

# Searching for the good debt case

## A model and seven case studies

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Abstract:

The possibility to borrow allows countries an extra choice space, which is likely to contain welfare enhancing options. Successful cases are termed good debt cases. However, most international loans lead to inferior outcomes. We discuss why the outcome is mostly bad, and look for good debt cases. That is, we explore all data for the LDC world where debt rises in one 5-year period and higher growth occurs in the following 10-year period. It happens in 17% of the 423 cases examined, while 83% cannot be good debt cases. Of the 73 potential good debt cases we identify 7 as the most likely candidates for the good debt case. We find that three of these appear to be good debt cases, while the four remaining cases are likely to be due to good luck. Thus it appears that good debt is possible but rare.

Keywords: Economic growth, Public debt, Developing countries

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## 1. Introduction: Cases of borrowing and welfare

The possibility to borrow gives a country a wider intertemporal choice set. The wider set is likely to contain choices that are better than the one made without the possibility of borrowing. The theory of optimizing behavior suggests that such choices will actually be made. Hence, there should be a positively sloping relation between the amount borrowed and the growth rate in some perspective. However, in reality the slope of the relation is negative as discussed in section 3, so the possibility to borrow appears to lead to worse outcomes in the typical case. Section 2 discusses the reasons for this outcome. The main reason is obvious once we think of the two extreme models of government:<sup>3</sup>

- (a) WB-governments are **w**ise and **b**enevolent. They borrow and *invest* wisely. Two types of such investments are considered: (i) Economic and (ii) popularity investments. In (ii) the investment is used to overcome short run status quo traps, which prevent development enhancing reforms. Thus, WB-governments increase welfare in the longer run. Both types of wise investment will generate higher growth making repayment easier.<sup>4</sup>
- (b) MS-governments are **m**yopic and **s**elfish. They borrow, skim off as much as possible, for their own use, use the rest for consumption in ways that increases political support, and leave repayment to future governments. Here the population suffers a long-run welfare loss.

It is arguable that both extremes are a caricature, and that all governments are a mixture of the two. Also, it is clear that the long time horizon makes the choices difficult to analyze. Think of the last 3½ decades: Debt accumulated from the early 1970s, and in 1982 the first major debt crisis broke out. Since then much debt has been forgiven, and some has been repaid, but most of the indebted countries are still indebted. Thus we are looking at a debt cycle that will last half a century. The story is documented in Paldam (2008), and it appears that the evidence is clear: The debt cycle has been expensive in welfare for the world. Thus, it appears that the MS-model of the government should have a larger weight than the WB-model in practice.

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3. Sections 1 and 2 do not discuss, if democratic or dictatorial governments are more likely to be WB-governments.

4. A third possibility is the case of a low level equilibrium trap. Here international borrowing provides the opportunity to spring the trap (see Sachs 2005), and it may thus vastly improve welfare. This possibility does not seem to apply in any of the 7 case studies that are discussed below, so it will be disregarded.

Some authors, notably Rodrik (1997), argue that the governments of the four Asian Tigers – in particular South Korea – were WB-governments. South Korea did borrow a lot, had a high investment ratio and grew very fast. However, it seems that only few foreign observers thought that South Korea had a wise and benevolent government before in the late 1970s.<sup>5</sup> Much of the funds borrowed were used to finance the HCI-drive that has often been discussed, as it was done for reasons of military security, and did lead to a debt crisis.<sup>6</sup> The total factor productivity growth until the early 1990s was rather modest (Young 1995). The high growth was related to massive absorption of labor outflow from the countryside into new export industries, financed mainly out of large savings; and South Korea emerged as one of the most spectacular economic success stories.

This example highlights the difficulties to come to clear-cut conclusions about the success and failure of debt policies in developing countries. In section 2, we develop a theory of debt, taking into account the theory of debt cycle and the preconditions for wise and benevolent governments to exist. The theory shows why WB-governments are likely to be rare, so that it is no wonder that good debt cases are rare.

The empirical part of the paper chases *good debt cases*. That is countries that have managed to borrow and grow. The main problem for the analysis will be termed the *good luck cases*. That is, countries which borrow in one period and later come to grow fast for an unrelated reason.<sup>7</sup> Also, some countries did hit oil and managed to grow fast for some time, irrespective of past borrowing, so we need to distinguish between good debt and good luck.

In section 3, we define the distinctive factor between the potential good debt and bad debt, and choose the best cases of good debt, in the sense of debt accumulation combined with high growth at a later stage. The section identifies the 7 most likely candidates for being good debt cases, i.e., countries that managed to borrow and grow. The section proposes a check list to establish if the cases are good debt and not good luck cases.

Section 4 goes through the 7 cases one by one and fill in the check list to see if the candidates are in fact good debt and not good luck cases. Section 5 summarizes the findings.

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5. In the prevailing “progressive” schools of development the realization that South Korea was an economic success came only in the mid to late 1980s.

6. The HCI-drive was a state-run development of a heavy and chemical industry, which was deemed necessary in the perspective of the cold war and the strong threats of the North Korea and perhaps even China. This might be true, but perhaps it should be seen rather as a cost of the location of the country, more than as an integral part of the rapid development of South Korea.

7. A case is Chile that acquired a large debt in the three years before the debt crisis, by freezing the exchange rate to root out inflation. This caused a dramatic revaluation of the peso and a collapse of exports and a debt burden. The policy failed, but some other policies were very successful, causing a high growth in a long period after that; but there is no obvious causal link between the debt and the growth.

## 2. A theory of debt

First the concept of the debt cycle is considered, and then it is discussed what we mean by one government being economically better than another. Next we turn to a theory of debt. It deals with a particular type of time inconsistency, where the decision maker (the government) has a time preference that differs from the interest rate on the loan. Thus, our analysis is taken to deal with public or publicly guaranteed loans. We take it that there is some agreement with the lenders that the loan is meant to finance long run investment activities, but it is clear that loans are fully or partly fungible. Even when the money borrowed is meant to finance the XX-project, it may get not be the marginal activity that takes place due to the loan. There is little the lender can do as long as the debt is serviced, and even if it is not. We shall not, however, deal with the case of debt default.

### 2.1 *The debt cycle*

The theory of the debt cycle is based on the intertemporal approach to the balance of payments, implying that the capital account is driven by saving-investment decision. As an aggregate result of individual borrowing or lending a current account balance (in Figure 1 trade balance) occurs (Obstfeld and Rogoff 1994). In the longer run, countries may undergo a debt cycle (Kindleberger 1963, pp. 458-461, Siebert 1987 and 1989). The theory of the debt cycle distinguishes several stages of development on the basis of the net foreign wealth position and thereby links development to the balance of payments. The country (or its individuals and firms) borrows from abroad. This leads to capital inflows that are (fully or partly) invested into yield achieving entrepreneurial activities. If successful, these activities lead to future sales abroad, with which the country repays the debt.

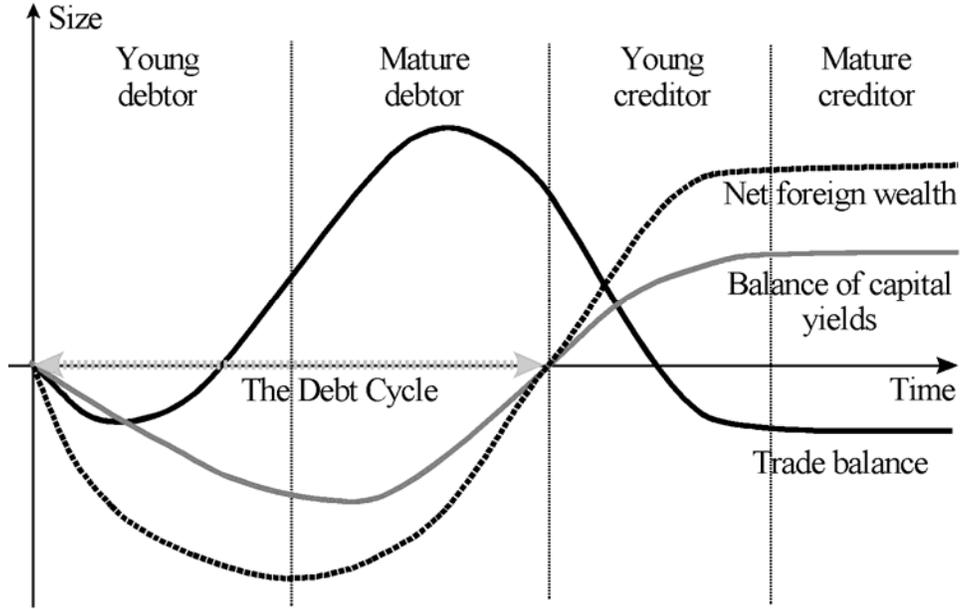
During the debt cycle, a country goes through four stages with respect to its net foreign position (Figure 1).<sup>8</sup> First, the country builds up a negative foreign wealth position (phase I and II). As young debtor country (phase I), the country runs a net capital inflow, a trade deficit and a deficit in the balance of capital yields because foreigners demand a return on their net assets. The capital inflows are invested, so that the country is able to increase future sales abroad and to finance further investment from own savings.<sup>9</sup>

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8. Kindleberger (1963, p. 460) distinguishes six phases by adding one phase for the debtor country and one for the creditor country respectively. The additional information of this extension, however, is limited.

9 South Africa seems to be in this phase, if the theory of the debt cycle applies to the country.

Figure 1. The debt cycle in theory



Source: Kindleberger (1963, p. 460), own modifications.

The capacity built up with this investment is used to produce internationally competitive goods and services. Then the country becomes a mature debtor country, running a trade surplus to diminish its liabilities. During this phase (II), the country already exports capital. Once, the net wealth position is positive, the country becomes a young (III) and later a matured creditor (IV) country. In the last phase, the country does no longer export or import capital, but runs a trade deficit, financed by capital income inflows.

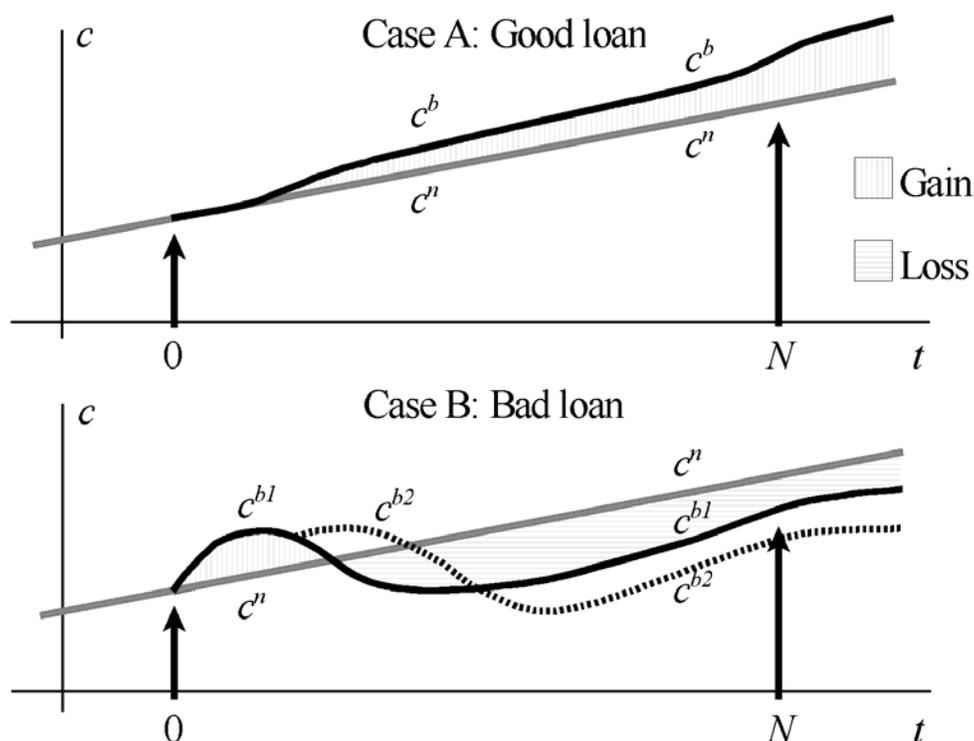
We are concerned only with the period from debt starts till the country is, once again, in balance as regards net wealth. This is what will be termed the debt cycle below. Note that if the debt cycle is successful, as depicted, the country is a net exporter at the end of the cycle. This will then start a new process where the country becomes a creditor.

## 2.2 The path of the economy over the loan cycle: The concept of a good development

Consider an economy with no borrowing has a consumption path with a constant (low) growth rate  $\delta$ :  $c_t^n = c_0^n e^{\delta t}$ . Thanks to borrowing the consumption path becomes:  $c_t^b$ . We define the excess consumption as  $\eta_t = c_t^b - c_t^n$ . The welfare effect of the debt is thus:  $w = \int_0^{\infty} \eta_t e^{-\rho t} dt$ , where  $\rho$  is the discount rate. As long as  $\eta_t = c_t^b - c_t^n > 0$ , welfare increases net of debt repayment and interest. Thus the path of consumption corresponding to Figure 1 is likely to look as

Case A on Figure 2. In the beginning while the good investments are made, there is no gain in consumption, but it does not fall, as the savings financing the investments is from external sources. Then production increases – and it does so with more than the servicing of the debt, so consumption is higher, though not by much. However, when the debt is paid at time  $N$ , consumption jumps upward. In this case the consumption path is always as good as or better than the no borrowing path – the whole area between the two paths is a gain:  $\eta_t = c_t^b - c_t^n > 0$ .

Figure 2. The path of consumption with no borrowing and with borrowing



Case B appears to be more common – here the loan is squandered, so that the path of  $c^b$  falls permanently below the  $c^n$ -path from some point. However, it is almost inevitable that there is a period of consumption above the  $c^n$ -path in the beginning while the borrowed funds are squandered, so we have to weight the gain and the loss together. In the analysis of welfare we take it that the weights that ought to apply to the welfare weighting with a small rate of discount, so that in case B it is clearly a bad outcome.

The Figure for case B, has a second loan included as a dotted line. It illustrates how one bad loan may necessitate another, till a real debt crisis results.

We are dealing with public (or publicly guaranteed loans). So to study the conditions for good debt (of case A) to occur we need to study the behavior of government, and thus the political economy of governments.

### 2.3 *The cost of the loan at time $t = 0$*

Assume that country  $B$  has the option to borrow \$  $L$  on the international market at the annual real rate of interest,  $r$ . We assume that the loan is fully fungible, so it provides the government  $B_G$  with the amount  $L$  to use, as it pleases. To simplify, assume that the loan runs  $T$  years, and then it has to be paid in full. We take it that the rate of exchange is adjusted, so that also  $B$  has the same inflation rate as the world and we set it at zero, so that everything is real. The decision on the loan is taken, at time  $t = 0$ , by the government of  $B$ ,  $G_B$ . It has the rate of discount  $\rho$ , which differs from the real rate of interest:  $\rho \neq r$ . This is precisely where time inconsistency enters. Calculated at the time the loan is signed,  $t = 0$ , the cost of the loan, for the government,  $G_B$ , per \$ is:

$$\beta = e^{-\rho T} + r \int_0^T e^{-\rho t} dt.$$

The first term is the cost of repayment and the second is the costs of the interest to be paid. A simple calculation shows:

$$(1) \quad \beta = e^{-\rho T} + r \left[ \frac{e^{-\rho t}}{-\rho} \right]_0^T = e^{-\rho T} + \frac{r}{\rho} - \frac{r}{\rho} e^{-\rho T} = z + (1-z)e^{-\rho T}, \text{ where } z = r / \rho$$

The values of  $\beta$  for a range of  $z$ 's are shown on Figure 3. Note that  $\beta > 1$ , if  $z < 1$ ;  $\beta = 1$ , if  $z = 1$ ; and  $\beta < 1$ , if  $z > 1$ . It is also obvious from formula (1).

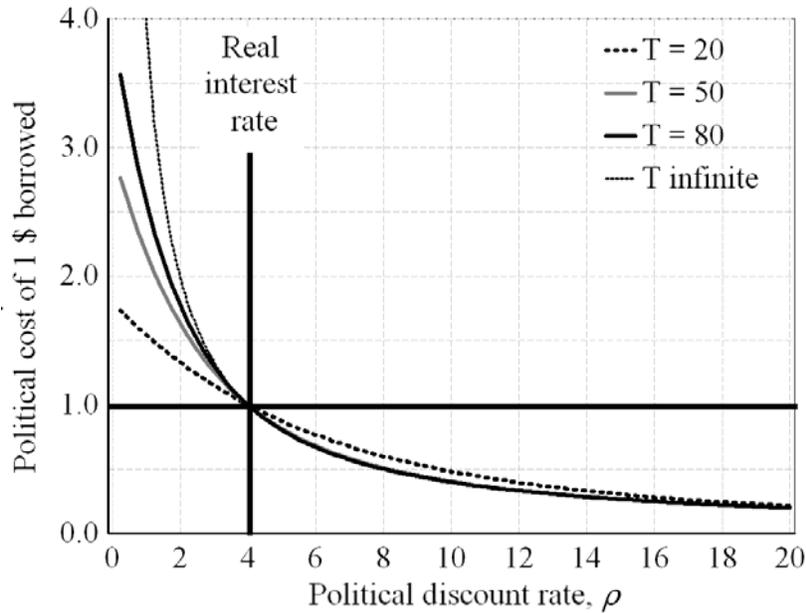
Note furthermore from the formula that when  $T$  rises the second term quickly vanishes. It does not matter how long the loan runs if the politicians are myopic anyhow. This is also illustrated on Figure 3, as the line for  $T$  infinite, where  $\beta = z$ .

Many studies of political decision processes show that they are myopic.<sup>10</sup> Political pressures are big and power uncertain. Thus we can assume that  $\rho$  is substantial. It is important that this predicts that  $\rho > r$ , and thus that  $z < 1$ .

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10. This is a main result, both from the literature on vote and popularity functions, and on political business cycles, see e.g. Paldam (1997) and Paldam (2003) for surveys.

Figure 3. The political cost per \$ of a loan, at time  $t = 0$



Notes: The curves are calculated from  $\beta = z + (1 - z)e^{-\rho T}$ , using the interest rate  $r = 0.04$ . For  $T = \infty, \beta = z$ .

The key observation is that when the political system is myopic the cost  $\beta$  of a \$ borrowed is smaller than a \$, because the cost of repayment has to be borne far into the future. Consequently, the interesting part of the figure is the right hand side, where  $G_B$  is myopic. Already for the political discount rate, of  $\rho = 10\%$  the cost of borrowing one \$ is 50 cents for a loan, with  $T = 20$ , and for more realistic rates such as  $\rho = 20\%$  the cost is 25 cents, and it barely matters if  $T$  is 20, 50 or 80 years. For really myopic rates such as 40 or 50% we are down to cost estimates of 15 to 10 cents.

Let us then imagine that the political costs of a loan is \$ 0.25 per \$ borrowed. Thus the borrowing government has a surplus of \$ 0.75 for each \$ borrowed. Borrowed money is cheap money for the government. Contrast this with the political costs of a tax revenue that has to be squeezed out of people.

People should control governments so that they act wisely. However, we know that people are as politically myopic as governments, and they are not likely to take much notice of an international loan. They are content if they get welfare enhancing public consumption for some part,  $\alpha$ , of the amount. Thus the government “profit” from each \$ borrowed is:

$$(2) \quad \gamma = 1 - (\alpha + \beta) > 0$$

When the government borrows \$  $L$  it thus has a profit of \$  $\gamma L$ . The reader may contemplate what the government will do with that profit. It obviously depends upon the government.

#### 2.4 *The political benefits: MS-governments*

A myopic and selfish government may simply pocket the money. If the government behaves as a roving bandit, it wants to put as much of the money in a safe heaven, so that it will provide a nice pension, when it has to leave the country.

Apart from pocketing the money it may also be used for items of conspicuous consumption, such as a new road to the airport, a couple of fighter planes or even castles at the Loire, etc. It is also possible that the government is faced with strong political pressures from groups that can be bought off. Thus the profit comes handy, and the government will feel that the money is spent well. And, of course, it might well be that the government is able to survive due to these payments, which do not change the long-run growth path.

Thus, it is likely that little extra development results from the loan. And when it has to be paid back it hinders growth. In cases where the loans are paid back gradually, it will appear as an annual debt service payment that eats taxes, and hence undermines the budget. Thus,  $\alpha L$  may increase  $C_t$ , but does not increase the growth path of consumption with growth rate  $\delta$ . Rather it decreases. As a consequence, debt finally decreases consumption possibilities as  $\eta_t = c_t^d - c_t^{old} < 0$ . Society is worse off due to debt. For this to happen, it is important to notice that the people are myopic, too. Otherwise they may be able to force government to become a WB government.

#### 2.5 *WB governments*

Now assume a non-myopic public and a WB government. Then the debt may be used in a way to increase the long run consumption rate  $\delta$ . The distinction between an MS government and a WB government can be made when looking at the political discount rate and the real interest rate again. A WB government will try to meet the condition  $r > \rho$ , leading to  $z > 1$ . In this case, the government is interested in investing into projects, with long-run returns exceeding the exogenously given  $r$ . In other words, there is an inverse relation between the political discount rate  $\rho$  and the return of investments. A WB government with long-term orientation is looking for good investments, which in the long-run will increase the growth rate of consumption  $\delta$ .

However; this benevolence cannot be expected without according restrictions for the government. Why should a government be benevolent? On the same token: Why should the public be non-myopic? If the government is able to keep the public uninformed about the true economic long-run cost of myopic and selfish behavior, i.e. if it exploits asymmetric information, or if it is able to oppress the public, it has high incentives to behave as an MS-government. If however, the public is able to learn, the government rather can act as a WB-government. The latter reduces the political discount rate  $\rho$ . Thus, the discount rate is driven by restrictions which can best be approximated with governance structures and institutions. The higher the degree of economic freedom, the lower the degree of corruption and nepotism, the lower the political discount rate  $\rho$  ceteris paribus will be:  $\rho = f(\text{institutions}, \text{governance})$ . The same holds for the public, which is better able to learn and therefore control the government if the institutional setting is good.

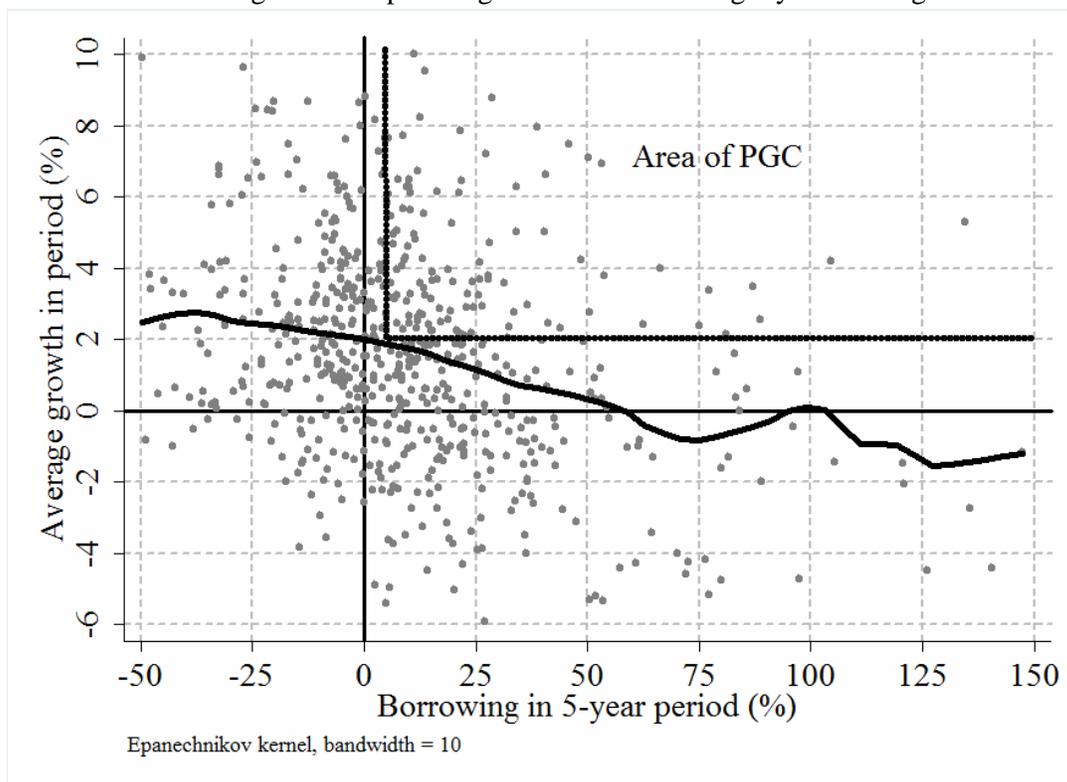
### 3. The choice of 7 candidates of potentially good debt cases

In Paldam (2008) it is demonstrated that the natural growth rate is 2% pa, in real per capita terms, during the period 1970 to 2005. How it is shown is outlined in 3.1. Next we use the results to find the PGC, that is, the *potential good cases* of debt.

#### 3.1 The natural growth rate is 2%

To find the natural growth rate, in the absence of borrowing, a set of figures like Figure 4 are generated. The result shown in Figure 4 also emerges for the initial debt and the later growth. They are drawn for different time horizons, with much the same result. Borrowing is defined as the first difference to the total debt burden (in % of GDP). The line on the graph is a Kernel regression with bandwidth 10.<sup>11</sup>

Figure 4. Graphs for growth and borrowing 5 years averages



11. A kernel regression can be understood as a moving average with a fixed bandwidth – with a small bandwidth the curve becomes quite jerky, and with a high bandwidth it becomes flat, but from about 5 to 20 the picture is rather like the one shown. We have used the Epanechnikov kernel, that has good smoothing properties, but the result is the same using other kernels.

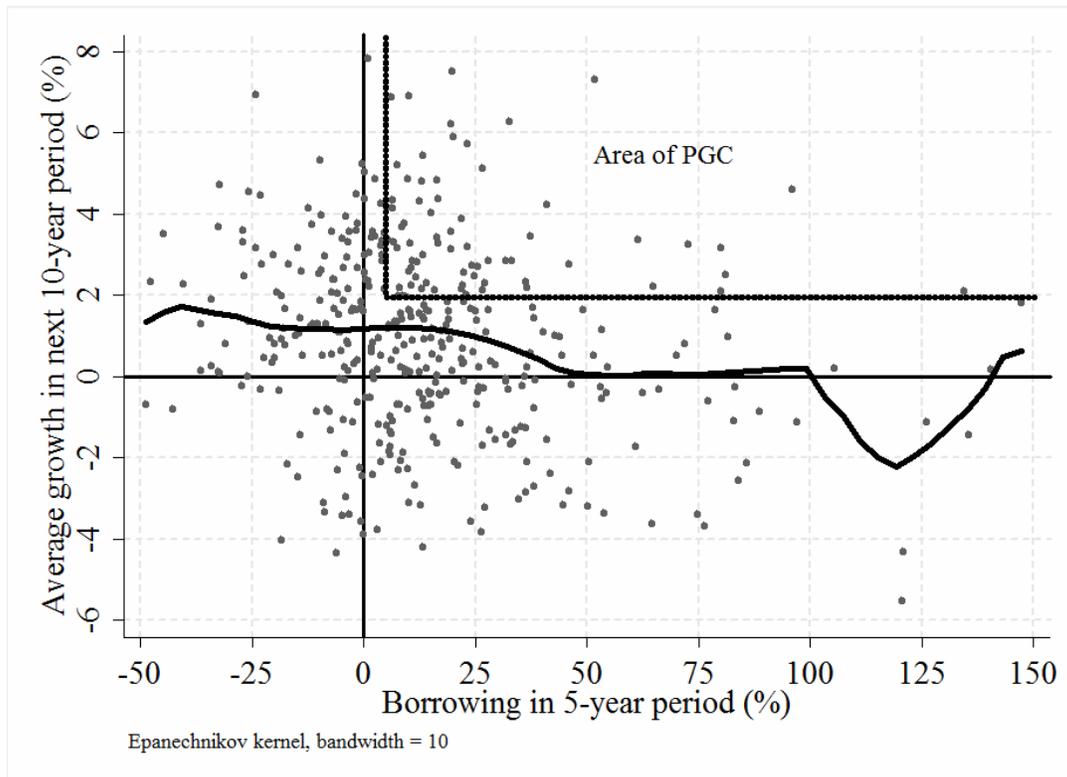
The observation that follows from the graph is that the curve intersects the vertical axis (for zero borrowing) at 2%. This has proved to be the result in all the graphs generated. This is the basis for the claim that the natural growth rate is 2%.

The claim that most borrowing is welfare decreasing is due to the fact that all graphs we have made in the format of Figure 4 have Kernel-curves with a negative slope. The point will also appear in connection with Table 1 in a moment.

### 3.2 The 73 PGCs (potential good cases)

The two dotted lines frame the PGC-area of the plane, where the good debt cases are likely to be found: It is defined for borrowing above 5% and growth about 2%. However, we want to consider later growth, so we have chosen to look at cases where borrowing exceeds 5% in one 5-year period, and average growth exceeds 2% in the next 10-year period. Figure 5 shows how this looks using the same layout as Figure 4, but as we look at later growth and a 10 year average the curve does not intersect the vertical axis at 2%, but a bit lower. However, the slope is still negative.

Figure 5. The choice of the 73 potential good debt cases of Appendix A1



The data set contains all such data in the WDI (from the World Bank). Table 1 show the number of PGC-cases found. Of the 423 cases surveyed 73 or 17.3% are the PGCs. That is 82.7% of the cases surveyed have a negative connection. It is clear from Figure 5 that the PGCs are a small fraction of all cases only.

Table 1. The periods chosen and the PGC (potentially good cases)

	Borrowing	Growth	All cases	PGC	PGC in %
P1	1971-75	1975-84	76	8	10.5 %
P2	1976-80	1980-89	78	10	12.8 %
P3	1981-85	1985-94	81	19	23.5 %
P4	1986-90	1990-99	90	17	18.9 %
P5	1991-95	1995-04	98	19	19.4 %
All			423	73	17.3 %

To find these cases we have had to choose a set of borrowing and growth averages. We think that our choices are reasonable, and we believe that the results would have changed only marginally for other reasonable choices; however, the choices made are an assessment.

Table A1 gives all 73 cases. 30 of the countries are on the list once; 11 are listed twice; and 7 are listed 3 times. So it is only 48 countries, or about 35% of the countries that appear on the list. We take it that the most likely cases are the seven countries that make the list three times: These are: Belize, Lesotho, Malaysia, Sri Lanka, St. Vincent (& the Grenadines), Thailand and Turkey.

In the next section we shall make a short analysis of each of these cases asking: Are they a genuine case of good debt or are they cases of good luck?

### 3.3 *Distinguishing between good debt and good luck*

In principle it is easy to make the distinction: Good debt is the result of wise policies and good luck is something that happens irrespective of policies. In practice it is very difficult to distinguish, so we shall apply three general rules of thumb:

(Period 1) When the loans are made we examine if it is a period of political stability, where it is likely that the government could undertake long run decisions, or if the borrowing took place in a period of political crisis/instability. We look at the political reality and additionally use indicators of institutional quality in this period. The indicator with the best coverage in the time span, we are interested in, is the index of economic freedom as

constructed by Gwartney et al. (2009). It shows the economic freedom in more than 120 countries with respect to five groups of criteria: size of government, legal structure and security of property rights, access to sound money, freedom to trade internationally and regulation of markets. It ranges from 0 to 10, with a higher mark implying more economic freedom. We believe that this index is mirroring the governments' incentives rather well. It seems as if it can be used quite well to distinguish WB governments from MS governments as well as distinguish good debt cases from cases of good luck.

(Period 2) Next we look at the period from the end of the borrowing period to the start of growth to see if some exogenous change occurred.

Finally, we consider the explanations found in various sources – notably the Economist and analyses made by international organizations such as the IMF – for the high growth period, and see if it is associated with the loans received.

We will try to be as objective as possible, in judging all three items, but an inevitable element of assessment will enter, so the reader may disagree.

In particular one issue will be difficult. It is possible that the loans are used to purchase a window of political quiet that allow difficult decisions to be made. We know of some cases where unusual politicians disregarded their own future in order to make irreversible reforms they deemed to be objectively good for their country in the long run. A particularly moving description of such policies in Russia between 1991 and 1993 – where some big loans bought brief periods of quiet – are given in Gaidar (1996). Such cases are disregarded below.

### 3.4 *Two good debt models and a problem*

We are not historian and we will not try to understand the inner working of the decision process. Also, assets and liabilities are separated by the *veil of fungibility*, so we cannot associate the actual use of the loans with the marginal activity resulting from the loan. What we study is if policies are broadly consistent with two WB-policies:

(i) *Physical investments*: The borrowing corresponds to a wave of investments, which are related to the high growth in the latter period.

(ii) *Popularity investments*: Many countries do get into economic structures that are detrimental to development. Such structures are often characterized by rent seeking coalitions, i.e., infant industries that have developed into overstaffed protected industries, etc. Thus the countries needs structural reform, but such reforms are politically costly in the short run. A loan may allow the government to do popular things to survive while it does the reforms.

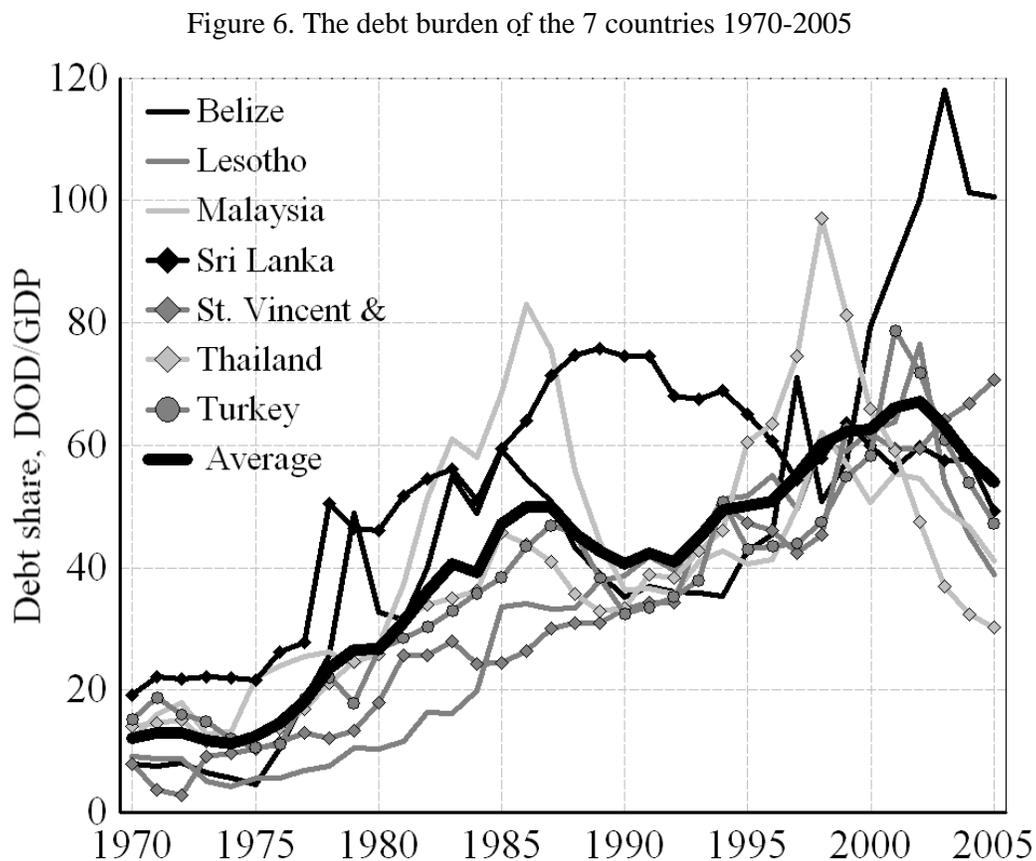
It is well known that transfers such as a loan cause transfer problems (known today as Dutch Disease). That is, the real exchange rate will reevaluate. As the borrowing is meant to lead to more export in the future this is a problem. Thus, we look for devaluations in Period 2, between the borrowing and the growth.

## 4. The good debt cases

The cases will be presented starting with a graph each showing the path of the debt burden in black, where peaks indicate the periods of borrowing, and the path of growth in gray, where the peaks are the periods of high growth. Both curves are smoothed by a MA(5) process to make them more easy to read (figures 7 through 13). The three facts mentioned at the beginning of each case are for 2008. The gdp is GDP per capita in PPP prices, relative to the US gdp. For each country we concentrate on the main peaks for borrowing and later growth. Note that these 7 cases are selected precisely as the ones which do have a *borrowing peak* and a later *growth peak*. So, we have chosen 7 cases of “head” and now we want to see if these cases are due to a lucky flip or a particular able flipper. What we need to examine is if the first peak causes the next, by looking at the three periods as discussed in section 3.3.

### 4.1 The path of the debt burden for the seven countries and the path of reforms

The path of the debt burden – measured as DOD/GDP is drawn on Figure 6



The first observation from Figure 6 is that all seven countries have debt burdens in a rather narrow range.<sup>12</sup> The second observation is that the debt of the seven countries is increasing rather steadily for the period 1970 all the way to 2000, with only a small drop at the end. While the picture is much the same for the 7 countries there are a few deviations that will be discussed under each country. The picture of a steadily growing debt burden does not tally well with the good debt story, which speaks of a period with debt and a period of high debt, where the debt falls.

Table 2. Economic freedom 1970 through 2005 in potential good debt cases

	1970	1975	1980	1985	1990	1995	2000	2005
Countries <sup>a)</sup>	53	72	105	111	113	123	123	141
Belize	Na	Na	5.9 (30)	5.7 (44)	5.8 (48)	<b>6.3</b> (51)	6.3 (71)	6.6 (73)
Lesotho	Na	Na	Na	Na	Na	Na	Na	6.7 (69)
Malaysia	6.5 (19)	6.3 (15)	<b>6.9</b> (12)	7.0 (13)	7.3 (13)	7.4 (21)	6.6 (50)	6.7 (71)
Sri Lanka	Na	Na	5.0 (70)	5.1 (70)	5.0 (77)	<b>6.1</b> (62)	6.1 (79)	6.1 (108)
St. Vincent	Na	Na	Na	Na	Na	Na	Na	Na
Thailand	6.2 (27)	5.8 (25)	6.1 (24)	6.1 (29)	<b>6.7</b> (21)	7.1 (27)	6.7 (49)	7.0 (57)
Turkey	4.1 (53)	4.0 (65)	3.7 (99)	<b>4.8</b> (81)	4.8 (88)	<b>5.7</b> (73)	5.8 (94)	<b>6.3</b> (94)

Note (a). Number of countries covered. Bolded values represent increases (liberalizations) of 0.5 FI points or more. The numbers in parenthesis is rank. Source: Gwartney and Lawson (2009).

Many countries report reforms. In order to have measurement giving the size of the reforms we use the Fraser Institute Economic Freedom index – we shall refer to changes as *FI-points*. Table 2 report the available values reported for 1970 to 2005 for the seven countries. The countries are typically in the mid range. The index points to seven liberalizations, where the index increases by 0.5 FI-points or more.

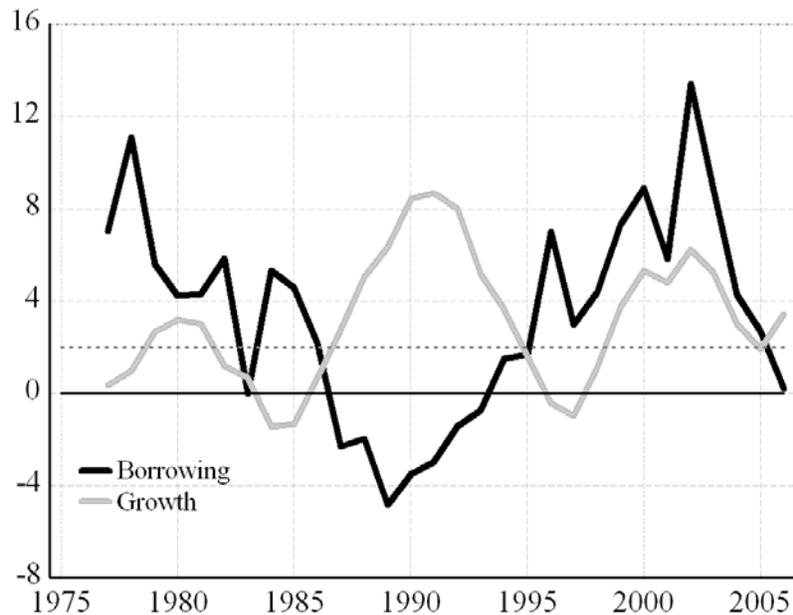
#### 4.2 Belize: Borrowing peak 1977-86, growth peak 1986-1995

Facts: Population 307,000, area 23,000 km<sup>2</sup>, gdp \$ 8,400.

The political system in Belize has remained a democracy, since the country gained independence from the UK in 1981, after a period with home rule. Since then the country has had only 4 PMs, with two moderate parties changing in power rather regularly.

<sup>12</sup> In Paldam (2008) the debt burdens of 70 countries are analyzed and depicted in six groups, from low to high debt. The seven countries are all in the two middle groups.

Figure 7. The Belize graph



In the case of Belize the growth peak is very clear, and it follows rather neatly just after the borrowing (first) peak. It is explainable by an export boom, but as the export share (in GDP) is trendless, the peak was not sustained. Belize did perform a liberalization of 0.5 FI-point between 1990 and 1995. This was well after the borrowing peak, but it is still consistent with using the loans to finance investments allowing the liberalization that gave the peak.

It appears that the first period of borrowing was done under and just after the home rule period, where the country was still under British control (and with the same PM as later), so it is likely that longer run considerations were allowed a high weight. Thus we are likely to have a good debt case.

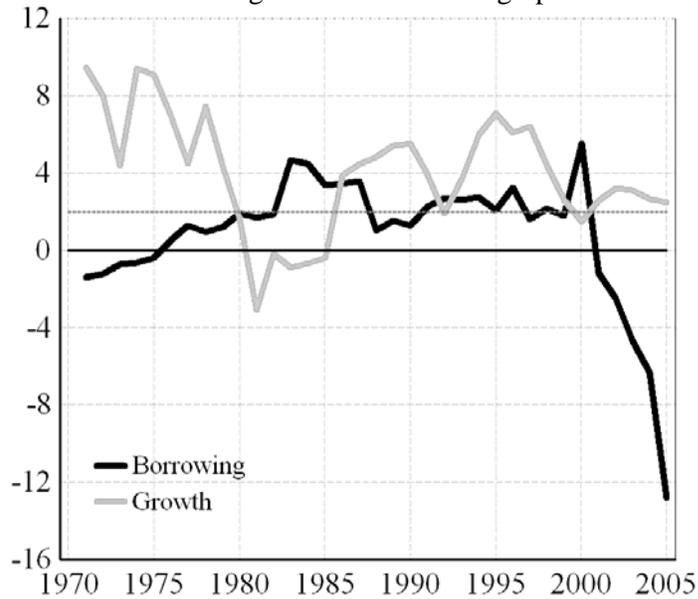
However, after the period discussed Belize has seen a rather dramatic increase in its debt burden, which was 100% in 2005.

#### 4.3 Lesotho: Borrowing peak 1970-79, growth peak 1983-1987

Facts: Population 2.1 mil, area 30,000 km<sup>2</sup>, gdp \$ 1,500.

Politically Lesotho is a rather complex case. It is a traditional kingdom and it is an island in South Africa. It became independent from the UK in 1964, and has seen royal rule, military rule and constitutional and unconstitutional civilian rule in the period. The period from 1979 to 86 was a period of constitutional fight as the PM continued ruling after having lost the election in 1970; but nearly the whole period was under the same PM. The economic freedom index is not available until 1990, which we interpret as a sign of weak institutions.

Figure 8. The Lesotho graph



It was a period of fairly high investments, but exports were stationary, and foreign relations, that is, with South Africa were difficult. Thus it is dubious if we are dealing with a case of good debt.

#### 4.4 Malaysia: Borrowing peak 1979-85, growth peak 1987-1995

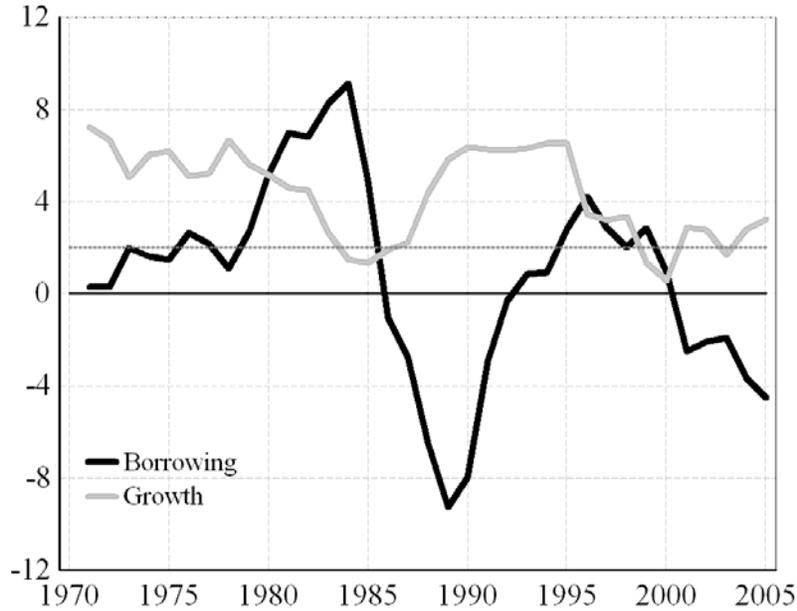
Facts: Population 25.7 mil, area 330,000 km<sup>2</sup>, gdp \$ 15,200.

Malaysia is a country with a fairly high level of democracy, though it might also be seen as a one party regime by the dominating ethnic group of the country, the Malays. Though there were two changes of PM in the period both were for health reasons and the succession was within the same small circle of leaders of the party. Hence the political conditions for long-run decisions were present.

This impression is backed by a long standing tradition of high economic freedom as reflected in Table 2. In the 1980s it was ranked 12<sup>th</sup> and 13<sup>th</sup> in the world. Between 1975 and 1995 the country liberalized by no less than 1.1 FI points, but only in small steps. During the Asian crisis the country did introduce a number of controls, and it seems that the discussion is still on as to whether it served the country well or just delayed the inevitable.

The investment share did follow the borrowing peak quite closely, and the share of export has risen rather steadily. The growth crisis 1983-87 is ascribed to commodity price falls that did cause the government to pursue an industrialization support policy, which did succeed.

Figure 9. The Malaysia graph



In addition the borrowing curve with the sharp peak and almost symmetric ensuing repayment “peak” may be related to the nationalization of the oil industry and the ensuing expansion of the oil sector. But it is lagged with about two years, so the link is at most indirect. As usual these matters are hidden under the veil of fungibility.

Thus it appears to be a rather clear case of a good debt policy. Also, we note that Malaysia has successfully reduced its debt to half the one in the peak-year of 1986.

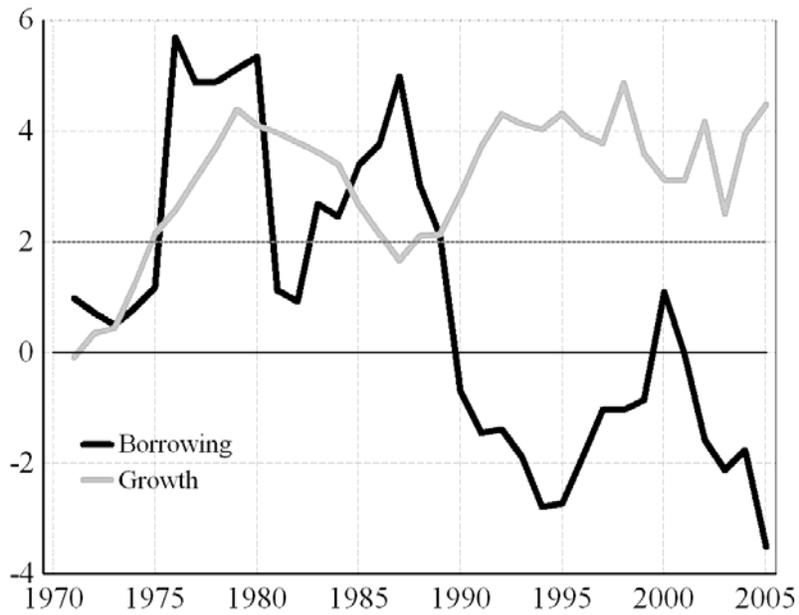
#### 4.5 Sri Lanka: Borrowing peak (twin) 1976-89, growth peak 1991-2005

Facts: Population 21 mil, area 66,000 km<sup>2</sup>, gdp \$ 4,300. The country has suffered a civil war – of variable intensity – from about 1983 till 2009. The war was based on ethnic lines. The war did not prevent the country from growing rather strongly and steadily.

Sri Lanka has had a democratic system throughout the period, but it has been somewhat limited in practice, due to the ethnic discrimination and the civil war. In addition Sri Lanka has had a rather complex political life with fairly polarized parties on the traditional right/left scale. All of this makes it difficult to imagine that long run policies have dominated.

In addition, the degree of economic freedom was low till 1990, but between 1990 and 1995 Sri Lanka liberalized by 1.1 FI points. However, the country still ranks in the bottom half of the world; in 1990 it ranked 77<sup>th</sup> of 113 countries.

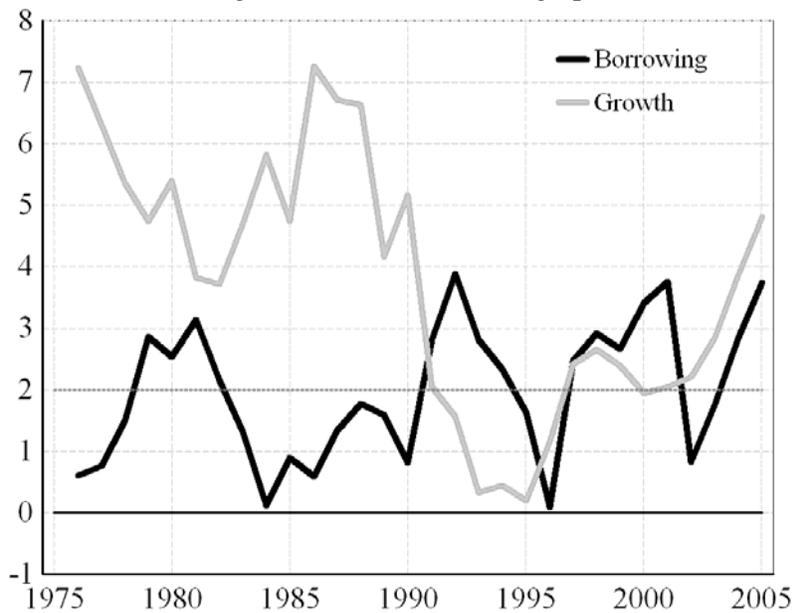
Figure 10. The Sri Lanka graph



However, the twin-loan peak took place under the rule of the two liberal-right parties that ruled 1977-89 and 1989-94. Where the second did make the liberalization mentioned. The country did have low growth in 1986-1990, but then the growth picked up nicely.

Thus it is dubious if Sri Lanka is a good debt case.

Figure 11. The St. Vincent graph



4.6 *St. Vincent and the Grenadines: Borrowing peak 1977-83, growth peak 1983-1990*

Facts: Population 104,000, area 389 km<sup>2</sup>, gdp \$ 10,200.

St. Vincent has been a rather fine democracy throughout, with a moderate Labour Party, ruling 1974-84 (PM Milton Cato), and an equally moderate conservative party, which won in 1984 and ruled to 2000 (PM James-Fitz-Allen Mitchell). Due to the small population and the peaceful political life the country is not well covered in the international statistics, news media etc., e.g., data on economic freedom are not available.

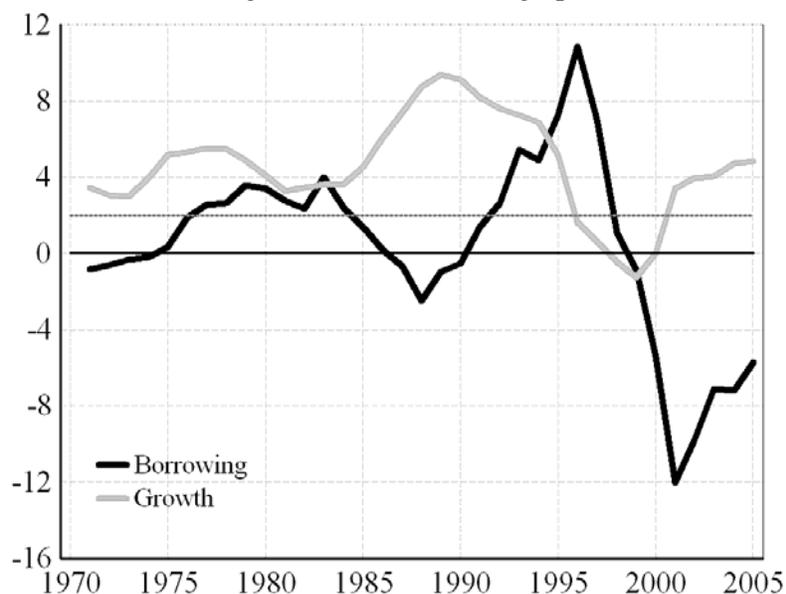
The export share and the investment share as well was relatively high during the growth peak, but it seems to have been due to price movements, so perhaps we can see the borrowing peak as due to the negative growth peaks at the same time.

We have found no reason to believe that St. Vincent is a good debt case.

4.7 *Thailand: Borrowing peak 1976-85, growth peak 1985-1995*

Facts: Population 66 mil, area 513,000 km<sup>2</sup>, gdp \$ 8,400.

Figure 12. The Thailand graph



Thai politics is not very transparent, as it is an on-off democracy with military coups, where the constitutional king has had a stabilizing influence. During 1976-88 military governments, with 3 PMs, where the last (Prem Tinsulanonda) ruled 1980 to 1988. From 1988 to 1991 the

country was ruled by a Conservative-Liberal civilian PM. Then a coup took place but the government became unstable 1991-92. Though it has got more stable it is still a fairly unstable democracy.

Thus the borrowing and the upswing was under the period of military government that was fairly stable. The peak came under the next government that followed much the same policies. The economically and politically unstable period came later.

From the descriptions of the policies in our sources it appears possible that we did have a deliberate policy of allowing market driven reforms in the borrowing period. And was followed by a devaluation in 1985 and the high growth period. During the twenty years under considerations, the degree of economic freedom was fairly high and increased. We note that Thailand did implement a fairly large liberalization between 1985 and 1990, which did seem causal for the growth wave.

Also, it is interesting to note from Figure 6 that Thailand in 2005 did manage to reduce its debt to almost the level of 1970. Thus we count Thailand as a rather clear case of good debt.

#### 4.8 *Turkey: Borrowing peak 1976-86, growth peak 1983-98*

Facts: Population 77 mil, area 784,000 km<sup>2</sup>, gdp \$ 11,900.

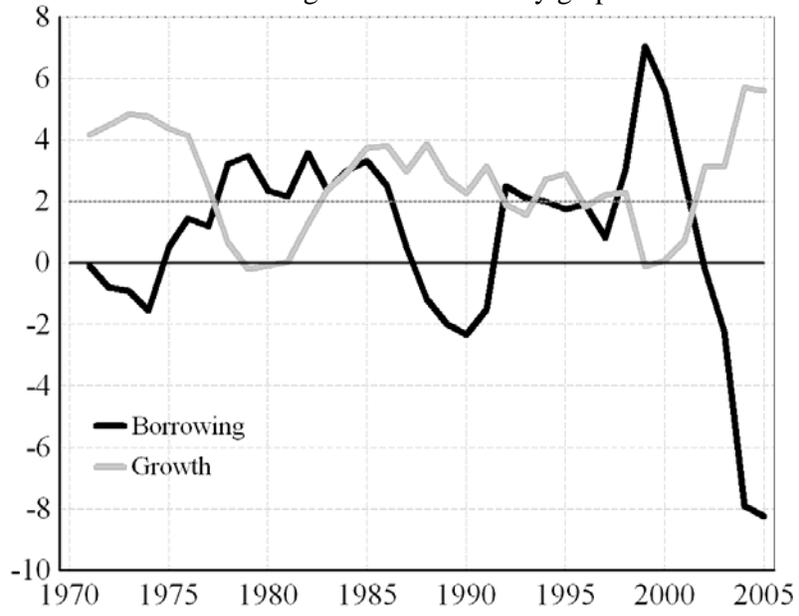
Turkish politics is complex, and it is one of the countries where the leading indices disagree the most as to the degree of democracy. The disagreement has to do with the unusual role of the military that sees itself as the guardians of the Atatürk heritage of a secular state. This is combined with a rather volatile high-inflation-economy, and strong shifts between the parties at the elections. For all of that Turkey has seen rather high growth.

Till 1983 Turkey was the classical case of a rent seeking society with the lowest FI-score of the 7 countries.<sup>13</sup> After that a large liberalization was undertaken, and between 1980 and 2005 the FI index has increased by 2.6 points. However, it is still rather low. Most of the period of the borrowing peak 1976-86 took place during the rent seeking period, which did have rather low investment and trade shares. However, at the end of the period after a shift of government the reform process started. So maybe the last of the loans financed the start of the reforms. However, it is clear that the growth peak 1983-98 followed from the liberalization. We note that Turkey has managed to reduce debt.

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13. In fact Krueger (1974) was written as a result of a study of Turkey.

Figure 13. The Turkey graph



Thus, we conclude that the case of Turkey is a dubious case of good debt.

## **5. Conclusion: Good debt cases exist, but they are rare**

The paper started with the observation that the possibility to borrow does provide countries with a larger choice set. Among the extra choices there is likely to be some that seen with hindsight are good for the country. Thus the possibility of good debt is a tantalizing one.

However, it appears that this choice is realized remarkable rarely. The theoretical section argues that this is due to time inconsistency, as debt has a long time horizon while political decisions have a short horizon. We refer studies that show that most cases of debt acquisition are detrimental to welfare seen in hindsight.

This leads to an attempt to find cases from the LDC-world where debt acquisition in one 5-year period leads to growth in the following 10-year period. We find 73 such cases (for 48 countries), which is 17% of the data-sets examined. We argue that 7 of those are the most likely cases: Belize, Lesotho, Malaysia, Sri Lanka, St. Vincent, Thailand and Turkey.

For each of these 7 countries we make a small case study based on standard data, and a reading of some broadly available sources. It is likely that one or two of these cases will be reclassified if we could dig deeper, but as it is we conclude that three of the cases appear to be good debt cases, while the remaining four cases look more like cases of good luck.

Thus the conclusion: Good debt cases exist, but they are rare.

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Appendix Table A 1: Countries borrowing above 5% in one 5-year period and growth above 2% in average the next 10 years

Country Name		Borrowing		Growth		Country Name		Borrowing		Growth	
		71-75	75-84	86-90	90-99						
Panama	P1	26.68	2.13	Mozambique	P4	134.50	2.09				
Pakistan	P1	16.72	3.27	Vanuatu	P4	10.58	2.25				
Algeria	P1	10.31	3.29	Nepal	P4	22.54	2.57				
Equatorial Guinea	P1	16.61	4.38	Bangladesh	P4	10.17	2.59				
<b>Malaysia (1)</b>	<b>P1</b>	<b>9.88</b>	<b>4.86</b>	Uganda	P4	25.60	2.70				
Botswana	P1	20.22	5.91	Trinidad	P4	33.13	2.84				
Egypt	P1	19.55	6.20	Syria	P4	80.07	3.17				
Jordan	P1	6.30	6.86	Laos	P4	178.12	3.19				
		76-80	80-89	Panama	P4	37.47	3.44				
Morocco	P2	23.05	2.00	Indonesia	P4	19.63	3.56				
<b>Turkey (1)</b>	<b>P2</b>	<b>15.99</b>	<b>2.13</b>	India	P4	8.62	3.69				
Barbados	P2	13.16	2.15	St. Lucia	P4	9.03	3.76				
<b>Sri Lanka (1)</b>	<b>P2</b>	<b>24.39</b>	<b>2.72</b>	<b>Sri Lanka (2)</b>	<b>P4</b>	<b>15.08</b>	<b>4.04</b>				
Egypt	P2	45.98	2.77	<b>Lesotho (2)</b>	P4	5.06	4.17				
<b>Belize (1)</b>	<b>P2</b>	<b>28.09</b>	<b>2.86</b>	St. Kitts	P4	12.55	4.31				
Chad	P2	10.98	2.86	China	P4	10.09	6.91				
<b>Malaysia (2)</b>	<b>P2</b>	<b>5.56</b>	<b>3.37</b>	Equatorial Guinea	P4	19.51	30.33				
<b>St. Vincent (1)</b>	<b>P2</b>	<b>7.51</b>	<b>5.22</b>			91-95	95-04				
<b>Thailand (1)</b>	<b>P2</b>	<b>13.32</b>	<b>5.44</b>	Algeria	P5	36.54	2.18				
		81-85	85-94	Ethiopia	P5	64.78	2.22				
Liberia	P3	80.10	2.10	Ghana	P5	22.20	2.24				
Colombia	P3	22.03	2.15	<b>Thailand (3)</b>	<b>P5</b>	<b>27.23</b>	<b>2.30</b>				
Bangladesh	P3	8.01	2.20	<b>St. Vincent (3)</b>	<b>P5</b>	<b>14.05</b>	<b>2.31</b>				
<b>Turkey (2)</b>	<b>P3</b>	<b>11.80</b>	<b>2.44</b>	Yemen	P5	36.47	2.32				
Solomon Islands	P3	24.69	2.46	Malawi	P5	81.02	2.50				
Nepal	P3	12.07	2.83	<b>Turkey (3)</b>	<b>P5</b>	<b>10.59</b>	<b>2.67</b>				
<b>Sri Lanka (3)</b>	<b>P3</b>	<b>13.41</b>	<b>2.98</b>	Angola	P5	207.26	2.69				
<b>Lesotho (1)</b>	<b>P3</b>	<b>23.31</b>	<b>3.19</b>	Samoa	P5	32.00	2.86				
Uruguay	P3	72.70	3.25	Sudan	P5	161.21	2.88				
India	P3	6.76	3.30	Mali	P5	19.69	3.15				
Papua New Guinea	P3	61.55	3.36	<b>Belize (3)</b>	<b>P5</b>	<b>7.53</b>	<b>3.16</b>				
Botswana	P3	21.97	3.87	Romania	P5	16.43	3.42				
<b>St. Vincent (2)</b>	<b>P3</b>	<b>6.58</b>	<b>4.14</b>	Hungary	P5	6.57	4.35				
<b>Malaysia (3)</b>	<b>P3</b>	<b>41.15</b>	<b>4.24</b>	<b>Lesotho (3)</b>	<b>P5</b>	<b>13.13</b>	<b>4.81</b>				
Chile	P3	96.01	4.60	Mozambique	P5	160.16	5.15				
Indonesia	P3	16.37	4.84	Chad	P5	32.57	6.27				
<b>Belize (2)</b>	<b>P3</b>	<b>26.59</b>	<b>5.12</b>	Rwanda	P5	51.70	7.31				
Mauritius	P3	23.31	5.72								
<b>Thailand (2)</b>	<b>P3</b>	<b>19.92</b>	<b>7.52</b>								

Note: The bolded countries are 3 times on the list.