

DEBT RELIEF ACCESS: SOME INDICATORS IN THE HIPC INITIATIVE

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1. Introduction

The purpose of this article is to investigate whether poverty indicators and access to infrastructure services can influence the decisions taken by the World Bank and the IMF to approve debt relief for low-income countries (LICs). Presently, access to debt-relief is premised on the notion that export-led growth, coupled with a poverty alleviation strategy, can become the basis for restoring macroeconomic stability and economic growth in LICs. While the export-led growth hypothesis has been examined in the literature (Balassa, 1978; Tyler, 1981; Ram, 1985; Bahmani-Oskooee et al., 1991; Kwan et al., 1996; Richards, 2001), the relationship of debt-relief access to economic growth and poverty alleviation should be explored for at least three reasons.

First, debt relief, under the World Bank and the International Monetary Fund (IMF) heavily indebted poor country (HIPC) Initiative, might not be a temporary program, especially if LIC saving behavior is unchanged (Easterly, 1999). Second, after several years, only twenty-four countries out of forty-one have received consideration for debt relief (World Bank 2001).¹ Yet there is the distinct possibility that there may be several other LICs that may require debt relief assistance, due to the lack of repayment capacity and the decline in the value of primary commodity exports. Third, noting that restoring creditworthiness without debt relief would exacerbate poverty, critics have recommended that the outstanding debt be written-off. In addition, they suggest that the cancelled repayments be directed to poverty alleviation programs, organized under a transparent and inclusive system (Jubilee USA Network, 2002).²

Eligibility under the HIPC program is based on a set of economic indicators used by the IMF and World Bank to control debt relief access. Among these indicators are the external debt-to-exports ratio, the ratio of debt-service to exports, government revenue as a share of GDP, and the exports-to-GDP ratio (Boote and Thugge, 1999). While these indicators satisfy the concerns for restoring international creditworthiness and macroeconomic stability, they do not directly include the concerns for poverty alle-

¹ The twenty-four HIPCs are Benin, Bolivia, Burkina Faso, Cameroon, Chad, Ethiopia, The Gambia, Guinea, Guinea-Bissau, Guyana, Honduras, Madagascar, Malawi, Mali, Mauritania, Mozambique, Nicaragua, Niger, Rwanda, Sao Tome and Principe, Senegal, Tanzania, Uganda, and Zambia.

² Easterly (1999) noted in his article that several pop entertainment and world religious-leaders have supported the call for a complete debt write-off from creditors.

Development Finance, 1999). Likewise, the Human Development Report (2000) also classified 174 countries into three categories of high, medium and low human development, using quality of life characteristics and poverty indicators. Interestingly, many of the countries in the medium and low human development categories were also included in the HIPC Initiative, implying that default risk and poverty were likely to be correlated, requiring continuous monitoring, with the World Bank and IMF performing the role as delegated monitors (Boot and Kanatas, 1995).

Under the HIPC Initiative, sovereign debt should be reduced by two-thirds, and through export-led growth, HIPCs are expected to satisfy their current and future external debt-service repayments, without recourse to further debt relief, loan rescheduling, and arrears accumulation. In addition, they are expected to build a national consensus around projects aimed at poverty alleviation, using the funds saved from reduced debt-service payments (The World Bank 2000; Boote and Thugge, 1999). Merging debt relief and poverty reduction with economic growth requires a collaborative approach that goes beyond rebuilding macroeconomic stability and international creditworthiness. It involves greater partnership among governments, the private sector, civic society, lenders and donors (World Bank 2000). And in order to accommodate this approach in LICs, the World Bank and the IMF have modified their LICs lending programs, agreeing to target poverty reduction, while pursuing economic growth in HIPCs (World Bank 2001).

3. Model

Debt relief depends on the action taken by the IMF and World Bank as delegated monitors (Boot and Kanatas, 1995) and the measures introduced by HIPC policy makers and civil society to foster economic growth and poverty reduction. These changes will provide measurable targets useful for approving debt relief and could be related to a set of economic (EI), poverty (PI) and infrastructure (INI) indicators, as specified in the following model:

$$HP = h(EI, PI, INI) \quad (1)$$

where HP is a dummy, dependent variable equal to one, if the IMF and World Bank approve debt relief for HIPC; or zero, otherwise. The economic indicators used as

independent variables in this study are income, the ratio of government spending to GDP, the external debt-to-exports ratio, the ratio of debt-service to exports, and the exports-to-GDP ratio (Boote and Thugge, 1999).

Access to debt relief decreases when government spending as a share of GDP increases, in keeping with a strategy of deficit reduction and enhanced national savings. As the ratios for external debt-to-GDP and debt-service to exports increase, access to debt relief should increase under the HIPC Initiative. Through a policy of export-led growth and trade openness, it is expected that the ratio of exports-to-GDP should increase, the foreign exchange earning capacity of the country should improve and access to debt relief should decrease. Similarly, as income increases, access to debt relief should decrease since income growth reduces the need for special HIPC assistance.

The United Nations, Human Development Report (2000) asserts that poverty should not be limited to measures of income only, but must take into account the opportunity for individuals to live long, healthy and creative lives. Thus a reduction in life expectancy, due to the AIDS pandemic in Sub Saharan Africa, will have a negative impact on the society, as the average age of the population declines. This study uses life expectancy as a proxy for institutional memory, which declines as life expectancy declines. Other poverty indicators included in the study are calories per capita, and dummy variables for countries in sub-Saharan Africa and severely indebted poor countries, as specified by the World Bank.

Evidence suggests that increasing levels of energy production and consumption are closely linked to rapid increases in per capita income and high standards of living (Cabral et al., 1994; World Bank 1994; Liebenthal et al., 1994; World Bank 1996; Narayan et al., 2000). Electricity services have transformed the lives of many rural households in the way in which they store and process food, access information, use clean water, and receive health care services. Using energy as proxy for the services provided by an efficient infrastructure system, it is expected that as energy consumption increases, access to debt relief should decrease. Table 1 summarizes the above discussion, showing the expected signs on the independent variables included in the econometric analysis.

Table 1: Expected signs in the Model

Independent Variables	HP
Debt-service to export	+
External Debt-to-GDP	+
Export-to-GDP (Openness)	-
Government spending-to-GDP	-
Income per capita	-
Severely Indebted country	+
Sub-Saharan Africa	+
Calories per capita	-
Life-expectancy	-
Electricity consumption	-

4. Data

The empirical analysis uses cross-country data from the Human Development Report 2000 for 108 countries, consisting of thirty-four HIPCs and seventy-four non-HIPCs.⁵ Table 2 presents the means and standard deviations for the variables used in the model. HIPCs tend on average to have higher debt-service flows and higher debt-to-GNP ratios in comparison with those observed in non-HIPCs. At the same time, HIPCs have lower per capita income, lower government spending-to-GDP ratios, lower per capita consumption of calories, shorter life expectancy, and less access to infrastructure services, such as electricity consumption, than in non-HIPCs. When taken together, these indicators confirm that HIPCs cannot only be identified by economic and poverty indicators, but also by the lack of access to infrastructure services. Moreover, the relatively large outstanding external debt of HIPCs indicates that export

⁵ **The HIPCs are:** Angola, Benin, Bolivia, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Côte d'Ivoire, Ethiopia, Guinea-Bissau, Lao People's Democratic Republic, Madagascar, Mali, Mauritania, Mozambique, Niger, Rwanda, Senegal, Sierra Leone, Tanzania, Togo, Uganda, Yemen, Zambia, Congo, Ghana, Guyana, Honduras, Kenya, Nicaragua, Sao Tome and Principe, and Viet Nam.

The Non-HIPC are: Albania, Algeria, Argentina, Armenia, Azerbaijan, Bangladesh, Barbados, Belarus, Belize, Brazil, Bulgaria, Cambodia, Cape Verde, Chile, China, Colombia, Costa Rica, Croatia, Czech Republic, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Fiji, Gabon, Gambia, Georgia, Grenada, Guatemala, Haiti, Hungary, India, Iran, Jamaica, Jordan, Kazakhstan, Kyrgyzstan, Latvia, Lebanon, Lithuania, Macedonia, Malawi, Malaysia, Mexico, Republic of Moldova, Mongolia, Morocco, Nepal, Nigeria, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Romania, Russian Federation, Saint Lucia, Seychelles, Slovakia, South Africa, Sri Lanka, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Thailand, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Uruguay, Venezuela, and Zimbabwe.

as a share of GDP should be larger than 28 percent, if building international reserves is a priority for these countries.

Table 2: Indicators in HIPC and non-HIPC (Mean and Standard Deviation)

	Mean			Standard Deviation		
	Hipc	Non Hipc	Total	Hipc	Non-Hipc	Total
Number of observations	34	74	108	34	74	108
Debt-service to exports (%)	18.8	14.6	15.9	8.8	12.2	11.4
External Debt-to-GNP (%)	167.2	50.0	86.9	135.7	28.8	96.0
Exports-to-GDP (%)	28	37	34	18.0	20.0	20.0
Income per capita (US\$/day)	3.3	13.7	10.4	1.8	7.7	8.0
Calories per capita, daily	2,169	2,702	2,534	245.6	379.3	422.6
Government spending/GDP (%)	12.7	15.2	14.4	5.6	6.4	6.6
Life expectancy/age (years)	51	68	63	8.9	7.0	11.0
Electricity consumption (per capita, per 1000 kilowatt hours)	0.19	1.81	1.3	0.22	1.47	1.4

5. Empirical Results

Using the logit regression model, three HIPC equations were estimated, measuring separately and jointly the impact that the economic, poverty and infrastructure indicators have on debt relief access. The regression results are shown in Table 3, where the estimated parameters and their t-ratios are recorded.

The empirical evidence suggests that economic, poverty and infrastructure indicators influence debt relief decisions. The coefficients estimated for the economic indicators, namely, external debt-to-GNP and debt-service-to-exports, are positive and statistically significant, signaling that increasing foreign debt and debt service flows increase the likelihood of obtaining debt relief from the IMF and World Bank, in keeping with the HIPC Initiative. In contrast, the estimated coefficient for the ratio of government spending-to-GDP is negative and statistically significant, indicating that as governments engage in expansionary fiscal policy, access to debt relief decreases. Likewise, access to debt relief decreases as income increases, given that the estimated coefficient is negative and statistically significant. The estimated coefficient for the ratio of exports-to-GDP is not statistically significant.

The coefficients estimated for severely indebted countries and countries in Sub-Saharan Africa are positive and statistically significant, implying that access to debt

relief increased for these countries. Similarly, the coefficient estimated life expectancy, as a proxy for institutional memory, is positive and statistically significant, indicating that countries with declining life expectancy will have less access to debt relief. The estimated coefficients for electricity consumption, and calories per capita are negative and statistically significant, implying that countries with increasing energy usage and daily calorie intake per capita are less likely to seek debt relief assistance.

Table 3: Regression Results

Variable	HP	t-ratios	HP	t-ratios	HP	t-ratios
External Debt-to-GNP (ETD)	4.84	2.60**	...	...	8.17	2.10**
Debt-service to exports (DSX)	1.07	1.34*	...	...	0.21	0.17
Exports-to-GDP (XG)	-1.57	-1.06	...	...	-3.39	-1.38*
Government spending -to-GDP	-0.13	-1.31*	...	...	-0.25	-1.39*
Income/capita (LnY)	-2.49	-2.50**	-1.54	-1.39*	-2.50	-1.49*
Severely Indebted (Dummy)	...	...	2.24	2.82**	1.03	0.71
Sub-Saharan Africa (Dummy)	...	...	1.80	1.62*	5.96	1.69**
Calories, daily per capita	...	...	-5.00	-1.30*	-17.41	-1.82**
Life Expectancy	...	...	4.94	1.12	23.34	1.88**
Electricity consumption	...	...	-2.83	-1.63*	-2.50	-1.49*
Constant	1.21	0.15	29.23	1.09	34.19	0.75
Total observations	108	...	108	...	108	...
Observation at one	35	...	34	...	34	...
Observation at zero	73	...	74	...	74	...
Log-likelihood function	-17.8	...	-23.0	...	-13.4	...
Mc Fadden R-square	0.73	...	0.65	...	0.80	...

Notes: A single asterisk indicates statistical significance at the 10 percent level; a double asterisk indicates statistical significance at the 5 percent level or better.

6. Concluding Remarks

This study showed that the IMF and World Bank, as delegated monitors, could use economic, poverty and infrastructure indicators to support the approval of debt relief. This approach can be implemented by establishing threshold levels for poverty and infrastructure indicators, below which debt relief could be accelerated to those countries. Furthermore, since energy consumption levels are relatively low in HIPC countries and life expectancy is expected to decline further, especially in Sub-Saharan Africa, where a majority of the HIPC countries are located, income growth could be negatively affected. Policy makers should therefore use the funds saved under the HIPC Initiative for improving life expectancy and expanding the access to infrastructure services.

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Appendix 1

Table1: LICs Sovereign Debt Rating

Severely Indebted Low Income	Moderately Indebted Low Income	Less Indebted Low Income
Angola*; Burkina Faso*; Burundi*; Cameroon*; Central African Republic*; Congo, Dem. Rep. Of* Congo, Rep. Of; Cote d'Ivoire*; Ethiopia*; Ghana*; Guinea; Guinea-Bissau; Haiti; Honduras*; Madagascar; Malawi*; Mali*; Mauritania; Mozambique; Myanmar; Nicaragua*; Niger*; Nigeria*; Rwanda*; Sao Tome' and Principe*; Sierra Leone*; Somalia*; Sudan*; Tanzania*; Uganda*; Viet Nam*; Zambia*.	Bangladesh; Benin; Cambodia; Chad*; Comoros; The Gambia; India; Kenya*; Lao PDR*; Pakistan**; Senegal*; Togo*; Yemen, Rep. Of; Zimbabwe.	Albania; Armenia; Azerbaijan; Bhutan; Eritrea; Kyrgyz Republic; Lesotho; Moldova; Mongolia; Nepal; Tajikistan; Turkmenistan.
Middle Income	Middle Income	Middle Income
Argentina+; Bolivia*; Brazil+; Bulgaria; Ecuador; Gabon; Guyana*; Indonesia+; Jamaica; Jordan; Peru; Syrian Arab Republic	Algeria; Belize; Chile; Colombia; Dominica; Equatorial Guinea; Georgia; Hungary; Macedonia, FYR; Malaysia; Mauritius; Morocco; Panama; Philippines; Slovak Republic; St. Vincent and the Grenadines; Thailand+; Tunisia; Turkey; Uruguay; Venezuela.	Barbados; Belarus; Botswana; Cape Verde; China; Costa Rica; Croatia; Czech Republic; Djibouti; Dominican Republic; Egypt, Arab Rep. of*; El Salvador; Estonia; Fiji; Grenada; Guatemala; Iran; Islamic Rep. of; Kazakhstan; Latvia; Lebanon; Lithuania; Maldives; Malta; Mexico+; Oman; Papua New Guinea; Paraguay; Poland; Romania; Russian Federation+; Samoa; Seychelles; Solomon Islands; South Africa; Sri Lanka; St. Kitts and Nevis; St. Lucia; Swaziland; Tonga; Trinidad and Tobago; Ukraine; Uzbekistan; Vanuatu.

Source: Global Development Finance: 1999, pp. 101

*- Included in HIPC Program, (+) Threat of Contagion and fast track financing- include Korea and Indonesia; (**) - special circumstances.

Abstract

Using data for one hundred and eight low-income countries, this paper confirms that access to debt relief under the HIPC Initiative depends on economic and poverty indicators and the lack of access to infrastructure services. The economic indicators are income per capita, external debt-to-GNP, exports-to-GDP, and government spending as a share of GDP. The poverty indicators are severely indebted countries, calories per capita, countries in Sub-Saharan Africa and life expectancy, along with energy consumption as a proxy for infrastructure services. Threshold levels of these indicators would allow debt relief.

ELIGIBILITÉ À L'ALLÈGEMENT DE LA DETTE: QUELQUES INDICES AU PROGRAMME DES PAYS PAUVRES LARGEMENT ENDETTÉS

Résumé

A partir des données recueillies dans cent-huit pays à bas revenus, la présente étude confirme que, dans le cadre du programme conçu à l'intention des pays pauvres largement endettés, l'éligibilité à l'allègement de la dette dépend des indices de pauvreté et d'économie et du manque d'accès aux services d'infrastructure. Les indices d'économie sont: le revenu par habitant, le rapport de la dette extérieure sur le Produit National Brut (PNB), le rapport des exportations sur le Produit Intérieur Brut (PIB), les dépenses publiques qui représentent une portion du PIB. Les indices de pauvreté sont: dans les pays sévèrement endettés, le nombre de kilojoules (calories) consommés par habitant; dans les pays de l'Afrique sub-saharienne, l'espérance de vie ainsi que la consommation d'énergie en remplacement des services d'infrastructure. Un allègement de la dette devient obligatoire quand ces indices atteignent des niveaux de seuil.