EXTERNAL SHOCKS, ADJUSTMENT POLICIES AND THE CURRENT ACCOUNT: THE CASE OF SRI LANKA, 1971-1991

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by

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C O N T E N T S

I. INTRODUCTION 1

II. METHODOLOGY 3

III. PRESENTATION OF RESULTS 15

III(a) The current account 15

III (b) The capital account 25

IV. CONCLUSIONS 31

REFERENCES 33

External Shocks, Adjustment Policies and the Current Account : The Case of Sri Lanka 1971-1991[1]

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I. INTRODUCTION

Two years before the first structural adjustment loan by the World Bank[2] Sri Lanka embarked on a programme of economic liberalization which attracted substantial attention and financial support from donors. The impact of this programme has been much debated [for example, Jayawardena *et al.*, 1987; Addison and Demery, 1988, Lal and Rajapatirana, 1989; Lakshman, 1989; Cuthbertson and Athukorala, 1991; and Kelegama, 1992]. But little of this debate has been set in the context of the more rigorous theoretical framework that has been developed to assess the impact of adjustment policies.

The most recent study in this latter literature - by Mosley *et al.* [1990][3] - reproduces the conclusions of a similar work by the World Bank [1988, 1990]. These conclusions may be summarised as follows. Adjustment policies generally have an adverse effect on the level of investment, have a negligible impact on the rate of growth and result in an improvement of the current account.

A major methodological problem in the analysis of adjustment policies is the separation of the effects of the policies themselves from those of changing external conditions. This separation is most usually attempted either by the use of comparator countries (or

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1 This paper was presented to the inter-University Development Economics Seminar Series at the Institute of Social Studies, The Hague, on 20 Jan. 1993. It was also presented to the Development Economics Seminar Series of the London School of Economics on 22 Jan. 1993. The authors have benefitted from the comments received at these seminars, and would like to record their particular thanks to Chris Edwards for comments on an earlier draft of this paper and P Samararatne for assistance in providing the data. The usual disclaimer applies.

2 Structural adjustment is often dated from 1980. There was, in fact, one structural adjustment loan (SAL) - to Brazil - in 1979.

3 A good summary of this study is given in Mosley [1991].

control groups) or through regression analysis.[4] The former approach is limited by the undoubted differences between the controls and the countries under study. The regression approach suffers from problems in measuring the "adjustment variable" to include on the right-hand side of the regression - for which either dummies have been used [e.g., Faini *et al.*, 1991] or the quantity of adjustment-related aid receipts [Mosley *et al.*, 1990]. But neither of these variables are good proxies for the policies being implemented, since, as the work of Mosley et. al. (1990) shows, the intensity of adjustment differs greatly from country to country and is not related to receipts of adjustment finance.

An alternative methodology would be one that assesses the impact of adjustment on a policy-by-policy basis, though of course the problem of removing the effect of external shocks remains. The distinction between domestic and external factors is, nevertheless, possible using a methodology developed to decompose the sources of changes in the current account. In this paper we apply this methodology, with a number of important modifications, to the experience of Sri Lanka for the period 1971 to 1991.[5] By extending the decomposition analysis to cover the capital account, we are able to address a further important issue in the adjustment debate: namely, distinguishing the impact of external finance given to support domestic policy adjustment efforts from that of the efforts themselves. This debate has been of particular importance in Sri Lanka, since Lal [1985] has argued that the current account deficit is simply a response to the substantial capital inflows received in the 1980s.

Part II of the paper presents the methodology, and Part III its application to Sri Lanka. Part III also incorporates a discussion of the debates concerning Sri Lanka's macroeconomic performance in the 1980s, and the impact of adjustment policies more generally. Part IV sets out the conclusions and policy implications of this analysis.

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4 Mosley *et al.* (1990) also present two simulation models. But neither of these provide an assessment of adjustment policies since one considers only the agricultural sector and the other (for Morocco) incorporates the adjustment package into the model parameters used for the base run.

5 The original version of this framework (developed by Balassa [1981]) was applied to Sri Lanka by Jayatissa [1982]. But Balassa's formulation has been superseded by improvements to the approach and Jayatissa's study covers the period only up to 1982.

II. METHODOLOGY

A decomposition approach to investigate the impact of external shocks on the current account was first used by Balassa [see Balassa, 1981; Balassa *et al.*, 1981; and Balassa and McCarthy, 1984]. Balassa's technique related (through an identity) deviations in the current account to deviations from trend of key current account items. The method was subsequently modified by Bacha [1986] and Aliva and Bacha [1987]; the new methodology being applied in a series of studies for UNCTAD [1987]. Rather than analyse deviations from trend, these studies sought to explain the change in the current account with respect to a base year by decomposing the changes in all items in the account with reference to this base year.

More recently, Fitzgerald and Sarmad [1990] applied the approach to a sample of twenty-two countries for the period 1970-88. Balassa [1981] found that in the period 1974-78, domestic policies were more important than external shocks in determining current account performance. But Fitzgerald and Sarmad (1990) found the external shocks during the period 1982-88 to be more serious than those during the late 1970s in determining the current account. They also reported that "adjustment has taken place more through expenditure- switching rather than expenditure reduction" [p.29].

In applying the methodology to the case of Sri Lanka, and examining whether the above findings apply in this case, we make, as described more fully below, a number of significant modifications. In particular, we make the hitherto neglected distinction between exchange rate policy and terms of trade shocks; and we separate the effect of domestic prices that has previously been conflated with the external terms of trade. We also disaggregate exports to examine the impact of the changing structure of the export sector on the current account. Finally, we extend the analysis to include the capital account.

The starting point for the decomposition is the definition of the current account, CA:

$$CA_t = EX_t + R_t + T_t - M_t - V_t \qquad (1)$$

where EX is exports of goods and non-factor services, R net receipts of private transfers, T net official transfers, M imports of goods and services and V net factor

payments abroad, all measured in current Rupees. In Sri Lankan national accounts the last item, V, includes only factor income from capital, as all labour income is included in private transfers, most of which are workers' remittances. Aid inflows which are a pure grant - that is, carrying no repayment obligations - are labelled as "official transfers" in accounting terminology. Although the identity requires that these be recorded as a net figure, Sri Lanka has never had any debits under this item.[6]

Our first step is to separate exports into two categories, i.e., those from plantation agriculture (EXP) (tea, rubber and coconut), and others (EXO). Previous studies have not disaggregated exports - but an important part of the longer-term development strategy supported by adjustment policies in Sri Lanka, as elsewhere, is the diversification of export production into non-traditional goods. This policy has been successful in that, in 1971, plantation crops accounted for 75 per cent of the value of exports, but by 1991, the situation had been reversed with plantation crops accounting for only 25 per cent.[7] Whether or not this diversification had a beneficial effect on the current account is a different question, to which we return in Part III.

Each of the two export categories is then written as a product of exports in constant prices (XP and XO for each sector, and X for total exports - in 1985 prices, as are all real series in our analysis) and the price index in domestic currency for each group of commodities. Finally, the export price indices in domestic currency (PxP and PxO, respectively) are decomposed into the product of the index of the nominal exchange rate (E, defined as Rupees/dollar)[8] and the dollar price index (PxP$ and PxO$). More formally, these steps may be written as:

$$\begin{aligned} EX_t &= EXP_t + EXO_t \\ &= PxP_t xP_t + PxO_t XO_t \\ &= E_t PxP\$_t XP_t + E_t PxO\$_t XO_t \end{aligned} \qquad (2)$$

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6 All data for this paper (except where so indicated) are drawn from the social and economic database for Sri Lanka maintained by the Institute of Policy Studies, Colombo. This database collates data from a wide range of national sources. Most of the data used in our analysis come, in the first instance, from Central Bank reports.

7 The decline in share has been steady throughout the period, and is not just the result of adjustment. By 1977, plantation exports already accounted for only 59 per cent of the total exports. As argued below, the changing structure results as much from neglect of plantations as promotion of non-traditional exports. The full picture may be evident from Figure A1 in Appendix 1.

8 This definition implies that a depreciation corresponds to an increase in the exchange rate index, E.

Previous decomposition studies have either used dollar values [e.g. Bacha, 1986; and Fitzgerald and Sarmad, 1990] or domestic currency values, with the export and import price indices defined also in domestic currency [e.g. van der Hoeven, 1987; and Kelegama, 1988]. Neither approach allows for a distinction between the impact on the current account of exchange rate movements and the external terms of trade. Such a distinction is important for two reasons.

First, as Hirschman [1949] pointed out, if a devaluation occurs when there is a current account deficit, then, assuming no supply response or expenditure switching, the deficit measured in domestic currency will worsen. As is illustrated below, the decomposition approach is ideally suited to measuring this effect. Second, the intention is to separate policy-induced changes in the current account from those caused by external factors. Changes in the external terms of trade measured in dollars are (given the small country assumption) certainly caused by the latter, but exchange rate movements - particularly in Sri Lanka which had vigorously pursued depreciation since 1977 - are more a matter of policy.[9] Finally, Figure 1 shows the importance of the distinction that is being made here as there is considerable divergence between the dollar and the domestic price indices for plantation exports. The export price index for plantation crops measured in domestic currency has grown at 8.0 per cent per annum (measured by a log-linear regression) over the period 1971-1991. Although the dollar index also illustrates the boom that beneficially affected all three of Sri Lanka's plantation crops in the mid-1980s, it has displayed a much weaker trend over the whole period, of only 3.4 per cent per annum.[10]

The next stage of the decomposition is to express real exports as the product of three terms: share of that category in total Sri Lankan exports ('sp' for plantation exports and 'so' for other exports), the share of Sri Lanka's total exports in world trade (x) and the volume of world trade (W). That is, for the plantation sector, for example:

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9 The external terms of trade, measured as the ratio of the export and import price indices, are clearly independent of the base currency. But the decomposition analysis expresses changes in the terms of trade as the difference between the export and import price indices (see equation 8) so that a separate exchange rate effect can be incorporated.

10 For other exports the figures are 9.0 per cent and 5.0 per cent for the rupee and dollar indices, respectively, and for import prices 9.4 per cent and 5.1 per cent, respectively.

$$XP_t = \frac{XP_t}{X_t}\frac{X_t}{W_t}W_t$$
$$= sp_t x_t W_t \qquad (3)$$

Import prices are decomposed in an identical manner to those for exports; so that $M_t = E_t PM\$_t J_t$, where J is real imports.[11] Real imports are then expressed as a product of three terms:

i) the ratio of real imports to real domestic absorption (consumption plus investment by both public and private sectors, which is A - the ratio is j);

ii) the ratio of actual absorption to its trend value (bm); and

iii) the trend value of real absorption (A^*.)

That is:

$$M_t = E_t Pm\$_t J_t$$
$$= E_t Pm\$_t \frac{J_t}{A_t}\frac{A_t}{A^*_t}A^*_t$$
$$= E_t Pm\$_t j_t bm_t A^*_t \qquad (4)$$

The import-absorption ratio measures the average propensity to import, which may decrease with successful expenditure-switching, or rise with import liberalization. The ratio of actual absorption to its trend value reflects the state of the economy - a booming economy will have a real level of absorption higher than its trend value, which will pull in additional imports.[12] The final term shows the growth in real imports accounted for by the underlying trend growth in domestic expenditure. Previous studies have measured the state of the economy either by reference to a level of "potential income" [e.g. Bacha, 1986] or by simply using real absorption [e.g. Fitzgerald and Sarmad, 1990]. The latter approach cannot distinguish changes in absorption due to underlying growth and exceptional changes, which may more appropriately be

11 Some studies [e.g., Kelegama, 1988] have disaggregated imports (capital, consumption and intermediate). Though we have not done this, we comment where the distinction is important.

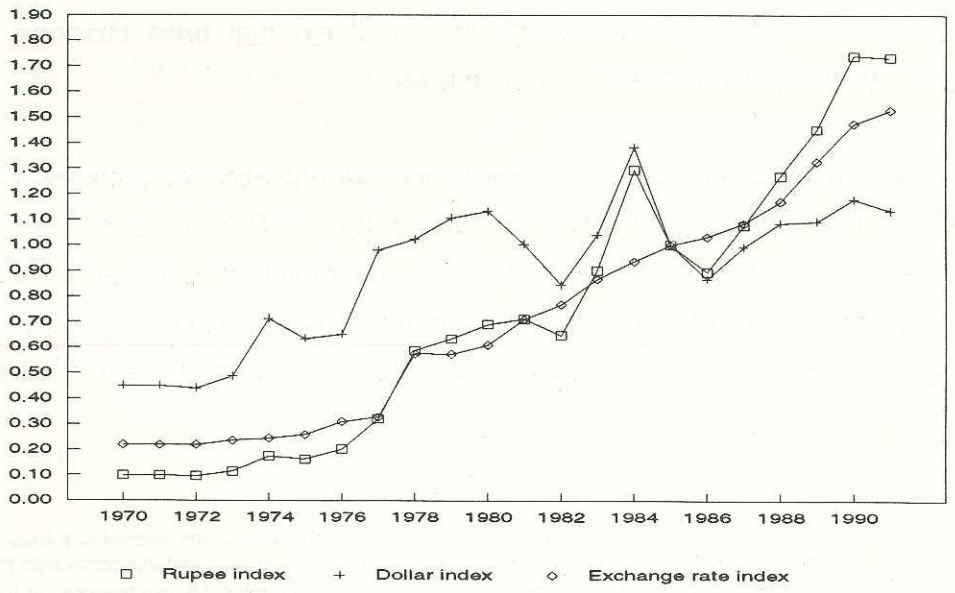
12 The trend series was estimated by a linear time regression. As Nelson and Ploesser [1982] point out, this method of estimating booms assumes that income follows a deterministic trend, i.e. a trend stationary process (TSP), whereas it is more likely to be a difference stationary process (DSP). Both TSP and DSP models were used, but the latter did not conform to our knowledge of the cycles experienced by the Sri Lankan economy, so we have adopted the former. See Hill [1991] for an extended application of these concepts to the case of a developing country.

called the result of policy. Such a distinction is very important in the case of Sri Lanka, where the 1977 liberalization programme was accompanied by a massive public investment programme. The disadvantage of the former approach is the problematic, and perhaps arbitrary, measure of potential income [Ahluwalia, 1986]. Our formulation avoids both of these problems.

Factor payments (V) are separated into interest payments on foreign borrowing (V_i) and others (V_d) - the latter is net payments arising from direct investment, but also inflows resulting from foreign assets held by Sri Lankans.[13] Interest payments are written as the product of the average interest rate on outstanding debt and the value of that debt in the previous period (F).

$$V_{i,t} = r_t F_{t-1} \qquad (5)$$

Figure 1
Price Indices for Plantation Exports 1971-1991



13 Previous studies [e.g., Bacha, 1986] have mistakenly defined V_i as net payments. Given the specification of equation (5), V_i should include only payments (and not receipts).

The interest rate used is the implicit rate given by rearrangement of equation (5) - which will be an underestimate to the extent that payments are rescheduled, not made or a part of the debt if forgiven. However, in Sri Lanka, none of these complications arose during the period of our study.

Equations (2) to (5) are substituted into equation (1) and the whole divided by nominal GDP (Y, which may be written as PY.Z where PY is the GDP deflator and Z real GDP):

$$\left(\frac{CA}{Y}\right)_t = \left[\left(\frac{PxP\$}{PY}\right)_t sp_t + \left(\frac{PxO\$}{PY}\right)_t so_t\right] E_t x_t \left(\frac{W}{Z}\right)_t + \frac{R_t + T_t - V_{d,t}}{Y_t}$$

$$- r_t \frac{F_{t-1}}{Y_t} - E_t \left(\frac{PM\$}{PY}\right)_t j_t bm_t \left(\frac{A^*}{Z}\right)_t \qquad (6)$$

The division by the GDP deflator for the export and import price indices further confuses the "terms of trade effect" as has been measured in previous studies, since such studies have considered the changes calculated from these price ratios. Our decomposition fully distinguishes the impact of external price changes from those caused by changes in the domestic price level.

The decomposition analyses changes in the current account (defined as a ratio to GDP) by taking first differences of equation (6).[14] The first order terms from the resulting equation may be rearranged into the following fourteen effects: exchange rate, terms of trade, export structure, world trade, export penetration, private transfers, official transfers, other factor payments, interest rate shock, debt burden, import

14 The methodology developed by Aliva and Bacha [1986] expresses differences with respect to a base year, a practice followed by all other studies we have seen with the exception of van der Hoeven and Vandemoortele [1987]. This latter study expresses them on a year-on-year basis. We have chosen this method for two reasons: (i) it will concentrate more of the effects into the first order terms (since they are a better approximation to the whole change than what the large order terms represent); and (ii) the extent of the changes, especially for variables that undergo dramatic one-off changes, is better captured this way - for example the devaluation in November 1977 is shown by a change in E of 0.25 from 1977 to 1978 (from 0.33 to 0.57). If we were to take changes with respect to the base year in our data set (1985) then dE for 1978 would be -0.43, which is much less easy to interpret.

replacement, expansionary, trend absorption and inflationary. Each of these may be expressed algebraically as follows:[15]

Exchange rate effect

$$\{[\ (\frac{PxP\$}{PY})_{t-1} sp_{t-1} + (\frac{PxO\$}{PY})_{t-1} so_{t-1}\ ]x_{t-1}(\frac{W}{Z})_{t-1} - (\frac{Pm\$}{PY})_{t-1} j_{t-1} bm_{t-1} (\frac{A^*}{Z})_{t-1}\} dE_t \qquad (7)$$

The expression inside the curly brackets in equation (7) simply denotes the trade balance in current dollars deflated by the domestic GDP deflator. Therefore, if the current account is in deficit a depreciation (i.e., dE>0) must *ceteris paribus* lead to a worsening of the current account measured in domestic currency. As we commented above, this was the point made many years ago by Hirschman [1949]. He further pointed out that there is also an income reduction effect, which is clear from the income-expenditure identity; an idea which was subsequently elaborated by Krugman and Taylor [1978].[16]

Of course, those that advocate devaluation as a strategy for rectifying current account deficits do not believe that *ceteris* will be *paribus*: the increase in the relative price of traded goods that a devaluation brings about will reduce the volume of imports and increase that of exports.[17] But it takes time to bring about substitution in consumption, and even longer for the supply response to occur. Indeed, the imports and exports of the months following the devaluation may have already been contracted in dollars so that the rupee payments increase accordingly. The period in which import and export volumes do not respond to the devaluation explains the downward part of the J in the well-known J-curve effect of a devaluation on the current account.

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15 As shown in Appendix 2, for a consistent decomposition, the various trade terms need to be divided by a deflationary term. This latter term is not shown here.

16 Our equation (7) is an exact reformulation of the algebraic statement of this point by Krugman and Taylor [1978, p.449].

17 Equation (6) also demonstrates that, for the devaluation to have an overall beneficial effect, the supply and demand elasticities need to be somewhat stronger when devaluation is effected from an initial deficit.

Two points follow from this discussion. First, the decomposition approach is very well suited to capture the impact of a devaluation. But secondly, it cannot be more than a part of the total impact at any time. Only the most structuralist of economists would argue that there would be no increase in exports or reduction in imports as a result of a devaluation. These effects are also included in the decomposition analysis, but there is no way in which the change in trade patterns can be linked in a causal manner to the devaluation. Therefore the exchange rate effect captures only a part of the total impact of devaluation on the current account.

Terms of trade effect

$$\{[sp_{t-1}\, d\left(\frac{PxP\$}{PY}\right)_t + so_{t-1}\, d\left(\frac{PxO\$}{PY}\right)_t]\, x_{t-1}\left(\frac{W}{Z}\right)_{t-1} - j_{t-1}\, bm_{t-1}\left(\frac{A^*}{Z}\right)_{t-1} d\left(\frac{Pm\$}{PY}\right)_t\} E_{t-1} \quad (8)$$

Measuring the terms of trade effect in this way shows how an improvement in the terms of trade may actually lead to a deterioration in the current account. Suppose there is an equal percentage rise in both the export and import price indices, the terms of trade, measured as the ratio of the two, will remain unchanged. But if the trade balance is in deficit then, *ceteris paribus*, the import bill will rise more in absolute terms than export earnings. If the percentage rise in the import price index is slightly less than that for export prices, it is still possible that the trade balance will worsen depending on the magnitude of the initial deficit. It is also clear that even if there is some supply and demand response to the price changes, it is still possible for the current account to worsen as the terms of trade improve.

Export structure effect

$$[\left(\frac{PxP\$}{PY}\right)_{t-1} dsp_t + \left(\frac{PxO\$}{PY}\right)_{t-1} dso_t]\, x_{t-1}\left(\frac{W}{Z}\right)_{t-1} E_{t-1} \quad (9)$$

The strategy of diversification is intended to move the productive structure away from agricultural crops whose prices are both volatile and subject to a long-run downward trend. The export structure effect captures the extent to which the move towards non-

traditional exports benefits the current account by their higher value. Since d(so) = - d(sp), the effect is positive if the price index for other exports exceeds that for plantation exports. Both price indices start at one in the base year 1970.[18] The export structure effect will be positive when the price index for plantation crops exceeds that for non-traditional exports (both from the preceding year).

World trade effect

$$\left[\left(\frac{PxP\$}{PY}\right)_{t-1} sp_{t-1} + \left(\frac{PxO\$}{PY}\right)_{t-1} so_{t-1}\right] x_{t-1} E_{t-1} d\left(\frac{W}{Z}\right)_t \quad (10)$$

Export penetration (change in share of world exports)

$$\left[\left(\frac{PxP\$}{PY}\right)_{t-1} sp_{t-1} + \left(\frac{PxO\$}{PY}\right)_{t-1} so_{t-1}\right] E_{t-1} d\left(\frac{W}{Z}\right)_{t-1} dx_t \quad (11)$$

The world trade effect reflects the increase in exports resulting from the increase in demand, measured by the ratio of the real volume of world trade to Sri Lanka's GDP. The world trade effect holds Sri Lanka's share of world trade constant. But if this share is falling - measured as declining export penetration - then exports may fall despite the rise in world trade.

Private transfers effect

$$d\left(\frac{R}{Y}\right)_t \quad (12)$$

Official transfers effect

$$d\left(\frac{T}{Y}\right)_t \quad (13)$$

---

18 For the export structure effect to be meaningfully interpreted, the first year must be the base year. This was done in our analysis, with the resulting discrepancy (since other terms are calculated with a 1985 base year) absorbed into the third and higher order effects.

Other factor payments effect

$$-d\left(\frac{V_d}{Y}\right)_t \tag{14}$$

The three terms in equations (12) to (14) are the changes in the current account consequent upon the changes in private and official transfers and net factor payments, respectively.

Interest rate shock effect

$$-\left(\frac{F_{t-2}}{Y_{t-1}}\right) dr_t \tag{15}$$

Debt burden effect

$$-\ r_{t-1}\, d\left(\frac{F_{t-1}}{Y}\right)_t \tag{16}$$

Debt can adversely affect the current account in two ways: if the interest rate on external debt rises (equation 15) or as the volume of debt increases (equation 16).

Import replacement effect (change in import-absorption ratio)

$$-\left(\frac{Pm\$}{PY}\right)_{t-1} E_{t-1}\, bm_{t-1} \left(\frac{A^*}{Z}\right)_{t-1} dj_t \tag{17}$$

Expansion/recession effect

$$-\left(\frac{Pm\$}{PY}\right)_{t-1} E_{t-1}\, j_{t-1} \left(\frac{A^*}{Z}\right)_{t-1} dbm_t \tag{18}$$

Changes in average absorption propensity effect

$$-\left(\frac{Pm\$}{PY}\right)_{t-1} E_{t-1}\, j_{t-1}\, bm_{t-1}\, d\left(\frac{A^*}{Z}\right)_t \qquad (19)$$

The three preceding terms come from the decomposition of the import term. The import ratio will change not only with trade policy and the exchange rate, but it also depends on other determinants of imports, such as foreign exchange availability. The change in the average absorption propensity is a difficult term to interpret, since it depends not only on trend absorption but also GDP. As absorption is financed out of national disposable income (GDP plus net transfers and factor payments) this term will vary as the ratio of national disposable income to GDP varies. There may be a J curve effect consequent on trade liberalization, as there is in response to adjustment. Initially, liberalization will worsen the trade balance with a flood of imports. These will be offset as the domestic traded goods sector responds to the new more favourable policy environment.

Inflationary impact effect

$$-\{[PxP\$_{t-1} sp_{t-1} + PxO\$_{t-1} so_{t-1}]\, E_{t-1} x_{t-1} \left(\frac{W}{Z}\right)_{t-1} - E_{t-1}\, PM\$_{t-1}\, j_{t-1}\, bm_{t-1} \left(\frac{A^*}{Z}\right)_{t-1}\} \frac{dPY_t}{PY^2_{t-1}} \qquad (20)$$

An increase in the domestic price level will, from an initial trade deficit, improve the current account as a percent of GDP in domestic currency as the deflator in the numerator grows.

The various effects are classified into three main groups:

External shocks: terms of trade, interest rate and world demand effects;

Other external factors: private and official transfers and other net factor income; and

Policy variables: debt burden, import replacement, export penetration, expansion/recession, changes in average absorption, and inflation.

For the last category, the extent to which the government has direct control varies widely. The exchange rate, expansion/recession, debt accumulation and inflationary effects are the most closely related to government actions. The three trade performance related variables - export structure, import replacement and export penetration - represent the outcome of government policies on both trade and development (some policies, such as the change from quotas to tariffs, will have an immediate impact, whereas the effect of others, including supply-side policies such as vocational training, will only be felt over the much longer-term). External factors also play a role here - it will be seen that much of the variation in export penetration has, in fact, been the result of external factors. Both export penetration and import replacement will also depend on the trade and other policies of Sri Lanka's trading partners and competitors. Therefore, although the accepted practice of including these under domestic policy is followed here, mention is made below where external factors have also been significant.

Fitzgerald and Sarmad [1990] argue that it is also important to include the higher-order effects in the analysis, since they can account for a large part of the change in the current account. With the greater degree of decomposition given here compared to previous studies, our difference equation has terms up to the fifth order. All higher-order terms were calculated, but it was found that only in a few instances did those over the second-order constitute a significant component of the overall change (see Table 1). There are 34 second order effects, of these 13 may be ascribed to the external shock or policy categories.[19]

A current account deficit must be financed by either capital inflows or a decrease in reserves. That is, if we define the capital account (KA) to include changes in reserves (dR) and errors and omissions (EO)[20], then:

$$KA = DFI + AID + LTL + STL + dR + EO = -CA \qquad (21)$$

19 Terms are allocated to a category when both differences are of variables in the category from the classification of first order terms. All remaining terms are labelled as "cross-effects". The one exception is that the cross term from the two debt variables has been added to the external shocks category.

20 The EO terms also include a number of small miscellaneous items, specifically, SDRs and valuation adjustments on IMF funds.

where DFI is net direct foreign investment, AID net concessional inflows (i.e., inflows minus that year's amortization payments), LTL net non-concessional inflows and STL net short-term borrowing.[21,22] Previous decomposition studies have not considered these items. But they are important for two reasons. One is to understand the sources of financing the deficit, which will facilitate analysis of prospects for future performance. The other is that the capital account will most likely not be passive in the face of the current account - it does not simply respond to fill a deficit. Instead, some part of the current external deficit may well be caused by movements in the capital account: this has been an important part of the debate about the Sri Lankan adjustment experience.

III. PRESENTATION OF RESULTS

III(a) The current account

The performance of the current account (expressed as a percentage of GDP) is shown in Figure 2. During the pre-liberalization period (up to and including 1977) the current account fell only once (1974), with marked improvements in 1976 and 1977, bringing it to its highest level in the whole period of a surplus of 3.7 per cent of GDP in the latter year. In the three years following liberalization it tumbled dramatically - to a low point of -18.5 per cent in 1980. From there it jumped back, reaching a peak in 1984. The years 1977 to 1984 appear to show something of a J curve response to liberalization - whether this was in fact the case will be one focus of our analysis. After 1985, the current account immediately fell back and has since showed milder fluctuations around a modestly rising trend.

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21 As mentioned, aid which is a pure grant has already been included under the current account as official transfers.

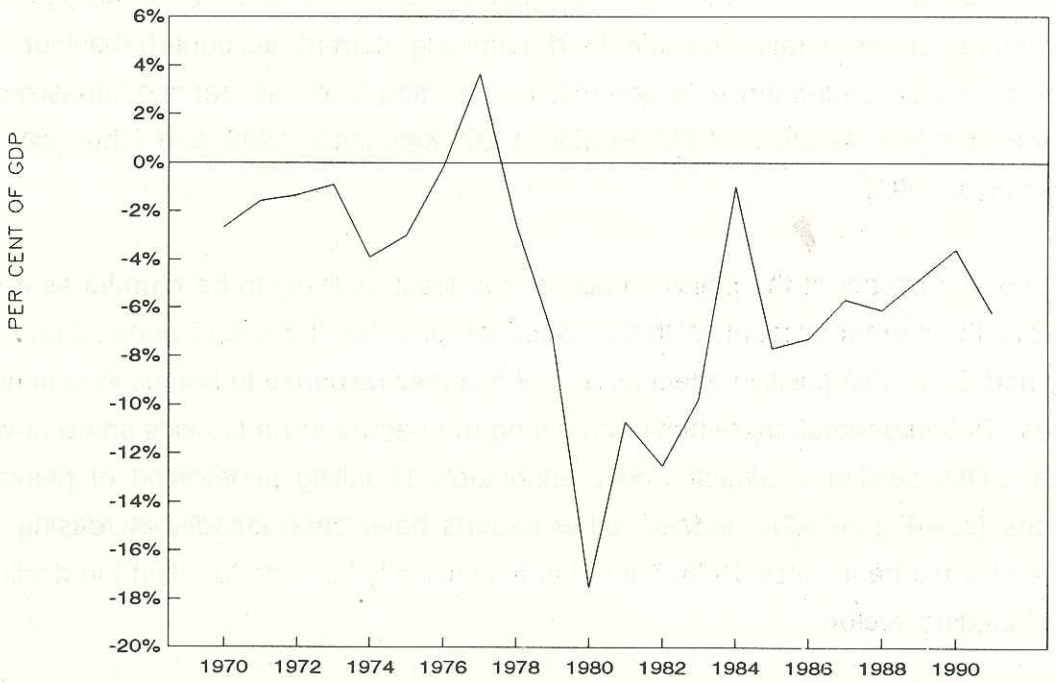
22 The difference equation for the capital account is not reported since it is straight-forward, containing only first-order terms. (This statement in fact ignores the revaluation effect of exchange rate movements - which we also ignored for transfers and factor payments. Since the revaluation effect properly depends on the denomination of the inflow or outflow, accurate data are hard to gather to disaggregate it correctly. In the case of project aid flows, it is unlikely that there is any benefit from revaluation because, although a dollar amount is allocated, it is only drawn down against actual expenditures).

Table 1
Results of Decomposition Analysis for the Current Account

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Current account	1.1	0.2	0.4	-3.0	0.9	2.8	3.8	-6.2	-4.6	-10.4	6.8	-1.8	2.7	8.8	-6.7	0.4	1.6	-0.4	1.2	1.3	-2.7
External shocks	NA	1.6	1.2	-4.1	-2.2	7.3	-1.1	0.4	-14.9	-3.6	-2.1	0.7	-0.8	-0.9	3.2	3.8	3.0	-2.9	0.4	-4.0	NA
TOT effect	-1.2	-1.1	-.24	-3.5	-4.1	5.1	7.0	-0.3	-18.3	-6.5	-0.9	0.5	5.2	3.1	-1.6	-2.6	2.6	-3.9	-0.2	-2.6	0.0
Interest rate shock	NA	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.9	0.7	-0.6	0.3	-0.1	0.7	0.3	0.1	0.2	-0.1	0.0
World trade effect	2.1	2.6	3.3	-0.5	2.1	2.2	-5.5	0.7	3.4	2.9	-0.2	-0.8	-5.2	-4.1	5.1	6.4	0.0	0.8	0.4	-1.2	NA
Second order effects	NA	0.0	0.3	-0.2	-0.2	0.0	-2.5	0.0	0.3	0.2	-0.2	0.2	-0.3	-0.2	-0.2	-0.7	0.0	0.1	0.0	-0.1	NA
Other external	0.3	-0.1	0.0	0.8	1.0	-0.3	0.0	1.7	3.4	1.1	1.3	0.6	-0.2	-0.3	-0.1	-0.6	-0.1	0.3	-0.2	-0.4	-0.1
Private transfers	-0.1	0.0	0.2	0.0	0.1	0.1	0.2	0.5	0.7	2.1	1.3	0.9	-0.1	-0.6	-0.2	0.0	0.3	-0.2	0.2	-0.2	-0.2
Official transfers	0.2	-0.1	-0.2	0.7	0.9	-0.4	-0.3	0.8	2.3	-0.8	0.3	-0.4	0.0	0.2	-0.4	-0.1	-0.1	0.2	-0.3	-0.5	0.0
Other net factor income	0.2	0.0	0.1	0.1	0.0	-0.1	0.2	0.3	0.4	-0.2	-0.2	0.1	0.0	0.1	0.5	-0.5	-0.3	0.2	-0.1	0.3	0.1
Policy	NA	-0.1	-0.3	1.6	1.8	-5.2	4.8	-7.5	5.2	-6.1	7.2	-3.6	4.9	11.9	-8.5	-2.3	-1.1	2.2	0.9	5.7	NA
Exchange rate	O.O	0.0	-0.1	0.0	-0.2	-0.9	-0.1	1.8	0.0	-0.8	-4.0	-1.4	-2.6	-1.3	-0.5	-0.4	-0.7	-0.9	-1.6	-1.2	-0.3
Inflation	0.0	0.0	0.1	1.0	0.3	0.1	-0.4	0.4	1.7	3.7	2.9	2.4	2.1	1.1	0.1	0.7	0.7	1.2	0.9	1.5	NA
Export structure	0.0	0.0	0.1	1.1	-0.2	0.3	0.1	0.0	-0.2	0.0	0.1	-0.2	0.7	0.4	0.7	0.4	0.2	0.3	0.0	0.4	1.2
Debt accumulation	NA	0.0	0.0	0.0	0.0	-0.1	0.0	-0.5	-0.1	0.2	-0.3	-0.7	-0.1	-0.1	-0.3	-0.3	-0.3	-0.3	0.0	0.0	0.1
Import replacement	1.7	0.4	2.9	1.0	0.6	-1.2	2.6	-3.8	5.7	-4.5	4.4	-1.4	1.2	-1.9	-0.6	0.8	0.1	3.4	2.1	0.2	NA
Export penetration	-1.8	-2.9	-2.4	-1.2	1.0	-1.5	3.0	-0.3	-1.4	-2.2	2.2	-0.3	4.2	10.4	-7.5	-3.5	-1.4	-1.8	-1.7	3.8	NA
Expansion/recession	1.9	2.4	-0.4	0.4	1.0	-0.2	-0.4	-1.5	-1.2	-2.2	2.2	-1.8	-1.3	2.2	-0.1	0.0	1.3	0.7	1.5	-0.5	NA
Changes in APA	-1.8	-1.0	-0.7	-0.7	-0.9	-0.8	-0.4	0.4	0.3	0.3	0.5	0.2	0.2	0.3	0.3	0.1	-0.9	-0.4	-0.5	1.1	NA
Second order effects	0.2	0.1	0.1	0.0	0.1	-0.8	0.3	-3.9	0.1	-0.6	0.8	-0.3	0.6	0.8	-0.7	-0.1	0.0	0.1	0.1	0.4	NA
Second order terms: cross effects	NA	-0.3	-0.3	-0.2	0.0	1.5	1.0	0.0	2.0	-1.4	-0.1	0.0	-0.6	-1.2	-1.5	-0.2	-0.1	0.1	0.0	0.0	NA
Third and higher order terms	NA	0.0	-0.2	-1.2	0.3	-0.5	-0.8	-0.7	-0.2	-0.5	0.6	0.5	-0.5	-0.7	0.2	-0.4	-0.2	-0.1	0.1	0.0	NA

Note: a positive sign indicates an improvement in the current account.

Figure 2
Current Account (as a percent of GDP)



The year-on-year changes are shown in the first row of Table 1, which also shows the results of the decomposition analysis. The figures give the value of the change in the current account (as a percent of GDP) accounted for by each effect in a given year. For example, the number 1.2 means that the current account (as a per cent of GDP) was 1.2 percentage points higher (say, -1.0 rather than -2.2 per cent) than it would otherwise have been.

In order to analyse the results, we have made the following periodisation, which reflects both changes in the domestic situation and the behaviour of the current account. These periods are: pre-liberalization (1971-77); liberalization, phase I (1978-80); liberalization, phase II (1980-82); stabilisation (1983-86); political instability (1987-89); and renewed liberalization (1990-91).

At the most general level, the following observations may be made. First, those effects labelled as external shocks have been the predominant factor behind changes in the current account, both beneficial and detrimental. In ten out of the nineteen years for which a comparison is possible, the changes coming from external shocks have been

the largest category - and for three of those years in which policy appeared to dominate, the main factor was changes in export penetration resulting from external factors. Of external shocks, the terms of trade effect is most usually the strongest; the importance of the terms of trade in determining current account behaviour, and macroeconomic performance in general, is a finding that has been emphasised by other writers [e.g. Jayatissa, 1982; Herring, 1987; Kelegama, 1988; and Athukorala and Jayasuriya, 1991].

Second, the impact of the policy variables is at least as likely to be harmful as it is to improve the current account. With the exception of 1990, the export penetration effect only had a sizeable positive effect as part of a supply response to booms in commodity prices. But, in general, there has been a long-run decline in Sri Lanka's share of world trade. This decline is almost wholly attributable to falling penetration of plantation exports (see Figure A2). Indeed, other exports have been steadily increasing their share of world trade since 1978, but not at a sufficiently fast rate to offset the decline in the plantation sector.

Beyond these general observations we next consider the factors underlying the performance of the current account in each period.

In the pre-liberalization period Sri Lanka benefitted from the expansion of world trade - which was particularly strong from 1971 to 1973 and again in 1975 and 1976 - but this benefit was almost entirely offset by the decline in export penetration - Sri Lanka's share of world trade dropped precipitously from nearly 0.13 per cent in 1970 to just above 0.07 per cent in 1974. That is, in this period Sri Lankan producers failed to respond to the opportunities afforded by growing international demand. Since the period 1970-1977 was characterised by the greatest degree of inward-orientation,[23] the poor export performance is not only unsurprising, but need not have harmed the current account if import dependence was successfully reduced. Was this the case?

In fact, whilst the import terms do lie behind some improvement in the current account in this period, recession was at least as important as a reduction in the import ratio. In 1971 and 1972 in particular, there was a sharp fall in domestic absorption to 6 per cent

23 The liberalisation index for the period 1950-1984 presented by Cuthbertson and Athukorala [1991, p.336] falls rapidly to its lowest level at the beginning of the 1970s and remains there until 1977/78.

below trend (see Figure A6). Import replacement effects were also important - again, especially in the period 1971-73.

But the evidence suggests that import replacement was not a result of successful import-substitution. First, there was a shortage of foreign exchange to finance imports which may otherwise have been purchased - see Part III(b). One manifestation of this shortage was that, during this period, factories which depended upon imports of fuel and machinery were forced to reduce production owing to foreign exchange constraints [Balakrishnan, 1977].[24]

But the single most important factor behind changes in the current account over this period, were changes in the terms of trade. These led to substantial deteriorations in the current account, especially in the years following the first oil price hike. More dramatic still was the improvement in 1976 and 1977 - leading to an improvement in the current account equivalent to 7.3 per cent of GDP in 1977 alone. We must agree with other commentators on the current account during this period [notably Kappagoda and Paine, 1981] that the surplus that appeared in 1977 - the only surplus during the two decades under study - was almost entirely the result of the large increase in export prices.[25] It is mistaken to argue, as does Lakshman [1992], that the 1977 surplus demonstrates that there was no underlying imbalance in the Sri Lankan economy (and so liberalization did not have an economic rationale) - indeed, it is precisely this attitude of treating temporary booms as permanent, that has been diagnosed as a major failing of Sri Lankan macroeconomic management [see Lakshman, 1989, and Athukorala and Jayasuriya, 1991].

The dramatic fall in the current account from 1978 to 1980 is in part explained by a combination of three main policy influences. First, an increase in the import ratio - presumably in response to liberalization - which alone caused a worsening of the current account of 3.8 per cent of GDP in 1978 and a further 4.5 per cent in 1980. Second, the government embarked on a massive public investment programme, mostly related to a very large-scale irrigation and settlement project, the Accelerated

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24 The demand for domestically produced goods was also restricted by the lack of complementary imports. For example, tyre sales were depressed by the ban on imported cars.

25 The largest part of the increase came from the main export crop, tea, the price of which rose by 67 per cent from 1976 to 1977.

Mahaweli Development Programme, as well as a substantial housing programme. The investment ratio rose steeply as a result - peaking at around 34 per cent in 1980 (after which the programmes were cut back). Imports absorbed this increase in expenditure, and the concomitant adverse impact on the current account averaged 1.6 percent of GDP a year over this period. Third, the new outward-orientation had no impact on Sri Lanka's share of world trade, which continued to fall.

The large devaluation in November 1977 (the annual average exchange rate rose from Rs. 8.87 per dollar in 1977 to Rs.15.61 per dollar in 1978) led to a small positive exchange rate impact on the current account in 1978. This was due to the fact that the current account was in surplus in 1977, so that the devaluation improved the current account in domestic currency. Since the current account moved into deficit the following year - and has remained there ever since - the continuing depreciation of the rupee has had a persistently adverse direct effect on the current account. Here we should repeat the caution made earlier: each of the effects reported here is only partial. In the case of the exchange rate, the depreciation may be having an offsetting beneficial impact on the current account through higher export penetration or import replacement (though - as we shall return to - it does appear hard to locate such effects).

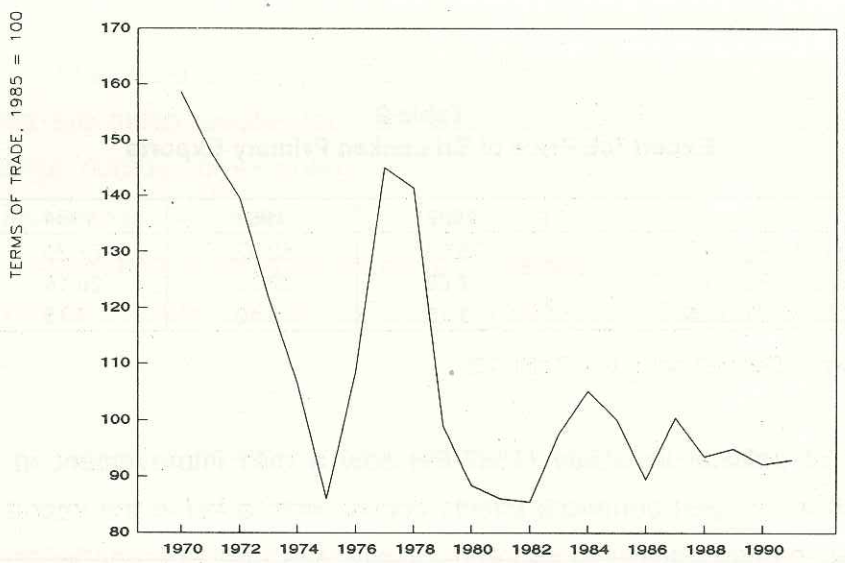
The most important factor offsetting the adverse impacts on the current account was the dramatic rise in transfers that Sri Lanka enjoyed during the first phase of liberalization. Grants received jumped dramatically in the year following the adoption of the liberalization programme (see Figure A6): they have tailed away since, but, at an average of 3.2 per cent of GDP for the period 1980-91, are an important factor in financing the other items on the current account. Private transfers have been even more marked, experiencing their strongest growth in 1979 (as many Sri Lankans found employment in the Gulf States). During the 1980s they have remained at around 5 per cent of GDP.

The largest single effect in the period 1978-80 is the adverse terms of trade shock - this effect was mostly concentrated in 1979 when the worsening of the terms of trade caused a current account deterioration of a massive 18.3 per cent of GDP. The year 1979, marked, of course, the second oil price hike: the import price index rose by over 30 per cent from 1978 to 1979. Unlike during the first oil-price shock when there was

some offsetting improvement in Sri Lanka's export prices in dollars, during the second boom these export prices actually fell (see Figure 1).

The terms of trade remained the most important contributor to current account changes in the 1981-82 period, but this time with a positive influence. However, this benefit was almost fully offset by the continuing depreciation of the rupee.[26] The continuing rise in private transfers also contributed to the overall improvement in the current account, as did a large decline in the import ratio in 1981. Although investment had been cut back, the programme had led to an inflationary boom. The more rapid rise in prices of domestic goods over those of foreign goods meant that inflation helped to reduce the current account ratio; but continued high absorption in this period worsened it.

Figure 3
External Terms of Trade



The years 1983 and 1984 witnessed large increases in the prices of all three of Sri Lanka's main crop exports: these are shown in Table 2. For example, the fob price of

26 Since we are using dollar international price indices, we also use the nominal rupee/dollar exchange rate. The US dollar was particularly strong in the first half of the 1980s so that most currencies weakened with respect to it, perhaps by more than their governments would have wished. But the Sri Lankan government's policy endorsed the falling exchange rate, especially as this was a period of high inflation and the real exchange rate was actually appreciating [see White and Wignaraja, 1992].

tea more than doubled between 1982 and 1984. The terms of trade effect was reinforced by the increase in Sri Lanka's share of world trade, which surged for the duration of the boom. But, on account of the evidently low short-run supply elasticity in plantation agriculture, the share of plantation crops in total exports continued to fall throughout the boom. There was a slight resurgence of the share of plantation exports in 1985 and 1986 (but by then the price had fallen), which resulted in a modest beneficial export structure effect (of 0.7 and 1.4 per cent of GDP, respectively).

One can therefore conclude that the J shape of the current account in the period 1977-84 is not explained by the usual J-curve effect. The devaluation was not responsible for the initial deterioration, since the current account was in surplus at the time. Even though subsequent devaluations had an adverse impact, this impact has not been so great as that of other factors, especially the external terms of trade. In particular, movements in the terms of trade largely lay behind the improvement in the current account towards the middle of the decade - not changes in patterns of supply and demand.

Table 2
Export fob Price of Sri Lankan Primary Exports

	1982	1983	1984
Tea (Rs./kg)	35.03	52.52	77.20
Rubber (Rs./kg)	17.68	22.77	26.16
Coconut (Rs./nut)	1.76	5.42	7.75

Source: Central Bank (1991, Table 12)

The period of political instability (1987-89) saw a mild improvement in the current account with the largest beneficial effects coming from a fall in the import ratio and a decline in absorption relative to its trend. There was also a beneficial terms of trade shock in 1987 when the current account improved. Offsetting factors were the exchange rate and worsening export penetration.

In the 1990-91 period the current account worsened again, with the world recession being the most important external factor. But the world recession has not hit Sri Lanka so badly since its share of world trade increased - the export penetration figure recording its largest increase in the sample period outside of the commodity boom in

1990. This was the only year in which the improving share of non-traditional exports was sufficient to more than match the decline from the plantation sector, thus at last offering some hope that the promotion of a greater degree of outward orientation over the last fifteen years may now be resulting in a significant beneficial impact on the current account. It would, however, be premature to draw a strong conclusion: and a consideration of the export structure effect may call the conclusion into question.

The export structure effect has played only a minor role - and is has been negative as well as positive. This is a worrying observation. As we noted earlier, the diversification of the economy is intended to bring about a number of benefits, presumably including the generation of foreign exchange. But it appears that the value of these new exports is not much greater than that of the traditional products they are displacing. However, some if the benefits of diversification may appear indirectly in other ways. The instability of the current account has been clearly shown to be driven in large part by terms of trade shocks. Since such instability is undesirable, then diversification towards non-traditional exports (for which price fluctuations are much less marked) will help diminish it. It may also be believed that the prospects for increasing Sri Lanka's share of world trade are much greater for non-traditional exports than for traditional ones (given the large number of established competitors and the continuing threat from synthetic substitutes). Whilst these arguments may have some validity, we would argue that revitalisation of the plantation sector is vital if Sri Lanka is not to suffer continued current account imbalances during the 1990s. There are at least three reasons for arguing this.

First, it is important to emphasize a point we mentioned earlier - Sri Lanka's share of world trade has fallen almost consistently throughout this period, as the rising penetration of markets by non-traditional exports has not been sufficient to offset the decline from the crop sector. It is therefore vital that the promotion of non-traditional exports is not done at the expense of traditional ones, which can so easily happen, both through macroeconomic Dutch disease type effects (competition for labour and other non-tradables) and government policy (e.g. unfavourable tax treatment of the traditional sector).[27] The government currently plans to revitalize the plantation sector

27 In 1978 the government raised export duties on plantation crops so that producers would get no benefit at all from the devaluation. Duties as a percentage of the fob value of exports were 43.4, 49.5 and 27.1 per cent for rubber, tea and coconut, respectively. The government's intention now is to remove this discrimination and by 1990, these figures were 1.5, 24.3 and 5.4 [Chanmugam, 1992].

as a part of the privatisation programme. It may be that, given the years of neglect, more direct support will be necessary.[28]

Second, although non-traditional exports now account for the largest share of gross foreign exchange earnings, their share of net earning is considerably less. Athukorala and Bandara [1987] show that, in 1985, the relative shares of primary products and manufactures in gross exports were 60 and 40 per cent, respectively, but that in net terms these shares were 80 and 20 per cent respectively. In general, for the period 1977-85, they found the share of manufactures in net earnings to be around half that calculated on gross earnings.[29]

Finally, there may be limits on the exports of non-traditional exports because of the prevailing quota system (notably for textiles and garments). Nicholas *et al.* [1992] argue that quotas may already have had an impact on export volumes during the 1980s. This seems doubtful given the rising export penetration by non-traditional goods (except during the political disturbances). In fact Sri Lanka may well be benefitting from the quota system, since it has made little headway in markets not governed by the Multi-Fibre Agreement (MFA). The planned phasing out of the MFA, rather than the extension of the quota system, poses the greater threat to Sri Lankan exports.

Before moving to the capital account, it is worth noting what we have not mentioned. Neither of the debt burden variables ever appear as having had a sizeable impact. Sri Lanka enjoyed a very low interest rate in the 1970s. The average interest rate rose rapidly for a brief period in the early 1980s, and has generally been higher than it was in the 1970s. These movements mainly reflect a change in the composition of borrowing towards harder loans in the first part of the 1980s - see Part III(b). But neither this effect, not the gradual increase in the debt burden, have been sufficiently large to cause great current account difficulties.

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28 In the 1992 Budget, the Prime Minister blamed the decline of the plantation sector on its nationalisation in the 1970s [*Ceylon Daily News*, 7th November, 1992] - this may be true, but it does not mean that privatisation will be sufficient to reverse the problem. We may break a leg by falling out of a window, but it will not be mended by climbing back in again! - rather more care and assistance is required.

29 Some have argued that non-traditional exports may make no net foreign exchange contribution - importantly, and fortunately, this was not found to be the case. A more recent study [Edwards, 1992] also finds a positive net foreign exchange contribution from the Free Trade Zone at Katunayake.

III (b) The capital account

Figures for the capital account are summarised in Table 3. (A positive change in reserves corresponds to an "inflow" of foreign exchange, i.e. a depletion of reserves). As stated above (equation 21), the sum of the capital account items must be equal and opposite to those in the current account. This is confirmed in the Table. The main trends may be seen in Figures 4 and 5, which show the different types of inflow. Clearly all types of foreign exchange have become more plentiful since liberalization.

Table 3
Decompositon of the capital account

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Net DFI	0.0	0.0	0.0	0.0	0 .0	0.0	0.0	0.1	1.4	-0.3	0.1
Concessional	1.5	-1.0	-0.9	0.2	1.1	0.1	-0.4	3.3	-2.3	-0.2	1.0
Non-concessional (long)	0.0	0.0	0.0	0.0	-0.2	-0.1	-0.2	1.5	1.0	0.3	1.5
Short-term	-1.1	-0.4	1.6	-0.2	-1.7	0.5	-0.6	0.6	0.1	4.2	-3.4
Change in reserves	-1.6	1.0	-0.7	3.1	0.0	-3.4	-7.7	5.0	3.0	6.4	-4.3
EO	0.0	0.1	-0.4	-0.1	-0.1	0.1	5.0	-4.2	1.4	0.1	-1.7
Total	-1.1	-0.2	-0.4	3.0	-0.9	-2.8	-3.8	6.2	4.6	10.4	-6.8
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	
Net DFI	0.2	-0.6	-0.2	-0.1	0.0	0.5	-0.3	-0.4	0.3	0.7	
Concessional	0.4	0.3	0.2	-0.3	-0.1	-0.6	0.1	-0.5	1.0	1.7	
Non-concessional (long)	1.9	-2.5	-1.9	-0.3	-0.2	-1.2	-0.4	0.2	1.2	-0.9	
Short-term	-0.6	0.6	-1.2	0.5	-0.3	0.9	-0.5	1.3	-0.6	0.0	
Change in reserves	0.6	-1.4	-4.7	5.8	-1.8	1.8	1.0	-0.8	-3.3	-0.5	
EO	-0.6	0.9	-1.0	1.1	1.9	-2.9	0.5	-1.0	0.2	1.6	
Total	1.8	-2.7	-8.8	6.7	-0.4	-1.6	0.4	-1.2	-1.3	2.7	

Note: A positive sign indicates a capital inflow; a positive sign on the change in reserves is a reduction in reserves.

Figure 4
Aid and Direct Foreign Investment (as a percent of GDP)

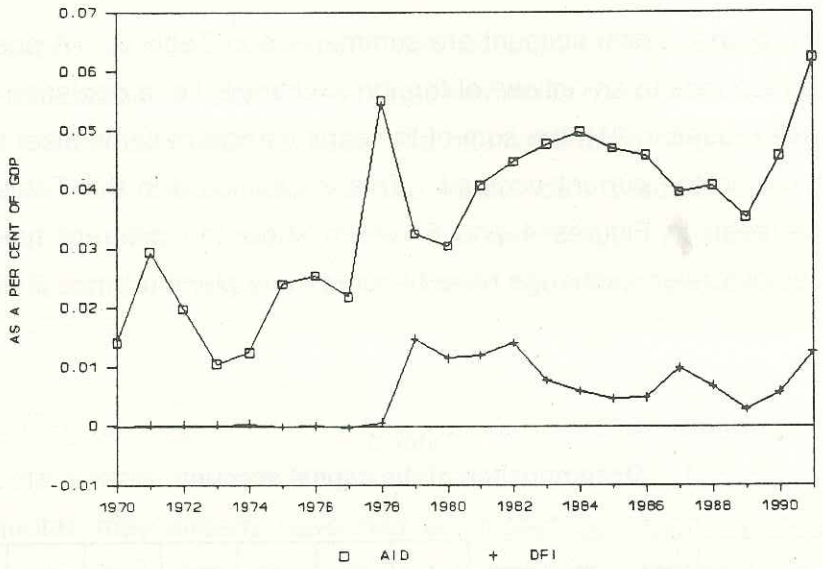
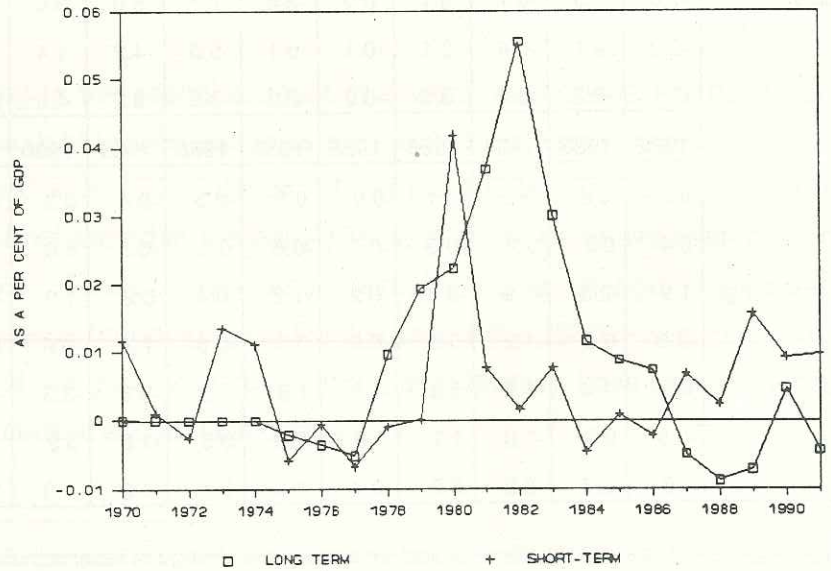


Figure 5
Non-Concessional Borrowing (as a per cent of GDP)



The apparent unavailability of foreign exchange prior to 1977 is the basis for our earlier observation that the positive import replacement effect in this period was caused at least as much by the inability to import, as the development of domestic industries: the government simply could not afford to run a current account deficit. Jayatissa [1982] is making a similar argument when he points out that gross external assets were only sufficient to finance three months of imports over the period 1973-81. It is instructive to break down this average. The average for the period 1970-75 (calculated on a quarterly basis) was 3.0 months - but it was falling towards the end, being only 1.9 months at the end of 1975 (see Figure A8). The figure subsequently increased with the 1976-77 commodity price rises, but was brought down again by the 1980 current account deficit. Although the average for 1983-1991 was only slightly higher (3.4 months), the figure was in general improving over this period, being 4.7 months at the end of 1991.

The liberalization programme was rewarded immediately with an increase in concessional aid flows (as with grants), and a year later, by an influx of foreign private investment, which has remained considerably more important than it was during the earlier period. Lal [1985] has argued that this surge of foreign capital inflows was the cause of the current account deficit, which may occur either through the direct effect of inflow-related imports or indirectly *via* the real exchange rate.

Direct effects occur since the inflows bring with them a requirement for higher imports as part of the investment requirements of the projects they finance, and to support the life-styles of the aid workers and foreign managers that accompany them. Assume, for example, that a capital loan is 100 per cent successfully tied to procurement from the donor country. Then the capital inflow will be fully and directly offset by an increase in imports: the capital account improvement directly causes a one-for-one deterioration in the current account. These concessional and DFI inflows may be considered "autonomous" in our analysis of the external account. That is, they drive changes in the current account. But the same is not true of the other capital account items, which may react to satisfy a need for financing. For example, either higher growth (increasing import demand) or adverse external terms of trade movements may result in a current account deficit that brings with it the requirement of a capital account surplus. It is important to try and understand which account is leading which.

Vos [1991] has argued that the increased availability of funds in the second part of the 1970s and early 1980s was the autonomous element that led to many countries running current external deficits. We agree that in the Sri Lankan case this was so for concessional funds. But the data strongly suggest that non-concessional inflows and drawing down of reserves in the early 1980s (which is when they were important) was a response to, not a cause of, the current account deficit. The all-time low in the current account (of -17.5 per cent of GDP in 1980) was accompanied by the peak of both short-term borrowing and running down of reserves to finance the deficit - an inflow-induced deficit need not be financed in this way, since it is self-financing. As can be seen from Table 3, these latter two items financed a far greater share of the capital account deterioration in 1980 than did long-term inflows. The short-term inflows in 1980 must surely be attributed to the government's response to the impact of the adverse terms of trade shock on the current account. Long-term non-concessional inflows remained an important source of funds for the period 1981-83. The use of short-term funds was carried out at considerable cost to the government, as witnessed by the sharp rise in the average interest rate on external debt (Figure A4) and the rise of the subsequent debt-service ratio to its peak of just below 30 per cent in 1988, so it is doubtful that the borrowing led the current deficit, rather than *vice versa*.

Lal [1985] does not mention the direct effects discussed in the preceding two paragraphs, but rather, that the adjustment of the current account to the changes in the capital account is brought about via the price mechanism of higher inflation causing a real exchange rate appreciation (thus decreasing exports and increasing imports). He further argues that this appreciation is an optimal response to the higher inflows and that, trying to improve the current account through devaluation only, induces further inflation. The balance between direct and indirect effects depends on the purpose for which the inflows are used. If they are used exclusively to finance imports then there will be no increase in demand for domestic output and no inflation.[30] But aid inflows must carry with them some increase in local expenditure - indeed, Stewart [1970] points out that some aid projects may have no direct foreign exchange component whatsoever, but that donor finance is required only for the import demand consequent upon the income multiplier effects of the project expenditure. Whether domestic

30 Indeed, there may be a deflationary impact. If the aid only finances capital or intermediate imports, it will increase subsequently and facilitate increased supply, but with no increase in demand (considering only first-round effects), with a consequent deflationary impact. Commodity aid may be either inflationary or deflationary depending on the procedures followed for counterpart funds [see Roemer, 1989; and Bruton and Hill, 1990].

expenditures fuel higher inflation depend on the extent to which the economy is supply constrained.

The government's investment drive in the period 1978-80 did indeed lead to a large increase in demand for domestic output, resulting in sufficient inflation for the real exchange rate to appreciate in the early part of the 1980s. But the investment programme was only in part aid-financed, and we have already seen that capital account behaviour in 1980 suggests that the current account deficit (caused by the demand expansion) was the lead factor. That is, Lal's argument can only be partly correct.[31] Moreover, the reallocation of resources consequent upon adjustment of the real exchange rate is only optimal (as Lal says it is) if either there are no costs to resource movements or the inflow is to be permanent [see van Wijnbergen, 1985; and White, 1992]. Neither is the case. There is therefore an economic case for subsidies to the traded goods sector for the duration of higher capital inflows to protect it from the full force of the real exchange rate appreciation.

A second, and related, issue is that raised by Mosley *et al.* [1990]. When assessing the impact of adjustment policies supported by donors, how can we distinguish between the impact of the policies they support from that of the money they give to support them? The decomposition analysis allows us to make this distinction. Adjustment policies are intended to improve macroeconomic indicators such as the investment rate and the current account. In the case of investment, the picture is complicated since the adjustment finance alone will support investment. But, as just been discussed, the finance will worsen not improve the current account, though an important distinction must be made between grants and loans.[32] Grants appear as a positive item in the current account itself, and we saw above that official transfers played a major role in the current account in the period 1978-80, since they increased dramatically in 1978. Without them the deterioration in the current account would have been considerably worse (by up to about 3 per cent of GDP in each year).

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31 Econometric analysis of real exchange rate behaviour in this period does allocate some of the appreciation to aid inflows [White and Wignaraja, 1992].

32 If adjustment finance is strictly defined to be only monies received from the World Bank and IMF, then the distinction becomes irrelevant since neither organisation makes grants. But it is more appropriate to consider the aid from all donors, especially where - as in Sri Lanka - there is a World Bank chaired Consultative Group of some importance.

The monies on capital account do not have the same effect as grants - they must cause a current account deterioration. But the important point, discussed above, is whether this deterioration is simply caused by the importation of aid-financed goods and services, or if there are significant economic mechanisms that further undermine the current account. The answer to this question will partly depend on the policy environment in which the inflows take place.

So what has been the overall policy impact on the current account since liberalization? As noted above, this impact is as likely to be harmful as beneficial. The continuing exchange rate depreciation has, except for 1978, had a persistently adverse direct effect. This adverse direct effect may have been offset by either displacing imports or increasing exports. Sri Lanka's strategy is focused on the latter - and liberalization, the investment programme and large capital inflows have meant that import displacement has not been great. But export penetration-Sri Lanka's share of world trade - has also not been good. This may be partly because nominal devaluations have not been matched by similar movements in the real exchange rate (especially in the early 1980s). We have also mentioned the importance of revitalising plantation exports. Here we would make the additional point that results bear out the now established proposition that getting the prices right may be a necessary part of successful export promotion, but is by no means sufficient. Non-price determinants of competitiveness (skills training, marketing development and support etc.) are just as important, and must form an integral part of any export promotion programme [see Kelegama, 1992, for further discussion].

Previous studies have emphasised how any beneficial impact on the current account from adjustment and/or stabilisation policies has come from expenditure reduction rather than switching. We commented on the lack of expenditure switching. However, Sri Lanka is perhaps an unusual case in which adjustment was initially accompanied by a large expansion in public expenditure.[33] The result, as we have seen, was a further worsening of the current account, and expansionary policies encouraged imports.

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33 Indeed, Levy [1987] has argued that the government only reluctantly accepted policy conditionality to access the funds required to carry out it's own agenda of increasing it's role.

The investment programme - in part financed by the higher capital inflows that came in the wake of the liberalization programme - ensured that the initial adverse impact of adjustment on output and employment was reduced. However, the government was also using a sizeable amount of non-concessional foreign borrowing, so that the strategy would soon have become unsustainable. The large positive terms of trade shocks in 1983-84 may well have saved the adjustment programme (and was described by the President as a "godsend" for precisely that reason [quoted in Lakshman, 1989]). These shocks, rather than the stabilisation policies implemented from 1983-86, were the main factor behind the improved current account during this period: only a small part came from the downward pressure on actual absorption relative to its trend.

IV. CONCLUSIONS

Current account behaviour has been largely determined by changes in the external terms of trade. Even though it has been argued [Balassa, 1986] that opening up the economy will, through diversification, reduce the economy's vulnerability to such shocks we find little evidence that this has happened. The continued - if not increased - vulnerability has occurred because of the lengthy period required to restructure the productive base.

We have also argued that the restructuring through promotion of non-traditional exports must not be at the expense of the traditional crop exports. During the 1980s the decline in the plantation sector more than offset any benefits from higher non-traditional exports. Moreover, the plantation sector has greater domestic value added than the leading non-traditional exports (textiles and garments) and does not suffer from potential quota limits on future export growth. As our analysis shows, devaluation is not sufficient to promote exports, and the type of marketing and other support that are given to non-traditional exports should also be extended to the traditional sector. In summary, the opening up of the economy will not lead to any immediate dramatic improvement in the current account - nor was the immediate worsening followed by an improvement of a J-curve type. The beneficial effects require a much longer period to be felt and need to be supported by a range of non-price supply-side policies, which were neglected in Sri Lanka until the late 1980s.

Sri Lanka's response to windfall improvements in the external position - through commodity price increases in 1976-77 and 1983-84 and from capital inflows in 1978-79 - has been far from optimal. Such windfalls have been used for spending sprees rather than for financing adjustment. That is, the gains have been treated as if they were permanent rather than temporary. Rather than confront the difficult task of further adjustment, the government resorted to external borrowing in the period 1980-83 to maintain the momentum of its programme. Ironically, it was partly the continued support of donors in this period which allowed the government to avoid the deflationary aspects of adjustment at this time.

The temporary nature of these gains should have been obvious from the out set. Ideally, they should be used to build up reserves to smooth expenditure and, possibly, repay debt. But such use of gains has rarely been made among both developed and developing countries. It is to be hoped -- should the opportunity arise again that Sri Lanka will succeed in achieving it.

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APPENDIX 1: ADDITIONAL FIGURES

Figure A1 Share of Plantation Crops in Total Exports

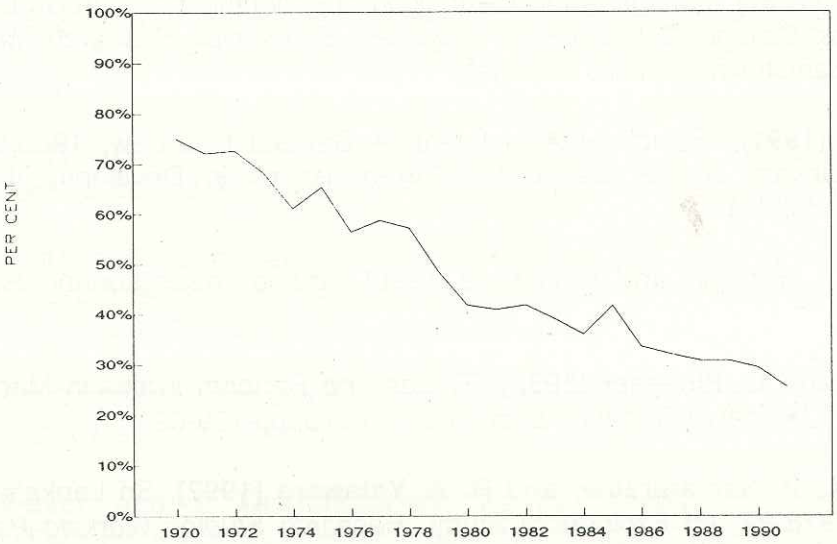


Figure A2 Sri Lanka's Share of World Trade

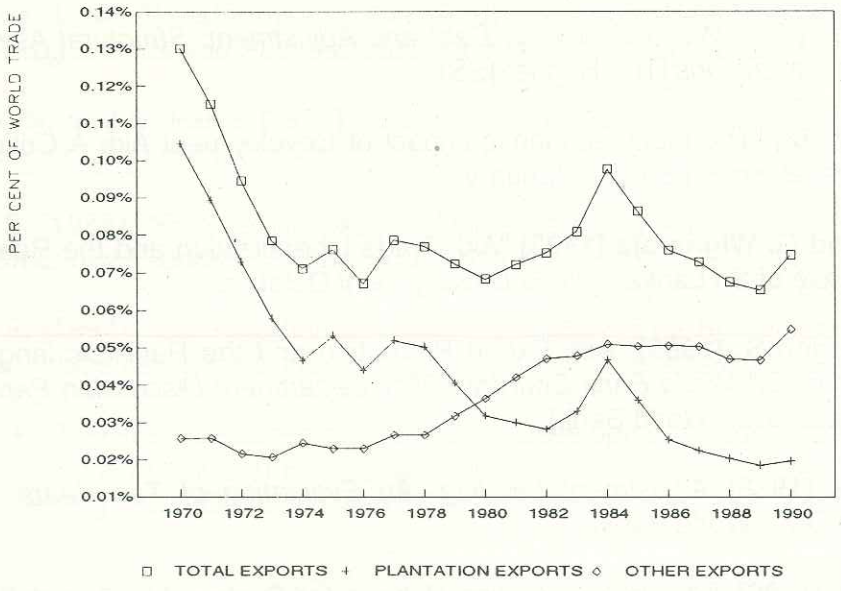


Figure A3 Outstanding Debt (As a percent of GDP)

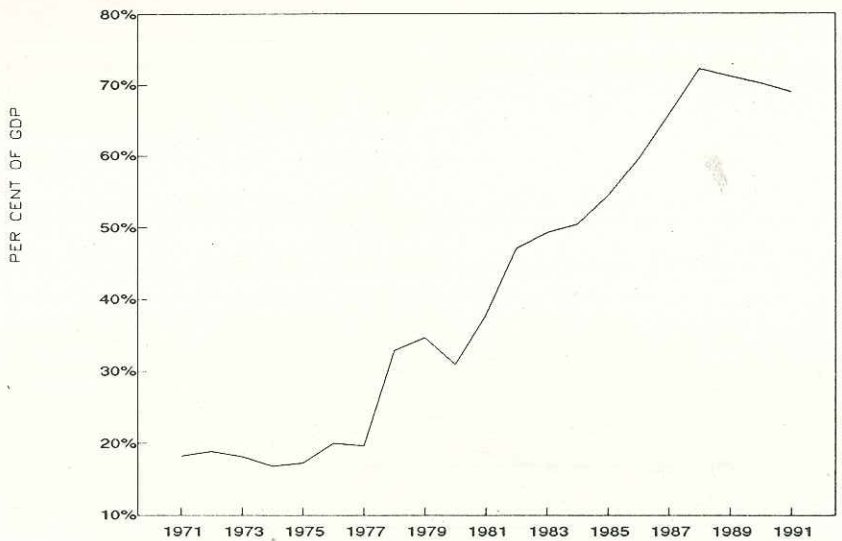


Figure A4 Average Interest Rate on External Debt

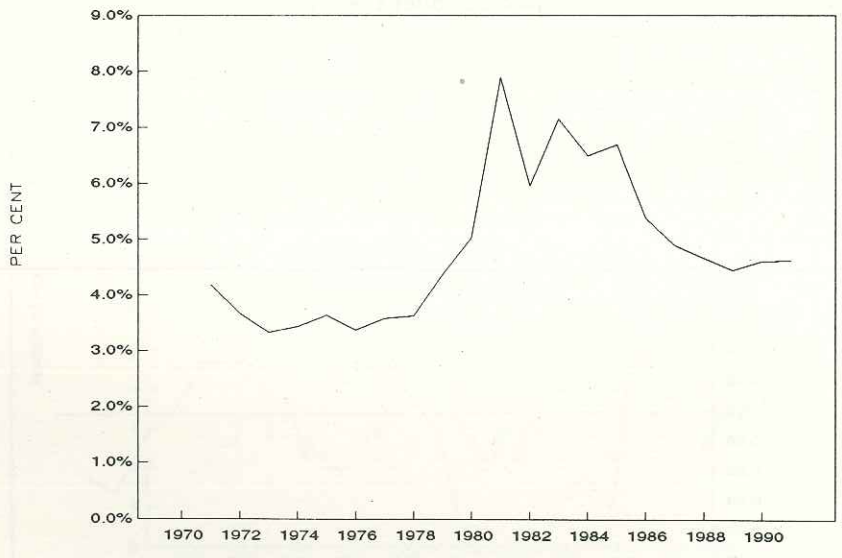


Figure A5 Net Tranfers Received
(As a percentage of GDP)

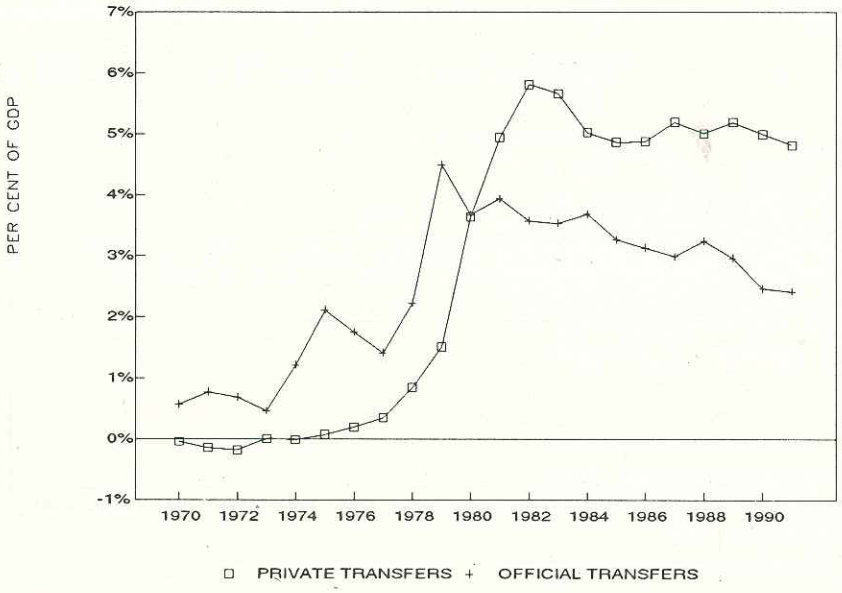


Figure A6 Actual and Trend Absorption
(Actual over trend)

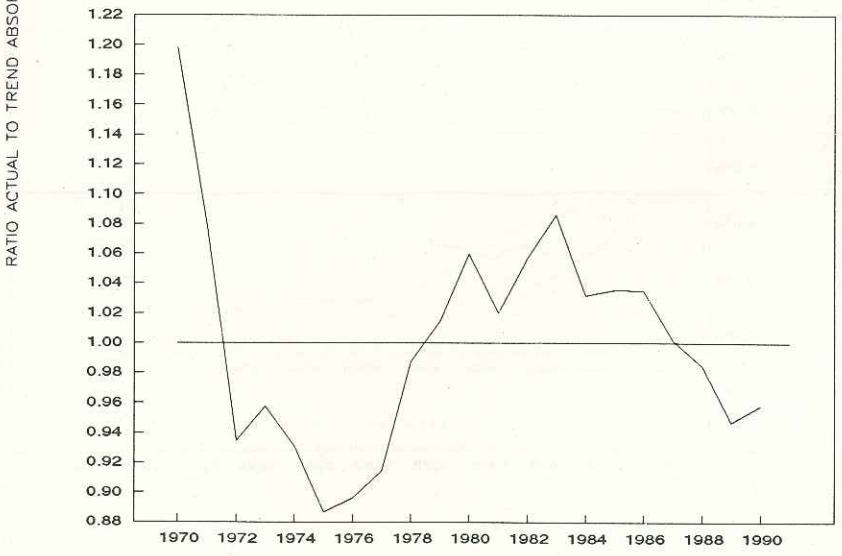


Figure A7 Change in Reserves
(as a percent of GDP)

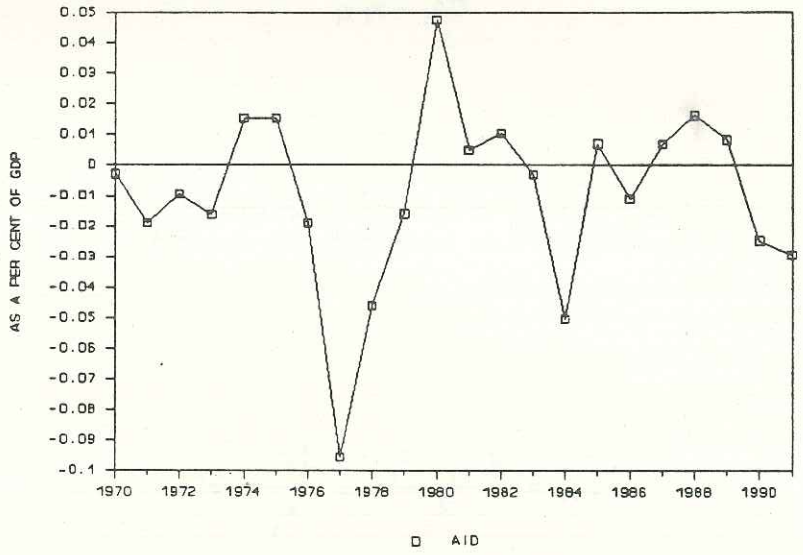
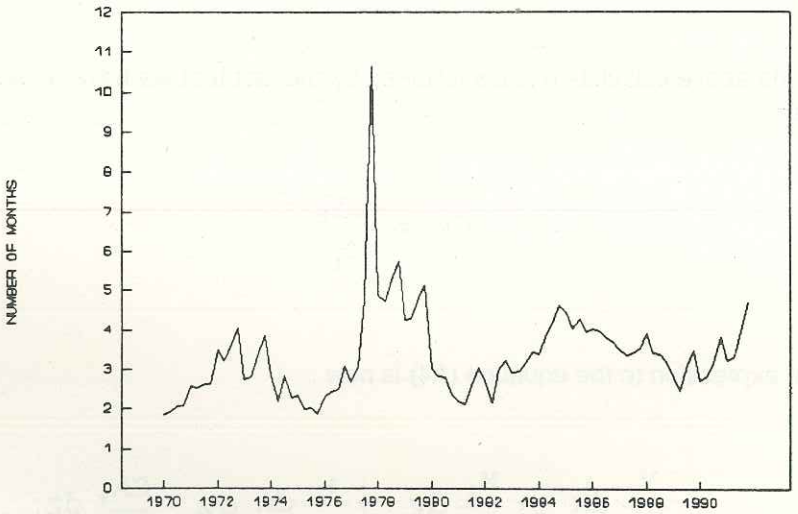


Figure A8 Months of Imports Covered by
Total External Assets (quarterly)



Appendix 2: Algebraic Note

Previous studies have decomposed components only of the multiplicative form. We give the example of two components. The basic principle generalises, but the highest order term equals the number of multiplicative components. We have:

$$CA_t = x_t y_t \tag{A1}$$

Therefore :

$$(1+g^{c}_{t+1})C_t = (1+g^{x}_{t+1})x_t(1+g^{y}_{t+1})Y_t \tag{A2}$$

where :

$$g^{x}_{t+1} = \frac{x_{t+1} - x_t}{x_t} = \frac{dx_t}{x_t} \quad \text{etc.} \tag{A3}$$

Rearranging gives :

$$dCA_{t+1} = Y_t dx_{t+1} + x_t dy_{t+1} + dx_{t+1} dy_{t+1} \tag{A4}$$

But in this study the above calculation is complicated by the fact that we have a seperate component in the denominator :

$$CA_t = \frac{x_t y_t}{z_t} \tag{A5}$$

So the equivalent expression to the equation (A4) is now :

$$dCA_{t+1} = \frac{\frac{y_t}{z_t} dx_{t+1} + \frac{x_t}{z_t} dy_{t+1} + \frac{1}{z_t} dx_t dy_t - \frac{CA_t}{z_t} dz_{t+1}}{1+g^{z}_{t+1}}$$