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Public debt and pro-poor economic growth evidence from South Asian countries

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ABSTRACT

Over the years, most developing countries have failed to collect enough revenues to finance their budgets. As a result, they face the problem of twin deficits and are relying on public external and domestic debt to finance their developmental activities. NGOs and anti-globalisation movements have propagated the view that instead of reducing poverty public debt has increased the miseries of the poor. The current study examines the consequences of public debt for economic growth and poverty regarding selected South Asian countries, i.e., Bangladesh, India, Pakistan and Sri Lanka, for the period 1975–2010. It develops an empirical model that incorporates the role of public debt into growth equations and the model is extended to incorporate the effects of debt on poverty. The model is estimated by using standard panel data estimation methodologies. The results shows that although public debt has a negative impact on economic growth, neither public external debt nor external debt servicing has a significant relationship with income inequality, suggesting that public external debt is as good/bad for poor as it is for rich. However, domestic debt has a positive relationship with economic growth and a negative relationship with the GINI coefficient, indicating that domestic debt is pro-poor.

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1. Introduction

At the beginning of twenty-first century, the developing world has faced two major inter-related problems: heavy indebtedness and the incidence of poverty. Together, they have important implications for growth possibilities. Due to pressure from NGOs and the anti-globalisation movement; the International Monetary Fund (IMF), World Bank and other International Financial Institutions (IFIs) have somewhat belatedly linked debt relief with poverty reduction programmes.

The standard theoretical models are silent on the possible transmission mechanisms between high external debt and poverty. Similarly, the empirical impact of indebtedness on poverty reduction is not well explored. Theoretical and empirical literature covers debt problems mainly with respect to economic growth, but it does not always explicitly link them

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to poverty and human development. The assumption is that overall growth paves the way for poverty alleviation. The public debt–poverty issue is closely linked with the sustainability problem of external debt. In general, debt sustainability conditions state a position in which a country has the capability to service its debt compulsions. In the creditors' view, debt sustainability is satisfied when the country meets its debt servicing obligations after implementation of different debt rescheduling measures. The NGOs' definition regarding debt sustainability is more concerned with human development needs, requiring the incorporation of the poverty issue in HIPC (heavily indebted poor countries) initiatives (Befekadu, 2001). Unsustainable external debt is supposed to have been mainly responsible for causing major setbacks in development activities and the perpetuation of the poverty traps.

According to traditional neoclassical models, in the initial stages of their economic development, these countries have limited capital stocks and investment opportunities; therefore capital mobility increases the economic growth (Chowdhury, 2001). As long as these borrowed resources are used for productive investment, these countries do not face macroeconomic instability, and so economic growth increased. Burnside and Dollar (2000) have shown that under certain conditions external borrowing contributes positively to economic growth. Similarly, domestic savings and investment are also positively affected by external debt. This implies that foreign savings are helpful in balancing domestic savings (Eaton, 1993). However, a high level of accumulated debt has adverse implications for investment and economic growth. A broad rationalisation of these effects is referred to as 'debt overhang' theory. It asserts that if there is a probability that a country's future debt will be more than its repayment ability, then anticipated costs of debt-servicing can depress the investment (Karagol, 2002; Krugman, 1988). Similarly, if a greater share of foreign capital is used to service the external debt, very little will remain available to finance investment and growth, this channel is known as the 'crowding out' effect.

The review of the literature suggests that the effects of high indebtedness on poverty reduction seem not well explored empirically. Therefore, there is dire need for a comprehensive study, exploring the links between public debt and its impacts on the poor. The current study is an attempt to fill this gap in the existing literature.

The paper is divided into seven sections. After the introduction, Section 2 deals with the literature review; in Section 3, issues related to digression on the definition of pro-poor growth are highlighted. Section 4 is devoted to the empirical model and Section 5 discusses the data and methodology of the study while Section 6 discusses the estimation results that emerged from the current study. The final section concludes by giving some policy implications and suggestions for future research on the subject.

2. Literature review

The relationship between debt accumulation and poverty has been examined in only a few studies. However, this relationship is implicitly present in analyses of debt and economic growth. Over the last three decades, numerous studies have been conducted on the external debt–economic growth nexuses.

According to Krueger (1987) external debt has played a positive and important role in the economic development of developing economies. Most of the studies, e.g., Sachs (1990), Levy and Chowdhury (1993), Cunningham (1993), Fosu (1996, 1999), Cohen (1996), Chowdhury (2001), Lin and Sosin (2001) and Akram (2011), find a negative relationship

between external debt and economic growth. On the other hand, the studies based on the overlapping generation models suggest that gains and losses of the external debt are unequally distributed and most of the benefits of growth go to the future generations while the costs are borne by the existing generation (Dellas & Galor, 1992).

In recent times the concept of 'Debt Laffer Curve' has achieved popularity among economists and various studies have estimated the optimal level of external debt. Smyth and Hsing (1995) estimated that 38.4% is the optimal debt-to-GDP ratio for the USA. Siddiqui and Malik (2001) have also supported the existence of the nonlinear relationship between external debt and GDP growth. Pattillo, Poirson, and Ricci (2002) find that up to approximately 160% of export-to-debt level external debt is growth enhancing. Thereafter, it is growth reducing (debt overhang range). This also reveals that the debt overhang mechanism works through the productivity along with the volume of investment. Later, Pattillo, Poirson, and Ricci (2004) also found that the negative impacts of external debt on growth are transmitted strongly through total factor productivity (TFP) and investment (physical capital accumulation). However, the impact of external debt on human capital accumulation is insignificant.

Sawada (1994) finds that HICs' debt is more than their expected present value of future returns; therefore, they have to face the debt overhang problem. However, Afxentiou and Serletis (1996), fail to find a causal relationship between debt and GDP in a sample of 55 developing countries and concluded that debt overhang is rather an exaggeration. Mahdavi (2004) has analysed the impacts of debt servicing on public expenditure composition and finds that debt burden adversely affects 'capital expenditure' and it invariably changes the spending composition in favour of payments of interest on debt and displaces the share of subsidy and transfers and non-wage goods and services. Fosu (2007) also argued that expenditure on debt servicing may shift public expenditure away from social sectors such as health, education and maybe from public investment, which severely affects growth.

Various authors (Pattillo et al., 2002; Pattillo et al., 2004) and Cohen (1993) are unable to find the empirical significance of the crowding out effect. However, Chowdhury (2001), Clements, Bhattacharya, and Nguyen (2003), Elbadawi, Benno, and Njuguna (1999) find that both debt service obligations and debt burden have adversely affected economic performance and the investment. Warner (1992), Karagol (2002) and Hansen (2002), estimated that investment and growth are negatively affected by debt servicing. As mentioned earlier, the relationship between debt accumulation and poverty has been examined in only a few studies. However, this relationship is implicitly present in analyses of debt and economic growth. The hypothesis that exports and debt increase individual income inequality as described by the dependency theorists has been tested by Prechel (1985). It finds that exports enhance income inequality but higher debt does not. Moreover, the covariant analysis shows that in developing countries inequality is affected more by exports in comparison with developed countries.[1]

It is argued that debt can be used as an instrument to protect the benefits of the developed countries and to extract economic surplus from poor countries (Hoogvelt, 1990). In this context, historical evidence is cited – namely, that most of the outstanding debt of developing countries was originally contracted at low and fixed interest rates during the 1970s. This debt was rescheduled in the early 1980s – the era of floating (and rising) interest rates. This has added to the debt burden of these countries. The officially stated aims of these policies have been to stimulate economic growth, stabilise domestic economies, and to enhance the

country's ability to accumulate foreign exchange reserves required for foreign debt servicing. However, even by the IMF/WB's own macroeconomic standards (growth, stability and foreign exchange earnings) these policies have been an absolute failure.

Loko, Mlachila, Nallari, and Kalonji (2003) concluded that poverty is not only affected by external debt's negative impacts on income growth and public investment but also through the crowding out effects of external debt on social spending. Government budgetary allocations on social safety nets, education, health, water and sanitation are curtailed by high debt servicing; this is because, for the government, it is easier to cut back spending on these sectors in comparison with other expenditures.

From the review of literature, it can be broadly summarised that only a few studies are available on the relationship between debt and poverty and most of them are micro level studies. A comprehensive study focusing on the impact of different macroeconomic policies incorporating public debt is lacking. The proposed study intends to fill the gap by analysing the impacts of public debt on poverty.

3. Digression on definition of pro-poor growth

Poverty alleviation is one of the major objectives of public policy in developing countries. Historically, the concept of pro-poor economic growth gained currency in the 1990s (World Development Report, 1990). But, according to Kakwani and Pernia (2000), the idea of poverty-focused growth, as referred to by Chenery (1974), dates back to the 1970s. However, there are very few studies that have explored the role of public debt in the context of its distributional impacts.

> Reliability and availability of data for the indicators of poverty and income inequality has been a major constraint on research on the issue of poverty. There exists extensive literature on the definition and measurement of pro-poor economic growth. In trying to give operational content to the concept, two main definitions got popularity. The first definition illustrates the literal meaning of the phrase: 'growth is pro-poor when poor benefit disproportionately from it'.

This condition will be met if the income growth rate of the poor surpasses the income growth rate of the non-poor. Thus, for economic growth to be pro-poor, it should accompany a reduction in income inequality. Literal interpretation of the concept has been discarded by the second definition: 'growth is pro-poor if it reduces poverty'. Thus, a number of international organisations define the term in this way (OECD, 2001). Using the second definition, poverty would be reduced if human development indicators improve and per capita income increases.

Mostly economists are focused on income dimension of pro-poor growth. However, Klasen (2007), has emphasised the non-income dimension of poverty. This considers education, health, mortality and gender equity, etc., as equivalent to income measurement of poverty. The indicators such as Human Development Index (HDI), Human Poverty Index (HPI), and Physical Quality of Life Index (PQLI) are based on the non-income dimension of poverty.

It is also worth noting here that to compare pro-poor growth across countries, a standard poverty line is necessary. Internationally comparable poverty lines, and estimated poverty reduction on that basis, would be sensitive to the value of the absolute poverty line (Chen & Ravallion, 1997, 2001; Ravallion, 2004). However, these lines are very limited and their construction methods have been criticised in the economic literature (Pogge & Reddy, 2002).

To measure pro-poor growth, the Theil Index, GINI coefficient, ratio of income share of the bottom 20 to 40% of the population and head count ratio based on 1 USD per day and the Human Development Index etc., are the most widely used indicators. In this study, we have adopted the relative definition and used the GINI coefficient as an indicator of pro-poor growth, and a decrease in GINI will be referred as pro-poor growth.

4. Empirical model

The relationship between public debt and poverty reduction is implicitly present in the models linking external debt to economic growth. Theoretically, there is no doubt that the process of pro-poor growth benefits the poor. However, as discussed earlier, there exists a large literature on the definition and measurement of pro-poor economic growth. Keeping in view the discussion of the concept and definition of pro-poor growth and the constraints of data availability, we have used a relative measure of pro-poor growth, and the GINI coefficient is used as an indicator of pro-poor economic growth (it may be noteworthy that a decrease in the GINI coefficient is considered as pro-poor growth). In order to test the relationships, a two-step analysis will be conducted. In the first step, the impact of public debt along with other control variables on economic growth is analysed and, in the next step, the relationships of the variables with income inequality will be explored. The reduced form equations will take the following forms.

$$y_{it} = \alpha + \sum_{j=1}^{k} \delta x_{i\tau j} + \sum_{m=1}^{p} \pi Debt_{i\tau m} + \varepsilon_{i\tau} \tag{1}$$

$$gini_{it} = \alpha + \sum_{j=1}^{k} \delta x_{i\tau j} + \sum_{m=1}^{p} \pi Debt_{i\tau m} + \varepsilon_{i\tau} \tag{2}$$

where y_{it} is GDP growth rate of the ith country at t time and $gini_{it}$ is the log of the GINI coefficient of country i at time t, X_{itj} is a vector of control variables, $Debt_{itm}$ is the vector of various public debt indicators, and ε_{it} is the classical error term.

5. Data and estimation methodology

To empirically test the relationship between public debt and pro-poor growth, panel data for the South Asian countries, i.e. Bangladesh, India, Pakistan and Sri Lanka, for the period 1975–2010 have been used. As we have only four countries from the same region so the Fixed Effect Model (FEM) has been applied. However, since there is a likelihood of endogenity in the panel data, so Two Stage Least Square (2SLS) and the Generalised Method of Moments (GMM) estimation methodologies have also been applied to get robust results (for details see Baltagi, 2005 and Enders, 2004). The selection of valid instruments/moments is most difficult and a tricky issue in 2SLS and GMM methodologies. There exists no rule of thumb in selection of instruments. However, Murray (2006) discusses various tricks that are handy for this purpose. The current study has used the lagged values of independent variables as instruments.

Table 1. Data sources.

Sr. no.	Name of variable	Data source	Comment
1.	Per capita GDP (*Y*)	WDI	Current GDP in US$/ Population
2	GINI coefficient (*gini*)	WDI+WIID 2.0	GINI coefficient in percent form
3.	Investment (*K*)	WDI	Gross capital formation as percentage of GDP
4	External debt (ED_y)	WDI	Public and publicly guaranteed external debt as percentage of GDP
5.	Debt Servicing (DS_x)	WDI	Debt servicing of Public and Publicly guaranteed external debt as percentage of Exports.
6.	Openness (*op*)	WDI	(Exports + Imports)/GDP*100
7.	Urbanisation (*ur*)	WDI	Urban population as percentage of total population
8.	Inflation (*inf*)	WDI	Consumer Price Index
9.	Domestic Debt (dd_y)	IFS	Domestic debt as percentage of GDP. Abbas (2007) has defined domestic debt as 'all domestically held claims of central government' on the analogy of the definition of public & publicly guaranteed external debt by Global Development Finance. In this regard, International Financial Statistics (IFS) database series 22a+42a and 20c+40c serve the purpose. Domestic Debt = Bank's claims on government + Central bank securities =IFS [(22a+42a)+(20c+40c)]
10.	GDP growth rate (*Yg*)	WDI	GDP growth rate

Sources: WDI, IFS and WIID.

The collection of the data for the GINI coefficient is a difficult issue in the current study. The data on income inequality differ in various aspects – such as the concept of income in the survey (expenditure or income), the survey unit (household, family, household equivalent, person) and coverage of the survey (age, area, population). Data used in the study are extracted from four different sources: World Development Indicators, UNU-WIDER world income inequality database version 2.0 (WIID 2.0), Global Poverty Monitoring Database and Measuring Income Inequality Database of World Bank. Every possible effort is made in this study to obtain data with similar characteristics. However, still a few years' data were missing, so the panel data for equation (2) is an unbalanced panel. A brief description of other variables used in the study along with their data sources are discussed in Table 1.

6. Estimation results

This section report the results obtained by using GDP growth rate and GINI coefficient as dependent variables in specification 1 and 2 respectively. Table 2 summarises the results of estimation 1 wherein GDP growth rate has been used as a dependent variable.

These results confirm a negative relationship between external debt variables and economic growth. The table shows that external debt as a percentage of GDP has a significant and negative relationship with GDP growth rate. The reason seems to be that, when domestic resources are mobilised to repay and service the external debt (if it is too large in relation to the GDP) not much resource remains available for investment. Hence, the study confirms the existence of the debt 'overhang effect'. However, servicing of external debt does not have a significant relationship with economic growth, suggesting the nonexistence of 'crowding out effect'.

Similar to some of the extant findings (e.g. Abbas 2007), the effects of domestic debt are found to be positive and significant on economic growth. The domestic debt is normally used for the development of internal financial markets that protect the banks from unfavourable external shocks and mitigation of foreign exchange risk. However, these positive impacts

Table 2. Estimation results (dependent variable: GDP growth rate).

Name of independent variable	FEM (OLS)	FEM (2SLS)	FEM (GMM)
Constant	−7.814363* (−3.656840)	9.168527* (2.316762)	11.66786 (0.954036)
OP	0.746372** (1.775114)	0.908640** (1.672023)	1.478639* (4.071285)
ED_Y	−1.009998* (−3.882383)	−0.780312* (−3.205759)	−1.371377* (−3.091262)
DS_X	−0.168178 (−0.344789)	−3.252335 (−1.496380)	−0.009899 (−0.014209)
DD_Y	0.085727** (1.682368)	1.437492* (3.331471)	1.543533* (4.135519)
INF	−0.011432 (−0.164473)	−1.160165 (−1.056939)	0.544320 (0.513780)
UR	1.860627* (10.58610)	0.514006* (5.062864)	1.745794* (2.909313)
KT	1.507148* (3.154160)	1.161653** (1.798354)	1.777032** (1.822358)
R^2	0.572507	0.487524	0.510806
Adjusted R^2	0.524236	0.426305	0.509934
Durban-Watson Statistic	2.152582	1.926971	1.860760
F-Statistic	3.573757	3.458394	…
P-value of F-statistic	0.001582	0.008909	…

Source: Estimation results by using Eviews 6.0.
* and ** denotes significance at 5% and 10% level respectively and values in parenthesis are t-statistics.

are linked to macroeconomic stability and financial markets liberalisation. Similarly, the banking system is also not well organised in most developing countries. The domestic debt help the banks to guard against high private sector credit risk (Barajas & Salazar, 1999, 2000). Consequently, domestic debt can crowd in risky private sector investment by protecting bank balance sheets and profitability. Therefore, domestic debt makes the banking system more efficient, leading towards enhancing the economic growth.

In accordance with theory, investment has a positive and significant impact on economic growth; and it is supported by numerous studies on the subject – e.g., Pattillo et al. (2002), Mankiw, Romer, and Weil (1992), and Abbas (2007). Consistent with expectations, openness is growth enhancing. It is supported by Pattillo et al. (2002) and Lucas (1988). The reason is that greater openness of an economy to the outside world represents improved competitiveness and productivity of the economy, which leads towards better economic performance. The estimation results also suggest that urbanisation has a positive and significant impact on economic growth. The proponents of new growth models suggest that cities are the hubs of innovation, creativity and institutions. Economic history also reveals the fact that over the years civilisations have moved towards cities, and most of the growth has taken place in the mega cities. Hence, urbanisation helps in increasing economic growth (Haque & Nayab, 2007).

The estimation results do not give an unambiguous picture about the effect of inflation on economic growth in the region. According to the theory, if inflation remains moderate then it finances economic activity but the same is not the case for high rates of inflation, which create distortions in the economy. There is a common perception that single-digit inflation is good for economic growth whereas double-digit inflation results in depressing growth performance. In the current study, inflation is found to be insignificant for economic growth because, in the selected countries, the inflation rate does not give a clear picture; in Sri Lanka, there is on average double-digit inflation, whereas in the other countries inflation is, on average, in single digits.

In the next step, the equation (2) is estimated wherein the GINI coefficient has been used as the dependent variable. The results are presented in Table 3.

External debt as a percentage of GDP and debt servicing as a percentage of exports do not have a significant relationship with the GINI coefficient, which suggests that debt remained

Table 3. Estimation results (dependent variable: GINI coefficient).

Name of Independent variable	FEM (OLS)	FEM (2SLS)	FEM (GMM)
Constant	5.18207* (12.07922)	2.96820* (7.31172)	3.04182* (10.82813)
YT	−0.30443* (−9.14125)	−0.06932* (−2.02984)	−0.09019* (−2.14172)
OP	0.26622* (6.33050)	0.23847* (2.39986)	0.26150* (6.50734)
ED_Y	−0.05390 (−1.19765)	−0.10375 (−1.16241)	−0.12183 (−0.87212)
DS_X	−0.03974 (−1.37268)	−0.01769 (−0.40112)	−0.02607 (−1.09237)
DD_Y	−0.00431* (−2.16167)	−0.05381* (−4.40425)	−0.05510* (−4.49382)
INF	0.00160 (0.13645)	0.01422 (1.47671)	0.01724 (1.40490)
UR	0.10568* (1.91222)	0.14218* (3.21260)	0.15208* (3.39136)
KT	0.01860 (0.36196)	0.02827 (0.43112)	0.02105 (1.27823)
R^2	0.69352	0.68785	0.61784
Adjusted R^2	0.66337	0.66538	0.59358
Durban-Watson Statistic	1.97550	1.78170	2.15643
F-Statistic	23.00546	21.59035	…
P-value of F-statistic	0.00000	0.00000	…

Source: Estimation results by using Eviews 6.0.
* and ** denotes significance at 5% and 10 % level respectively and values in parenthesis are t-statistics.

neutral with respect to its distributional effects. These finding are in accordance with Prechel (1985). Similarly, Blejer and Guerrero (1990) concluded that channels through which macroeconomic policies affect income inequality are quite complicated and the impacts of individual variables may differ with the composition of aggregate policy packages. Policies that have by themselves clear distributional effects can result in quite different outcomes when combined with other policies.

Domestic debt has a negative and significant impact on the GINI coefficient, suggesting that domestic debt reduces income inequality. Therefore, it can also be inferred that domestic debt not only stimulates economic growth but it also reduces the income inequality. Moreover, as most of the selected countries have used fiscal deficits to finance the development expenditure and for subsidising the consumption of wage goods, this is likely to be helpful in reducing income inequality in these countries.

The results also indicate that per capita GDP has a negative and significant impact on GINI coefficient; Dollar and Kraay (2003), and Page (2006) also support that an increase in per capita GDP reduces the income inequality and is helpful for the poor. However, it is worthwhile pointing out that the benefits of economic growth depend on the degree of inequality, types of growth and there are both direct and indirect effects of per capita GDP growth on income inequality. An increase in per capita GDP gets some of the poor out of poverty, which leads directly to a reduction in income inequality. Similarly, a higher growth rate of the GDP stimulates revenue generation, which should tend to raise the volume of public investments leading to bringing the poor into the economic mainstream. Both of these effects tend to decrease income inequality.

Urbanisation has a positive and significant relationship with the GINI coefficient. It suggests that urbanisation worsens the living standards of the poor. These findings support the Harris-Todaro (1970) hypothesis that due to urbanisation the unemployment rate increases and the health of the workers worsens. It results in a reduction of workers' productivity, which directly curtails the income of the poor. The results also suggest that supportive steps should be taken to ameliorate the adverse impact of urbanisation on the poor.

Openness also has significant and positive relationship with the GINI coefficient. This supports the findings of Lundberg and Lyn (1999) that openness contributes to increasing income inequality.[2] This finding also supports the anti-globalisation point of view – that

openness has contributed to increasing the inequalities between nations and within nations. Because openness enhances trade, FDI and other foreign capital inflows that are, in general, beneficial for economic growth, these sectors are pro-rich. Hence, openness can be helpful for economic growth but not for income inequality.

The estimation results also show that inflation and investment have insignificant relationships with the GINI coefficient. It reveals that inflation and investment remain neutral as to the distribution of income between the poor and the rich and that investment and inflation can be equally beneficial/harmful for poor as well as rich segments of society.

7. Conclusions and policy implications

The main finding that emerged from the present study is that public external debt does not have a significant relationship with the GINI coefficient, indicating that public external debt remains neutral for the distributional effects. The public external debt is as good/bad for the poor as it is for rich segments of society. However, domestic debt has a negative and significant relationship with the GINI coefficient, revealing that domestic debt can reduce income inequality if it is used to support the projects that increase the growth of GDP.

The study also fails to support the hypothesis that debt servicing significantly reduces development expenditure, economic growth and enhances the poverty/income inequality. The point is that, although debt servicing becomes a hindrance to growth when it becomes too large in relation to the nation's paying capacity, it should be seen in relation to such factors as effective utilisation of debt, corruption in the public sector projects, and preference of current expenditure over development expenditure, etc.

The present study shows that although openness fosters economic growth, it leads towards increasing income inequality. So if the country wants to accelerate economic growth with the help of trade and openness then this policy must be supplemented with pro-poor policies. For example, preference may be given to those sectors of the economy that use labour-intensive technologies. So that unemployment does not increase, foreign investors should be directed to spending a considerable portion of their profits on the developmental projects of the poor, and so on. There are various other options but they are beyond the ambit of this study.

Similarly, despite having a positive impact on economic growth, urbanisation also leads to raising income inequality, so it is recommended that instead of promoting urbanisation, government should provide basic facilities, such as health, education and access to clean drinking water (with the best quality) in rural areas. Similarly, income generation opportunities may be created in rural areas so that living standards can be raised. Furthermore, it is not beneficial for the economy to keep the prices of agricultural commodities low to benefit the people living in the urban areas at the expense of the rural community. Therefore, such practices may be discouraged because they increase income inequality.

For a comprehensive analysis of the impact of public external debt on poverty, it seems appropriate that a micro-level study may be conducted. In such a study, various foreign aid/loan funded development projects should be analysed in the context of their impacts on the local community and poverty-reduction efforts. In particular, the impacts of the mega projects on poverty reduction should be analysed.

Notes

1. It is worth mentioning here that this result is not in line with the neo-classical trade theory (Heckscher-Ohlin version), which says that exports tend to reduce inequality by transferring resources from the capital-intensive import substitution industries to labour intensive export industries. This increases both the relative and absolute share of wages in total income – by the Stolper-Samuelson Theorem. For details, see Naqvi (1996).
2. For a comprehensive discussion for the effects of trade liberalisation on economic growth and poverty see Naqvi (1996), and Nafziger (2006).

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References

Abbas, S. M. (2007) *Public Domestic Debt and Growth in LICs* (Draft doctoral thesis). University of Oxford, Oxford. Retrieved from http://users.ox.ac.uk/~hert1734/Public%20domestic%20debt%20and%20growth.pdf

Afxentiou, P., & Serletis, A. (1996). Foreign indebtedness in low and middle income developing countries. *Social and Economic Studies*, 133–159.

Akram, N. (2011). Impact of public debt on the economic growth of Pakistan. *Pakistan Development Review, 50*, 599–615.

Baltagi, B. H. (2005). *Econometric Analysis of Panel Data* (3rd ed.). West Sussex: John Wiley & Sons.

Barajas, S., & Salazar, N. (1999). Interest spreads in banking in Colombia. *IMF Staff Papers, 46*, 196–224.

Barajas, S., & Salazar, N. (2000). The impact of liberalization and foreign investment in Colombia's financial sector. *Journal of Development Economics,* 157–196.

Befekadu, D. (2001). Ethiopia's external debt: The impact and the way forward. *Canadian Journal of Development Studies, 22*, 377–416.

Blejer, M. I., & Guerrero, I. (1990). The impact of macroeconomic policies on income distribution: An empirical study of the Philippines. *The Review of Economics and Statistics, 72*, 414–423.

Burnside, C., & Dollar, D. (2000). Aid, policies, and growth. *American Economic Review*, 847–868.

Chen, S., & Ravallion, M. (1997). What can new survey data tell us about recent changes in distribution and poverty? *World Bank Economic Review, 11*, 357–382.

Chen, S., & Ravallion, M. (2001). *Measuring Pro-Poor Growth.* Washington Dc: The World Bank.

Chenery, H. (1974). *Redistribution with growth.* Oxford: Oxford University Press.

Chowdhury, A. R. (2001). *External debt and growth in developing countries; a sensitivity and causal analysis* (Discussion Paper No. 2001/95): WIDER

Clements, B., Bhattacharya, R., & Nguyen, T. Q. (2003). *External debt, public investment, and growth in low-income countries* (Working Paper No. 03/249): IMF.

Cohen, D. (1993). Low investment and large lcd debt in the 1980's. *The American Economic Review, 83*, 437–449.

Cohen, D. (1996). *The sustainability of African debt* (Working Paper No 1621): Wold Bank Policy Research.

Cunningham, R. T. (1993). The effects of debt burden on economic growth in heavily indebted nations. *Journal of Economic Development*, 115–126.

Dellas, H., & Galor, O. (1992). Growth via external public debt and capital controls. *International Economic Review, 33*, 269–281.
Dollar, D., & Kraay, A. (2003). *Growth is good for the poor* (Working Paper 2587): World Bank.
Eaton, J. (1993). Sovereign debt: A primer. *The World Bank Economic Review, 7*, 137–172.
Elbadawi, I. A., Benno, J. N., & Njuguna, N. U. (1999). Debt overhang and economic growth in Sub-Saharan Africa. Chapter 5. In Iqbal Zubair & Ravi Kanbur (Eds.), *External Finance for Low-Income Countries*, pp. 49–76. Washington, DC: IMF Institute.
Enders, W. (2004). *Applied Econometrics: Time Series*. New Jersey: John Wiley & Sons.
Fosu, A. K. (1996). The impact of external debt on economic growth in Sub-Saharan Africa. *Journal of Economic Development*, 93–118.
Fosu, A. K. (1999). The external debt burden and economic growth in the 1980s: Evidence from Sub-Saharan Africa. *Canadian Journal of Development Studies/Revue canadienne d'études du développement*, 307–318.
Fosu, A. K. (2007). *The external debt-servicing constraint and public expenditure composition* (Research Paper No. 2007/36): WIDER.
Hansen, H. (2002).The impact of aid and external debt on growth and investment (Research Paper No. 2/26): CREDIT.
Haque, N. U, & Nayab, D. (2007). *Renew Cities to be the Engine of the Growth*. Islamabad: PIDE policy view point.
Haris, R., & Todaro, M. P. (1970). Migration, unemployment and development: A two sector analysis. *American Economic Review*, 126–142.
Hoogvelt, A. (1990). Debt and indebtedness: The dynamics of third world poverty. *Review of African Political Economy, 47*, 117–127.
Kakwani, N., & Pernia, E. M. (2000). What is pro-poor growth? *Asian Development Review, 18*, 1–16.
Karagol, E. (2002). The causality analysis of external debt service and GNP. *The Case of Turkey", Central Bank Review*, 39–64.
Klasen, S. (2007). Economic growth and poverty reduction: Measurement issues using income and non-income indicators. *World Development, 36*, 420–445.
Krueger, A. O. (1987). Debt and LDC growth. *American Economic Review*, 159–164.
Krugman, P. (1988). Financing vs forgiving a debt overhang. *Journal of Development Economics, 29*, 253–268.
Levy, A., & Chowdhury, K. (1993). An integrative analysis of external debt, capital accumulation and production in Latin America, Asia-Pacific and Sub-Saharan Africa. *Journal of Economics and Finance, 17*, 105–119.
Lin, S., & Sosin, K. (2001). Foreign debt and economic growth. *The Economics of Transition, 9*, 635–655.
Loko, B., Mlachila, M., Nallari, R., &Kalonji, K. (2003). *The impact of external indebtedness on poverty in low-income countries* (working paper No. 3/06): IMF.
Lucas, R. E., Jr (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 3–42.
Lundberg, L., & Lyn, S. (1999). *Inequality and Growth: Lessons for Policy*. Washington, DC: WB. Mimeo.
Mahdavi, S. (2004). Shifts in the composition of government spending in response to external debt burden. *World Development, 32*, 1139–1157.
Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A contribution to the empirics of economic growth. *The Quarterly Journal of Economics, 107*, 407–437.
Murray, M. P. (2006). Avoiding invalid instruments and coping with weak instruments. *Journal of Economic Perspectives, 20*, 111–132.
Nafziger, W. (2006). *Economic Development* (4th ed.). Cambridge: Cambridge University Press.
Naqvi, S. N. H. (1996). The significance development economics. *World Development, 24*, 975–987.
OECD (2001). Rising to the global challenge: Partnership for reducing world poverty. *Statement by the DACs high-level meeting, Paris, 25–26 April 2001*.
Page, J. (2006). Strategies for pro-poor growth: Pro-poor, pro-growth or both? *Journal of African Economies, 15*, 510–542.

Pattillo, C., Poirson, H., & Ricci, R. (2002). *External debt and growth* (Working Paper, No. 02/69): IMF.
Pattillo, C., Poirson, H., & Ricci, R. (2004). *What are the channels through which external debt affects growth?* (Working Paper, No. 04/15): IMF.
Pogge, T. W., & Reddy, S. G. (2002). How not to count the poor. Retrieved from: www.socialanalysis.org.
Prechel, H. (1985). The effects of exports, public debt, and development on income inequality. *The Sociological Quarterly, 26*, 213–234.
Ravallion, M. (2004). *Pro-poor growth: a primer* (Working Paper Series No 3242): World Bank.
Sachs, J. D. (1990). A strategy for efficient debt reduction. *The Journal of Economic Perspectives, 4*, 19–30.
Sawada, Y. (1994). Are the heavily indebted countries solvent? tests of inter temporal borrowing constraints. *Journal of Development Economics*, 325–337.
Siddiqui, R., & Malik, A. (2001). Debt and economic growth in South Asia. *The Pakistan Development Review, 40*, 677–688.
Smyth, D., & Hsing, Y. (1995). In search of an optimal debt ratio for economic growth. *Contemporary Economic Policy, 13*, 51–59.
Warner, A. M. (1992). Did the debt crisis cause the investment crisis. *The Quarterly Journal of Economics*, 1161–1186.
World Development Report (1990). *Poverty*. New York, NY: Oxford University Press. World Bank.