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Impact of External Financial Resources on Economic Growth: The Case of Pakistan

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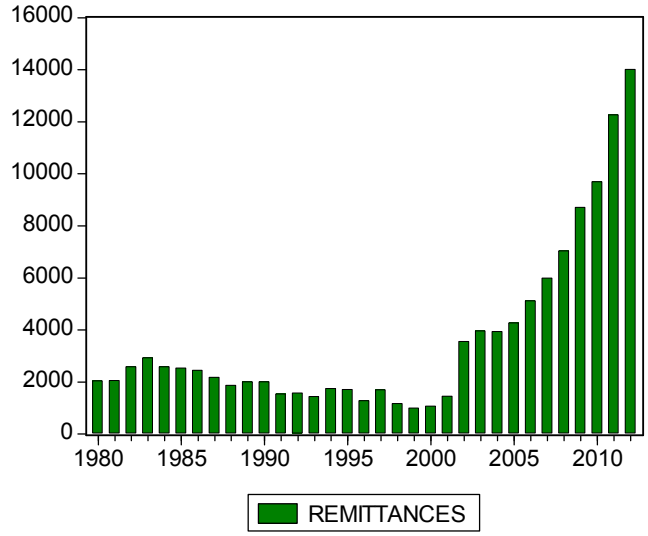
Abstract
Financial resources are crucial for both developing and developed economies, whereas external financial resources are one of the drivers of economy for developing countries. Pakistan also heavily depends upon foreign capital inflows. Official Development Assistance, foreign direct investment, foreign reserves, workers' remittances and external debt are the resources that flow from rest of the world to Pakistan. In order to capture the relationship among these variables with Growth Domestic Product of Pakistan, we used data over the period 1973 to 2016.Econometric techniques of ARDL Bound Testing Approach has been employed in the study. It has been obtained that external debt and FDI are significant long run determinant of economic growth in Pakistan.
Keywords: growth, financial resources, developing countries

Introduction

External financial resources are very influential on the growth of any economy, whether developing economies like Pakistan or a developed economy like United States. Pakistan's growth and development cannot be explained without the foreign capital inflows. Domestic investment was always greater than domestic savings; was particularly financed by foreign resource inflows since 1951. In 1974-75, domestic investment was comprised of 15.6 percent of Gross Domestic Product while gross domestic savings were 4 percent, which resulted in the deeply dependence of the country on external financial resources (V. Ahmed & Amjad, 1984, p. 97). Pakistan has received $8.4billion in the shape of FDI in 2007-07, outshining the targeted $4 billion of the government. A significant decline of 54.6% in investment has been witnessed in 2010 because of political instability and poor law and order conditions. Now Pakistan is the most investment-friendly South Asian economy. Since 1999, trading and business rules have renovated to welcome foreign asset inflows. In most sectors, 100 percent equity participation has been allowed. Flow of foreign capital is free of any restriction. Along with the moderate business regulation in the region, rule of unlimited remittance of profits, dividends, service fee and capital prevails. Ease of Doing Business Index report published by The World Bank in September 2009 has ranked Pakistan far ahead of its neighbors like China 89th and India's 133rd position. Pakistan has been placed at 85th position. One of the most significant variables in external inflows to the country is remittances. The remittances of Pakistanis living abroad have played an important role in the country's economy and foreign exchange reserves. Major supply hub of remittances to Pakistan is the Pakistani workforce in the oil rich Arab states, North America and Western Europe.

Figure 1: Remittances of Pakistan



Source: UNCTAD

Remittances decreased in 2000's due to crises in the world against Pakistani people but again after that a war against terrorism started and opportunities being provided that lifted the remittances massively. Remittance

started to rise in the "Musharaf era" and it is increasing as time passes.

Reserves are foreign exchange and gold stock. State bank of Pakistan maintains foreign reserves of the country. During 2005-dollar price falls down bringing along losses in the reserves, as reserves are solely embraced of US dollars. In the same year, central bank decided to maintain reserves in Euro and Yen. Two years later, in October 2007, foreign reserves of the country raised to $16.4 billion. Pakistan has raised its stock of foreign reserves and exports increased to 18 million US dollars, which postulates a positive sign for the economic condition of the country. Revenue increased to $13 billion while foreign investment of $8.4 billion has been injected into the economy. However, in the following year 2008, two global events strike stock of reserves; the international credit crisis and spikes in crude oil prices and central bank of Pakistan stated depletion in the foreign reserves by 571.9 million dollars to 7749.7 million dollars. The foreign exchange reserves had turn down more by $10 billion to frightening level of 6.59 billion dollars. In 2011, reserves reached $18.25 billion which was all time high. Official financial assistance is given to developing countries with the objective to promote economic welfare and development. These are loans and grants with special discount. Official development assistance is disbursed by Development Assistance Committee, Non-DOC countries and by multilateral institutions.

Figure 2: Net official development assistance received in Pakistan.

Source: World development indicators (WDI)

According to the World Bank, Net official development assistance received in (US$) in Pakistan was 3013030000 in 2010. The objective of the study is to find the influence of all external financial resources on GDP of Pakistan. Different researchers have studied these variables in their study but not any author has taken all these variables in one research. This study is unique in the since that it has taken all possible external financial resources under one study. Rest of the study distributed as review of literature, model & data, results, conclusion and finally references.

Review of Literature

Many studies have taken theses variables in under consideration. However, this study is distinctive that all variables which are possible sources of financial provision in Pakistan are taken under consideration.

3Chowdhury (1994) used granger causality test for Asian and Pacific countries from 1970 to 1988 in order to capture the nexus between external debt and economic growth. It has been captured that both public and private external debt positively impact gross national product of the countries but the impact in minimal however, one percent increase in GNP will increase external debt while overall debt burden impact economic growth negatively.

Were (2001) reported that it is not necessary that debt burden slower down economic activities but it is a policy lack. Lack of information about construction, nature and size of external debt liability are the main causes of unfavorable consequences of debt. Abdul Waheed (2004) attempted to integrate the major empirical studies on impact of foreign capital on economies of developing countries. This study is the survey of previous studies on the topic. Safia Shabbir (2004) had taken pool data for 24 developing countries for the period 1976 to 2003 and investigated association between economic growth and debt liability. Results are in line with the debt overhang theory liquidity constraint hypothesis. Using GDP per capita, debt to GDP, TOT, CPI, exchange rate, trade openness, interest rate and debt services, it has been found that external debt crowd out growth. Yoshifumi

and Shin (2008) examined the effect of foreign exchange reserves on macro-economic variables in the context of developing economies. Consumption, investment and GDP are taken as explanatory variables while a foreign exchange reserve is the explained variable. Findings of the study are that accumulation of foreign reserves enhances economic growth and investment bur it negatively impact consumption accompanied with social cost as well. Data spans from 1980 -2004 for 134 developing countries. Adnan Mubarak (2008) captured the effectiveness of foreign direct assistance in Pakistan. Pakistan was receiving foreign aid for the developmental processes till 1980. However, after1980's large amount of foreign debt has been accumulated on behalf of the country. Ali, Mustafa (2011) examined short run and long run dynamics of external debt on economic growth of Pakistan from the period 1970 -2012. The extended production function has been considered with variables; Education expenditure as a proxy for human capital, capital, labor force and external debt as a percentage of GDP. For the long run estimation Johnson co integration has been employed while short run analysis relied on Error Correction Mechanism (ECM). Result of this study revealed a significant negative impact on economic growth. Johansen Co Integration technique and error Correction Method has been employed in the study. Mathew (2011) studied that GDP growth is argued to be dependent upon trade, financial inflows and asset markets. It has been found that external factors play an important role on the growth of Pakistan but domestic economy drive growth of the country. Data from the period 1951 to 2009 has been taken under consideration in episodes and break points. Ahmad, Martinz (2012) focused on finding the impact of ODA, FDI and remittances on Pakistan's economy. Authors found that external inflows have volatility but remittances are less volatile as compared to official direct assistance and foreign direct investment. ODA is found stabilizing while FDI is destabilizing. Data period in this study is from1974-201. Variables are GDP of Pakistan, ODA, FDI and remittances. Different econometric techniques are used in the study: correlation, Structural VAR, OLS etc. Unbreen Qayyum et al (2013) investigated influence of foreign aid, external debt and governance on economic growth by using the Ramsey-Cass-Koop man's growth model. Long run and short run analysis showed that external debt and foreign aid impact the consumption. External debt is a burden on the economy. Foreign aid and governance drive economic growth. Investment and savings both are independent of external debt. It is argued that quality of governance will encourage the output and consumption.

MODEL &DATA SOURCES

Data has been obtained from the websites of World Development Indicators and United Nations Conference on Trade and Development (UNCTAD).

Data is time series and ranges from 1972- 2016.

After Unit Root Test to check the stationarity of the data, Johansen Co Integration technique has been used in the study to find long run relationship among variables.

ECM is also being applied to find short run dynamics of the model.

$RGDP = \beta 1 + \beta 2 remittences + \beta 3 f.reserves + \beta 4 ODA + \beta 5\ FDI + \beta 6\ debt$

Where

RGDP = Real GDP of Pakistan (dependent variable)

Remittances = workers' remittances received by Pakistan (explanatory variable)

f.reserves = accumulation of foreign exchange reserves including gold (explanatory variable)

ODA = official development assistance (explanatory variable)

FDI = foreign direct investment inflow in Pakistan (explanatory variable)

Debt = total debt liability on Pakistan

$\beta 1, \beta 2, \beta 3, \beta 4$ and $\beta 5 > 0$ while $\beta 6 < 0$

Methodology

Stationarity Test

Time series exhibit inconsistency with the time trend. Inconsistent variance is not good when we study the dynamics of the economic variable. Data series with inconsistent variance are called non-stationary in nature. To operate and investigate different aspect of economy we have to deal with data which should be "stationary". To make data stationary or to 'de-trend" data we apply various stationarity test; these include Augmented Dickey Fuller (ADF) Test, KPSS, DF, Phillip-Perrron test etc.

In this study, we have applied Augmented Dickey Fuller (ADF) to make data stationary.

Results & Discussion

Unit Root Test

Augmented Dickey Fuller has the following hypothesis:

Null Hypothesis H0: = 0, the time series is non-stationary.

Alternative Hypothesis H1: ≠ 0, the time series is stationary.

Table 1: Unit root test

Variables	*Level*	*1st Difference*
Remittances	2.871	3.313*
FDI	-2.628	4.506*
ODA	4.151*	6.172*
RGDP	0.105	-3.762(3) *
Foreign Reserves	2.587	5.609(3) *
External Debt	4.483*	5.874(5) *

*Indicate significance of variables

Variables are significant at 5% level of significance. ADF technique is used to check the stationary of the data. From the above table remittances are stationaryat1st difference. For whole process of stationary SIC Criterion has been used. Remittances are stationary at 1stdifference because in 2000 there was considerable decline in remittances and volatility also has been found in the data period that has been chosen. FDI becomes stationary at first difference. Official development assistance is stationary at 1st difference in the 2nd lag. GDP growth is stationary at level form and at 1stdifferenceas well and foreign Exchange reserves are stationary in 1st difference form. Finally, external debt is stationary in the 5th lag. From the unit root test, it is confirmed and justified to apply ARDL Bound Testing approach. This technique is applied on the model when variables are mix of I (0) and I (1).

Table2: Bound Testing Approach ARDL

Maximum dependent lags: 3 (Automatic selection)			
Model selection method: Akaike info criterion (AIC)			
Variable	**Coefficient**	**t-Statistic**	**Prob.***
GDP (-1)	0.885731	4.583142	0.0002
GDP (-3)	-0.345121	-2.240278	0.0360
ODA	-46.79318	-1.086675	0.2895
FDI (-2)	70.45930	3.025107	0.0064
Reserves (-1)	16.06324	2.311297	0.0311
Debt	52.43898	3.818394	0.0010
Debt (-3)	59.18910	2.696378	0.0135
Remittances	-95.91597	-3.110660	0.0053
Remittances (-3)	87.54545	2.771718	0.0114
Constant	2.55E+11	4.640654	0.0001
R-squared	0.99978	Akaike info criterion	52.62877
Adjusted R-squared	0.99959	Schwarz criterion	53.43099
Log likelihood	-1033.57	H.Q criter.	52.91883
F-statistic	5351.46	Durbin-Watson stat	1.928071
Prob(F-statistic)	0.00000		
*Note: p-values and any subsequent tests do not account for model selection			

Abode table contains results of the regression of the ARDL Bound testing technique.

Goodness of fit of the model is 99% indicating that 99%of the changes in the GDP growth are described by the explanatory variables in the model. On the other hand, overall model is also significant.

It is clear from the above results that GDP growth is also dependent upon its lag. Depicting that GDP in the last year determines the GDP in the current year. Reserves, FDI and debt are significantly and positively related with the growth of the country. Official Development Assistance is insignificant positive determinant of the economic progress in the case of Pakistan. Remittances in the current have significant but negative association with the growth while in the lag year it has positive relation with the GDP.

Table3: ARDL Bound Test

Null Hypothesis: No long-run relationships exist		
Test Statistic	**Value**	**k**
F-statistic	8.503942	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Bound Test is the test which tell us to go further or to stop here. If the if the F-Statistic is greater than the both I0 and I1 bound, it is clear that there is long run association with the variables in the model. And from the above table we have seen that value of F-Statistic is greater than both bound values. It indicates that there is a long run integration in the mode and we can check this association.

Table 4: Short run and Long run

Cointegrating Form			
Variable	**Coefficient**	**t-Statistic**	**Prob.**
D (GDP (-2))	0.345121	2.240278	0.0360
D (FDI (-1))	-70.459302	-3.025107	0.0064
D(Debt)	52.438983	3.818394	0.0010
D (Debt (-2))	-59.189095	-2.69637	0.0135
D(Remittances)	-95.915974	-3.11066	0.0053
D (Remittances (-2))	-87.545450	-2.77171	0.0114
ECM (-1)	-0.359275	-3.87326	0.0009
Long Run Coefficients			
Variable	**Coefficient**	**t-Statistic**	**Prob.**
FDI	126.539497	2.678796	0.0141
DEBT	318.019497	27.224854	0.0000
Constant	44098.28863	5.098378	0.0000

Short run and long run results are being reported above. GDP in the lag year, FDI, debt and remittances are significantly related in the short run however, FDI, debt and remittances are negatively associated in the short run. Short run co integrating equation of ECM is also negative and significant which means that system will converge towards long run equilibrium.

In the long run, FDI and debt along with constant term are significant and in positive relation with the GDP growth of Pakistan.

Conclusion

External financial resources play a pivotal role in the economic progress of developing countries. In this study, we have confined all possible resources of external financial inflows to Pakistan. Using data over the period 1973 to 2016, we have employed Johnson Cointegration technique for the long run association and Error Correction mechanism for the short run dynamics of the variables in our model. We have found equilibrium relationship among variables and from ECM technique; it has been found that the system will converge in the long run. Official development assistance has been found negative significant determinant of growth while external debt exerts positive and significant determinant of driving economic activities on Pakistan. Debt in spite of being liability on the economy plays an important role in economic activities of the country because debts are disbursed without any direction or limitation. On the other hand, ODA are disbursed with a special purposes and Pakistan receive small amount of ODA's.

Theory of Public Debt Sustainability provides fundamental relationship between economic stability and debt sustainability in a country. The inefficient debt management and permanent growth of debt to GDP ratio may result in various negative tendencies and changes in macroeconomic indicators like crowding out of investment; financial system instability, inflationary pressure and exchange rate fluctuations etc. Unsustainable debt burden also has social and economic implications.

Following recommendations are fruitful when adopted:

A comprehensive debt management is needed to keep current level of debt under control as well as it will be helpful in repayment obligations of the debt. Separately treat domestic and external debt. Tight fiscal policy will increase taxes which increase revenue of the Govt.

References

- Ahmad, M. H., Alam, S., & Butt, M. S. (2003), *"Foreign direct investment, exports and domestic output in Pakistan"*. Pakistan Development Review, 42(4), 715–723.
- Adnan Mubarak (2008), "*Role of foreign Assistance in Economic Development of Pakistan"*. International Conference on Applied Economics – ICOAE 2008
- Arshad Ali, *"The Impact of financial crises on Pakistani economy"*, p106-117
- Atique, Z., Khan, M. H., & Azhar, U. (2004), *"The impact of FDI on economic growth under foreign trade regimes: A case study of Pakistan*". Pakistan Development Review, *43*(4), 707–718
- Chowdhury, Khorshed (1994) "*A Structural Analysis of External Debt and Economic Growth: Some Evidence from Selected Countries in Asia and the Pacific*", Applied Economics, 26: 1121-1131
- Devesh Kapur, *"Remittances: The new Development Mantra?"* G-24 Technical Group Meeting

- Economic Survey of Pakistan 2013
- Islam, N. (1972), "Foreign *assistance and economic development": The case of Pakistan*. Economic Journal, *82*(325), 502–530.
- Kemal, A. R., Din, M. U., & Qadir, U. (2006), *"Economic growth in Pakistan"*. In K. S. Parikh (Ed.), *E*xplaining growth in South Asia. New Delhi, India: Oxford University Press.
- Khan, M. A., & Qayyum, A. (2007), "*Trade liberalization, financial development and economic growth", Pakistan* Institute of Development Economics. Working paper no. 19
- Matthew McCartney (2011), *"Pakistan, Growth, Dependency, and Crisis"*. The Lahore Journal of Economics 16: SE (September 2011): pp. 71-94
- Muhammad A. Khan, Ayaz Ahmed (2007), "Foreign Aid-Blessing or Curse: Evidence from Pakistan". The Pakistan Development Review 46: 3 (autumn 2007) pp. 215–240
- Parikh, K. S. (Ed.). (2006), "Explaining *growth in South Asia"*. New Delhi, India: Oxford University Press.
- Sidrat Jilani et al (2010), *"Exploring Impact of Macro Economic Variables on GDP of Pakistan"*, Journal of Management and Social Science, Vol. 6, No. 2, (Fall 2010) 65-7
- Safia Shabbir (2004), "*Does External Debt Affect Economic Growth: Evidence from Developing Countries"*
- Shin-Ichi Fukuda, Yoshifumi Kon (2008), "*Macroeconomic Impacts of Foreign Exchange Reserve Accumulation": A Theory and Some International Evidence.* May 2008
- Unbreen Qayyum et al (2013), "Foreign *Aid, External Debt and Governance",* SBP Working Paper Series No.64, September 2013
- Were, Maureen (2001) "*The Impact of External Debt on Economic Growth in Kenya: An Empirical Assessment"*, *UNU-WIDER Research Paper*, DP2001/116.
- World Development Indicators 2013
- UNCTAD Statistics

Appendix

Residual Diagnostics

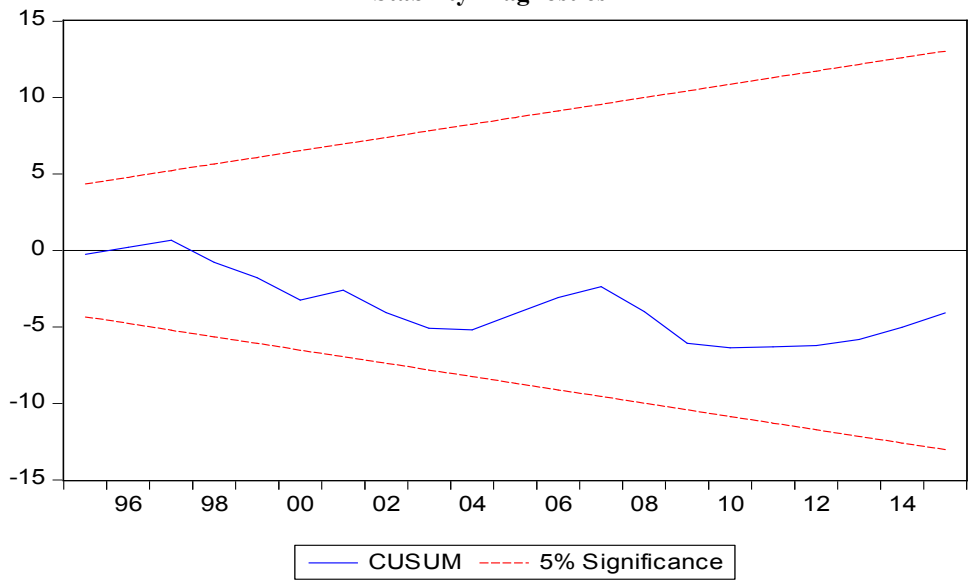
Heteroskedasticity

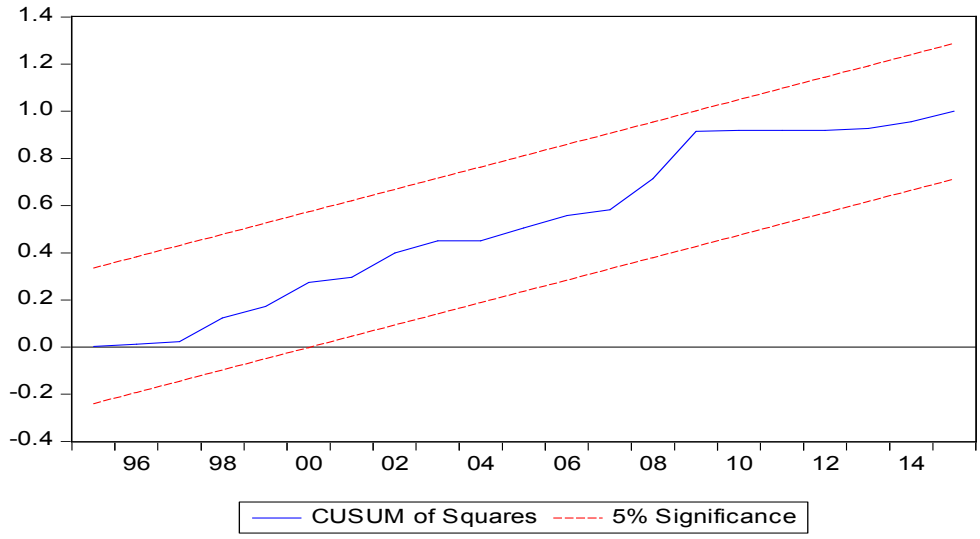
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.24919	Prob. F (18,21)	0.3099
Obs*R-squared	20.6832	Prob. Chi-Square (18)	0.2957
Scaled explained SS	8.03806	Prob. Chi-Square (18)	0.9781

Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.75875	Prob. F (2,13)	0.4879
Obs*R-squared	4.07665	Prob. Chi-Square (2)	0.1302

Stability Diagnostics

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