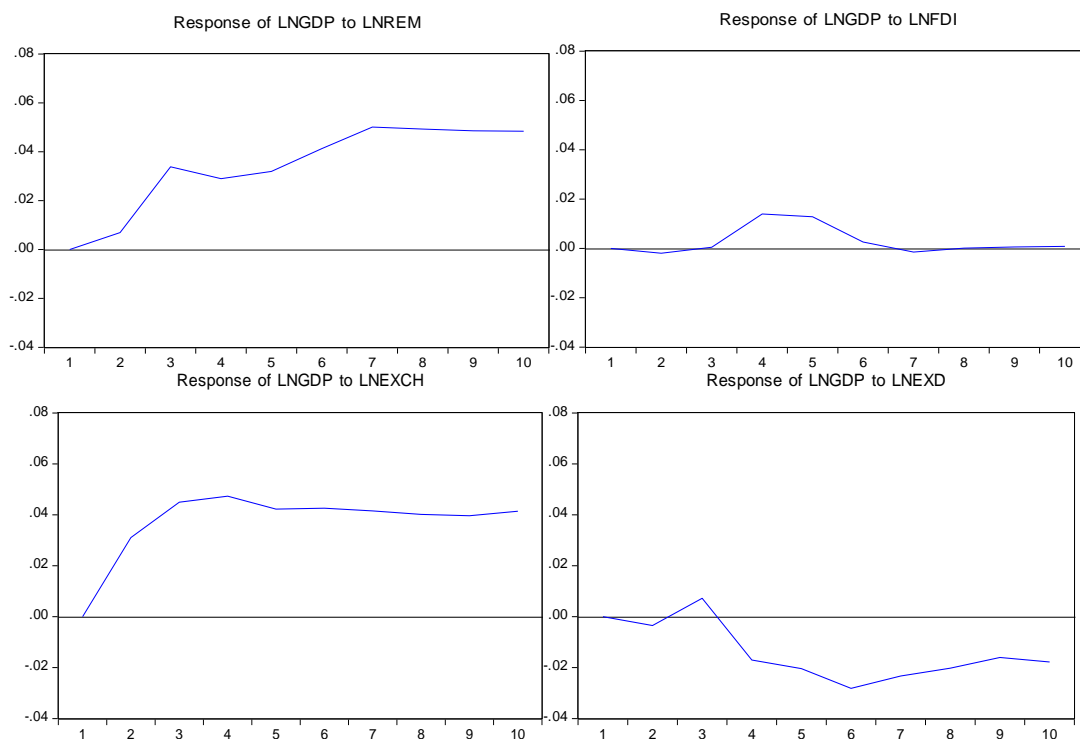
Variance Decomposition

Table Table no 5 shows the variance decomposition results of the restricted VAR model. The results in Table no 5 show that 51.77% of economic growth is explained by its own innovative shocks , 22.18% by foreign remittances, 0.32% by FDI, 1.06% by ODA ,4.26% by external debt and 20.41% by exchange rate through the innovative shocks respectively. On the basis of the above analysis it may be concluded that among all the four foreign capital flows only foreign remittances can significantly stimulate economic growth in Pakistan.
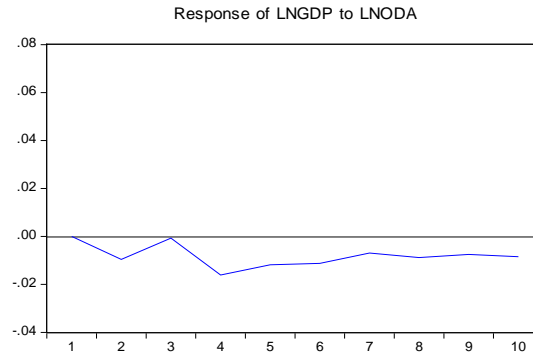
Table no 5 : Variance Decomposition of LNGDP

Period	S.E.	LNGDP	LNREM	LNFDI	LNEXD	LNODA	LNEXCHH
1	0.057710	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.096263	87.90667	0.515023	0.041440	0.132586	0.994337	10.40994
3	0.123458	71.53969	7.817543	0.026554	0.423010	0.607793	19.58541
4	0.147228	62.33114	9.375126	0.919765	1.637315	1.624064	24.11259
5	0.169583	59.35293	10.61259	1.265694	2.679838	1.708428	24.38052
6	0.194000	57.14390	12.63521	0.985080	4.148278	1.639735	23.44779
7	0.216697	55.36337	15.47913	0.793958	4.477873	1.416696	22.46898
8	0.236520	54.43010	17.33666	0.666481	4.490650	1.328310	21.74780
9	0.254166	53.96496	18.66713	0.577765	4.286997	1.237578	21.26556
10	0.271135	53.50370	19.58614	0.508651	4.198902	1.184520	21.01809
11	0.287438	53.04426	20.29586	0.455006	4.168263	1.143127	20.89348
12	0.303013	52.63332	20.84349	0.412396	4.201589	1.126184	20.78302
13	0.317823	52.28127	21.34687	0.376837	4.229138	1.104558	20.66133
14	0.332055	51.99259	21.78969	0.346440	4.253769	1.082966	20.53454
15	0.345738	51.76937	22.17666	0.320209	4.261339	1.061257	20.41117

Impulse Response Function

We have used generalized approach which is superior to Choleskey or thogonalization approach. It is observed from the analysis that one SD innovative shock in foreign remittances increases economic growth significantly and same inference can be drawn from exchange rate to growth. But the response of economic growth from foreign debt, ODA and FDI significantly negative. These results support the findings of the above analysis.

Response of LNGDP to LNREM

Response of LNGDP to LNFDI

Response of LNGDP to LNEXCH

Response of LNGDP to LNEXD

Response of LNGDP to LNODA

IV. RESULTS AND DISCUSSION

After the estimation process this paper reaches towards the conclusion that there is a robust positive association of foreign remittances with the economic growth of Pakistan. This result is generally in line with the findings of Burki(1991), Adams（1998）, Chaudhry, Malik & Ramzan（2009）, Mughal（2012）, Ali, Mustafa Shahbazi（2013). This is not surprising because foreign remittances are just private inflows transferred directly from migrants to their families rather than through government channels, and additionally remittances are more stable (Junaid,2011;Ratha,2003; Javid,2012;Ahmad,2012) and the size of foreign remittances have exceeded that of FDI.

The results for external debt are consistent with the study that increased external debt servicing has negative effects on economic growth and investment of the economy (Jafri & Habib, 2012; Ali, 2013). Krugman (1988) concluded this negative impact as "debt overhang" indicating the potentials of repayment of outstanding facilities fall lower than the signed value. Negative effects of external debt are also supported by the studies of Sheikh, Faridi & Tariq (2010) and Ali (2014). If not utilized productively external debt may become a burden for economic growth of the host country, because any increase in the external debt servicing would crowd out private investment in Pakistan (Ali, 2013). Chaudhry, Malik & Ramzan (2009) also found that external debt would reduce the domestic investment, thus may produce negative impact on economic growth. Therefore only under a sound policy framework can external debt have growth stimulating impact. (Burnside & Dollar, 2000;Kemal, 2001;Rais & Anwar, 2012).

Similarly our result also confirms the significantly negative impact of FDI on economic growth in Pakistan, implying that FDI may be harmful for economic growth in the long run, which is consistent with the study of Masnoon & Rafique(2013), Oyinlola(1995) and Froot & Stein(1991). Not surprisingly our study also found that the elasticity of ODA is negative in the long run. Many previous researchers paid attention mainly to the effective impact of ODA on economic growth (Kimura & Todo,2010), but our study found that foreign aid might have not been used properly in Pakistan. This result is in line with that of the study by Burnside and Dollar (2000), Easterly et al. (2003), Levine (2003), Clemens et al. (2004) and Ali & Ahmad (2013).

The reason for the negative impact of external debt, FDI and ODA may lie in that all these inflows are transferred through government channels and their impacts are heavily influenced by many government-related variables, such as legal institutional environment, infrastructure level, government efficiency (Azam, Hassan & Khairuzzaman, 2013; Udenze,2014; Shamim & Aamir,2010;Kemal, 2001; Nishal, 2005). On the contrary, foreign remittances are supposed to have been directly received by migrants' family members instead of governments. Therefore remittances' final usage channel would be less influenced by government-related factors, making foreign remittances more effective in promoting economic growth (Mughal, 2013; Erhijakpor, 2010; Anyanwu &Faini, 2006; Srivastava & Chaudhary,2007; Fayissa & Nsiah, 2008;Zhang & Lin,2018).

Additionally, the positive sign of exchange rate implies that it is a very useful tool for the government to promote economic growth.

V. CONCLUSION AND POLICY RECOMMENDATIONS

Based on the secondary time series data for the period 1976 to 2014 obtained from World Development Indicators (WDI), this study investigated the growth effects of foreign capital in Pakistan. The results show that the growth effects of foreign capital in Pakistan are much limited and only foreign remittances can significantly stimulate economic growth both in the short run and in the long run while external debt, FDI and ODA exert a positive impact in the short run but a negative one in the long run. It seems that the role of worker remittance may be the most important foreign capital in spurring Pakistani economic growth. However, this study explored the impact of foreign capital on economic growth with no institutional and policy variables and our future studies must consider these government-related factors to identify clearly their important role for foreign capital to boost economic growth.

In order to further develop the positive role of foreign capital, Pakistani government needs to maintain political stability, improve basic infrastructure, formulate more effective policies to attract more FDI and remittances and convert more remittances into effective investment activities . To achieve this goal, the government also needs to explore new labor export markets and formulate policies to allow more remittances to flow through formal banking channels.

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