Growing External Debt in Pakistan and its Implication for Poverty

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Abstract

This study investigates the effectiveness of external debt in determining socio-economic development in Pakistan during the period from 1973 to 2013 using time series data. For analysis, Ordinary Least Square (OLS) and Augmented Engel-Granger (AEG) test is used. The results from AEG test show that there is co-integration and long run bond between external debt and poverty. The results provide strong evidences that poor economic performance have significantly aggravated economic downturn and augmented poverty level. Growing external debt services have unfavorable impacts on poverty level and income inequality as less has been left to finance expenditures on social services and poverty reduction. Poverty level and income inequality can be useful indicators of the Pakistan's initiatives on debt reduction goals and debt relief.

Keywords: external debt, poverty, inequality.

Introduction

Recently, external debt and poverty have received enormous attention from the researchers. Good governance and external borrowings play a central role in determining the socio-economic development of the developing and Highly Indebted Poor Countries (HIPC).

Pakistan's economy is persistently dependent on external borrowings to bridge the resource gap since 1970s. The growing resource gap is a reflection of its economic governance issues and also replicates the way macroeconomic aspects were accomplished overtime. Growing external debt burden inversely affect GDP growth
through the effects of debt overhang and liquidity constraints. Obviously, government expenditure on public services and settlement of debt requires to be financed by the internal sources available to the government, *i.e.*, raise capital through effective taxation (Mohey-uddin, 2005).

The ideal utilization of the borrowed funds could have facilitated improvement in the living standards of the masses but unluckily that did not materialize due to fiscal irresponsibility and Pakistan has accumulated huge external debt (Hasan, 1998). Borrowing demands that, at a certain point, these loans to be repaid and, hence, the nation requires generating surplus resources from the borrowed funds to retire its debt. Further, despite benefitted from debt relief initiatives in 2002-08; recently, Pakistan has systematically faced difficulties to comply with its external debt obligations.

A number of new issues pertaining to the Pakistan's external debt burden and poverty have been addressed in this analysis. The role played by growing poverty level, income inequality and trade openness in the build-up of external debt have received considerably low attention in the previous literature on debt sustainability in Pakistan have been discussed in this analysis.

**Problem statement**

Here the core focus is on the major determinants of external debt and poverty as well the quantifiable impact of these issues on economic development and sustainable external debt. Further, the sudden upsurge of the external debt problem and sluggish economic growth and its implications for poverty in the period of 2008-2013, particularly inspired the author to examine the root causes of this menace. In that reason, the major queries that are to be analyzed and hypotheses to be tested are:

Hypothesis-1:  
*Sustainable external debt is positively related to the country's economic growth and social development.*

Hypothesis-2:  
*Growing external debt is directly related to an unsustainable economic growth and results in poverty deterioration.*

Traditionally, the matter of debt sustainability in Highly Indebted Poor Countries (HIPC's) was usually assessed through the conventional debt indicators method. The
most common measures of public debt sustainability were the ratio of public debt stock to gross domestic product and ratio of public debt stock to government revenue. Further, in case of accumulated foreign debt, it is significant to express foreign exchange and export earnings in terms of foreign debt, likewise the foreign debt to gross domestic product ratio [Sun (2004); Cline (2003); Martin (2002); Gray (1998)]. European Network on Debt and Development (EURDAD) in 2001 observed that these indicators are incapable to detect the true factors that are helpful in determining the accurate level of sustainable debt. Further, these initiatives will not be adequate in poverty reduction efforts of HIPC’s as it does not take into account for the funds these nations need for expenditures on poverty eradication and for sustaining GDP growth [Birdsall and Deese (2004); and Sachs (2002)]. Thus poverty and income inequality have been introduced in the growth equation to overcome these shortcoming of the debt ratio analysis to determine the debt sustainability situations for Pakistan. Furthermore, trade openness is also taken into consideration in this study instead of conventional indicators for foreign debt i.e., present value based debt ratios of foreign debt to export earnings. In addition, the study analyzes the external debt accumulation and its implication for poverty level, the rationale behind it, and the feasible measures that Pakistan can implement to reduce its external debt burden.

Objectives of the Study

The main objective of the study is to assess variation in external debt and its implication for socio-economic development and to observe the impact of external debt obligations on Pakistan’s economic development i.e. cumulative GDP growth or improving socio-economic development achieve through sustainable external debt; so that advantage of success should be enjoyed by all section of the society.

Literature Review

There is infinite amount of literature that attempts to achieve the sustainable external debt. But despite the voluminous literature, there seem to be no reliable and unambiguous answer to this question. Most of the studies have considered fiscal and monetary (saving, productivity and foreign capital inflows) to reduce burden of debt (Crouch, 1973; Ahmad and Ahmed, 1998). In previous external debt sustainability literature on Pakistan, the most common measures of external debt sustainability were the ratio of public debt stock to gross domestic product and ratio of public debt stock to government revenue.

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Further, foreign debt has been expressed in terms of budget deficit, current account, foreign exchange and export earnings. For instance, Pasha and Ghaus (2003) and Bilquees (2003) basically observe the growth of public debt and classify the collective effect of preceding non-interest current account deficit and huge primary budget deficit are the major reasons accountable for the growing public debt.

Anwar (2002) observed that in case of stagnant exports, devaluation would cause increase in external debt in rupee in term and consequently increase in external debt service burden, lower GDP growth and raise poverty level. Further, it is essential to tackle fundamental basis that responsible for debt build-up and consequent unfavorable effects on GDP growth and poverty while working on debt reduction plan.

Poverty happens when people in a disintegrated society is fastened into a nexus of dominance, which denies the individuals of their genuine and possible share in resources. The deprived face markets, institutional and local power structures, which depressed against access of the poor to the resources, public services and decisions making, which impact their instant survival (Hussain, 2000).

Social under-development of large section of the society created severely affected economic revival. In the beginning, economic management in Pakistan have undertaken growth oriented policies and socio-economic development was completely neglected. An economic mechanism was developed which was responsive only to the production and distribution that ultimately results in the socio-economic disparities widened with the passage of time. Khan (2005) suggests that provision of better social infrastructure i.e. better education and health-care will increase the possibility of Pakistan entering a virtuous cycle of high GDP growth and will improve the living standards of the people.

Unstable macroeconomic environment may induce uncertainty; political instability and social unrest. The ultimate effects of these outcomes result in vicious circle of poverty, low growth and unsustainable debt. This analysis would discover evidences to specify that the poor and deprived have limited access over funds availed through external sources.

McGillivray (2010) has used three stage least square methods to determine impacts of foreign capital on revenue collection in all developing countries and found that aid has no incremental effect on tax collection.
Iqbal (1997) by using iterative three stages least square method for the period of 1976-1995 to show the affects of foreign capital on non-development and development expenditures. He observes that foreign aid has positive effect on expenditure generally but its impact on development expenditure is minor.

Chishti and Hasan (1992) have carried a theoretical model for Pakistan and analyzed it through the iterative 3SLS technique, which observes that 28 percent of public sector non-development funding is met from domestic or internal borrowings. External assistance illustrates a modest effect on public investment but not foreign loans.

Islam (2005) has applied OLS and 2SLS for the period of 1968–1997 for 65 countries including Pakistan and shows that foreign aid does not have any considerable effect on GDP growth. Further, foreign aid does not depend on quality of policies assumed by the recipients but aid has a positive effect only in a stable political environment.

Feeny and McGillivray (2010) examine that aid helps in promoting the economic growth but with diminishing returns by applying OLS, Fixed effect model and GMM for the period of 1980-2004 for fragile economies (Papua New Guinea) which show that foreign aid has not been utilized in an efficiently. Foreign aid was being utilized for filling the budget deficit.

Brautigam and Knack (2004) applied OLS and 2SLS for the period of 1982-1997 and found that foreign aid has the harmful impacts on the quality of governance in most of the African countries.

Easterly (2003) by applying OLS and 2SLS and examines that in the presence of better economic policies, the foreign aid has positive effect on GDP growth. Similarly, Burnside and Dollar (2000) uses 2SLS and found that foreign aid has positive effect on GDP growth.

Knack (2001) by using OLS and 2SLS empirical approaches and observed that high surge of foreign aid worsened the quality of governance and this effect is robust for alternative conditions.

Alesina (2000) by applying OLS, 2SLS and Tobit estimates observed that economic policies, strategic position of a country and political pacts, are the determining
factors to receive foreign aid.

Boone (1995) by using OLS and Fixed Effect (FE) using data on nonmilitary aid flows to 96 countries indicates that external aid it does not contribute to the economic growth and its impact on investment is insignificant. Foreign aid even does not assist the poor in the recipient countries but just swell the size of government. The existing literature suggests that poverty and inequality are interrelated and these two also shaped economic development process. It is instantaneously and broadly recognized that inequality adversely influences both the sustainability of economic growth as well as its potential for poverty diminution (World Bank, 2006). An appropriate approach would be investigated to determine how the present description illustrates the governance effectiveness in Pakistan.

**Theoretical Frame-work**

Theoretically high level of foreign assistance can cause favorable as well as unfavorable effects on sustainable economic growth. The matter of debt sustainability is usually assessed through the conventional debt indicators method in most of the developing countries {Sun, 2004; Cline 2003; Martin 2002; Gray 1998; Cuddington, 1996}. This method of public debt sustainability investigation expresses the debt indicators as a ratio of chosen macro-economic variables recognized by international financial institutions. Thus, level of the debt sustainability is concluded from the estimated debt ratios are matched with the standard level of public debt sustainability signs.

The most common measures of public debt sustainability were the ratio of public debt stock to gross domestic product and ratio of public debt stock to government revenue. Further, in case of accumulated foreign debt, it is significant to express foreign exchange and export earnings in terms of foreign debt, likewise the foreign debt to gross domestic product ratio.

Nevertheless, the conventional debt ratios method is not free of deficiencies, for example these indicators may lead ambiguous evidence, can be easily distorted and therefore does not present the true image of the issue. European Network on Debt and Development (EURDAD, 2001) observed that these indicators are incapable to detect the true factors that are helpful in determining the accurate level of sustainable debt.
Current Highly Indebted Poor Countries (HIPCs) debt reduction initiatives will not be adequate in poverty reduction efforts of HIPCs, as it does not take into account for the funds these nations need for expenditures on poverty eradication and for prompting GDP growth. For example, rapid growth in export earnings may not always transform into more financial allocations for the government to use to wage its debt obligations {Birdsall and Deese 2004; Sachs 2002; Birdsall et al 2002; Thomas, 2001}. This is correct in case of Pakistan, as due to volatility of Pakistan's commodity markets make the debt-to-export ratio an unreliable standard to forecast debt sustainability in the medium term. But very significantly, an exports-based method does not explain what the poverty reduction prerequisites of a nation are, and generates motivations for macroeconomic orientation, which may not always be pro-poor.

Thus poverty and income inequality have been introduced in the growth equation to overcome these shortcoming of the debt ratio analysis to determine the debt sustainability situations for Pakistan. Furthermore, trade openness is also taken in to consideration in this study instead of conventional indicators for foreign debt i.e., present value based debt ratios of foreign debt to export earnings.

Econometric Modeling / Methods Used in Previous Studies on the Issues of External Debt

There is hardly any pragmatic research on Pakistan's external debt sustainability problem founded on a sound theoretical approach. This research empirically assessed the external debt sustainability of Pakistan appropriate to the socio-economic issues prevailing since 1970s. This study tries to capture the impacts poverty level and income inequality as large portion of the population is living below the poverty line. Furthermore, trade openness is also taken in to consideration in this study instead of traditional indicators for foreign debt i.e., present value based debt ratios of foreign debt to export earnings. So the model of this study will be:

\[
\text{External Debt} = f (\text{Budget Deficit} + \text{Trade Openness} + \text{Saving-Investment Gap} + \text{Poverty} + \text{Gini} + \varepsilon) \quad \text{(1)}
\]

Where \(\varepsilon\) is White noise error term

According to the Trickle-down theory, development is solely an economic phenomenon in which benefits from the overall growth of gross domestic product and income per capita would automatically trickle-down to the masses in the form of employment and economic opportunities. The major concern is therefore to acquire the
growth job done while reduction in unemployment, income inequality and poverty are perceived to be realized as a result of economic growth. Thus equation for income inequality and poverty would be as follow:-

\[ \text{Poverty} = f(\text{Agriculture Cultivated Area} + \text{External Debt Services} + \text{Gini} + \text{UnemploymentRate} + \varepsilon) \] \[ \text{-------------------(2)} \]

Where, \( \varepsilon \) is white noise error term.

Sources of Data

The perceived analysis of this study uses statistics for Pakistan, which cover the period 1973 to 2013. Main data sources are Economic Survey of Pakistan (various issues), Hand Book of Statistics (SBP), Jamal (2004) and World Development Indicators published by the World Bank. All monetary units of variables are local currency unit of Rupee in million, while poverty and unemployment are expressed by number of people in millions. Agriculture cultivated area is expressed in hectares. Complete time series data on poverty and inequality are not available or available with some gaps. Therefore, an average of the last five years has been used for the missing years.

Multiple Regression Results for External Debt.

Table-1 contains multiple regression results for governance issues effects on external debt. The coefficient of inequality is insignificant but has a positive sign. The results indicate that the coefficient of poverty is significant and positively related with external debt at 5% and 1% level of significance respectively. The coefficient poverty is statistically significant and is consistent with the theoretical expectation and found to be positive. The coefficient of saving-investment gap is significant and positively related with external debt at 5% level of significance. The coefficient of trade openness is positively related with external debt and statistically significant at 5% level. The results are consistent with the prevailing literature. The coefficient of Budget deficit is significant and positively related with external debt at 5%, level of significance. The results are compatible with the hypothetical probability.

The F-statistics 63.3, which assesses the mutual significance of the independent variables, is established to be statistically significant at 1% level of significance as pointed out by the resultant probability value 0.0000. The Durbin-Watson statistic 1.81
in the table is greater than R²(0.90) indicating that the model is not spurious, and implies that there is absence of serial correlation.

**Table-1: Regression Results for External Debt**

Method: Least Squares

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-2326884.</td>
<td>565957.3</td>
<td>-4.111413**</td>
<td>0.0002</td>
</tr>
<tr>
<td>SIG</td>
<td>1.309604</td>
<td>0.607103</td>
<td>2.157137*</td>
<td>0.0379</td>
</tr>
<tr>
<td>TO</td>
<td>1734451.</td>
<td>902318.7</td>
<td>1.922215*</td>
<td>0.0627</td>
</tr>
<tr>
<td>BD</td>
<td>2.852778</td>
<td>1.489928</td>
<td>1.914709*</td>
<td>0.0637</td>
</tr>
<tr>
<td>POV</td>
<td>63303.15</td>
<td>14772.74</td>
<td>4.285133**</td>
<td>0.0001</td>
</tr>
<tr>
<td>G</td>
<td>18435.56</td>
<td>13721.49</td>
<td>1.343554</td>
<td>0.1877</td>
</tr>
</tbody>
</table>

R-squared  0.900454
Adjusted R-squared  0.886233
Durbin-Watson stat  1.810236
F-Statistics  63.31890
Prob (F-Stat)  0.00000

Note: * and ** denotes 5% and 1% level respectively

**Multiple Regression Results for Poverty**

Table-2 contains multiple regression results for determinants of poverty. The coefficient of external debt services is highly significant at 1% level of significance. The results indicate that the coefficient of external debt services is significant and positively related with poverty. The coefficient of unemployment rate is statistically significant at 1% level of significance and is consistent with the theoretical expectation and found to be positive. The coefficient of agricultural cultivated area is highly significant and negatively related with poverty at 1% level of significance. The coefficient of income
inequality is positively related with poverty and statistically significant at 1% level. The results are consistent with the prevailing literature.

The F-statistics 33.68460, which assesses the mutual significance of the independent variables, is found to be statistically significant at 1% level of significance as pointed out by the resultant probability value 0.000000.

The Durbin-Watson statistic 1.67 in the table is observed to be greater than $R^2$ (0.78) indicating that the model is not spurious, and implies that there is absence of serial correlation.

**Table-2: Regression Results for Poverty**

<table>
<thead>
<tr>
<th>Method: Least Squares</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Coefficient</td>
</tr>
<tr>
<td>C</td>
<td>102.2378</td>
</tr>
<tr>
<td>EDS</td>
<td>8.60E-05</td>
</tr>
<tr>
<td>ACA</td>
<td>-4.976295</td>
</tr>
<tr>
<td>UR</td>
<td>7.665089</td>
</tr>
<tr>
<td>G</td>
<td>0.430226</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.789151</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.765723</td>
</tr>
<tr>
<td>Durbin-Watson stat</td>
<td>1.679926</td>
</tr>
</tbody>
</table>

Note: * and ** denotes 5% and 1% level respectively
Engel-Granger Test Results for Cointegration

Engle and Granger (1987) examined that a linear combination of two or more non-stationary series may be stationary i.e., they are not spurious. If such a stationary linear combination exists, the non-stationary time series are said to be cointegrated and there is long-term association amongst the indicators. Therefore, the stationary linear combination is called the cointegrating equation and may be inferred as a long-term symmetry association amongst the variables.

Table-3: Engel-Granger Test Results for Cointegration

<table>
<thead>
<tr>
<th>Equation</th>
<th>τ - value</th>
<th>Critical value (1%)</th>
<th>Durbin-W</th>
<th>Prob</th>
<th>R2</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Debt</td>
<td>-6.17</td>
<td>-2.5899</td>
<td>1.99</td>
<td>0000</td>
<td>.43</td>
<td>Exist</td>
</tr>
<tr>
<td>Poverty</td>
<td>-5.50</td>
<td>-2.5899</td>
<td>1.94</td>
<td>0000</td>
<td>.48</td>
<td>Exist</td>
</tr>
</tbody>
</table>

In Table-3, since the computed τ– value (=t) for all regression equation is much more negative than the Engle-Granger one percent critical τ value, the conclusion is that the residuals from the regression of good governance variables on external debt is are I (0); that is, they are stationary. Hence, equations 1 &2, are cointegrating regressions and these regressions are not spurious and interpret its parameters as long run parameters.

Findings and Comparison with other Studies

This study observes that issues related to poverty reduction, optimal utilization of agriculture land and equal income distribution etc. are highly significant factors, which can explain welfare of a nation in relative terms. Now the question arises what should be the welfare function or criteria. This study concludes that nation's external indebtedness means its fiscal responsibility in terms of its desirable achievements of socio-economic development from the borrowed funds.

The result shows that there is a continuous increase in external debt and sluggish economic growth since 1970s. At the same time persistent escalation in poverty level
and income inequality have also been observed during this particular time period. This clearly indicates that external borrowing has not been utilized optimally. Therefore sustainable economic growth and debt reduction could not have been achieved.

The study observed that there is positive relationship between external debt services and poverty level. Positive relationship has also been examined between external debt and inequality. Hence, external debts have an adverse impact on poverty level and inequality. Countries that hold a considerable debt burden allocate little funds for social development and have to spend more against their debt obligations. External debt influences performance of the government by effecting the expenditure decision regarding social development and poverty reduction. Efficiency of foreign assistance is affected by poor economic performance of the recipient state [Burnside and Dollar (2000); Collier and Dollar (2002); Carl-Johan (2004)].

Due to lack of accountability in developing countries, the policy makers often undertake political driven project and less attention has been given to the vulnerable segments of the society that may result in social unrest and poverty level. Projects financed by foreign assistance are generally planned and utilized in politically motivated projects. Growing debt burden and IFIs strict conditions motivates the government to increase taxes. Thus, the masses may be overtaxed and be deprived of even the basic necessities of life. The government will finally opt for debt relief if an exceedingly painful course of adjustment is to be avoided with severely negative impact on living standards of the poor that ultimately result in social unrest and political instability. Trade openness shows positive sign but the result is insignificant. The study suggests that openness is not favorable in Pakistan context. Major exports of Pakistan consist of the commodities for which demand in the international market is elastic. Further, since 1975, the Pakistan's imports are higher than its exports; more openness means a considerable increase in the trade deficit and supplements external debt.

Negative relationship has been observed between agriculture cultivated area and poverty level i.e. revival of the agriculture sector can feed the most vulnerable segment of the society. In fact more than half of the population of Pakistan is associated with the agriculture sector. Agriculture sector is an important contributor to the GDP in Pakistan. It engaged almost 50 per cent of the labor forces in rural areas and backings nearly 66% of merchandise exports.
Conclusion

This study advocates better selectivity by donors, focusing aid to nations that take well-defined steps to poverty reduction, equal distribution of income and improve fiscal responsibility.

External debt services have adverse effects on poverty level and income inequality and have severe implications for economic growth sustainability. It is suggested that budget deficit should be financed by domestic resource mobilization. Most vulnerable segments of the society are associated with agriculture sector. Pakistan should increase agriculture-cultivated area where it has clear comparative advantage. Revival of the agriculture sector would boost economic growth and would help in lessening depravity of the vulnerable segments of the society.

This analysis advocates that external debt servicing exacerbate poverty level and income distribution negatively. This implies that the rising debt servicing liabilities reduces the economic and social development as large portion of government revenue is used in paying interest payments and less is spent on social services i.e. health and education. On the other hand economic growth is boost by investing in human capital and enhancing productivity. In return these social and economic elements would enhance socio-economic development.

Recommendations

GDP growth through external borrowings is crucial for sustenance of the socio-economic development. Moreover creating economic prospects, all-encompassing growth confirms equal admittance of chances amongst the numerous sections of a society. Consequently, a development plan founded on the all-encompassing growth notion has two key parts: one is to produce sustainable growth; and the second is to augment economic prospects and extend equal access to opportunities in the society.

The following steps are indispensable to control the restrictions associated to social unrest:

1. The prime suggestion of the study is that poverty and income inequality may be included in the HIPC's initiatives of debt reductions goals. Both of the indicators have
direct impact on governance effectiveness and socio-economic development.

2. Agriculture sector is an important contributor to the GDP in Pakistan. It engaged almost 50 per cent of the labor forces in rural areas and backings nearly 66% of merchandise exports. However, it is exceedingly reliant on major crops and weather conditions. Additional exploration and funds are required to expand the cultivated area, improve the irrigation system and crops yield.

3. The large number of the rural poor are in the farm sector that needs various targeted programs to reinstate this sector's efficiency. An extra ordinary physical and social infrastructure development is required in remote areas that are relatively deprived and neglected.

4. Openness is not favorable in Pakistan context. Major exports of Pakistan consist of the commodities for which demand in the international market is elastic. In this connection exports diversification can play its role in balance of trade.

5. Policy makers may guarantee the trickle-down of the benefits of borrowed funds to the masses in the pursuit or reduction in poverty and social development. New external borrowing schemes should be related with plans as per policy, which give power to the deprived and extending proper allocation to poor segments of the society.

Limitations

This study intended at understanding the association between some of the indicators of external debt and its implications for poverty in Pakistan. First constraint is incomplete time series data for poverty and income inequality. The data is available in gaps; therefore an average of the last five years has been taken for the missing years.

In addition, for future analysis of public debt, it is appealing to investigate the role of poverty level and inequality in economic slowdown and debt crisis. Optimal outcomes / results may only take place in a system where there is equal distribution of resources.

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References


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