Accumulation and Economic Growth: Empirical Evidence from Pakistan Economy

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Abstract
The study analyzes the contribution of external debt to Pakistan's economic growth. To investigate whether the external debt has contributed to the economic growth in the long run, extended Solow growth model is used. To test model Johnson co integration technique is applied on time series data for the period of 1972-2013. ADF test also being used to check stationarity of series. Results disclosed, negative relationship between external and economic growth of Pakistan.
Keywords: External debt, economic growth, developing countries.

1. Introduction

Accelerating growth of economy is one of the prime objectives of the developing economies. But these economies normally face severe problem of low savings due to the low level of per capita income as well as less developed and weak financial system. In order to meet their fiscal and trade deficits these countries then rely on the external sources of finance like IMF, World Bank and different non-bank institutions. These borrowed funds and resources termed as "external debts".

External debt is the foreign-currency denominated liabilities issued by public agencies of a country to non-residents. These liabilities imply shift of resources abroad in the form of debt repayment and debt servicing. Although, both foreign and domestic debt help to close the gap between the public sector's income and expenditures, but their impact on the behavior of macroeconomic variables are different; the long-run effect of the public sector's deficit is different, depending on financed.

The amount of debt availed from external sources compiled over the time due to non-payment of debt servicing. Moreover, the additional debt is obtained to pay previous debt owing to these economies and financing deficits. So, this debt accumulation is one of the main problems facing by the developing world. Although debt is helpful to play an augmenting role for economic growth, but debt dependency need to be closely monitored for which suitable strategy is required to enhance the re-payment capacity of the economy.

A level of debt that is unsustainable and highly compared to the economy's size has serious consequences in the form of less development expenditures which play pivotal role in economic growth, due to the payment of a high debt servicing. Crowding out impact of debt along with lesser amount of funds availability for investment in productive and development projects. Private investors expectation about government for the high tax rates in future that will reduce their profits. Both, taxes and government expenditures has same crowding out impact.

In context of Pakistan economy, crucial problem of debt accumulation prevails.[1]The external debt of Pakistan in absolute terms were $3.4 billion which surge to $9.93 billion in 1980.After 1981 and up to 1990 the external debt approaches to double and become $20.66 billion. During 1990-99 the external debt increased from $20.66 billion to $33.89 billion .In 2000 due to the rescheduled policy of government this figure declined to $32.78 billion, up to 2010 the external debt of Pakistan increased to a huge amount of $54.60 billion (government of Pakistan, 2010 and world bank 2007).

As compared to South Asian countries and low income economies likewise Pakistan is facing a severe

situation of indebtness. On the basis of *% of GNP* if we compare the Pakistan economy, 45.20% of GNP are external debts while the situation in South Asian and LICs is 24.17% and 45.20 % of the GNP, respectively. Total reserve to external debts ratio was 13.93 in Pak-economy while this figure in South Asian and low income countries was 30.94 and 24.67 accordingly (Mustafa, 2010).

Impact of the external debt on the economic growth and investment level is always questionable for researchers, academicians and policymakers alike. Researchers have no consensus on the role of external debt for economic growth. Some stated that it hampers growth rate and some argued a positive impact of the debt for economic growth. Researchers who are in favor of a positive impact argued that debt provides capital inflows which used for the productive projects and to improve the technology, skills and required expertise to promote economic growth activities. On other hand some researchers concluded that debt effecting the growth negatively in two ways, debt overhang effect and crowding out of private investment.

Present study involves analyzing the empirical relationship between total external debt stocks and economic growth rate in Pakistan economy, and to look that either the external debt effecting the Pakistan economy growth positively or it mere a burden on the economy.

2.   Literature Review

Economic growth can be accounted for by two major ways; in first according to Ellig (2001) economic growth arises from the dynamic competition model which states that the process of competition results in generating innovations and strategies which leads economic growth to rise. In second way as described by Solow (1956), is the neo-classical model followed by the argument that expansion in the scale of investment caused to encourage growth rate, and according to the neo-classical the policy of low income countries should focus on enhancing the scale of investment and savings Hunt (2007).Growth can't take-off until stock of capital and technology has risen to a specific threshold level in economy Sachs (2002).

Developing and low income countries which are facing dual deficit problem (budget deficit &trade deficit) have a tendency to avail the funds from different sources to meet their financial needs and accelerate their economic growth. These borrowings of government can be from external or internal sources but due to insufficient local savings rate to finance the investment needs mostly government borrow finances from external international financial institutions. This act of borrowing generates the debts for the countries.

"Debt refers to the amount of money or resources which are not invested by the owners of an organization, government or residents of a country in their economy rather the amount belongs to another party and is payable principal plus interest amounts after a certain period of time Oyejide et al (1985)". Funds can be borrow by government from various domestic as well as external sources, in order to finance the goods and services that are provided publically and which lead to welfare and economic growth Ogunmuyiwa (2011).

External debt can affect the growth rate of an economy in different ways as, Colaco (1985) explain vulnerability of debt servicing in low income developing countries and use three different contexts. First, the volume or size of external borrowings is reached to a level that it becomes much larger than equity finance of the economy, which causes to unbalancing the debt and equity levels. In second context the interest rate sustainability, as the interest rate raises and exchange rate changes the borrower directly hit by this increase and borrowings go to rise dramatically. Thirdly, maturity durations have shortened in a large part because it results in a decline in official flows of funds.

Elbadawi *(*1996) proved 'debt overhang effect' on economic growth using cross-sectional regression analysis for 99 less developed countries across Latin America, Latin America, SSA, Asia and Middle East. "They accredited three direct channels in which indebtedness in SSA works in inverse direction to growth rate; current debt inflows as a ratio of GDP (which should stimulate growth), past debt accumulation (capturing debt overhang) and debt servicing ratio. The fourth indirect channel is that, works through the impacts of the above channels on expenditures incurred by public sector.

Easterly and Schmit Hebbel (1991) that the debt flows affect the economic performance normally crowding out the investment by general public and resultantly a larger debt level reduce the level of public investment. A huge volume of the debt soaks up the resources of fiscal budget for government and reduces the funds available to the investments in productive projects. Although neo-classical paradigm explain the cause and effect as well as positive relationship between external debts and economic growth but it is criticized due to its flaws and un-realistic assumptions of the ability to freely mobilize the capital from one economy to another one perfectly. In real world scenario it is not possible the perfect mobility of the capital due to several restrictions on the basis of geographic, economic and political issues.

Geiger (1990) used ARDL technique and analyze the impact of external debt stocks burden and economic growth rate for 9 South American countries for the period of 1974 to 1986 and concluded significant negative impact of debt burden on growth rate. Borensztein (1990) stated the debt overhang as a situation where the benefits from the returns of additional investment are lower due to the repayment of debt obligations. Sachs (1990) and Kenen (1990) states that, debt burden is a major cause of lowering the economic growth of HIC's.

Private investments are discouraged due to a large debt overhang situation and the payments for the debt servicing become so large in some low income countries that it will become much tough to return to a growth path.

The reason for negative impact of the external debt on economic growth is undue conditions restrictions imposed regarding the economic policy of borrower country by the lender nations and entities as, Cobbe (1990) suggested that International Monetary Fund (IMF) and World Bank (WB) are completely responsible to be blamed for the breakdown of their credit distribution plans to stimulate GDP growth in developing world. Taking into account the facts that the overhauling and servicing of external obligations leads to a outflow of funds and resources which may be allocated to other sectors of the economy and augment the growth significantly , further he concluded that external debt stocks have negative effect on economic growth.

Some empirical research studies produce confusing results about the relationship between borrowings from external sources and growth of an economy. Warner (1992) studied the 13 developing countries and the Cohan (1993) have conducted a large cross-sectional research on 81 developing countries and find out rambling results about the significant effect of external debt on economic growth.

Ferarro and Rosser (1994) construct a relationship between the debt crises of 1980 and reckless loan policies of industrialized and developed countries. They argued "the proof of the wrong-mindedness & irresponsible behavior of lending in the 1970s became dramatically apparent in 1981". Like other theorists they also blame that a rise in interest rate and deterioration in terms of trade and conditions of primary goods' trade. Ferarro and Rosser (1994) pointed out that "the deep recession of 1981 – 1982 had made it unfeasible for developing countries to repay back their borrowings". Furthermore, they argue quoting UNCTAD, "Prices of the goods (for essentially food stuff, fuels, and minerals products) declined by 28 % in 1981 – 1982, and amount of interest payments on loans increased by 50 % in nominal terms and in real terms 75 %". Wayne (1993) and the Jubilee (2000) also analyze the impact of debt and argued in the same way.

Examining the external debt and economic growth rate of an economy various researchers produced different conclusions about the same unit of analysis as, Cunningham (1993) examined 16 highly indebted countries (HICs) for a period from 1971 to 1987 and presented a variety of results for different time periods in the same context. He employed similar methodology for empirical analysis and find out that during 1971-1979 a significant and negative relationship between external borrowings and economic growth while on other side the data set of same variables did not prove any significant impact of debt for the time period of 1980-1987. The earlier literature leads the economists of current time to a controversial relationship between the economic growth and external debt.

Chowdhury (1994) conducted a study to test the significance of foreign debt on economic growth. He used Granger causality test for the pacific and Asian countries over the period 1970-88 and attempted to resolve the problem of controversy among the researchers about the relationship of loans and growth. Furthermore, he concluded that borrowing from external sources has a very small impact on the GDP, the study also suggested that as GNI increases it leads to a higher external debt level while on the other hand; external debt stock has no significant negative impact on the economic growth. If private external debts and public external borrowings, then it is shown that growth is affected inversely by the public external debt while in case of private external debts the outcomes are found insignificant.

Smyth and Hsing (1995) find out that in early 1980s, debt ratios increased but it was below its optimal value; 38.4. Debt-financings have motivated the economic growth. On the other hand, during 1986-1993, debt ratio rose from 40.7 percent to 50.9 percent. This ratio is above the (38.4) optimal debt ratio and it is estimated to have a negatively effect on the economic growth.

An increase in external debt causes to expand the money supply, which leads to increase the interest rate & crowding out the private investment from the economy, and lowering the growth rate. Fosu (1996) argued that the gross domestic product is inversely related to the external debt. He presented the reason of increase in money supply and interest rate. Furthermore, he explored the effect of external debt on the GDP along with other control variables. Conclusively the author argued that the overall effect of the external debt on any economy is negative.

Elmendorf (1999) explained that public debt is inadequate to overcome the fiscal deficit which becomes a source of 'crowding out private investments' from economy. The allegations of enormous borrowings by Government are a rise in interest rates. "The rise in interest rates may reduce or crowd out private-sector investments in production plants and equipment. This decline in private investment level means that the overall economy has a smaller volume of capital stocks with which to work, which then decreases growth rates in future".

Basic growth equation model used by Mwaba (2001) estimate the impact of accumulated debt on economic growth and apply OLS (ordinary least square) in the context of Uganda and concluded that accumulated stocks of debt has an inverse impact on economic growth and current inflows of borrowed funds affect the growth in positive direction.

Benedict *et al.,* (2003) argued that borrowings from foreign sources up to a threshold level boost the growth positively but servicing of the external debt effecting the economic growth negatively as most of the funds are spent to pay the debt service rather at investment.

While analyzing the external debt impact on growth rate Schclarek (2004), Adelmawla and Mohammed (2005) studied effect of external debt levels on economic growth for Sudan for the period of 1978-2001 and concluded inflation and external debt effecting the growth negatively but exports boost up significantly economic growth of the country. Dijkstra (2006) asserted that World Bank is playing a major role in problem of debt overhang[1] in developing countries. She pointed that World Bank, by dominating the double role of Creditor and controller in the "International Financial framework", faces a responsibility to finance weak economies of the world.

Patenio and Tan-Curz (2007) argued that results of study proved that economic growth was not truly inclined by external debt servicing. The study used the time series data for the period 1981 to 2005. Furthermore, they explained that the effect of external debt obligation on the Philippians' economy is not clearly projected because of the data and time period.

Furthermore yadi (2008) studied the impact of external debt along with its servicing in Nigeria using the time series data for the selected period 1970-2007, he employ the OLS and GLS techniques for estimation and concluded that the debt and its servicing has a negative impact on economic growth. Lau, Puah, Liew and choong (2010) studied various types of debts and their impact on the economic growth of Malaysia, using co-integration test and concluded that economic growth is affected negatively by the debt in long run.

A study using time series data from 1970-2003 by Hameed *et al.,* (2008) on Pak-economy, investigate the empirical relationship among GDP, external debt, capital stock and labor force. He concluded that growth of economy, productivity of capital and labor are adversely affected by the debt servicing.

Arshad Hasan and Safdar But (2008) used ARDL model for analysis the external debt and growth rate for a period of time 1975-2005, concluded that external borrowings has no effect either in long run or short run on the economic growth. Therefore it is finally concluded that in-efficient use of the debt is a cause of slowing the economic growth not the debt itself in Pakistan.

Ramesh and Nelson (2009) studied the co-integrated relation of real GDP growth, labor force, trade openness and external debt for the period 1955 to 2006, evidence from Sri Lankan economy. The result of the study shows that all the explanatory variables previously mentioned positively affect the real GDP growth and the main effective variable is labor force. The included other independent variables may boost up the productivity of labor force. If debt is optimally used to achieve the potential returns of the resources, it may expedite growth.

Christensen (2010) complemented the enormous literature on external stocks of debt but mainly focused on the increasing level of public domestic debt and its effects on economic growth and external debt, by using a poled least square (PLS) technique on lower income and emerging countries. He Applied GMM technique also, and results indicate that domestic debt positively effecting economic growth on and it decrease the level of external debt. Furthermore, Christensen argued that in presence of advanced and managed financial institutions aggravated the emerging economies to ensure the political stability and accountability, market efficacy and development of financial structure, overall savings rate that can lead the developing countries to attain the goals of sustainable economic growth, environmental and social development.

Malik and Hayat (2010) used the time series data applied ARDL technique of estimation to explore empirical relationship between the stock of external debts and economic growth in Pakistan, the research concluded that external borrowings and debt is negatively related to economic growth in context of Pakistan economy.

Reinhart and Rogoff (2010) shed light on debt and growth phenomenon. The authors are of view that public debt is harmful for economic growth in any country. They pointed out that when external reaches the 60 percent of gross domestic product, the growth rate of economy is hampered by 2 percent. If external debt exceeds the 90 percent of gross domestic product, growth rate declines by 50 percent. Study explored that there is no link between high public debt level and inflation in advanced economies but in emerging countries high debt causes the higher level of inflation.

Sheikh et al. (2010) highlighted the domestic debt and economic growth in Pakistan. Time series data for 1972-2009 is analyzed through ordinary least square method. Findings determine domestic debt positively contributes to the economic growth of Pakistan. The study also found inverse relation between domestic debt servicing and economic growth.

Malik *et al.,* (2010) observed the empirically observed the external debt and economic growth in

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[1] Debt overhang: As defined by Krugman (1988), this happens when a country's expected debt repayment is less than the value stipulated in the debt contract. In this situation, the country's output is used to pay off existing foreign loans at the expense of investment towards economic growth [Clements, Bhattacharya, Nguyen, 2003]

Pakistan. Ordinary least square technique is applied on annual time series data (1972-2005). Analysis determined that external debt significantly impedes economic progress in Pakistan. Furthermore pessimistic relation among external debt servicing is found in analysis.

Rais and Anwar (2012) investigated the public debt and economic growth in Pakistan using time series data (1972-2010). The researchers employed ordinary least square technique for estimation. Investigation reported that both external and domestic debts are inimical for economic growth for Pakistan. It is also reported that domestic debt positively accelerate consumption and exports but inversely effects the investment. The authors strongly suggest that the loans from IMF should be avoided.

Umaru *et al.*, (2013) evaluated the impacts of external and domestic debt in Nigeria. Ordinary least square method and granger causality test have been used on the annual time series data (1972-2010) for examination. Bi-directional causation between external debt and gross domestic product is reported. Study concluded that external debt has obstructed the Nigerian economy.

Boboye and Ojo (2012) conducted a research on "effects of external debt on economic growth and development of Nigeria". It was based on the time series data of twenty seven years and researchers applied OLS technique for analysis. Research resulted that external debt has negatively impacted the national income and per capita income in Nigeria. A positive link is found between external debt servicing and national income.

Shabbir (2013) attempted to scrutinize the affects of external debt on economic growth. For this purpose panel data of 70 countries for the period of 1976-2011 is analyzed through fixed and random effect models. It was found that external debt hampers the economic growth. While foreign direct investment and gross capital formation positively contributes to economic progress.

3. Data and Methodology
3.1   Data Construction and Methodology
Time series data for the period of 1972-2013 is taken for analysis, as more than 30years data is compulsory for long run analysis. Data about gross domestic product, gross fixed capital formation, and total external debt is obtained from World development Indicator. Employed labor force data is sourced from Hand book of statistics of Pakistan 2010.

Table 1:

Variable	Unit Measurement	Data Source
Gross Domestic Product	Million Dollar	World Development Indicator
External Debt	Million Dollar	World Development Indicator
Employed Labor Force	Million Individuals	Hand book of statistics of Pakistan 2010
Gross fixed Capital Formation	Million Dollar	World Development Indicator

For estimation of econometric results, the study uses Augmented Dickey Fuller test for unit root examination. Long run relationship is examined using Johansen Cointegration test. For short run analysis, the study employs error correction model and granger causality test is used for cause and effect relationships.

3.2   Model formation
According to the objectives of the study, We are going to use extended Solow growth model for our analysis. Solow model in general form.

$$GDP = f(K, L)$$

We add our objective variable (external debt) and it will become

$$GDP = f(K, L, ED)$$

GDP stands for real gross domestic product taken as the proxy of economic growth, L signifies employed labor force taken as the proxy of labor. K is used for the gross capital formation taken as proxy of capital. Extended Solow growth is presented in the Cob-Douglas production function form as under

$$GDP = \alpha K^{\beta_1} L^{\beta_2} ED^{\beta_3} e^{\mu_i}$$

$$\ln GDP = \ln \alpha + \beta_1 \ln K + \beta_2 \ln L + \beta_3 \ln ED + \mu_i \ln e$$

Where $\ln e = 1$

$$\ln GDP = \ln \alpha + \beta_1 \ln K + \beta_2 \ln L + \beta_3 \ln ED + \mu_i$$

4.   Results and Discussions
4.1   Augmented Dickey Fuller Test
To apply co integration for estimation, it is necessary that all variables be of integrated at order one. ADF results are shown in following table. At first difference H_o is rejected. Hence it is proved that variable used in study are integrated at order 1.

Table 2: Unit Root Test Results

Variables	Test for Unit Root	Included in Test Equation	P- Statistics		Results
			ADF Test Statistics	Critical value	
LNGDP	Level	Intercept	0.13	-3.60**	I(1)
		Trend and intercept	-3.95	-4.19*	
	1st Difference	Intercept	-10.51	-2.60***	
LNELF	Level	Intercept	-0.41	-3.60*	I(1)
		Trend and intercept	-2.39	-3.52**	
	1st Difference	Intercept	-8.03	-3.60*	
LNED	Level	Intercept	-0.90	-3.60*	I(1)
		Trend and intercept	-1.71	-3.19***	
	1stDifference	Intercept	-4.18	-2.93**	
LNGCF	Level	Intercept	-1.97	- 2.60***	I(1)
		Trend and Intercept	-0.91	- 4.20*	
	1st Difference	Intercept	-5.84	-3.61*	

Note: *, **, *** show the critical value at 1%, 5%and 10% significance level respectively.

4.2   No .of Co-integration equations

Numbers of co-integration equations are found by trace statistics. In following table null hypothesis, Eigen value, trace statics, critical values and probabilities are plotted. Trace statistics indicates that there is one Co-integrated vectors in long run. Thus analysis shows that there is strong relationship between dependent and independent variable used in the present study.

Table 3:   Unrestricted Co integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.484794	57.55912	54.07904	0.0237
At most 1	0.376161	31.69478	35.19275	0.1137
At most 2	0.192374	13.29210	20.26184	0.3409
At most 3	0.119413	4.959507	9.164546	0.2879

Trace test indicates 1 co integrating equation(s) at the 0.05 level. * denotes rejection of the hypothesis at the 0.05 level.

4.3   Long run results of co integration

In our study we used gross fixed capital formation as a proxy of capital. As we know capital is considered the blood of economy. Capital is positively linked to economic growth, as it enhances production capacity of the country. Results reveal that elasticity of Gross Domestic Product regarding gross capital formation is 0.644 which is significant. And our findings are consistent with previous studies.

Table 4: Johansen Long run Results

Variables	Co-Efficient	Standard Error	T-Statistics	Remarks
LNGCF	0.644	0.051	12.39	SIGNIFICANT
LNELF	1.516	0.158	9.59	SIGNIFICANT
LNED	-0.253	0.070	-3.61	SIGNIFICANT

Results showed that employed labor force positively contributes to economic growth of Pakistan. This proposes that 1 percent increase in employed labor force will boost gross domestic product by 1.159 percent on average. Labor plays a vital role in under developed countries. Skilled labor not only increases production but also efficiency.

Our main objective was to find the long run relation of external debt and economic growth of Pakistan. Results showed there is negative relationship between external debt and economic growth of Pakistan. Debt elasticity to economic growth is -0.253. That's mean one percent increase in external debt decreases economic growth by -0.253. Debt is not bad but its use determines its consequences. Pakistan most of time got external debt to maintain its reserves, but because of huge imports Pakistan could not maintain reserves. To maintain reserves, Pakistan got more and more debt. At the same time for debt servicing we got more debt over the time. Thus a huge amount of debt is accumulated, now hampering economic growth. Our finding are consistent with previous studies like Malik et al. (2010), Rais and Anwar (2012), Umaru et al. (2013), Boboye and Ojo (2012), Shabbir (2013).

4.4   Vector Error Correction

Vector error correction showed speed of adjustment to reach equilibrium id 76 percent, which is most significant. DGP of 2012 and 2011 positively contributing to current GDP. GFCF of last two years negatively allied to current DGP. Employed labor force of last year negatively but of 2011 is positively link to GDP. Most important here is external debt. From last two years external debt adversely effecting economic growth of Pakistan.

Table 4: Short Run Results

Variables	Co-Efficient	Standard Error	T-Statistics
Speed of adjustment	-0.761868	0.32189	-2.36683
D(LNGDPMD(-1))	0.434624	0.32151	1.35182
D(LNGDPMD(-2))	0.218860	0.30667	0.71366
D(LNGFCFMD(-1))	-0.171315	0.22508	-0.76113
D(LNGFCFMD(-2))	-0.295309	0.24833	-1.18916
D(LNELF(-1))	-0.693387	0.61448	-1.12841
D(LNELF(-2))	0.023100	0.55568	0.04157
D(LNEDMD(-1))	- 0.022788	0.24292	[0.09381
D(LNEDMD(-2))	-0.045018	0.23939	-0.18806

4.5   Granger Causality analysis

Results generated by the Granger causality test explains that here is the bilateral causality exist between GDP and fixed capital formation.GDP and external debt stock however don't cause to each other but external debt and fixed capital formation have bilateral causal relationship that indicate a crucial implication that external debt depress the GDP through investment crowding and debt overhang channel.

Table 5: Causality

Null Hypothesis:	Obs	F-Statistic	Probability
LNGFCFMD does not Granger Cause LNGDPMD	40	3.29792	0.04873
LNGDPMD does not Granger Cause LNGFCFMD		6.60469	0.00368
LNEDMD does not Granger Cause LNGDPMD	40	0.61734	0.54515
LNGDPMD does not Granger Cause LNEDMD		1.93711	0.15926
LNELF does not Granger Cause LNGDPMD	40	11.0123	0.00020
LNGDPMD does not Granger Cause LNELF		1.01224	0.37380
LNEDMD does not Granger Cause LNGFCFMD	40	2.64264	0.08534
LNGFCFMD does not Granger Cause LNEDMD		2.94451	0.06578
LNELF does not Granger Cause LNGFCFMD	40	9.70170	0.00044
LNGFCFMD does not Granger Cause LNELF		2.02991	0.14652
LNELF does not Granger Cause LNEDMD	40	1.87190	0.16891
LNEDMD does not Granger Cause LNELF		0.34384	0.71141

5.   Conclusion and Policy Implications

The study attempted to examine the long run and short run impact of external debt on economic growth in Pakistan over the period of 1970-2010, considering GDP as a function of capital, employed labor force and the external debt. Long run relationship is empirically tested by applying Johansen co integration test while short run results were obtained through Vector Error Correction Modeling. Finally Error Correction Term was measured to capture the speed of adjustment.

Empirical evidence revealed that external debt exerts a negative impact on economic growth; clearly indicate that higher external debt discourages economic growth. Therefore it verified the occurrence of debt overhang and crowding out situation in Pakistan during the period of the study. Capital as a key factor of production, positively affects the economic growth. This indicates that capital investment has a lot of potential to accelerate the pace of economic growth. Employed labor force showed the positive impact on economic growth. Co-integration confirmed the long run relationship. An estimation of adjustment parameter by VECM suggested that 76 percent of any deviation to the long run equilibrium corrected in one year.

From the policy prospective it is recommended that increased domestic saving and export earnings could also raise the estimated growth rate and reduce the reliance of the economy on external debt. It is very important to create conducive environment for investment and much focus of the policies should be on the inflow of Foreign Direct Investment (FDI), while the inflow of debts should be minimized. There is severe need

of close monitoring and consistent debt management strategies to avoid the unproductive utilization of external debt.

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