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**DROPPING THE DEBT FORT THE NEW MILLENNIUM:  
IS IT SUCH A GOOD IDEA?**

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**Abstract:** This paper examines the economic analyses and popular rhetoric surrounding the debt relief initiatives of Jubilee 2000 and the World Bank. It is pointed out that simplistic calls to 'drop the debt' may be counterproductive. There is no point in just demonising debt. It has to be asked if debt cancellation is a particularly effective use of scarce aid resources. A serious look at historical evidence is required. In particular we consider the views of William Easterly on the adverse effects of continuing waves of debt relief on the governments of impoverished countries. We provide a brief empirical analysis in a panel data set using fixed effects estimation. Although our results are not consistent with Easterly's, many of the points that he and others have raised cannot simply be set aside.

**Key Words:** Debt relief, Jubilee 2000, HIPC, panel data

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During the 1990s, developing country debt has been highlighted as never before. The World Bank claims to have pioneered the new response, which starts from the assumption that removing debt overhang is essential for the alleviation of world poverty. However, it has been the remarkable Jubilee 2000 Coalition that has succeeded in capturing the headlines. It has been hailed by a spokesperson of the World Bank as ‘one of the most effective lobbying campaigns I have ever seen’ (Anthony Gaeta, [www.jubilee2000uk.org](http://www.jubilee2000uk.org), 19/04/00), and it has probably helped push the Bank towards a more radical agenda than would otherwise have been possible. Indeed, as the turn of the millennium approached, it seemed that almost everyone supported the Jubilee slogan ‘Drop the Debt’, from Tony Blair and Bill Clinton, to John Kenneth Galbraith, Salman Rushdie, Bono, and the Pope. Indeed, it became difficult for journalists wanting to cover the topic to find any dissenting voice. The few who were willing to raise difficulties sometimes found themselves abused in radio and television studios by the campaign’s supporters, often with the compliance of programme makers. Yet, on the one hand, some the claims made about debt are not as straightforward as is commonly supposed, and on the other hand, there are arguments that comprehensive cancellation may not be the most effective way of alleviating poverty.

In this paper, we try to sift through the rhetoric. We review some of the key economic debates, focussing in particular on the challenging hypothesis on high discount rate behavior put forward by an important dissenting voice within the World Bank, Bill Easterly (1999). We also present a brief analysis based on data relating to debt relief (or, more accurately, what we term ‘Debt Action’) in the past. We have found to our surprise that this is a somewhat novel approach. Many of the theoretical arguments proposed in the economic literature are just that – theoretical arguments. Little effort appears to have been directed towards assessing empirical evidence that ‘dropping the debt’ actually has positive or negative effects. We end up with an equivocal response to the question posed in the title. But that should not be a cause of irritation. It is actually rather an important finding, given the prevalence of far reaching assertions on the topic.

## **1. Introduction: Jubilee, the Bank and debt overhang**

The notion of debt cancellation being linked to a ‘jubilee’ in the year 2000 is derived from the Book of Leviticus in the Bible. Every fifty years, social inequalities are to be rectified. Initially the Jubilee 2000 Coalition, or at least high-profile individuals within it, called for a one-off, unconditional cancellation of all the debts of poor countries. The message was, to paraphrase Bono’s famous speech at the British pop awards in February 1999, ‘Drop the debt. Just do it. You don’t have to give money. Just tell them to do it’. Those that were called upon to do the dropping were mainly rich governments and multi-lateral organizations, who were supposed to be extracting debt repayments on ‘our’ behalf. Jubilee 2000 produced statistical information to back up their demands. For example, it was asserted that debt kills 134,000 children per week and that for every pound sent in grants, nine pounds comes back in debt repayments. Evidence for such assertions is hard to find, and most analysts would accept that there are actually net

capital transfers into impoverished countries rather than out of them. But it is small wonder that passions were aroused.

Subsequently, many of those speaking on behalf of the coalition retreated from the more extreme claims (although they can still be found in the Jubilee 2000 web site), and concentrated on the multi-lateral and bi-lateral debts of the world's 50 or so poorest countries. They also accepted that some form of conditionality would be necessary to ensure that resources were allocated to health and education, rather than, for example, an expansion of military capacity or luxury items for corrupt elites. Even those within the coalition, like the Institute for African Alternatives, who argued that all of the African debts and most of the Latin American debts were either unpayable or illegitimate, accepted that assurances would have to be secured to ensure that funds were used for socially progressive purposes. It was also usually accepted that debt cancellation could not occur in such a way as to prevent developing countries from borrowing again in the future.

Nevertheless, the Jubilee 2000 Coalition has never become a homogeneous organization. As Kevin Watkins of Oxfam (another coalition member) pointed out in an interview with one of the authors, the campaign's main strength, and also its main weakness, has been its capacity to mobilize people with a variety of views and backgrounds around the single issue of debt cancellation (taped interview with Tim Allen, 04/99). Watkins expressed concerns that the very achievement of mobilizing so many around the issue could be counter-productive in the long run. It was one thing to get people on to the streets to protest about debt, it was another to keep them there and maintain the momentum.

He was also bothered by the tendency of campaigners to link together all kinds of debt, from loans with a grant component, to export guarantee arrangements, to debts incurred to commercial banks. There are two main problems with this. First, a result of debt cancellation might be a decline in Official Development Assistance (ODA). The very soft loans made through the International Development Association (IDA) facility of the World Bank are largely financed out of ODA, and repayments of capital are re-loaned. It might be argued that such circulating finance is not the most effective way of deploying ODA, but simply canceling existing loans would mean that crucial resources needed by the most impoverished countries might no longer be available. Second, vague and over-blown assertions about debt in general make it unclear which specific institutions are being criticized for not agreeing to cancellations. A consequence is that those who might be appropriate targets for the campaign, such as the IMF (which Watkins calls 'the Achilles heel of the Bretton Woods institutions') can turn the tables and suggest that they support it.

Stealing Jubilee 2000's thunder has very much been the approach of the World Bank Staff have suggested that their Heavily Indebted Poor Countries (HIPC) Initiative, jointly set up by the Bank and the IMF in 1996, was the precursor of the Jubilee 2000 campaign. Indeed, the Bank has sometimes come close to presenting itself as part of the coalition. As Andrew Rogerson, the World Bank's spokesperson in London puts it:

... we were in the lead of those who recognized that poor countries that have unbearable debt burdens, and simply will not find a solution without significant amounts of debt reduction. This is not just debt relief in a sense of postponing the debt burdens, but actually reduction of their stock. (Andrew Rogerson, taped interview with Tim Allen, 04/99)

More recently, the World Bank's President, James Wofensohn, went out of his way to welcome a Jubilee 2000 rally in Washington, stating that 'it will send an important signal to the international community', and that he was 'very grateful for the enormous contribution Jubilee 2000 has made to debt relief' (World Bank News Release 2000/285/S, www.worldbank.org, 12/05/00). When asked what was the difference between the Bank and Jubilee 2000, Rogerson replied:

Well the devil is in the details, the debate is not about whether some countries need some debt reduction, but how deep this reduction should be. Is there a level which is sustainable?... How long will it take to get this reduction of debt in place, and what safeguards should there be?... (Andrew Rogerson, taped interview with Tim Allen, 04/99)

One detail of difference is, not surprisingly, that the Bank is concerned that debt cancellation will not result in a weakening of the IDA (due to reductions or shifts in ODA), while Jubilee activists tend to argue that the IDA should, at the very least, be fundamentally re-organized. But in general terms, the Bank is certainly keen to express solidarity with the coalition, and has been explicitly stating in official documents that debt overhang has to be removed, multilateral debt reduced, and endless debt restructuring stopped.

The use of the term debt overhang in official Bank documents (and in statements by Jubilee 2000 activists) is significant. Sometimes it is invoked in a rather vague way, but it does in fact have a specific, technical meaning. It refers not just to a very large debt, but to a debt large enough that it creates a disincentive to invest in productive activities. This remains a controversial idea in economics (see, for example Warner, 1992; Deshpande, 1997; Kaminsky and Pereira, 1996, and Afxentiou and Serletis, 1996). But it is important to note that, if there is a true debt overhang, it is easy to see why it might be in the creditors' interest to offer debt relief. It would allow productive investments to be made, potentially benefiting both creditors and the impoverished country alike<sup>1</sup> (see, for

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<sup>1</sup> In general, however, debt forgiveness negotiations must be conducted with all the bank creditors *as a group*. No individual lender has an incentive to do the debt reduction on its own, as they would thus absorb

example, Sachs, 1989 or Krugman, 1992). This is a reason why ‘dropping the debt’ has attracted some strange bedfellows. Even an economist at the famously neo-liberal Adam Smith Institute have expressed support (Alex Singleton, [www.jubilee2000uk.org](http://www.jubilee2000uk.org), 19/04/00).

However, the possibility of productive investment still leaves the issue of whether or not relief will really lead to poverty alleviation which, as World Bank staff are keen to emphasize these days, ‘is what we are all about’. Thus the Bank has continued to stress the need for careful negotiation and conditionality, rather than a one off arrangement with all impoverished debtors. Jubilee 2000 has been more or less forced to follow suit (even the most radical activists have come to accept that some form of conditionality is essential, although they would prefer it not to be regulated by the World Bank and IMF). In the real world it just cannot be assumed that governments will act in a benevolent way, and would like to spend more on social development programmes but cannot due to exogenous debt servicing requirements. It is also essential not to be seen as, in effect, rewarding governments that have been profligate and/or corrupt by turning debts into retrospective grants.<sup>2</sup>

So, leaving aside the strategic problems associated with concentrating on a single issue, and the more ‘over-the-top’ claims of some of the activists, is it the case that debt relief combined with conditionality alleviates poverty? The answer is that there is not much evidence with which to make such a judgement. However, within the Bank, one of the lead economists, Bill Easterly, has examined the limited data available and has come to pessimistic conclusions. He has presented a theoretical and empirical case that debt relief in the past has not been successful in reducing debt burdens or increasing welfare, and therefore it is unlikely to do so in the future (Easterly, 1999). In our view, his arguments have to be taken seriously. There is little point in demonizing debt as an end in itself (after all, developing countries will surely want to borrow again as soon as cancellations are made). Give the scarcity of development assistance finance, a good case has to be made for ‘dropping the debt’ as an especially effective means of reducing deprivation. In spite of all the claims to the contrary, it seems that has not really been done.

The rest of the paper proceeds as follows. In Section 2 we briefly describe some of the critical economic literature on aid effectiveness and conditionality, and discuss how this relates to the literature on debt relief. Section 3 reviews some of the empirical evidence on debt relief. Then in Section 4 we contribute our own simple empirical analysis, summarizing results in Section 5. Section 6 concludes. Tables and a list of countries in the analysis are included in the data appendix at the end of the paper.

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all of the cost and only a fraction of the benefit of debt relief (see Krugman 1992). Thus even in conditions of true debt overhang where it is in the creditors’ interest to give debt relief, there is still an important role for international cooperation, such as with the Brady Plan and other international initiatives.

<sup>2</sup> This moral hazard argument can of course be applied both to debt relief and to ODA in general. See, for example, Peter Bauer 1991. It can also be reversed, as it has by Jubilee 2000. If creditors suffer no adverse consequences for inappropriate lending, then they will have no incentive to avoid inappropriate lending in the future.

## 2. Critical concerns about aid and debt

An influential body of economic literature has recently documented the persistent inability of international aid to have much effect on growth or poverty in developing countries, at least at the macro economic level literature (see, for example, Boone 1996; Burnside and Dollar 1997). Indeed, the current emphasis on 'good governance' is in no small part due to the evidence that aid funds have been more effective when 'good policies' are already in place. Econometric analysis has shown that, in the cross section, aid in fact does have a positive aggregate impact on growth and social welfare, but only in those countries with 'good policies' as defined by the World Bank. The intuition of this result is quite simple: to the extent that aid is fungible, any aid funds, regardless of the specific programme they underwrite, can be thought of as a general subsidy to government expenditures. Thus if a developing area needs a new school, and this need is filled successfully by an aid project, the aggregate positive effect may be quite limited if the government is thus able to divert (other) funds it otherwise would have spent on education into less socially or economically productive sectors.

Doubt has also been cast on the idea that 'good governance' can be promoted by conditionality. Although governments may often 'commit' to certain policies *ex-ante*, politically it has been very difficult for the World Bank and the IMF to withhold funds if governments do not follow through *ex-post*. For example, Dollar and Svensson (1998) econometrically analyze the conditions which improve the probability that a World Bank structural adjustment programme will be successfully implemented (note that this does not mean it necessarily had a successful outcome – simply that it was implemented broadly as initially envisioned). They find that the only robust determinants of success are those related to the domestic political-economic environment of the recipient country, and not to factors under the control of the Bank.

It would seem that aid works best in environments of good policy, and good policy is primarily the result of internal, domestic political economic factors and not easily influenced from abroad. The policy implication of this line of reasoning is that the larger part of available aid finance should be targeted to those countries that have already demonstrated the political will and ability to reform. For the remaining countries, the prescription would be to emphasize technical assistance to facilitate internal reform and local knowledge accumulation. If the analysis is correct, such an approach would ensure that the greatest number of people in the developing world benefit from a given quantity of scarce aid funds.

However, this view of aid should not be adopted uncritically. Despite the commonsense attraction of the results, there are a number of methodological issues that need more investigation. The lion's share of empirical research in this area has used aggregate level cross country data, which are susceptible to the standard pitfalls of constructing a dynamic interpretation from cross section relationships. The interactions between development finance, other forms of capital transfer, and country regime need more scrutiny as well. Moreover, aid funds are often targeted at poor, rural areas. In many developing countries, especially in Africa, these regions operate in an 'informal' sector of

the economy, and thus any gains may not, by definition, show up in official aggregate statistics (see Allen 1998). It might additionally be pointed out that total ODA is low, and it cannot be ruled out that a substantial increase would have significant overall effects.

Nevertheless the main result that aid, on average, does not appear to be effective, cannot simply be set aside. If generalized debt relief (as opposed to debt relief targeted to only 'good policy' governments) has the effects hypothesized by some Jubilee 2000 activists, then it would be quite a remarkable finding. Overall beneficial outcomes from debt relief would mean that (a): the fungibility argument did not hold, or (b): that conditionality clauses associated with debt relief were more effective than previous attempts, or (c): that debt relief induced governments into 'good policy' regimes through other incentives.

There is, in fact, some theoretical support for the latter two propositions. Sachs (1989) has pointed out that the presence of debt overhang makes it less likely that conditions for reform will be implemented. Adjustment can be both socially and politically costly, especially in the short run (see Rodrik 1998a, 1998b) and governments have much less incentive to absorb these costs if the reforms primarily produces income for foreign creditors. Thus conditionality could be made more effective (in the sense of actually being implemented) if debt relief was included in conditional aid or lending programmes. However, other theoretical arguments counter that the incentives created by debt relief initiatives may actually delay the adoption of reforms.

Easterly (1999) points out that by offering progressively more favorable terms over time, successive debt relief initiatives could create a moral hazard – i.e. incentives to borrow in the expectation that part of this debt will be forgiven. More subtly, incremental debt relief also can create incentives to delay policy reforms, waiting for a progressively higher 'price' at which to 'sell' the policy changes. A government might be able to obtain \$10 million in debt relief for a reform today, but thinks that it may be able to get \$11 million for the same reform in one year's time. It could therefore choose to reduce its debt now and reform, or keep the \$10 million in debt for one year, pay interest on it, and wait until next year to reform. If the rate of interest on the debt is less than 10% in this case, it clearly pays to wait the year. Easterly also notes that there can be another perverse incentive, created by the allocation of debt relief in response to policy changes (rather than the quality of policies). Countries with worse initial policies have more scope for improvement, and if debt relief responds exclusively to policy changes, it may result in assistance going to countries with worse policies on average.

While Sachs hypothesizes that heavy debts (whose origin is left unspecified) could cause a government to pursue 'bad' policies (i.e. failure to invest in socially profitable projects), Easterly (1999) points out that how and why the country became highly indebted in first place may provide a good clue as to how it might behave upon receiving some debt relief. A key point that Easterly makes concerns 'high discount rate behavior'. This refers to activities which disproportionately down-play the importance (i.e. discount) the future. If excessive external debt is the result of high discount rate behavior on the part of the government (as opposed to external shocks or other exogenous forces) then, if there is any remaining capacity to borrow, debt relief will probably prompt the government to do



so, thus accumulating the same amount of external debt again. On the other hand, if the country cannot borrow (due to poor creditworthiness), Easterly suggests that the government has another option which will similarly allow greater consumption today at the expense of future. Instead of paying to maintain assets such as factories, highways and other infrastructure, it could use those resources for current consumption.<sup>3</sup>

Easterly's theoretical point is that governments may have a target ratio of net worth to consumption determined by its rate of time discount and/or inter-temporal elasticity of substitution. If the debt is reduced, this ratio may be restored either by (a) increasing the debt again by re-borrowing, or (b) reducing assets. In other words they engage in asset decumulation. Even if the government has a higher discount rate than the private sector it can impose its inter-temporal preferences on the whole economy through its policies, including predatory behavior that implicitly rather than explicitly taxes capital accumulation, such as high corruption, high inflation, financial repression, etc.

Easterly hypothesizes that if a government has run up excessive debt due to high discount rate behavior, and this characteristic does not change with debt relief, then it will display the same bad policies that explicitly or implicitly tax the private sector after debt relief as before. But, if the old government is replaced by a new government with a longer-term horizon, then debt relief could successfully provide a painless transition to a higher ratio of net worth to consumption. Easterly comments,

A once and for all program is greatly superior to a gradual program of increasing relief. The once and for all program has to attempt to establish a credible policy that debt relief will never again be offered in the future, and that is only giving debt relief to countries with a shift in intertemporal preferences. If this is problematic, then the whole idea of debt relief is problematic. It results in more resources going to countries with bad policies than poor countries with good policies. Why should HIPC's receive four times the aid per capita of less indebted poor countries, as happened in 1997? If there is any expectation that donors will continue to favor the highly indebted in the future, then debt relief will not be successful. (Easterly 1999, p. 30)

Thus, according to Easterly, if debt relief frees enough resources to reduce a debt overhang and the current government is reform-minded, then a one-time only debt relief programme could produce beneficial developmental outcomes. However, if the internal conditions which led to a high debt burden continue unchanged in the recipient government, then there is a chance that not only will debt relief not make a difference to the country's condition, but could cause a delay in the implementation of reforms. On the one hand, Easterly arrives at a position that is not so different from that of Jubilee 2000's initial call for one-off cancellation – although for very different reasons. On the other, his

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<sup>3</sup> Note that greater current consumption may not in itself indicate High Discount Rate Behaviour. This may be appropriate in certain conditions, for example, during a famine or after a flood.

analysis places him at odds with the approach to negotiated and staged cancellations adopted under the HIPC initiative.

### 3. Debt relief and the empirical evidence.

The theoretical literature reviewed above depends upon several things that need to be addressed empirically. First it should be ascertained whether or not debt relief will, in fact, increase the resources available to developing countries. Second, if debt relief does increase available resources, will these resources be directed towards education, health and anti-poverty programmes? In other words, keeping in mind the difficulties faced by past conditionality clauses, is there reason to expect that debt relief will change the expenditure patterns of recipient governments?

#### 3.1 *Creation of additional resources*

On the first issue this paper can only summarize some of the possibilities. As discussed in the previous section, if a substantial proportion of debt servicing is financed by international aid, debt relief could just result in a shift of resources from lesser debt-ridden to more debt-ridden countries, with an overall decrease in available aid funds to the developing world. It is beyond our scope to identify whether that is likely the case or not, but the possibility should be given serious consideration. Another possibility, which has received somewhat more investigation, is the question of whether debt relief in practice has been associated with increased capacity to import goods and services from abroad.

Whether or not circulating debt and debt servicing is included, the optimal debt strategy for a developing country should be that which maximizes the (real) resource flow from abroad into the domestic economy. If most of the debt relief is simply writing off debt that was not being serviced, then there is no reason to expect that this should increase resources to the government. It may reduce it if the settlement reduces aid flows and/or hurts the ability of the country in question to borrow anew.

Hernandez and Katada (1998) have examined empirically whether debt relief is associated with an increase in import capacity, in the context of 32 low-income countries in Africa from 1984 to 1993. They find that overall ODA debt relief has been neutral in this regard.

Despite successive debt relief initiatives, the debt/GDP ratio in the sample countries actually increased about 30% between the 1984-1988 average and the 1989-1993 average. Also debt servicing arrears (and the ratio of interest and principal arrears to total debt) increased substantially (arrears increasing almost thirteen-fold). This large increase in arrears would be consistent with hypothesis that much of the ODA debt forgiven was not being serviced, and was thus unable to free additional resources to be used for alternative purposes (or even if it the particular debt targeted for relief was being serviced, in the presence of arrears on other debts fungibility arguments can easily be made to come to the same conclusion). In fact, cancellation of non-serviced debt could have resulted in a *decrease* in import capacity, because the authors additionally found a crowding out effect between ODA debt relief and new lending from bilateral sources. However, such a potential impact was countered by new lending from multilateral

lenders and by grants from bilateral sources. This concessional finance allowed the sample countries to increase their import capacities by about 75% on average. Interestingly, Hernandez and Katada find that those countries with relatively less ODA debt relief have been able to expand their import capacity the most (however, the direction of causality in this relationship remains unexplored). It is instructive to keep in mind these historical experiences when considering the future of debt relief programmes.

### *3.2. Expenditure patterns*

The other crucial determinant of whether debt relief will be successful in targeting poverty is the use that the government makes of any freed resources. Much of the debt overhang literature assumes that freed resources will be put to good use, but as we have discussed, Easterly has pointed out that this need not be the case. It may be possible to attach strong conditionality to relief packages, it remains to be seen if this approach will prove any more successful than previous attempts to impose particular policies on recipient governments. However, while we cannot predict the future actions of any particular government, some lessons from the historical experience with debt relief can be instructive.

Easterly himself provides some empirical evidence in support of his theory. He shows that over the period 1980 to 1997, there is a statistically significant association between average debt relief as a percentage of GDP and new net borrowing as a percentage of GDP (Easterly 1999, p. 19). HIPC countries did not face worse terms of trade or war shocks than other equally poor countries, but they did display worse policy indicators despite the waves of debt relief. In particular, HIPC countries had (statistically significantly) higher inflation, higher overvaluation of their exchange rates, and lower Country Policy and Institutional Assessment marks. Easterly concludes:

In sum, we have a pattern of poor policy indicators that most needed to be improved to avoid a debt crisis. Not surprisingly, HIPC countries' policies were worse precisely in those areas – high current account deficits and budget deficits – that led to high debt accumulation. This is consistent with these countries having a discount rate that was unchanged before and after debt relief. This is also consistent with policy-makers waiting for the best deal during the incremental process of debt relief. It is also consistent with the moral hazard problem that after the initial debt relief in 1979, HIPC countries may have rationally anticipated that much of their new borrowing would be later forgiven. (Easterly 1999, p. 24)

## **4. A brief look at some data**

Given the relatively large amount of resources being currently devoted to debt relief programmes, it would seem prudent to establish just how serious a challenge the Easterly hypothesis is to the more optimistic interpretations. Even as a simple characterization of historical patterns, Easterly himself concedes that the evidence he has presented is not conclusive. His econometric analysis is based on simple cross-country time-averaged

regressions, controlling only for initial GDP per capita and distinguishing HIPCs by a simple dummy variable. In this paper we propose to take his analysis one small step further. We wish to know (a) whether debt relief increased the resources spent on developmentally desirable sectors (i.e. education), (b) whether or not debt relief has had an impact on the composition of spending in recipient countries, and (c) whether there is evidence of some of the hypothesized high discount behavior (such as high inflation and asset decumulation).

First we examine whether countries receiving debt relief, as a group, differ from other countries of similar GDP per capita. We then exploit the fact that countries received different amounts of debt relief over time to analyze whether those countries who received relatively more debt relief in a time period display relatively more (or less) of a particular characteristic in that period. We used fixed effect panel data which allows us to control for all country specific characteristics which do not change over time.

#### *4.1 Data and methodology*

Accurate measures of true debt cancellation are almost impossible to obtain. In principal we would want to differentiate between relief on serviced versus non-serviced debt and to be able to calculate the net present value of any debt renegotiation. Instead we use a measure of ‘action relating to debt’ as a percentage of total debt service payments (Debt Action).<sup>4</sup> Debt Action includes different types of debt reorganisation, including debt cancellation, rescheduling, refinancing, etc. This is not an ideal measure, and in particular one could object that often debt reorganisation does not in fact result in any change in the net present value of the obligation (such as when the loan period is extended, reducing the current payments at the expense of a longer repayment period).

However, while these caveats should definitely be taken seriously, we think they are not a fatal problem for two reasons. The first is that while not capturing exactly what we are interested in, the Debt Action variable is very likely to be correlated with it. Those countries who have had their debt most reduced are likely also to be those with the most action related to debt. Second, we are particularly interested in examining Easterly’s hypothesis of high discount rate behavior. If a country does not have a high discount rate, then it would not be expected to change its behavior in response to a superficial change in debt terms that does not change the net present value of the debt servicing obligations. In such a situation, if our measure captures a large amount of this sort of negotiation, we should not find any relationship. If, however, the government does behave as though it has a high rate of discount (i.e. higher than the prevailing rate used to calculate the net present values), then from the government’s perspective the same reorganization (neutral in terms of net present value) of debt may in fact be associated with changes in behavior as the longer period of future payments would not balance out the current decrease in payment obligations. From that government’s point of view the ‘neutral’ reorganization would in fact represent an opportunity for increased current consumption. Thus the measurement problem should tend to bias our results *away* from

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<sup>4</sup> The Debt Action variable is taken from OECD 1999.

the conclusion that governments' display high discount rate behavior. If we find no evidence of this kind of behavior then we cannot completely dismiss the possibility, due to measurement error. But, if we do find evidence, then our results will be all the stronger.

In addition to the Debt Action variable we control for GDP growth (GGDP), population growth (GPOP), the dependency-ratio (DEPRAT) as a rough control for demographic shifts, and the percentage of government revenue coming from aid (Aid). In addition we control for terms of trade in the inflation regressions (TOT).

The variables we are interested in explaining include those that relate to the expenditure pattern of government spending, the share of government spending on education (Education Share), and the share of government spending on capital expenditures (Capital Share). We also want to explore the quantity changes in resources expended in sectors and thus examine the growth of capital expenditures (Growth of Capital). In addition (unreported) regressions were run using the growth of education spending and the results are noted in the discussion of results. Finally, we check for policies associated with high discount rate behavior by analyzing the determinants of the inflation rates (Inflation). All these variables come from the World Development Indicators of the World Bank.

For each variable we take the average value over the four year periods 1981-1984, 1985-1988, 1989-1992, and 1993-1996 (data was originally collected from 1973 but due to missing values only these four (and usually just the last three) four-year periods are used). The sample includes 95 countries but the actual number in each regression varies with data availability. A list of countries in each regression is presented in Table 4 in the data appendix. Heteroskedasticity was found not to be significant and thus the regression analysis is conducted using fixed-effects ordinary least squares estimation, controlling for period effects as well. To save space neither the fixed effects nor the period effects are reported in the tables.

Using a panel data fixed effects approach has several advantages over the cross section analysis used in Easterly (1999). In particular, the fixed effects control for country-specific, time-invariant (over the sample period) country characteristics. Thus, rather than looking for correlations between Debt Action and, say, education spending across countries (which could be due to any number of unobservable country characteristics rather than any causal relationship between the two variables of interest), we are instead asking whether a change in Debt Action *within* countries is systematically associated with changes in education spending. Spurious correlation could of course still occur, but the use of multiple time periods for each country and fixed effects reduces the scope for these kinds of errors. In addition, this approach gives us some freedom to explore certain dynamic questions such as whether debt relief in one period is linked to changes in inflation or spending patterns in later periods, a useful piece of information for assessing the likelihood of an actually causal relationship

Because there are many very small and zero values for the Debt Action variable, and changes over time in expenditure shares are small, considerable care must be taken to

ensure that results are not driven by a few outlier countries. This is not to say that these outliers definitely have nothing to offer in terms of learning about debt relief, but their particular cases would need more specific study which is beyond the scope of this brief paper. Thus, as we wish to gauge the *general* effect of our Debt Action variable it is important to ensure that results represent a meaningful pattern.

Controlling for the fixed effects could take care of many of these kinds of problems, but not all. So, graphical analysis was used to supplement the regression work, and several outlier countries were identified and eliminated from the sample. In particular, Central African Republic, Sierra Leone and Mozambique were dropped due to their undue influence on the coefficient estimates. Including the Central African Republic, for example, would have caused the Debt Action variable to be positively and significantly correlated with inflation. However, upon closer scrutiny it is clear that *generally* the relationship has more of a negative shape (i.e. the outlier was driving the regression).. Similarly, including Sierra Leone and Mozambique in the analysis gave the impression that Debt Action was positively and significantly correlated with Education Share. However, the more general relationship is that of no real correlation. The difficulties with measurement and identification of general relationships suggests that additional empirical work, accompanied with closer analysis of specific cases, would be a fruitful direction for future research.

## 5. Discussion of the results

Due to the large number of very small values of Debt Action, we begin our analysis by examining how those countries which have had at least 10% of their debt service payments subject to Debt Action, compare to other countries with similar characteristics that have not received as much Debt Action. Thus we define a Debt Action Dummy which equals 1 when Debt Action is greater than 0.1, and 0 otherwise.

We note that as a group, the high Debt Action countries have a (weakly) statistically significant different government expenditure pattern, compared to similar countries without as much Debt Action. In particular, high Debt Action countries have a significantly lower share of government spending on education and a significantly higher share on capital expenditures, at the 10% level. However in regression 4 we observe that the Debt Action dummy variable is not associated with a change in the quantity of spending on capital. Due to lack of data, fixed-effects analysis could not be performed with the growth of education spending, but panel analysis with regional dummies and controlling for initial GDP and initial debt burden showed no indication that education spending was related to the Debt Action dummy variable<sup>5</sup>. Regression 3 indicates that countries with Debt Action over 10% do not differ from other countries in terms of inflation<sup>6</sup>. Our result that Aid is insignificant in all regressions is consistent with the general literature on aid effectiveness mentioned above.

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<sup>5</sup> These supplemental results are not reported in the paper but are available from the corresponding author upon request.

<sup>6</sup> This result depends on omitting the Central African Republic from the analysis as explained in the text.

The results from regressions 1 and 2 could be given an alternative explanation. In particular, it could be that countries in particular trouble – those which cannot afford to spend much on education – are those which are receiving the most Debt Action. Thus the relationship observed would in fact be due to a (unobserved) third factor driving the original difficulties. While we cannot rule this possibility out completely, in table 2 we examine the relationship with those countries which received high Debt Action (again, over 10% of debt service payments) in the previous four-year period<sup>7</sup>. In regression 5 we see that having previously received considerable Debt Action is not significantly correlated with education share of spending. Thus our alternative interpretation of the relationship from regression 1 seems more probable and we conclude that there is likely not a causal relationship from Debt Action to lower education share. However, as regression 5 shows, the share of government spending on capital remains higher in the four year period after a high share of Debt Action. Although these relationships are statistically significant only at the 10% level, they run in direct contradiction to the Easterly hypothesis that such countries may be likely to deaccumulate assets. In addition we see no effect of past Debt Action on inflation rates. In table 3 we check these results by examining the relationship between the fully continuous Debt Action variable and our dependent variables of interest. Our results are broadly consistent with those from tables 1 and 2<sup>8</sup>.

Lastly, we consider the possible effect that the changing nature of conditionality associated with Debt Action over the sample period could be confusing the results. During the 1980s conditionality requirements introduced by donors tended to be aimed primarily at deficit reduction, and sometimes required cuts in social services. Towards the end of the decade, however, emphasis shifted towards a more explicit concern with poverty reduction, and during the 1990s there was a greater willingness to promote the maintenance (or even increase) of health and education spending. In order to assess if shifts in conditionality terms affect our results, we introduce an interaction term between the last period (1992-1996) and our Debt Action variables. Thus we are checking to see whether the relationship between our expenditure variables and Debt Action changed significantly in the last period. We find that this interaction variable is not statistically significant for either the education or capital spending variables (although we do find some evidence that the impact of Debt Action on lowering inflation was stronger in this latter period<sup>9</sup>).

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<sup>7</sup> Including both current and lagged values of the Debt Action Dummy simultaneously does not significantly change the results.

<sup>8</sup> Further regressions including lagged Debt Action in the Education Share and Capital Share regressions yielded similar results to those with the Debt Action Dummy variable. In particular, Lagged Debt Action is not significantly correlated with Education Share, while it is statistically significant and positive in the Capital Share regression.

<sup>9</sup> To save space these results are not reported below but are available upon request from the authors.



## 6. Conclusions

While we cannot rule out Easterly's hypothesis of high discount rate behavior completely, our results are not consistent with that story. In particular the generally equal (or lower) inflation and higher shares of government spending on capital in Debt Action countries, if taken at face value, would tend to contradict the idea of high discount rate behavior. However, we find no evidence that countries receiving Debt Action have increased either the quantity or the share of spending on education (and unreported -due to scarcity of data- analysis on health spending similarly failed to show any change). In fact we find a negative correlation between education's share of the budget and Debt Action. Thus, across the categories that we examined in our empirical analysis, we found no evidence that Debt Action increased available resources, a result which is broadly consistent with the results of Hernandez and Katada (1998).

Jubilee 2000 would respond by arguing that the amounts of debt cancellation (as opposed to Debt Action) that occurred during the period covered by our data may not have been sufficient to have had a significant effect. This is a fair point, although it should be noted that many of those developing countries which did receive substantial inflows of financial resources, notably due to oil exports (e.g. Venezuela and Nigeria), have records which confirm that this alone is not sufficient for either growth or poverty reduction. What is clear from both our review of the literature and our own examination of data, is that much less is known about the consequences of debt cancellation than is often asserted. Further analysis is urgently required to obtain a more adequate understanding of the responses of governments benefiting from such schemes. In particular, close scrutiny is required of developments in countries like Uganda, which have had substantial debt cancellations under the HIPC initiative.<sup>10</sup>

Our own view is that there is not a strong case for immediate one off cancellation of all the multi-lateral and bi-lateral debts of the poorest countries. Jubilee 2000's arguments have been essentially moral and politically strategic, rather than based on economic analysis. Increasingly the coalition's position seems to be shifting towards a less extreme

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<sup>10</sup> A glance at the currently available evidence is not altogether promising. After having about one fifth of external debt written off in 1998, the Ugandan government immediately increased its borrowing and had a higher debt by the end of 1999 than before the cancellation. This could partly be explained by a decline in the world price of coffee. But there had also been a substantial increase in the defence budget. It was argued that this had not effected the government's poverty reduction programmes but, of course the fungibility argument applies. A second wave of cancellation, amounting to two fifths of the external debt, was recently been delayed when it was discovered that government had raised a loan at a commercial rate to pay for a new presidential aircraft. In May 2000, it was announced by the World Bank and IMF that the cancellation would proceed, because the Government of Uganda had 'reaffirmed' that the costs of the plane would be met by cuts in the defence and other non-wage expenditures. Interestingly, this official statement also justified the second wave of debt cancellation by stating that: 'Uganda has recently completed a poverty reduction strategy involving a participatory process. While Uganda remains one of the poorest countries in the world, the share of the population living in poverty declined to 44 percent in 1996'97, from 56 percent in 1992/93.' ([www.worldbank.org](http://www.worldbank.org), 21/05/00). The implication seems to be that the Ugandan government is being rewarded for successfully reducing poverty, rather than that cancellation is the necessary first step in doing so.

agenda: pressurising for an enhanced version of the HIPC initiative. This doubtless in part because, half way through the year 2000, no one really expects that a 'debt jubilee' of the kind initially envisaged will occur. But there has also been a recognition of the following:

- (1) A one off removal of the bi-lateral and multi-lateral debt burden on the poorest countries would require the agreement of all creditors to cancel debt at the same time. Partial cancellation has been very difficult to organise for particular countries, such as Uganda. It is therefore highly unlikely that cancellation of all external debt for all impoverished countries can be arranged to occur at the same time.
- (2) It would be counter-productive if any debt cancellation occurred in such a way as to prevent governments borrowing in the future. Given historical experience, it is also important to keep in mind that substantial flows of private finance probably will not be immediately forthcoming to most impoverished countries (even if 'debt overhang' in the technical sense exists and is removed). It can be assumed that most new finance which is made available, will be offered by the same ODA-funded creditors currently being asked to cancel debts.
- (3) If the cancellation of bi-lateral and multilateral loans does not involve new funds, the effect would be a drastic reduction in available aid finance.
- (4) If new funds are made available, there is an opportunity cost involved in using them for debt cancellation (they might be better used, for example, as grants for primary health care).
- (5) Cancelling the debts of all impoverished countries would, in several cases, provide finance for manifestly corrupt, unaccountable, inefficient and oppressive governments, with little interest in promoting social welfare.

For all the difficulties involved, it seems to us that a case by case approach is the only way forward. Jubilee 2000's efforts to accelerate such a process may well prove to be a positive contribution, but there is also a danger in the high-profile 'drop the debt' rhetoric of taking the eye of the ball. Debt cancellation by multi-lateral and bi-lateral creditors is the allocation of aid by another name (irrespective of whether or not it is formally incorporated into ODA). If the objective is to assist in the alleviation poverty, then there is little evidence that it is either the most effective means of distributing scarce resources or of promoting socially progressive governmental reforms. It may be an appropriate component of programmes in some places, but Easterly is surely correct in arguing that HIPCs should not receive more resources than other poor countries, just because they are more heavily indebted.

## RESULTS APPENDIX

Table 1: Fixed and Time Effects Panel Data Analysis, OLS

REGRESSION #	1	2	3	4
Dependent Variable:	EDUCATION SHARE	CAPITAL SHARE	INFLATION	GROWTH of CAPITAL
GGDP	0.1418 (1.20)	0.3076 (2.33**)	-1.704 (-2.8***)	2.8211 (7.21***)
GPOP	-.0022 (-.58)	0.0036 0.55	-.0284 (-.59)	0.0141 (0.74)
DEPRAT	0.0437 (0.21)	0.2631 (1.11)	0.5678 (0.45)	-.2372 (-.34)
TOT			-.0000 (-.85)	
AID	-.0263 (-.98)	0.0007 (0.40)	0.0024 (0.30)	0.0024 (0.51)
DEBT ACTION DUMMY	-.0237 (-1.9*)	0.0261 (1.67*)	-.1041 (-1.3)	0.0066 (0.14)
Adj. R-squared	0.6766	0.7382	0.4115	0.1105
# observations	201	313	284	302

t-statistics in parentheses. Fixed and time effects not reported

Table 2: Fixed and Time Effects Panel Data Analysis, OLS

REGRESSION #	5	6	7
Dependent variable:	EDUCATION SHARE	CAPITAL SHARE	INFLATION
GGDP	0.1439 (1.20)	0.2949 (2.23**)	-1.634 (-2.7***)
GPOP	-.0018 (-.46)	0.0046 (0.70)	-.0284 (-.56)
DEPRAT	0.0010 (0.01)	0.3058 (1.31)	0.3115 (0.25)
TOT			-.0000 (-.85)
AID	-.0331 (-1.2)	0.0014 (0.84)	0.0019 (0.22)
LAGGED DEBT ACTION DUMMY	0.0048 (0.29)	0.0366 (1.65*)	-.0103 (-.09)
Adj. R-squared	0.6670	0.7382	0.4064
# observations	201	313	284

t-statistics in parentheses. Fixed and time effects not reported

Table 3: Fixed and Time Effects Panel Data Analysis, OLS

REGRESSION #	8	9	10	11	12
Dependent Variable:	EDUCATION SHARE	CAPITAL SHARE	INFLATION	GROWTH of CAPITAL	INFLATION
GGDP	0.1555 (1.31)	0.2971 (2.25**)	-1.621 (-2.7***)	2.8312 (7.26***)	-2.589 (-2.7***)
GPOP	-.0020 (-.51)	0.0030 (0.46)	-.0290 (-.60)	0.0131 (0.69)	-.0297 (-.48)
DEPRAT	0.0236 (0.11)	0.2668 (1.13)	0.2543 (0.20)	-.3013 (-.44)	0.2222 (0.12)
TOT			-.0000 (-.84)		-.0000 (-.34)
AID	-.0307 (-1.1)	0.0009 (0.52)	0.0022 (0.27)	0.0026 (0.55)	0.0020 (0.24)
DEBT ACTION	-.0481 (-1.7*)	0.0669 (1.81*)	0.0744 (0.37)	0.1014 (0.90)	-.1697 (-.61)
LAGGED DEBT ACTION					0.2723 (0.68)
Adj.R-sq'd	0.6714	0.7383	0.4060	0.1143	0.4500
Observations	201	313	284	302	230

t-statistics in parentheses. Fixed and time effects not reported

Table 4: List of countries in each regression

Reg # #'s	1,5, 8	2,6, 9	4,11	3,7, 12
ALB		X		
ARE	X	X	X	
ARG	X	X	X	X
BDI	X	X	X	X
BFA	X	X	X	X
BGD	X			X
BHR	X	X	X	X
BHS	X	X	X	
BLZ	X	X	X	X
BOL	X	X	X	X
BRA	X	X	X	X
BRB	X	X	X	
BTN		X	X	
BWA	X	X	X	X
CHL	X	X	X	X
CHN	X			X
CMR	X	X	X	X
COG	X			X
COL	X	X	X	X
COM		X	X	
CRI	X	X	X	X
CYP	X	X	X	X
DOM	X	X	X	X
ECU	X	X	X	X
EGY	X	X	X	X
ETH		X	X	X
FJI	X	X	X	X
GAB	X	X	X	X
GHA	X	X	X	X
GIN		X	X	
GNB		X	X	X
GRD		X	X	
GTM	X	X	X	X
GUY	X	X	X	X
HND		X	X	X
HTI	X	X	X	X
IDN	X	X	X	X
IND	X	X	X	X
IRN	X	X	X	X
ISR	X	X	X	X
JAM	X	X	X	X
JOR	X	X	X	X
KEN	X	X	X	X
KNA		X	X	
KOR	X	X	X	X
KWT	X	X	X	
LBN	X	X	X	X
LBR	X	X	X	X

Reg # #'s	1,5, 8	2,6, 9	4,11	3,7, 12
LKA	X	X	X	X
LSO	X	X	X	X
MAR	X	X	X	X
MDV	X	X	X	
MEX	X	X	X	X
MLI	X	X	X	
MLT	X	X	X	X
MRT		X	X	
MUS	X	X	X	X
MWI	X	X	X	X
MYS	X	X	X	X
NAM	X	X	X	X
NER	X	X	X	X
NGA	X	X	X	X
NIC	X	X	X	X
NPL	X			X
OMN	X	X	X	
PAK	X	X	X	X
PAN	X	X	X	X
PER	X	X	X	X
PHL	X	X	X	X
PNG		X	X	X
PRY	X	X	X	X
RWA	X	X	X	X
SDN	X	X	X	X
SEN		X		X
SGP	X	X	X	X
SLB	X	X	X	X
SLV	X	X	X	X
SOM		X	X	X
SUR		X	X	
SWZ	X	X	X	X
SYC		X		X
SYR	X	X	X	X
TCD		X	X	X
TGO	X	X	X	X
THA	X	X	X	X
TUN	X	X	X	X
TUR	X	X	X	X
UGA		X	X	X
URY	X	X	X	X
VCT		X	X	
VEN	X	X	X	X
VUT		X	X	X
ZAF	X	X	X	X
ZMB	X	X	X	X
ZWE	X	X	X	X

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