FOREIGN EXCHANGE RATE REGIMES AND FISCAL DISCIPLINE IN THE CARIBBEAN

ABSTRACTS

Many economists have argued that fixed exchange rate regimes provide more fiscal discipline than flexible rate regimes, since sustained fiscal deficits eventually exhaust foreign exchange reserves leading to the politically costly abandonment of the peg. In the 1990s, however, a number of Caribbean countries have adopted flexible exchange rate regimes and have registered relatively good fiscal performances *vis-à-vis* their fixed rate counterparts in the region. This paper, therefore, explores whether the conventional wisdom that fixed rate regimes generates more fiscal discipline holds true in the region, by confronting a relatively simple model of fiscal adjustment with data from select Caribbean countries.

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Introduction

Much of the work on exchange rate regimes have focussed on the effectiveness of stabilisation policy under different regimes (Robinson (1998), Mundel (1962), Fleming (1963), Marston (1985)) but few have compared the actual performance of economies operating under these different regime types. Ghosh, Gulde, Ostry and Wolf (1997) and Tornell and Velasco (1995) are among the small number of authors who have investigated this issue in a formal analytical framework. In particular, there has been precious little work on the degree of fiscal disciple under different exchange rate regimes. This has been the case in spite of a great deal of informal discussion on the link between exchange rate regimes and fiscal discipline.

In the Caribbean, the situation is no better. Only work by Rolle (1994) and Anyadike-Danes and Francis (1993) touch on this issue in a region that has had more than its fair share of experimentation with the exchange rate regime. In the context of recent exchange rate regime switches, the fact that fiscal imbalances manifest themselves so quickly in balance of payments problems in the region and the ongoing debate about macroeconomic performance under different regimes, this paper investigates whether fixed regimes do in fact provide more fiscal discipline relative to flexible regimes in the Caribbean.

The paper is structured as follows. Section 2 reviews some of the literature on the conventional wisdom that fixed rate regimes generates greater fiscal discipline than flexible rate regimes. Section 3 reviews the fiscal management experiences of selected Caribbean countries operating under different exchange rate regimes. Finally, section 4 confronts a simple model of fiscal adjustment with data from the Caribbean to test whether the conventional wisdom holds.

2. The Conventional Wisdom on the Link Between Exchange Rate Regimes and Fiscal Discipline

Conventional economic thinking on this issue is that fixed exchange regimes provide more discipline than flexible regimes (Aghevli and Khan (1991), Giavazzi and Pagano (1988) and Frenkel, Goldstein and Masson (1991)). This hypothesis is based on the argument that under a fixed rate regime, an lax fiscal stance will lead to a deterioration in international reserves, balance of payments problems and the eventual abandonment of the peg. The collapse of the peg also implies political and reputation costs for policy-makers and politicians.[1] The costs associated with this therefore leads policy-makers to adopt a disciplined approach to fiscal management. This alludes to the political economy aspect of the decision on an exchange rate regime. Collins (1996) reasons that it may be more politically difficult[2] to adjust a fixed peg than it would be undertake a similar nominal adjustment under a managed float because the latter is much easier to disguise.[3] This seems to fit well with the high drama normally associated with a decision to devalue a fixed peg. A series of small depreciations under a managed float on the other hand is less likely to attract such widespread attention.

A fixed peg can also be viewed as a commitment to a future inflation rate, which disciplines policy-makers to adopt a prudent fiscal and monetary policy stance towards the achievement of that rate. Many authors have in fact argued that the exchange rate can serve as a nominal anchor and as a means of establishing credibility for stabilisation programmes (Corden (1994), Edwards (1992) and Giavazzi.and Pagano (1988)). On the other hand, flexible regimes allow the fiscal authorities greater flexibility with revenue at the expense of a lack of commitment to future inflation targets (De Kock and Grilli (1993)). It is this

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[1] Cooper 1971 argues that stepwise devaluations are often associated with political upheavals and the fall of governments.

[2] See Edwards 1996.

[3] See Johnson 1969 who argues otherwise, stating that under fixed exchange rate regimes adjustment takes place through reserves losses and external debt which are difficult to monitor because of central bank secrecy and forward foreign exchange operations.

flexibility in fiscal policy, which leads some economists to believe that the fiscal authorities would be less disciplined, accepting higher inflation at the margin in the pursuance of other objectives. The implication again is that a fixed rate regime elicits a more disciplined fiscal stance from policy-makers than would be the case if they operated under a flexible regime. In a sense, this line of reasoning suggests that a flexible regime signals to economic agents its predisposition to be less fiscally disciplined in order to pursue other policy objectives.

There are of course both theoretical and empirical problems with this line of argument. From a theoretical standpoint, some have argued that it is unclear why a devaluation under a fixed exchange rate regime is more politically costly than a depreciation under a flexible regime. Moreover, the political costs associated with devaluations are difficult to identify and quantify (Tornell and Velasco 1995). Moreover, Tornell and Velasco argue that under a flexible exchange rate regime imprudent fiscal management has costs as well. The difference, however, is in the inter-temporal distribution of these costs. With fixed regimes indiciplined fiscal behaviour manifests itself first in falling reserves or increasing debt. This behaviour can therefore continue for some time after the indiciplined stance has begun (depending on the initial level of international reserves and the countries initial debt overhang) before there has to be adjustment. It is only when countries approach the limits in terms of external reserves and foreign financing does the cost[4] of these imprudent policies really begin to impact on the country. In flexible exchange rate countries, however, the effect of an imprudent fiscal stance tends to manifest itself almost immediately in the exchange rate and prices[5].

Under both regime types therefore costs are incurred for lax fiscal policies. The difference, however, is that under flexible regimes the costs are incurred up front whereas under fixed regimes they tend to impact with a time lag. Tornell and Velasco also argue that if inflation is costly to the authorities or if they have inflation control as a main objective, then flexible rates may in fact provide more fiscal discipline by forcing costs to be paid up-front.

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[4] High debt service payments, import restrictions, foreign exchange scarcity and reduced growth.

[5] Of course it could be argued that even in a flexible regime the monetary authorities can intervene also to put of adjustment by using their reserves to intervene in the market.

Tornell and Velasco formalised this argument in a standard general equilibrium model with optimising agents, perfect foresight, price flexibility and perfect capital mobility. They also endogenised government spending and assumed that there are three distortions.

These are:

1. The fiscal authority has the tendency to spend more than is socially desirable because net transfers to individuals generate utility (political power and longer terms in office) for those who control fiscal policy (Edwards (1996));

2. The fiscal authorities discount events at higher rates after a certain point in time because of uncertainty about their re-appointment and because there usually is a fixed term in office; and

3. The central bank could pre-commits not to accommodate the wishes of the fiscal authorities only for a finite period of time.

Essentially, they argue that under imperfect credibility and limited central bank autonomy the choice of an exchange rate regime is basically a choice about when to collect inflation tax revenues. In turn, this determines the costs the fiscal authorities must pay if they want to increase spending and the deficit. If the fiscal authorities are impatient[6], a flexible regime can provide more fiscal discipline by forcing the costs of imprudent policies (high inflation and exchange rate instability) to be paid up front.

This is not at odds with the approach of some fiscal authorities in the region, specifically Jamaica[7] and Trinidad and Tobago. These countries in an effort to foster exchange rate and price stability have focussed on good fiscal management as one of the mechanisms to maintain external and internal price stability. In fact, the exchange rate

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[6] That is, the fiscal authorities would like to immediately reap the benefits of high spending (political prestige).

[7] In Jamaica the situation is compounded by a high debt overhang and the concomitant high interest rate which leads to stubbornly high fiscal expenditures.

appears to not only be a mechanism through which adjustment occurs in the economy but has also become a target for policy because if it critical role in fostering stable growth. These arguments throw some doubt on the contention that fixed rates regimes provide greater fiscal discipline than flexible regimes.

Views on the relevance of the conventional wisdom have also fluctuated over the last 30 years. During the 1970s, the pervasive view was that a small country with a poorly developed financial market should peg its currency to a main trading partner. This view reflected the concern that as the markets for the currencies of small countries were thin, the exchange rate would tend to be volatile and this would be disruptive to economic activity (Quirk 1994). By the mid-1980s, however, this view appears to have changed. Quirk (1994) observes that the International Monetary Fund's 1987 review of the early experiences with floating regimes concluded that these regimes could be operated satisfactorily, even by developing countries with a wide range of structures. Many countries adopted flexible regimes in the post-mid 1980s and many of these appear to have done so in the context of an IMF programme. The more recent IMF view seems to be that there is no single exchange rate prescription (Burton and Gillman 1991).

We now turn our attention to some of the experiences with fiscal management under different exchange rate regimes. Some authors have argued that the actual experiences of some countries is at odds with the conventional wisdom that fixed rate regimes provide more fiscal discipline than flexible regimes (Tornell and Velasco (1995)). Specifically, Tornell and Velasco, argue that the experience of sub-Sahara Africa does not seem to conform to the conventional wisdom. They show that the fixed rate regime countries in the French Franc Zone (CFA) had poor fiscal performances relative to the flexible regime countries. Indeed, between 1980 and 1984, countries with a flexible regime reduced government spending by 5 percentage points of GDP while the CFA Zone remained constant, this in the context of terms of trade stocks for both groups of countries in the late 1970s. Moreover, the history of stabilisation programmes in Latin America also seems at odds with the conventional wisdom on exchange rate regime and fiscal discipline. In a representative sample of Latin American countries considered by Tornell and Velasco (1995), only one of the countries that used an

exchange rate based stabilisation programme without prior fiscal consolidation was able to achieve fiscal consolidation during the programme. In contrast, several of the countries that used a money based stabilisation programme without prior fiscal consolidation managed to get their fiscal deficit under control during the programme.

Moreover, some Caribbean countries that have adopted flexible regimes seem to have done relatively well in fiscal management in their flexible regime years relative to their fixed rate past (Table 1). Of course this could also have been due to the relatively good economic growth performances of these countries in that period, as well as the limits (targets) on government financial operations that were part of the various adjustment programmes that these countries had to undergo in the 1980s and 1990s. The fact that they have been able to maintain their positions after the programmes ended[8] indicates, however, that a flexible regime at least does not predispose the authorities to be fiscally indisciplined. The basic point that emanates from the theoretical debate and the experience of some countries seems to be therefore, that it is unclear which regime type is likely to provide more fiscal discipline. We now turn to a more detailed review of the fiscal management experiences of select Caribbean countries under different exchange rate regimes.

3. Fiscal Discipline and Exchange Rate Regimes: The Experience of the Caribbean

The macroeconomic disequilibrium in the 1970s and 1980s led many countries in the region to undergo structural adjustment and economic stabilisation. In terms of governments financial operations, it meant the tightening of fiscal policies and the withdrawal of the state from many areas (Ould El Hadj (1999)). The various programmes designed to improve fiscal management generally entailed efforts to improve the efficiency in government expenditure, efforts to broaden and simplify the tax system, measure to combat tax evasion and a shift to new forms of taxation such as the value added tax (VAT). They also involved a reduction or elimination of subsidies to state enterprises, privatisation and the introduction of more disciplined budgetary systems.

[8] Guyana is still under an IMF/World Bank programme.

Although the dynamics of the various fiscal consolidation programmes are relevant to most discussion on fiscal management, we are of course more interested in the fiscal performances across exchange rate regimes. In this regard, we focus on the performances of The Bahamas, Barbados, Guyana, Jamaica and Trinidad and Tobago over the period 1980 to 1997. The first two countries maintained a fixed rate regime for the entire period while the last three had regime shifts in the 1990s.

A casual look at Table 1 seems to indicate that countries operating under a fixed regime for the entire period (1980-1997) posted reasonably good performances with respect to fiscal discipline. Countries such as Guyana, Jamaica and Trinidad and Tobago, which switched to a flexible regime in the 1990s[9], seem to have manage their fiscal affairs better in the flexible regime years, especially Guyana. In particular, over the period 1980 to 1997 the current fiscal account to GDP ratio for Guyana, Jamaica and Trinidad and Tobago in the flexible regime years averaged –1.76%, 4.5% and 0.9% respectively, compared to their fixed regime years when they averaged -19.1%, 1.5% and 4.9% respectively. In the case of Trinidad and Tobago, when the windfall fiscal revenue years (1980 and 1981) are excluded the average for the fixed regime years is 0.7%. Moreover, the average ratio for these three countries in their flexible regime years compares favourably to the average ratio of 0.83% for The Bahamas and 2.2% for Barbados. On the broad front, the average for the fixed rate regime years for all countries is –1.93% compared to 1.21% for the flexible rate years for all countries (Table 1).

This pattern of performance is repeated if we consider another indicator of fiscal discipline the overall fiscal deficit to GDP ratio. For example, this ratio averaged –40%, 7.9% and –4.1% for Guyana, Jamaica and Trinidad and Tobago respectively in the fixed rate years, compared to –11%, -0.8% and –0.2% in the flexible regime years. The ratio for The Bahamas and Barbados averaged –2.5% and –4.1% respectively. The fact that the results are consistent across indicators implies that they are relatively robust.

[9] We consider the beginning of the flexible regime to be 1990 for Guyana and Jamaica, and 1993 for Trinidad and Tobago. Some may argue, however, that the regime shift was only consummated later when exchange control legislation was repealed in Guyana and Jamaica. Nevertheless, the year of the regime shift was set as 1990 since for all intent and purpose the structure for a flexible regime was largely in place by then.

Of course the efforts at fiscal consolidation alluded to above would have impacted positively on the fiscal performance of the flexible regime countries. This argument does not however account for the fact that fiscal consolidation was also attempted in the 1980s when these countries were still operating fixed regimes, with relatively little success. One could therefore argue that efforts at fiscal consolidation were relatively more successful under a flexible exchange rate regime. On the other hand, the improved growth performances in those years could have helped to shore up the accounts of the fiscal authorities. The data does not however seem to back up this proposition as the correlation between the economic growth rate and the fiscal deficit is relatively low[10]. Countries can also postpone adjustment to their fiscal accounts by running down their reserves or using debt financing. Public debt is strongly negatively correlated with the change in the fiscal deficit but exchange reserves is weakly positively correlated with this measure of fiscal adjustment. This may reflect the fact that the debt to GDP ratio corrects for the debt burden, therefore, all things being equal, the higher the ratio the more difficult it is to finance a given fiscal deficit in the face of a negative shock. Both the performance on the balance of payments and the level of international reserves are expected to impact positively on the measure of fiscal adjustment since they are a potential source of fiscal revenue and a potential financing source respectively.

Differences across regime type in areas such as economic growth rates, balance of payment performances, debt and international reserves could also impact on the fiscal balance and therefore must be taken into account explicitly when trying to determine whether the regime type had a significant part to play in the actual experiences of these countries. To this end we now confront a simple model of fiscal adjustment with data from selected Caribbean countries.

[10] The Correlation Coefficient between these variable averaged about 0.3.

4. A Simple Model of Fiscal Adjustment

Following Tornell and Velasco (1995) we now outline a very simple model of fiscal adjustment which seems to be compatible with Caribbean type economies.

$$FD = \alpha_1 + \alpha_2 D_i + \alpha_3 R_i + \alpha_4 B_i + \alpha_5 E_i + \alpha_5 DUM_i + \mu_i$$

Where FD is the change in the overall fiscal deficit as a percentage of GDP, D is the total public sector debt to GDP ratio, R is the total foreign exchange reserves to GDP ratio, B is the current account of the balance of payments to GDP ratio, E is the real growth rate and DUM is a dummy variable which is one for flexible regimes and zero for fixed regimes. Data covering the period 1980 to 1997 for the Bahamas, Barbados, Guyana, Jamaica and Trinidad and Tobago were utilised in this exercise.

The equation therefore attempts to determine the significance and direction of impact of different exchange regimes on a simple measure of fiscal adjustment, correcting for the impact of growth, balance of payments performance, the level of international reserves and the level of public debt.

The Dickey-Fuller test results are reported in Table 2. Table 3 displays summary results and statistics for the regression. The dummy for the exchange rate regime is negative but insignificant. All other variables conform to our a-priori view of their impact on the measure of fiscal adjustment, with the growth rate being insignificant. The results also seem to indicate that countries with debt will find it difficult to finance a fiscal deficit in the context of a negative shock. The positive coefficients on the current account to GDP ratio contradicts the traditional neoclassical approach to fiscal policy, which seems to argue that as the external accounts improve, there is less need to have recourse to fiscal stabilisation. In contrast, the model in Tornell and Lane (1994) implies that this coefficient should be positive. The logic is as follows: The fiscal revenues of these countries are strongly

influenced by changes in the external accounts, thus any windfall inevitably leads to a rush to deal with outstanding infrastructural development and missing social services. Labour unions also recognise this as a opportune time to press for increase wages. Improvements in the external accounts are therefore associated with increasing fiscal deficits. The international reserves to GDP ratio is positive reflecting the tendency to use reserves to finance fiscal adjustment. Lastly, the coefficient on the economic growth rate is positive but insignificant.

5. Conclusion

This paper reviewed both the theoretical debate, as well as some empirical evidence that looks at whether fixed exchange rate regimes generate greater fiscal discipline than flexible regimes, all other things being equal. The theoretical debate leaves many questions unanswered. In many instances, the literature takes conflicting positions, often dependent on the peculiarities of model structures and assumptions about the incentive structure of policy-makers.

The evidence as presented here for selected Caribbean countries does not help in this regard since it leaves the critical question of whether the exchange regime determines fiscal discipline unanswered. The problem may be that the data series, especially for the flexible regime years is not sufficient to allow an unambiguous conclusion to be drawn. On the other hand, the data may simply be indicating, like Collins (1996), that countries that undertake sensible macro-economic policies in the context of their specific environment (whether under fixed or flexible exchange rate regimes) can produce good economic results. Abstracting from the exchange rate regime, the experiences of different countries with fiscal adjustment seem to indicate that the consistency of the policy stance across the range of policy areas and, a policy regime which generates the least indirect costs (in terms of government revenue foregone, stability and short-term income losses) offers the best hope of achieving good macro-economic and real sector performances.

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TABLE 1
CENTRAL GOVERNMENT: CURENT SAVINGS OR DEFICIT (-) AS A % of GDP

Year	Bahamas	Barbados	Guyana	Jamaica	Trinidad and Tobago
1980	2.8	2.7	-11.6	4.0	21.6
1981	2.6	1.0	-20.4	4.0	20.2
1982	0.8	0.9	-29.3	2.9	4.8
1983	0.3	2.4	-27.1	-8.6	1.8
1984	0.4	0.5	-36.7	-1.4	1.4
1984	1.0	0.5	-18.0	-0.7	1.9
1986	1.4	1.6	-5.0	5.1	-0.8
1987	1.5	1.2	-27.2	3.6	1.3
1988	-0.2	4.5	-10.3	2.3	-2.3
1989	-0.6	4.5	-4.9	4.1	-2.0
1990	0.2	0.2	-14.6	4.9	-0.1
1991	-1.1	2.7	-16.8	6.1	3.1
1992	0.1	2.3	-11.3	7.3	-1.2
1993	0.1	3.3	1.9	6.7	1.0
1994	1.9	2.3	5.4	6.0	1.4
1995	1.8	3.2	6.5	7.4	2.0
1996	1.0	0.9	10.8	-1.6	1.2
1997[P]	0.8	5.0	4.0	-0.7	1.7

p. Provisional
... Not available

Source: IDB, *Economic and Social Progress in Latin America,* 1996, Report; Official Publications.

Table 2: Dickey-Fuller Test Statistics

Variable	ADF Statistics
FD	3.20[12]
B	-4.23[12]
E	-4.61[1]
R	-3.46[1]
D	-3.55[12]

1 Significant at 5%
2 Significant at 10%
3

TABLE 3. REGRESSION RESULTS

Variable	Coefficient	t-Statistic
C	4.17	4.07
DUM	-1.52	-0.89
B	0.29	2.29
E	0.15	1.23
R	11.89	2.07
D	-10.48	-10.03
R-squared 0.64 D.W = 1.35		