

ABSTRACT

On the basis of models I have developed to simulate mathematical relationships between external debt and fiscal and balance of payments variables my thesis evaluates whether debt cancellation will overcome the debt overhang and crowding out effects of external debt and allow Severely Indebted Low Income Country (SILIC) economies to meet their current and future debt service in full, without further debt relief, without further rescheduling or accumulation of arrears and without unduly compromising economic growth.

I find that recipients of debt cancellation have not lowered their total indebtedness [as a condition for solving their debt overhang problem] nor have they experienced exchange market stability, increased fiscal spending or higher import capacity [as a condition for solving their 'debt crowding out' problem]. Recipients of debt cancellation have also failed to improve debt service capacity, resulting in failure to meet current debt service obligations and continued accumulation of arrears.

The principal explanation for this result is that debt cancellation is "pseudo" or "accounting" money and it has a crowding-out effect on new lending from bilateral sources. Since losses in new external disbursements undermine the capacity of countries to meet demands of their development programs and their current and future debt service in full [without further debt relief] debt cancellation forces countries to borrow more from non bilateral sources and therefore accumulate further debts.

In the context of an endogenous growth style model where capital accumulation is the sole force driving growth these results underscore the desirability of implementing optimal rescheduling policy because implied guarantees of new external resources minimise the risk of debt repudiation, lowers uncertainty, and also allows the cycle of international borrowing to ensure that debts do not crowd out new investment. By reducing uncertainty, optimal rescheduling policy also contributes to lowering debt overhang and remains an essential part the gradual exit strategy from external indebtedness.

ACKNOWLEDGEMENTS

I am indebted to two sets of supervisors. I am profoundly grateful to Graham Bird, professor of international economics and also Richard Pearce, Reader in Econometrics, both from the University of Surrey, England.

I am highly indebted to Graham as the head of Economics, my first supervisor and also as the tutor of my favourite course 'International Finance for Developing Economies' the principal module for my course.¹ Graham and Richard is the fulcrum upon which my perception of intellectual quality has changed enormously.

I am also indebted to Robert Martin, professor of International Finance and Henrik Fyrst Kristensen Senior Lecturer in Mathematical Economics, both from Knightsbridge University, England for the kind guidance and supervision provided during the final remaining year of my PhD program.

To these men, I owe the highest debt for their contribution to my intellectual enrichment.

I am also full of appreciation to my mom Chejamiya Abiti Kalonga and my late Dad Che Siyadi Wadi Tambuli. The fact that they recognized the need to put me in school exemplifies their wisdom.

I also thank His Excellency President Dr Bakili Muluzi for making my dream for a doctorate degree come true. For other friends and detractors alike, thank you for giving me the inspiration to succeed.

¹ The World Financial System, Causes of External Disequilibria, stabilization, Adjustment Liberalization and Policy reform, Exchange Rate Policy, Demand for External Liquidity and Reserve Adequacy, North-South Economic Interaction, Foreign Aid and External Debt, Commercial Lending to Developing Countries, The IMF and Developing Countries, IMF Resource Transfer Mechanisms: SDR's, Interest Rate Subsidies and Reserve Consolidation, The World Bank and Developing Countries, Developing Country Debt, Capital Flight

To Anjimile, Atupele and Ahsante

March 2000,

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SHORT SUMMARY

My thesis models multidimensional mathematical relationships between external debt and fiscal and balance of payments variables using panel data from 32 Severely Indebted Low Income Country (SILIC) economies in Latin America, Caribbean, sub-Saharan Africa and South Asia. I make use of traditional methods (Ordinary Least Squares, instrumental variables, and fixed effects) as well as recent econometric techniques (System GMM) to evaluate whether debt cancellation will allow these economies to achieve optimal reduction in external debt stock.

Optimal external debt stock (OEDS) level is defined as the threshold below which the debt overhang and crowding out effects of debt cease to exist. The main condition from OEDS is that economies should be able to meet their current and future debt service in full, without further debt relief, without further rescheduling or accumulation of arrears and without unduly compromising economic growth.

I use models with debt dummies, quadratic specifications, spline function and co-integration techniques to investigate the linearity and non-linearity of the relationship between debt and macroeconomic variables. Due to low precision offered by the ordinary least squares method I also use the maximum likelihood method (ML-method) for test whether debt cancellation may achieve simultaneous elimination of debt overhang and enhancement of debt service capacity.

I augment these econometric analysis with the Engle Granger two step procedure to optimize cointegration tests and estimate long run relationships between debt cancellation and macro-variables.

Contrary to widely held opinion, I find that recipients of debt cancellation have not lowered their total indebtedness as a precondition for solving their debt overhang problem nor have they experienced any improvement in debt service capacity or enjoyed greater macroeconomic stability. Invariably, their import capacities have weakened, while exchange market pressures have intensified resulting in recurrent episodes of currency instability. Recipients of debt cancellation have also repeatedly failed to meet current debt service obligations, thereby accumulating arrears.

I conclude that debt cancellation is "pseudo" or "accounting" money and it has a crowding-out effect on new lending from bilateral sources. Since the magnitude of debt stock reduction affects a small and insignificant part of accumulated arrears, and does not lower current repayment obligations, losses in new disbursements undermine the capacity of countries to meet their budgetary obligations in addition to current and future debt service in full and without further debt relief.

As a policy option, debt cancellation seriously compromises the liquidity of Severely Indebted Low Income Country (SILIC) economies forcing them to borrow from alternative sources and raising the stock of debt. By lowering the intertemporal budget constraint, debt cancellation also undermines financing of the development program, thereby lowering the net present value of future incomes and solvency in these economies.

In the context of stipulations of an endogenous growth style model - where capital accumulation is the sole force driving growth - these results support the desirability of implementing of optimal rescheduling policy over the life of the debtor-creditor relationship. In the context of the gap analysis, guaranteed availability of further external resources allows the cycle of international borrowing to ensure that debt service does not crowd out new investment and also minimises the risk of debt repudiation or accumulation of arrears.

By reducing uncertainty, optimal rescheduling policy also contributes to lowering debt overhang and remains an essential part the exit strategy from external indebtedness.

LONG SUMMARY

As we approach the end of this millennium, high external indebtedness is receiving increased attention as one of the main factors constraining growth, development and poverty reduction in Severely Indebted Low Income Country (SILIC) economies. Despite receiving very large amounts of loans since 1982, often at highly concessional interest rates, it is becoming increasingly clear that repayment of the remaining net present value of the obligations would not only be virtually impossible but would also be likely to severely constrain their economic performance.

In recent years international organizations as well as bilateral creditors have added to traditional debt relief mechanisms by implementing the Heavily Indebted Poor Countries (HIPC) initiative that provides conditional assistance to countries that meet specific policy and performance criteria. However, movements such as Jubilee 2000, church organisations and singers like Bono, Manu Chao, and Jovanotti, demand that, as a final exit strategy, Africa's debts must be cancelled in full and without conditionality. The campaign has gained momentum, notwithstanding that - up until now - no analytical foundations exist for the reasoning that outright cancellation will contribute effectively and irreversibly to eradication of Africa's debt problem.

In chapter 1, I use the intertemporal borrowing model, the growth-cum-debt model and the gap models, I establish that a defining characteristic of external debt of Severely Indebted Low Income Country (SILIC) economies is the exponential increase in external indebtedness disproportionate to their debt service capacities. High oil prices and interest rates - in the 1970's - magnified pressures on balance of payments, while collapse of commodity prices undermined debt service capacity. Widening external gaps and appreciation of the US \$ thus combined to accelerate external debt accumulation also assisted by capital flight.

In chapter 2, I use a panel data set of 32 Severely Indebted Low Income Country (SILIC) economies over 1969-98 to determine that the average impact of debt becomes negative at about 160-170 percent of exports or 35-40 percent of GDP. For Severely Indebted Low Income Country (SILIC)

economies with average indebtedness, doubling the debt ratio also reduces per capita growth by half to a full percentage point. My analysis also shows that between countries with external indebtedness (in net present value) below 100 percent of exports and those above 300 percent of exports, the differential in per capita growth is in excess of 2 percent per annum.

In chapter 3, I undertake a reverse examination of these data to show that the growth implosion among poor countries after 1975 was a major negative fiscal shock precursory to the debt crisis. I argue that lower rates of economic growth actually lowered the present value of tax revenues and primary surpluses - hence the intertemporal budget constraint - thus making a given level of debt more burdensome. I use econometric tests and fiscal solvency accounting methods to demonstrate that - while it is not a monocausal explanation - slow economic growth has the capacity to cause a debt crisis.

In chapter 4, I examine debt relief measures and demonstrate that, despite all the enthusiasm, major proposals have not tackled issues central to debt problems of Severely Indebted Low Income Country (SILIC) countries. The Baker plan and Schumer Watkins plan targeted wealthier debtors in Latin America who threatened integrity of the international banking system, while the Bradley Plan failed to identify who was going to bear the cost of the debt write relief.

Proposals of the Brandt report calling for global correction of imbalances in the international economic system [also echoed in Mitterand and Lawson proposals] addressed resource needs of Severely Indebted Low Income Country (SILIC) countries, but simply failed to get international consensus. Lopsided commercial debt concerns of the Brady Plan have also eluded Severely Indebted Low Income Country (SILIC) economies the bulk of whose debt is multilateral.

By rescheduling small amounts of debt at market interest rates during 1980's, Paris Club relief under "Toronto Terms" and "London terms" also failed to ameliorate Africa's debt. "Naples Terms" innovatively offered deeper relief, but most Severely Indebted Low Income Country (SILIC) countries were ineligible as a result of a large part of the debts of being multilateral.

By providing funds to buy commercial debt, the *IDA Debt Reduction Facility* of the World Bank similarly eluded Severely Indebted Low Income Country (SILIC) states.

In chapter 5, I demonstrate that by increasing multilateral financing under Structural Adjustment (since 1985) and Enhanced Structural Adjustment (since 1986) at a faster pace, the IMF has substituted the drop in bilateral assistance and also facilitated Africa's debt stock restructuring. The World Bank has also strengthened the move towards greater concessionality by disbursing IDA credits and resources of the Fifth dimension program to pay interest on outstanding IBRD loans.

In chapter 6, I demonstrate that relations between rich and developing countries are not reciprocal and remain a major constraint to the ability of Severely Indebted Low Income Country (SILIC) economies to realise their full potential, especially in export performance. This, combined with inadequate reform has resulted in demands for multilateral debt service demands rising in relation to exports. As a result, a large share of new multilateral disbursements is being recycled into multilateral debt service while demands of the development program are not met in full.

In Chapter 7, I examine data from 32 low-income countries in Latin America, Caribbean, Africa and South Asia (1969-98) to determine the impact of debt cancellation. I find that those countries receiving concessional lending and debt cancellation have not reduced their total indebtedness as a precondition for solving their debt overhang problem. Invariably, their arrears have increased significantly out of current debt service obligations. However, countries that received grants significantly expanded their import capacities and also remained on up to date in debt service.

I conclude that debt cancellation implies smaller cash flows because it is "pseudo" or "accounting" money and it has a crowding-out effect on new lending from bilateral sources. Using my models, I also conclude that debt cancellation may contribute to heightening uncertainty with respect to the debt service payments falling due because, except for reducing arrears, it does not increase current fiscal or balance of payments liquidity.

In chapter 8, I examine HIPC-I (1996) and the HIPC-II (1999) and find that they have appropriate characteristics for a strategy aimed at lowering debt burdens of these countries to sustainable levels. This is as a result of the combination of stock (cancellation) and flow of debt (based on optimal rescheduling policy) operations as well as extension of qualifying debt to include amounts owing to multilateral institutions like the IMF, World Bank and the regional development banks.

In chapter 9, I demonstrate that even if the HIPC Initiative is fully successful and managed to write-off all debt that is owed by Indebted Low Income Country (SILIC) economies, the debt problem will not be completely overcome. The historical origins of external debt in these countries and the structural problems confronting the continents of these countries show that the debt problem is essentially a trade problem. Thus, long-run solution to debt points to the importance of addressing trade and trade related structural problems facing poor countries, and not necessarily the provision of more aid.