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Trade sustainability and aid under liberalization in fragile least developed countries

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Research Paper No. 2007/26

Trade Sustainability and Aid under Liberalization in Fragile Least Developed Countries

Amelia U. Santos-Paulino*

May 2007

Abstract

This study investigates the effect of trade liberalization on export growth, import growth, the trade balance and the current account of the balance of payments in 17 least developed countries (LDCs) over the period 1970 to 2001. The paper also assesses the marginal relation between capital flows (e.g., aid flows) and import growth, and the trade balance and the current account of the balance of payments. The higher import growth contrasts with the more modest export growth following trade liberalization and this has fundamental policy implications, especially for the balance of trade and the balance of payments. However, the financing and sustainability of the trade deficit in the reforming countries will depend not only on the outcome of trade liberalization, but also on other macroeconomic policies, developments in the real exchange rate and the inflows of foreign capital.

Keywords: trade liberalization, aid, balance of payments, dynamic panel data, least developed countries

JEL classification: C23, F13, F14, F32

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Acronyms

COMESA	Common Market for Eastern and Southern Africa
CPIA	country policy and institutional assessment
LDCs	least developed countries
MFN	most favoured nation
ODA	official development assistance
PRGF	poverty reduction and growth facility
QRs	quantitative restrictions
SACU	South African Currency Union
SADC	Southern Africa Development Community
SAF	structural adjustment facility
SAP	structural adjustment programme
SSA	Sub-Saharan Africa
UNCTAD	United Nations Conference on Trade and Development
VAT	value added tax

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1 Introduction

Advanced countries and international financial and development organizations have poured financial assistance in the form of loans, grants, and technical support to the less developed countries, with the aim of spurring economic growth and reducing poverty. Effective aid is seen as the foremost tool to achieve internationally agreed development targets (e.g., Millennium Development Goals), and to arrest economic atrophy in the poorest regions, particularly in Africa and Asia, where the majority of least developed countries (LDCs) are found.[1]

However, multilateral and bilateral financial assistance is still a contentious issue. Some academics and policymakers argue that aid failed to reduce poverty and, furthermore, attaching conditionality to aid did not lead to policy changes. Moreover, domestic political factors such as macroeconomic environment, secure property rights, effective rule of law, and delivery of critical social services are seen as primary determinants of policy changes rather than *aid* on its own (Devarajan, Dollar and Holmgren 2001).[2] For instance, Collier and Dollar (2001) develop a model in which aid flows respond to policy improvements, thus establishing a better background for poverty reduction and effective aid allocation. Another concern is that the resources tendered are inadequate relative to the goals, and that western donors fall short of the UN target of delivering 0.7 per cent of GDP in aid (Besley and Burgess 2003: 1). Therefore, 'even effectively targeted aid is unlikely to yield a solution without a considerable change in the global political climate'.

This study examines the effect of liberalization on export growth and import growth, and on the trade balance and current account of the balance of payments in 17 LDCs, also classified as fragile states,[3] over the period 1970 to 2001. Trade liberalization is assumed to improve a country's performance by promoting domestic economic

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1 The LDC are defined by the United Nations' Economic and Social Council as low-income countries that are suffering from long-term handicaps to growth, in particular low levels of human resource development and/or severe structural weaknesses. The following criteria are used for determining the LDC status, as proposed by the Committee for Development Policy:

(i) a low-income criterion, based on a three-year average estimate of the gross domestic product per capita (under US$900 for inclusion, above US$1,035 for graduation)

(ii) A human resource weakness criterion, involving a composite augmented physical quality of life index (APQLI) based on indicators of nutrition; health; education; adult literacy.

(iii) An economic vulnerability criterion, involving a composite economic vulnerability index (EVI) based on indicators of: the instability of agricultural production; the instability of exports of goods and services; the economic importance of non-traditional activities (share of manufacturing and modern services in GDP); merchandise export concentration; the handicap of economic smallness (as measured through the population in logarithm).

2 However, there authors provide examples of African economies that have successfully liberalized under structural adjustment programmes. This issue will be discussed later.

3 The LDC countries studied in this paper are also categorized as fragile states under the World Bank's country policy and institutional assessment (CPIA). The CPIA ranks countries according to 16 criteria grouped in four groups: (i) economic management; (ii) structural policies; (iii) policies for social inclusion and equity; and (iv) public sector management and institutions. The countries' standings in this classification will affect the pattern of financial assistance from major development funding institutions (e.g., those under the International Development Association umbrella).

efficiency and by encouraging trade flows between nations.[4] However, the literature on trade liberalization has hitherto focused on the beneficial effects of liberalization episodes by using mainly supply-side growth models, overlooking the effects on the balance of payments.[5]

The paper also assesses the marginal relationship between capital flows (i.e., aid flows) and import growth, and the trade balance and the current account of the balance of payments. Trade liberalization by developing and least developed countries in recent decades has been undertaken both in the context of multilateral trade negotiations, and as part of the conditionality linked to structural adjustment and stabilization programmes agreed with the IMF and the World Bank.[6] This conditionality justifies the need of analysing the links between the liberalization commitments and financial resources inflows. Also, official development assistance remains the most important source of foreign capital in poor countries, amounting to more than 20 per cent of imports, and 10 per cent of GDP.

Some studies have also analysed the causality between aid flows and trade, and vice versa. McGillivray and Morrissey (1998) suggest that aid may induce donor exports either because: (i) of the general economic effects on the recipient, (ii) aid is directly linked to trade, or (iii) aid reinforces bilateral economic and political links, or (iv) a combination of the three factors. Similarly, the view that trade can lead to aid is often attributed to the effects of donors' aid allocation policies. Also, trade can lead to aid depending on the commercial links between the donor and the recipient country (which could engender trade dependency). The authors show that there is a relationship between aid and trade but that the specific nature of this relationship can vary between donor-recipient pairs. Lloyd et al. (2000) produce similar conclusions.[7]

Moreover, not only aid flows but the volatility of such flows has serious implications for the recipient country's domestic activity, particularly in highly aid-dependent countries such as LDC (Bulíř and Hamnn 2003). Also, programme aid inflows are regarded as paramount for the financing and sustainability of reforms, and for funding balance of payments deficits. White and Dijkstra (2003) show that capital inflows (i.e., programme aid)[8] would ultimately contribute to boost economic growth and hence reduce poverty. The authors also stress the marginal direct impact on the external accounts.

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4 See Romer (1994); Grossman and Helpman (1995) and Krueger (1998).

5 Santos-Paulino and Thirlwall (2004) analyse the effect of trade liberalization on exports, imports and the balance of payments for a sample of developing and LDCs that have also liberalized in the context of structural adjustment and/or multilateral trade commitments. However, the authors do not assess the impact of foreign capital or aid, or how financial inflows might be influenced by the liberalization process.

6 The LDCs began to receive core financing in the mid-1980s by the IMF's structural adjustment facility (SAF) in March 1986, which was extended in 1987 to the enhanced structural adjustment facility (ESAF) (see IMF 1998). In 1999 the ESAF was transformed into the poverty reduction and growth facility (PRGF) which since then conduct policy change, debt relief, and financing in low income countries.

7 See also Morrissey (2006).

8 Programme aid is defined as 'Programme assistance consists of all contributions made available to a recipient country for general and development purposes i.e., balance of payments support, general

The rest of the paper is organized as follows. Section 2 discusses trade policy reforms in LDCs. Section 3 looks at the relationship between trade liberalization and export performance, and the effects of trade liberalization and aid on import growth. Section 4 analyses the impact of trade liberalization and aid on the trade balance and the current account of the balance of payments. Section 5 discusses policy implications and concludes.

2 Trade policy reforms in LDCS

From the early 1980s many least developed countries (LDCs) adopted multi-year structural adjustment programmes (SAP) to address existing macroeconomic struggles, and trade reforms were a key in such programmes. Improvements were achieved in the areas of inflation, and notably on balance of payments and fiscal balances, but at the expense of taxing international indebtedness, mostly in Sub-Saharan Africa (SSA).[9] Belshaw and Livingstone (2002) show that by the end of the 1990s, half a dozen countries had large government budget deficits and at least thirteen countries showed negative current trade balances in excess of 40 per cent of current exports. The greater part of such countries are LDCs.

In the context of the global phenomenon of trade liberalization, LDCs have evidenced significant commitment towards policy reforms, in spite of problems of implementation and disruptions (see Morrissey 2002 and UNCTAD 2002). Tables 1A and 1B present the dating of trade liberalization in LDCs, and the average duty change before and after the liberalization episodes. The quantifiable reduction in average tariffs in most LDCs is also reported in Table 2. Table A2 also shows the changes in trade policy restrictiveness (i.e., the changes in tariff and non-tariff barriers), which are noteworthy if compared with other developing countries.

The reforms in LDCs involved, as in other developing economies, major changes in industrial policies and the protection structures, and some of these reforms were implemented as early as 1980s. The most common factors of trade liberalization in the majority of the countries embrace (see Musonda and Adam 1999; Rodrik 1997 and Morrissey 2002):[10]

i) reduction of tariffs and rationalization of tariff structures, including the introduction of new structures based on MFN (most favoured nation) rates, and zero or special rates based on bilateral and regional trade agreements; and

ii) gradual elimination of quantitative restrictions and prohibitions.

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budget support and commodity assistance, not linked to specific project activities' White and Dijkstra (2003: 17) (quoted by the authors from OECD 1991: 5).

9 Debt accumulation is related to the poor use of aid inflows, including well-known factors such as political clientelism, imposition of penalties by donor agencies, lobby or pressure groups, etc. An exhaustive analysis of aid fungibility, aid flows, or aid's impact in economic performance is beyond the purposes of this paper. For a detailed analysis of aid effectiveness to Africa, refer, for example to Kanbur (2000) and Addison, Mavrotas and McGillivray (2005).

10 In the present case the date of liberalization coincides with the liberalization episodes described in Tables 1A and 1B, or the second liberalization attempt. Also, Borgatti (2003) presents an exhaustive analysis of the LDCs' trade policy regimes. See also Table A1.

Table 1A
Export growth and duty change before and after liberalization episodes

	Liberalization:		Before liberalization		After liberalization	
Country	1st attempt	Episodes	Export growth	Export duty	Export growth	Export duty
Bangladesh	1986	1992-present	6.69	4.50	10.94	0.0
Benin	1988	1990-94	8.25	2.43	2.62	0.0
Burundi	2002	2002 present	6.70	15.46	16.90	0.03
Gambia, The	1985	1985-88	6.48	4.65	1.09	1.22
Guinea	1986	1985-87	–	–	4.62	16.03
Lesotho	1984	1994-99	8.89	5.92	8.87	0.0
Madagascar	1988	1988-96	3.02	5.00	6.14	0.17
Malawi	1988	1997-2001	4.94	0.48	2.75	0.0
Mauritania	1992	1992-97	10.51	0.48	1.67	0.0
Mozambique	1987	1992-93	-14.39	–	11.32	0.0
Nepal	1986	1986-92	10.41	3.36	9.68	1.17
Senegal	1986	1994-present	2.86	1.89	4.33	0.0
Sudan	1992	1996-2000	-0.65	60.69	6.05	0.67
Tanzania	1984	1990-present	–	6.28	9.07	0.0
Togo	1988	1988-96	11.17	1.96	0.05	0.0
Uganda	1981	1991-96	1.96	35.21	11.51	0.02
Zambia	1982	1992-95	0.02	2.65	3.39	0.0

Source: Liberalization dates from Borgatti (2003); Export growth and duty: author's own estimations.

Table 1B
Import growth and duty change before and after liberalization episodes

	Liberalization:		Before liberalization		After liberalization	
Country	1st attempt	Episodes	Import growth	Import duty	Import growth	Import duty
Bangladesh	1986	1992-present	9.39	33.46	8.70	15.01
Benin	1988	1990-94	6.16	51.14	3.80	0.0
Burundi	2002	2002 present	5.14	22.00	13.23	8.19
Gambia, The	1985	1985-88	2.79	69.09	2.34	65.91
Guinea	1986	1985-87	–	–	2.74	21.44
Lesotho	1984	1994-99	11.62	72.07	-1.30	0.0
Madagascar	1988	1988-96	0.84	36.37	7.29	46.54
Malawi	1988	1997-2001	2.48	23.05	2.53	13.54
Mauritania	1992	1992-97	7.74	35.33	2.73	0.0
Mozambique	1987	1992-93	-6.14	–	4.75	0.0
Nepal	1986	1986-92	9.27	35.17	7.54	31.27
Senegal	1986	1994-present	2.40	39.73	2.77	0.0
Sudan	1992	1996-2000	2.45	42.08	0.15	21.34
Tanzania	1984	1990-present	–	13.09	-0.50	0.0
Togo	1988	1988-96	8.14	28.68	0.19	0.0
Uganda	1981	1991-96	3.63	12.89	10.74	32.07
Zambia	1982	1992-95	-1.33	10.68	3.45	0.0

Source: Liberalization dates from Borgatti (2003); Import growth and duty: author's own estimations.

Table 2
Average tariffs in LDCs (1997 and 2000)

	Average tariff		
Country	1997	2000	% change
Bangladesh	26.0	26.4	1.54
Benin	14.0	14.6	4.29
Bhutan	15.3	15.4	0.65
Burkina Faso	32.1	14.6	-54.52
Burundi	41.0	35.0	-14.63
Cambodia	18.0	16.5	-8.33
Ethiopia	24.3	18.9	-22.22
Gambia, The	13.7	11.8	-13.87
Guinea	15.0	16.9	12.67
Lesotho	15.1	6.4	-57.62
Madagascar	18.0	19.2	6.67
Malawi	25.3	13.6	-46.25
Maldives	22.0	20.0	-9.09
Mali	23.1	14.6	-36.80
Mauritania	19.0	14.0	-26.32
Mozambique	15.6	13.8	-11.54
Nepal	17.3	13.3	-23.12
Senegal	29.0	14.6	-49.66
Solomon Islands	45.0	22.7	-49.56
Tanzania	21.8	14.3	-34.40
Togo	16.3	14.6	-10.43
Uganda	13.2	14.9	12.88
Yemen, Republic of	12.9	12.6	-2.33
Zambia	18.6	13.4	-27.96

Source: Direct country communications and author's own calculations.

Export promotion strategies have been put in place. These include duty drawback schemes, tax rebates and exemptions, financial support to exporters, establishment of export promotion agencies, and bilateral and regional trade agreements. Although there has not been an uniform exchange rate policy amongst LDCs, there is a variety of exchange rate regimes such as monetary unions (WAEMU, including Benin, Burkina Faso, Guinea-Bissau, Mali, Niger Senegal, and Togo), basket peg (Bangladesh and Solomon Islands), fixed peg to one currency (Bhutan, Cambodia, Comoros, Lesotho, and Maldives), floating rates (The Gambia, Guinea, Madagascar, Malawi, Tanzania, Uganda, Yemen and Zambia), and managed float (Ethiopia, Lao and Mauritania). Table A1 details the specific reform policies carried out by the countries under analysis. Foreign exchange regimes deregulation has also been important in reforming trade regimes.

These policy changes are also evident in international rankings of trade policy regimes such as the IMF (1998) and the Heritage Foundation Index of Economic Freedom (see Johnson, Kirkpatrick and Homes 1998; O'Driscoll et al. 1999), which classify many of those economies as possessing low-to-moderate trade policy regimes.

However, as Morrissey's (2002) review of trade policy reforms in twelve SSA countries indicates, the success in various efforts in this direction has been mixed. While some countries made significant progress in liberalizing trade, rationalizing tariff structures and removing export bias associated with exchange rates and other restrictions, others have been slow and partial in the implementation of reforms. Moreover, where reforms have been implemented, their effects are difficult to isolate from those of other factors, positive or negative, affecting tradables (e.g., price and non-price incentives).

Moreover, in the case of Africa, Dean, Desai and Riedel (1994: 14-8) show that most of the countries had very restrictive trade regimes to start with (both in terms of tariff and non-tariff barriers). In fact, many of the countries undertook trade liberalization in the early 1980s after suffering the adverse effects of commodity price fluctuations. However, in some instances the reform process was reversed (e.g., Zambia) or slowed (e.g., Malawi), which imposes th problem of credibility and sustainability. The main reasons for such setbacks in most LDCs were political, namely the needed government commitments, and the lack of institutional resources to accomplish the reforms. Additionally, African countries suffer from natural barriers, which are often understated, but which affect the effectiveness of policy reform. The impact of trade liberalization on government revenues also hindered the reform efforts, in stances where some countries failed to adopt alternative tax reforms as, for example, the introduction of indirect taxes, to compensate for the loss of government revenue.

3 Trade liberalization, exports and imports

3.1 Empirical specification

The paper proceeds to investigate the impact of trade liberalization on export performance. To that end the exercise employs an export growth equation, capturing a mixture of demand-side and supply-side influences.[11] Export growth is expected to respond positively to world income growth and negatively to the real exchange rate measured in such a way as to reflect international competitiveness. A modified standard export growth, incorporating lagged adjustment ($t - 1$), may be written as:

$$x_{it} = \beta_0 + \beta_1 px_{it} + \beta_2 wy_{it} + \beta_3 x_{it-1} + \mu_t \qquad (1)$$

where *it* are the country- and time-specific effects for the panel data estimator, *px* is the rate of change of the RER; $\beta_1 = \eta$ and $\beta_2 = \varepsilon$ are the short run price and income elasticities, respectively, and μ_t is the error term. The long-run price and income elasticities are given by $\beta_1/(1 - \beta_3)$ and $\beta_2/(1 - \beta_3)$, respectively.

Within this framework (which controls for demand side variables), there are several channels through which trade liberalization can affect export growth. Two measures of liberalization are included. First, the ratio of export duties to total exports (d_t) is taken as

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11 Export demand analysis has been applied to both industrial and developing countries. Goldstein and Khan (1985) survey the literature related to income and price effects in foreign trade, and Senhadji and Montenegro (1999) for an assessment of export demand equations. Greenaway and Sapsford (1994), Shafaeddin (1994), Ahmed (2000) and Santos-Paulino (2002b) analyse export responses to trade liberalization in developing and least developed countries.

a major indicator of the degree of distortion or anti-export bias in an economy. The selection of this variable is based on the fact that export duties represent one of the most widely used policy instruments in the countries analysed, and can be easily measured. A reduction in the ratio is expected to raise export growth for any given change in world income growth and the real exchange rate. Second, a liberalization indicator (lib_t), defined as a dummy variable that takes the value of zero before the year of liberalization and 1 afterwards (see Table 1A for the particular years of reform in each country). To the extent that liberalization reduces anti-export bias, there will be shifts in both the quantity and quality of resources into the export sector, which may also be expected to improve export performance for any given growth of world income and the real exchange rate.

Trade liberalization can also affect the price and income elasticities of demand directly. Such interaction effects between liberalization and the price and income elasticities can be estimated by including two slope dummy variables in the estimating equation, $wy \times lib_t$ and $px \times lib_t$. Taking account of these liberalization effects gives an augmented export growth function of the form:

$$x_{it} = \alpha_i + \beta_1 px_{it} + \beta_2 wy_{it} + \beta_3 x_{it-1} + \beta_4 d_{it} + \beta_5 lib + \beta_6 (px \times lib)_{it} + \beta_7 (wy \times lib)_{it} + \mu_t \quad (2)$$

where α_i captures country specific effects, and the expected signs of the coefficients are: $\beta_1 < 0, \beta_2 > 0, \beta_3 > 0, \beta_4 < 0, \beta_5 > 0, \beta_6 < 0,$ and $\beta_7 > 0$.

In modelling the effect of trade liberalization on import growth, the study estimates dynamic import demand functions relating import flows to relative price and domestic incomes.[12]

Another crucial issue for LDCs is the contribution of capital inflows, mainly in the form of aid, as was stated at the outset. The augmented import growth function, which accounts for the effects of trade liberalization and capital inflows, can be expressed as:

$$m_{it} = \alpha_i + \beta_1 pm_{it} + \beta_2 y_{it} + \beta_3 m_{t-1} + \beta_4 d_{it} + \beta_5 lib_{it} + \beta_6 aid_{it} + \varepsilon_{it} \quad (3)$$

Where α_i are country-specific effects; pm is the growth in relative prices; y is the growth in domestic (real) income; d_{it} is import duties; lib_{it} is a shift dummy variable for the years following significant liberalization; aid is the aid variable (where aid is measured as a ratio of nominal GDP); and ε_{it} the error term. The rest of the variables are as defined earlier, and we expect $\beta_1 < 0, \beta_2 > 0, 0 < \beta_3 < 1, \beta_4 < 0, \beta_5 > 0$ and β_6 to be determined. The detailed description of the variables is provided in the Appendix.

The slope dummy variables $y \times lib$ and $pm \times lib$ are also incorporated to capture the joint effects of the elimination of import distortion measures on income and price elasticities, respectively. The assumption is that trade liberalization has a significant impact not only on the autonomous growth of imports, but on their sensitivity to income and price

12 Other relevant studies on import demand and trade liberalization for developing countries include Boylan and Cuddy (1987); Mah (1999); Bertola and Faini (1991); Faini, Pritchett and Clavijo (1992), and Santos-Paulino (2002a).

variations as well.[13] Also, given the conditionality attached to financial assistance, which is highly dependent on the outcomes of policy reform, a slope dummy is also included to assess the direct impact of trade reforms on aid inflows as a share of GDP. Thus, the equation to be estimated is:

$$m_{it} = \alpha_i + \beta_1 pm_{it} + \beta_{2y_{it}} + \beta_3 m_{t-1} + \beta_4 d_{it} + \beta_5 lib_{it} + \beta_6 aid_{it}$$
$$+ \beta_7 (pm \times lib)_{it} + \beta_8 (y \times lib)_{it} + \beta_9 (aid \times lib) + \varepsilon_{it} \quad (4)$$

3.2 Panel data analysis and results

To test for the effects of trade liberalization on export growth, the relationships are estimated by the dynamic panel data model based on generalized methods of moments (GMM). The GMM controls for the endogeneity of other explanatory variables, and the instruments used are based on lagged values of the explanatory variables (Arellano 1993; Arellano and Bond 1998; Wooldridge 2001).

The results in Table 3 show that the price and income elasticities of exports are significant, but the price elasticity is very low. Low price elasticities, which do not comply with the 'small country' assumption of trade theory, are frequently found also in time series estimates (see Senhadji and Montenegro 1999; Perraton 2003); and there is not much difference between the short- and long-run elasticities. The impact of liberalization is positive and significant, and the effect of the removal of export duties is also significant in most cases. The slope variable suggests that export growth becomes more responsive to world income growth as liberalization takes place. The slope dummy ($px \times lib$) coefficient, although relatively small, indicates that the liberalization episode might improve the sensitivity of export performance to relative prices.

To look more closely at the impact of trade liberalization, a set of impulse dummies is included, where the liberalization indicator (d_1) indicates the impact of trade reform on export growth in the first year only, instead of an average post reform effect. The other impulse dummies (d_2 and d_3) pick up the impact of liberalization in subsequent years. The results reveal a relatively smaller lagged effect of trade liberalization on export growth in the first year following the reform, and then in the two years post reform.[14]

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[13] Melo and Vogt (1984) propose two hypotheses in this regard, which they tested for the case of Venezuela. First, they suggest that as the degree of import liberalization increases, the income elasticity of demand increases. Second, as economic development proceeds, the price elasticity of import demand also rises as the ability to substitute domestic production for imports becomes easier.

[14] A similar approach is undertaken by Greenaway, Morgan and Wright (2002) to analyse the relationship between trade liberalization and GDP growth in developing countries. Using a panel data analysis, and a set of different liberalization indicators, it is observed that liberalization does appear to have an impact on growth, albeit with a 'J-curve' type response.

Table 3
Trade liberalization impact on exports and imports (1970-2001)

Explanatory variables	Export growth (x_t)		Import growth (m_t)	
	(i)	(ii)	(iii)	(iv)
RER growth	-0.03 (3.33)**	-0.17 (2.20)*	-0.11 (3.39)**	-0.11 (3.33)**
Income growth	1.72 (5.02)**	1.72 (2.23)*	1.68 (4.18)**	1.66 (4.21)**
Lagged export/import growth	0.07 (0.92)	0.03 (0.39)	0.13 (1.03)	0.13 (1.07)
Duties	-0.19 (2.12)*	-0.13 (1.14)	-0.17 (1.67)ζ	-0.17 (1.87)ζ
Liberalization (Shift), *lib*	0.50 (5.15)**		1.06 (5.75)**	
Liberalization (impulse d_1)		0.17 (2.12)*		2.35 (10.60)**
Liberalization (impulse d_2)		0.09 (4.35)**		1.22 (4.37)**
Liberalization (impulse d_3)		0.02 (0.53)		0.07 (4.24)**
Slope dummy (*wy*×*lib*),(*y*×*lib*)	0.15 (5.05)**	0.84 (2.93)*	0.22 (4.23)**	0.22 (4.25)**
Slope dummy (*p*×*lib*)	-0.02 (2.94)*	-0.07 (2.25)*	-0.08 (0.96)	-0.12 (4.21)**
Long-run income elasticity	1.85	1.77	1.95	1.91
Long-run price elasticity	-0.003	-0.18	-0.13	-0.13
	Diagnostic statistics			
Omit *wy*×*lib*, *y*×*lib*	20.24**	25.51**	93.80**	25.20**
Wald test	[0.000]	[0.000]	[0.000]	[0.000]
Sargan test	[0.332]	[0.175]	[0.193]	[0.102]
1st-order serial correlation	[0.040]	[0.080]	[0.000]	[0.000]
2nd-order serial correlation	[0.179]	[0.201]	[0.695]	[0.513]
Number of observations	545	545	545	545

Notes:

1. Figures in parentheses ( ) are absolute t-ratios; figures in brackets [ ] are p-values. **, *, and ξ indicate that a coefficient is significant at the 1%, 5%, and 10% level, respectively.

2. Omit *y* × *lib*, *pm* × *lib* is the F-statistic for the omission of these two variables from the regression.

3. The **Wald** test is for the joint significance of the regressors. The **Sargan** test is of over-identifying restrictions, that is, for the validity of the set of instruments and is defined as Prob ($J > \chi^2_p$), where *p* is the number of over-identifying instruments. The tests for 1st and 2nd order of no serial correlation are asymptotically distributed as standard normal variables (see Arellano and Bond 1998, 2001). The p-values report the probability of rejecting the null hypothesis of serial correlation, where the first differencing will induce (MA1) serial correlation if the time-varying component of the error term in levels is a serially uncorrelated disturbance. 1st and 2nd order of no serial correlation tests are related to the lags of the instruments (i.e., t_{-1} and t_{-2}), where the instruments are the lagged values of the explanatory variables and the lagged dependent variable.

4. The estimations were performed by using the DPD model developed by Arellano and Bond (2001) Ox version 3.00 (Windows) for PcGive (C).

As far as the liberalization-imports tie is concerned, income elasticities are statistically significant, whilst the price elasticities are very small and statistically insignificant. Import tariffs have a marginal significant and negative impact on imports. The independent impact of trade liberalization as exposed by the shift dummy coefficients is statistically significant. Also, the positive links between liberalization and income growth is confirmed (see Table 3).

More interestingly, the lagged impact of trade liberalization is also apparent for imports. However, as in the case of exports, such an effect is relatively small if compare to the shift in the dependent variable as a result of liberalization. However, in the second and third years following the liberalization event, the direct impact of the reform increases.

Table 4
Trade liberalization and import performance: 1970-2001

	Import growth (m_t)	
Explanatory variables	(i)	(ii)
RER growth (*pm*)	-0.11 (4.82)**	-0.11 (4.91)**
Income growth	1.63 (5.99)**	1.63 (6.10)**
Lagged import growth (m_{t-1})	0.13 (1.50)	0.13 (1.56)
Import duties	-0.12 (2.09)*	-0.16 (2.25)*
Liberalization (Shift), *lib*	1.87 (5.94)**	
Aid growth	0.29 (4.29)**	0.31 (4.25)**
Liberalization (impulse d_1)		1.09 (3.47)**
Liberalization (impulse d_2)		0.04 (6.34)**
Liberalization (impulse d_3)		0.01 (6.14)**
Slope dummy *(y × lib)*	0.21 (6.05)**	0.22 (6.17)**
Slope dummy *(pm × lib)*	-0.12 (6.41)**	-0.03 (2.45)*
Slope dummy *(aid × lib)*	0.53 (4.44)**	0.16 (4.87)**
Long run-income elasticity	1.87	1.87
Long run-price elasticity	-0.13	-0.13
	Diagnostic statistics	
Omit (*aid × lib*)	49.20**	74.81**
Wald test	[0.000]	[0.000]
Sargan test	[0.892]	[0.176]
1st-order serial correlation	[0.020]	[0.000]
2nd-order serial correlation	[0.770]	[0.757]
Number of observations	545	545

Notes: See Table 3.

Table 4 incorporates the *aid* variables. The results corroborate previous findings. The statistically significant coefficients of the *aid* variable, which accounts for the official development assistance (ODA) and official aid received by the countries, confirm the positive impact of aid flows on imports. Also, the direct (and positive) impact of trade reforms on aid receipts is confirmed. However, this boost in import growth driven by the liberalization processes and the increase in capital inflows reinforce the concerns about the effect on the trade and current accounts of the balance of payments. These relationships would be assessed in the following section.

4 Trade liberalization, the trade balance and the current account

4.1 Empirical analysis specification

The effect of trade liberalization on the trade balance and the balance of payments is theoretically ambiguous. This theoretical ambiguity is also present at the empirical level, as demonstrated and discussed by Ostry and Rose (1992); UNCTAD (1999) and Santos-Paulino (2005).

In this study, the impact of liberalization on trade performance is measured in monetary terms because it is the nominal gap between imports and exports that measures a country's shortage of foreign exchange, and how much countries need to borrow to sustain growth if liberalization worsens the payments position (Santos-Paulino and Thirlwall 2004). The effect of trade liberalization on the trade balance and the balance of payments is quantified by estimating two equations which control for income and relative price changes, and which also include a separate terms of trade variable, given that changes in the price of exports and imports automatically affect the monetary value of trade flows, independent of liberalization. With this procedure it is also possible to separate the nominal and real (volume) effects of price changes on trade flows.

In order to investigate the impact of duty reductions and liberalization on the trade balance (*TB*) and the current account of the balance of payments (*CA*), both dependent variables are normalized by taking the trade balance and current account as a share of GDP. The equations are derived from standard export and import demand functions in which the growth of exports and of imports is a function of income and relative prices. As in the case of the import growth estimations, we include the aid inflows, measured by the official development assistance and aid receipts as a share of GDP. The basic estimating equations are:

$$TB/GDP_{it} = \beta_1 + \beta_2(TB) + \beta_3(w)_{it} + \beta_4(y)_{it} + \beta_5(p)_{it} + \beta_6(d_x)_{it} + \beta_7(d_m)_{it} + \beta_8(TOT)_{it} + \beta_9(lib)_{it} + \beta_{10}(y \times lib)_{it} + \beta_{11}(aid)_{it} + \beta_{12}(aid \times lib)_{it} + \varepsilon_{it} \quad (5)$$

and,

$$CA/GDP_{it} = \beta_1 + \beta_2(CA)_{t-1} + \beta_3(w)_{it} + \beta_4(y)_{it} + \beta_5(p)_{it} + \beta_6(d_x)_{it} + \beta_7(d_m)_{it} + \beta_8(TOT)_{it} + \beta_9(lib)_{it} + \beta_{10}(y \times lib)_{it} + \beta_{11}(aid)_{it} + \beta_{12}(aid \times lib)_{it} + \varepsilon_{it} \quad (6)$$

where TB_{t-1} and CA_{t-1} are lagged dependent variables; w is the growth of world income; y is the growth of domestic income; p is the rate of change of the real exchange rate; d_x is export duties as a share of total exports; d_m is import duties as a share of total imports; *TOT* the nominal ('pure') terms of trade, measured as the ratio of export to import prices; *lib* is a liberalization shift dummy; *aid* is the ratio of aid to GDP; and *y*×*lib* and *aid*×*lib* are the interaction (slope) dummy variables to take account of the impact that liberalization may have on growth and aid and, therefore, on the balance of payments. The expected signs of the coefficients are $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 (< 0)$, $\beta_6 < 0$ $\beta_7 > 0$ and $\beta_8 > 0$. The signs of the $p(\beta_5)$ $lib(\beta_9)$, $aid(\beta_{11})$ $y \times lib(\beta_{10})$ and *aid*×*lib* (β_{12}) coefficients are to be determined.

4.2 Estimations and results

Tables 5 and 6 present the results concerning the impact of trade liberalization on the trade balance and the current account. All explanatory variables affect the trade balance in the expected fashion. Specifically, world income growth has a significant positive effect; domestic income growth has a significant negative effect; the trade balance is positively related to the real exchange rate (although the impact is minimal), and the pure terms of trade effect is negative.

Reductions in export duties have significantly improved the trade balance, whereas a decline of import duties has deteriorated it. Furthermore, the process of trade liberalization seems to have worsened the trade balance. The findings also indicate that liberalization has improved growth performance, which has deteriorated the trade balance. Using a similar framework, Santos-Paulino and Thirlwall (2004) analyse the influence of trade liberalization on exports, imports and the balance of payments for a sample of developing and LDCs that have also liberalized in the context of structural adjustment and/or multilateral trade commitments. Their results uphold the observation that liberalization has stimulated export growth, but has raised import growth by more, leading to a worsening of the balance of trade and the balance of payments. However the authors do not assess the impact of foreign capital or aid, or how financial inflows might be influenced by the liberalization process.

The coefficients of the *aid* variable indicate that inflows are contributing to the financing of the trade deficits in our sample of countries. The impact of trade liberalization on the trade balance through aid is also positive and statistically significant. The impulse dummies confirm the 'J-curve type' effect of trade liberalization on the trade balance.

Turning to the current account of the balance of payments shown in Table 6, the results relate to those of the trade balance, indicating that trade liberalization has also worsened the current account for our sample of countries. However, the marginal impacts of export and import duties on the current account balance are smaller than those of the policy reform. The current account balances comprise not only goods and services but also other current transactions such as interest payments and profit flows. However, these items have more to do with financial liberalization, and have no systematic relation with export and import behaviour. The coefficients of the aid variable and aid slope dummies are also statistically significant, confirming that capital inflows have

helped to fund the deficits generated by liberalization, and making it easier also to adjust the current account to a sustainable level.

Table 5
Trade liberalization and the trade balance, 1970-2001

Explanatory variables	Dependent variable: trade balance/GDP (tb)			
	(i)	(ii)	(iii)	(iv)
Lagged trade balance ratio (tb_{-1})	0.98 (5.80)**	0.97 (5.70)**	0.98 (5.69)**	0.97 (6.83)**
World income growth (w)	0.23 (2.59)*	0.31 (2.73)*	0.16 (2.39)*	0.31 (2.77)*
Income growth (y)	-0.21 (3.14)**	-0.20 (2.50)*	-0.26 (2.26)*	-0.29 (2.63)*
RER growth (p)	-0.01 (0.96)		-0.01 (0.89)	
Export duties (d_x)	-0.10 (0.29)	-0.18 (0.14)	-0.13 (1.16)	-0.24 (0.31)
Import duties (d_m)	0.13 (0.35)	0.15 (0.48)	0.19 (0.27)	0.16 (0.15)
Liberalization (shift, lib)	-4.01 (2.07)*	-1.30 (3.21)**		
Liberalization (impulse d_1)			-1.55 (2.21)*	-1.10 (1.29)
Liberalization (impulse d_2)			-0.41 (2.25)*	-0.05 (2.34)*
Liberalization (impulse d_3)			-0.01 (0.44)	-0.02 (1.31)
Aid (Aid/GDP)	0.71 (2.58)*	0.95 (2.23)*	0.67 (2.54)*	0.81 (2.27)*
$y*lib$	-0.09 (2.04)*	-0.33 (2.91)*	-0.23 (2.17)*	-0.19 (2.82)*
*Aid*lib*	0.68 (1.17)	0.13 (2.72)*	0.16 (2.25)*	0.13 (2.83)*
TOT		-0.09 (1.12)		0.01 (0.39)
	Diagnostic statistics			
Wald test	[0.000]	[0.000]	[0.000]	[0.000]
Sargan test	[0.368]	[0.438]	[0.853]	[0.391]
1st-order serial correlation	[0.000]	[0.000]	[0.000]	[0.000]
2nd-order serial correlation	[0.249]	[0.166]	[0.248]	[0.163]
Number of observations	545	545	545	545

Notes: See Table 3.

Table 6
Trade liberalization and the current account, 1970-2001

Explanatory variables	Dependent variable: current account/GDP (*ca*)			
	(i)	(ii)	(iii)	(iv)
Current account ratio (ca_{t-1})	0.63 (8.19)**	0.33 (4.60)**	0.63 (3.26)**	0.33 (4.69)**
World income growth (w)	0.42 (2.28)*	0.86 (2.55)*	0.42 (2.29)*	0.80 (2.51)*
Income growth (y)	-0.18 (2.39)*	-0.18 (2.89)*	-0.18 (2.67)*	-0.18 (2.05)*
RER growth (p)	-0.004 (1.39)		-0.004 (1.37)	
Export duties (d_x)	-0.01 (0.38)	-0.02 (0.94)	-0.01 (0.23)	-0.02 (2.32)*
Import duties (d_m)	0.01 (0.33)	0.02 (1.63)	0.01 (0.37)	0.06 (1.68)ζ
Liberalization (shift, lib)	-0.70 (2.77)*	-1.98 (2.27)*		
Liberalization (impulse d_1)			-0.80 (2.67)*	-0.97 (5.08)**
Liberalization (impulse d_2)			-0.61 (2.04)*	-1.05 (3.08)**
Liberalization (impulse d_3)			0.81 (2.50)*	0.31 (3.64)**
Aid (Aid/GDP)	0.14 (4.37)**	0.30 (2.47)*	0.17 (3.49)**	0.16 (2.32)**
$y*lib$	-0.28 (1.78)ζ	-0.55 (2.88)**	-0.28 (1.78)ζ	-0.41 (2.90)*
*Aid*lib*	0.22 (2.84)**	0.14 (1.96)ζ	0.22 (7.87)**	0.19 (1.98)*
TOT		-0.02 (2.70)*		-0.02 (2.63)*
	Diagnostic statistics			
Wald test	[0.000]	[0.000]	[0.000]	[0.000]
Sargan test	[0.189]	[0.282]	[0.511]	[0.285]
1st-order serial correlation	[0.000]	[0.000]	[0.000]	[0.000]
2nd-order serial correlation	[0.400]	[0.200]	[0.399]	[0.199]
Number of observations	545	545	545	545

Notes: See Table 3.

4 Conclusion

Overall, the paper's findings have important policy implications, particularly the higher import growth in contrast with the more modest export growth following trade liberalization. It raises the issue of the sequencing of the liberalization of exports and imports, that is, import liberalization should be appropriately sequenced or combined

with effective measures designed to improve competitiveness and to promote exports. The lack of an appropriate combination of domestic policies and liberalization—both trade and financial—was one of the main factors behind the balance of payment crises affecting developing countries in the early 1980s, as Khan and Zahler (1985) note. Moreover, the fact that the impact of trade liberalization on import growth is higher than its effect on export growth implies that the shift to a liberalized trade regime exacerbates aid dependence and, to the extent that aid is not provided in grants and is not building up trade capacity, it has increased the likelihood of another debt crises in the future, as well as the problem of sustainable financing of the trade deficit.

The financing and sustainability of the trade account deficit in the reforming countries will depend not only on the outcome of trade liberalization, but on other macroeconomic policies (particularly those that influence demand), developments in the real exchange rate and the inflows of foreign capital. With regard to the financing of the trade deficit, financial liberalization could be a vehicle to ensure such financing, because this would help to attract foreign capital in search of high returns, allowing them to increase their investment (in relation to savings) without running into payments constraints. Also, a higher flow of foreign direct investment would further accelerate growth not only by supplementing domestic resources for capital accumulation, but also through technological transfers and knowledge.

The results concerning the current account effects of liberalization indicate that the countries under review have had difficulties in financing the foreign exchange consequences of trade policy reform, and have had to adjust their economies according to the level of sustainable capital inflows (e.g., foreign aid or official development assistance). On the other hand, the liberalization of the capital account, intended mostly to mobilize private external financing, could have also affected the management of foreign exchange and henceforth the overall payments positions of the countries. Instability in financial flows and the resulting misalignments and fluctuations of exchange rates worsen payments difficulties by discouraging investment in traded-goods industries. Thus, capital flows could widen the resource gap through their adverse effects on exchange rates, imports and exports, rather than being driven by the requirements of the current account.

Appendix: Data definitions and sources

Aid (*aid*): Official development assistance and official aid. Source: World Bank (2002).

Aid (*aid/GDP*): Official development assistance and official aid (current US$) as a share of nominal GDP. Source: World Bank (2002).

Export growth (x): Exports of Goods and Services; annual percentage growth constant 1995 US$). Source: World Bank (2002).

Export duties (d_x): Export duties (per cent of exports); includes all levies collected on goods at the point of export. Source: World Bank (2002).

Import duties (d_m): Import duties (per cent of imports). Import duties comprise all levies collected on goods at the point of entry into the country. They include levies for revenue purposes or import protection, whether on a specific or ad-valorem basis, providing they are restricted to imported products. Data are shown for central government only. Source: World Bank (2002).

Rate of change of relative prices (p_x and p_m) used in the export and import demand functions is measured by the real exchange rate (RER) defined as $\left(EP_d / P_f \right)$, where E is the nominal exchange rate measured as the foreign price of domestic currency and $\left(P_d / P_f \right)$ is the ratio of domestic to foreign prices. Source: World Bank (2002) and IMF's *International Financial Statistics* (various issues).

Import growth (m): Imports of Goods and Services; annual percentage growth (constant 1995 US$). Source: World Bank (2002).

Income growth (y): GDP; annual percentage growth (constant 1995 US$). Source: World Bank (2002).

World income growth (w): World GDP; annual percentage growth (constant 1995 US$). Source: World Bank (2002). The activity variable is defined as the difference between world GDP and country GDP, that is:

$$WY_i = WorldGDP - GDP_i \ .$$

Appendix Table A1
Trade and exchange rate liberalization policies

Bangladesh	1980	-	The Foreign Private Investment Act was adopted, containing provisions for non-discrimination of FDI against domestic investment.
	1985-86	-	Implementation of a SAF programme, aimed at rationalizing tariffs and other import taxes, eliminating import prohibitions and other restrictions.
	1991	-	Replacement of the positive lists of imports by a negative one. Incentives to support export promotion programmes such as bonded warehouse facilities and a duty drawback scheme were introduced
	1991-92	-	A new industrial policy was adopted, aimed at promoting liberalization and private sector development. It also provided priority treatment for export-oriented industries.
	1994	-	The tariff regime was rationalized and simplified: the number of bands was decreased from 15 to 5 and the maximum rate from 300 to 37.5%.
	1997-99	-	Tax incentives were introduced to attract FDI. The multiple sales tax was replaced by a 15% VAT levied on imports and domestically produced goods.
		-	The exchange rate was unified and the foreign account holdings liberalized.
		-	The taka became convertible internationally.
		-	Additional reductions of QRs and tariffs. Trade liberalization was continued.
Benin	1991	-	The tariff reforms decreased the number of taxes levied on imports to two, and the range of duty rate contracted from 15 to 5.
		-	A VAT of 18% was introduced.
	1994	-	Benin joined WAEMU.
		-	The tariffs on all products originated within the Community member states were eliminated and import tariffs with respect to non-WAEMU countries were reduced.
		-	The CFA franc was devalued against the French franc.
Burundi	2002-03	-	Simplification of the import licensing process.
		-	The tariff scheme was simplified and the number of bands reduced to four. The maximum import tax rate was decreased. A simplification of the custom procedures was also undertaken.
		-	Exchange rate devaluation.
Gambia	1985	-	The government strategy changed in favour of export-oriented type of policies. This had been preceded by a devaluation of the exchange rate.
		-	Abolition of licensing and quotas.
	1998	-	The tariff scheme was simplified. Only four bands were used and the maximum rate was lowered to 18%.
Guinea	1985-86	-	Progressive trade liberalization comprising the elimination of QRs on most products, and reduction of import duties. Export restrictions and licences were abolished on the majority of products.
		-	A monetary reform introduced a new currency.
		-	Elimination of State Marketing Boards.
		-	Price controls were gradually streamlined and only oil products were regulated.
		-	The Guinean Franc was launched.

Appendix Table A1 continues

Appendix Table A1 (con't)
Trade and exchange rate liberalization policies

Guinea (con't)	1991	-	An Enhanced SAP with the IMF was signed. Structural reforms re-started.
		-	Tax advantages were given to exporting firms
	1993	-	The banking sector was liberalized
	1996	-	A VAT of 18% was levied on imports of local products.
	1997	-	The exchange rate became market determined, and an inter-bank rate was created.
Lesotho	1984	-	The Customs and Excise Act gave effect to tariff policy under the SACU agreement with common customs and excise duties on goods imported from third countries set by S. Africa as well as duty-free circulation of goods within SACU.
	1988	-	A SAP was implemented. It included public sector reform, investment incentives and a reform in the tax system.
	1994	-	Tariff efforts were accelerate by South Africa, consequently the average common tariff rate was reduced. Agricultural price controls were liberalized and state monopolies privatized.
		-	QRs were dismantled.
	1995-96	-	The dual exchange rate system was abolished, and the privatization programme was launched. A sharp depreciation of the US dollar following the South African rand.
	2000	-	The Trade Cooperation and Development Agreement was signed between SACU and the EU. SACU tariff rates rat o be reduced to half the bound rates over 8 years.
	2001	-	Tariff reduction agreement between SACU and the US.
Madagascar	1982	-	The economic reforms started to be implemented gradually.
	1988	-	All non-tariff barriers were eliminated and replaced by ad-valorem rates. On the same year the Malagasy franc was devalued and then pegged to a currency basket.
	1999	-	The tariff schedule was simplified and the number of bands decreased from six to four.
		-	The maximum rate decreased to 30%.
		-	With some exceptions, all export duties have been eliminated.
Malawi	1988-89	-	An SAP was introduced, under which the tariff schedule was unified, and duty rates on imports started to be lowered.
		-	The exchange rate was devalued by 15% against the currency basket and exchange controls started to be relaxed.
		-	Export promotion activities were introduced, including tax allowance and duty drawback schemes, technical assistance and transport subsidies.
	1991	-	The Investment Promotion Act was introduced to facilitate domestic and foreign investment (ratified in 1998).
		-	A negative list of imports requiring foreign exchange approval was introduced (and abolished in 1994).
	1994-95	-	Export processing zones started to be developed.
	1996-97	-	State-owned enterprises started to be privatized.
		-	Most non-tariff barriers were removed, including licensing requirements and quotas. The maximum rates were lowered to 35%, and tariffs on raw materials used in manufacturing eliminated.
		-	An integrated trade and industrial policy was adopted to stimulate the private sector, including the reduction of corporate taxes.
		-	Exports taxes and foreign exchange rationing were removed.

Appendix Table A1 continues

Appendix Table A1 (con't)
Trade and exchange rate liberalization policies

Malawi (con't)	2000-01	-	A Free Trade Area with other COMESA members was created.
		-	The Trade Protocol establishing SADC-free trade area was signed. Although most non-tariff measures were eliminated, new ad hoc measures were introduced.
Mauritania	1992	-	Overall economic reforms and trade liberalization started. Reforms included prices liberalization, exchange rate liberalization, and privatization of state enterprises.
		-	Elimination of most non-tariff barriers and constraints on capital movements.
	2000	-	The tariff rates were decreased and the schedule was rationalized.
		-	The number of rates decreased to four and the maximum duty reduced from 30 to 20%.
Mozambique	1987	-	The Economic Rehabilitation Programme was introduced to start the liberalization of the economy.
		-	The privatization of the majority of state-owned enterprises was accomplished by 1999.
	1990	-	The export promotion institute was created to sponsor exports.
	1992	-	The majority of QRs and exchange controls were eased and/or eliminated. The tariff schedule was simplified and the number of bands reduced.
		-	Export registration requirements and licenses were removed.
		-	Foreign exchange controls were eliminated.
	1999	-	A VAT of 17% was introduced, replacing the turnover and consumption taxes. Corporate and personal income taxes were reduced.
		-	The Mozambican Stock Exchange rate was created.
		-	All tariffs were bound to current rates.
	2000-01	-	Preferential tariff treatment was granted to all members of SADC.
		-	The tariff structure was simplified once more, and the maximum rate was reduced from 30 to 25%.
Nepal	1986	-	The launching of the SAP allowed for a large tariff structure rationalization as well as duty reductions.
		-	An import license auction system for the liberalization and facilitation of exports was introduced.
		-	QRs and import licenses were eliminated, and major market oriented policies were adopted.
		-	The new Foreign Investment and Technology Transfer Act and the Industrial Enterprises Act came into force, facilitating the creation of new enterprises.
Senegal	1986	-	The long-term structural adjustment plan dictated a fall and a harmonization of the tariff rates. It also established the elimination of many non-tariff measures and import licensing. The agricultural sector was deregulated and the state enterprises started to be privatized.
		-	After the introduction of minimum customs tax assessments, a greater use of reference prices, and an increase in the custom duties, the effective rate of protection increased in 1989.
	1994	-	The tariffs on all products originated within the Community member states were eliminated and import tariffs with respect to non-WAEMU countries were reduced.
		-	In the same year, the CFA franc was devalued against the French franc.

Appendix Table A1 continues

Appendix Table A1 (con't)
Trade and exchange rate liberalization policies

Tanzania	1986	-	The Economic Recovery Programme of 1986 liberalized the exchange rate system and eliminate foreign exchange controls. Efforts were undertaken to decrease government control over the economy as well as to encourage private sector activities.
		-	The real exchange rate started to depreciate.
	1999	-	The import duty reform simplified the tariff structure implementing a five-tier tariff structure. The highest tariff rate of 30% was eliminated.
		-	Export taxes were abolished.
Togo	1988	-	The SAP included measures aimed at reforming the public sector, dismantling the majority of QRs, and eliminating the export licenses for the local industrial products.
	1994	-	The tariffs on all products originated within the Community member states started to be eliminated and import tariffs with respect to non-WAEMU countries were reduced.
		-	The CFA franc was devalued against the French franc.
	1996	-	Import licenses as well as export monopolies of the base products were eliminated.
Uganda	1987	-	The Economic Recovery Programme started the elimination of QRs and the liberalization of export monopolies. Import and export licenses were granted to private firms.
		-	The exchange rate was devalued by around 70% and the exchange rate regime was reformed.
		-	FDI started to be promoted.
Zambia	1991-92	-	The adoption of the three-year SAP included the privatization of state-owned enterprises, the phasing out of non-tariff barriers and a simplification of the tariff regime (the tariff categories were reduced from 12 to 4) and planning for a gradual lowering of the tariff rates.

Note: COMESA: Common Market for Eastern and Southern Africa;
QRs: quantitative restrictions;
SACU: South African Currency Union;
SADC: Southern Africa Development Community;
SAF: Structural Adjustment Facility;
SAP: Structural Adjustment Programme;
VAT: value added tax;
WAEMU: West African Economic and Monetary Union.

Source: Borgatti (2003); Santos-Paulino and Thirlwall (2004), and WTO *Trade Policy Review* (various issues).

Appendix Table A2
Initial overall rating and targeted change in trade policy restrictiveness rating
in selected least and developing countries

Country/agreement	Initial overall rating	Targeted overall change	Targeted NTB change	Targeted tariff change	Final overall rating
LDCs					
Mozambique (1990) ESAF	**10**	-4	-1	-2	**6**
Zimbabwe (1992) ESAF, EFF	**10**	-4	-1	-2	**6**
Burkina Faso (1993) SAF	**10**	-3	-1	0	**7**
Bangladesh (1990) ESAF	**10**	-2	-1	0	**8**
Ethiopia (1992) SAF	**10**	-2	-1	0	**8**
Burkina Faso* I (1991) ESAF	**10**	0	0	0	**10**
Tanzania (1991) ESAF	**9**	-4	-1	-1	**5**
Mauritania* (1992) ESAF	**9**	0	0	0	**9**
Mali (1992) ESAF	**8**	-3	-1	0	**5**
Lesotho* (1991) ESAF	**8**	0	0	0	**8**
Nepal (1992) ESAF	**7**	-4	-1	-1	**3**
Zambia (1992) ESAF	**7**	-3	-1	0	**4**
Benin* (1993) ESAF	**6**	-3	-1	0	**6**
Developing countries					
Comoros (1991) SAF	**10**	-2	-1	0	**8**
Guyana (1990) ESAF	**10**	-2	0	-2	**8**
Jordan* (1992) SB	**10**	0	0	0	**10**
Panama* (1992) SB	**8**	-4	-1	-1	**8**
Philippines* (1991) SB	**8**	0	0	0	**8**
Sri Lanka (1991) ESAF	**7**	-5	-1	-2	**2**
Equatorial Guinea (1993) ESAF	**5**	-2	0	-2	**3**
Argentina (1992) EFF	**5**	0	0	0	**4**
Sierra Leone (1992) ESAF	**5**	0	0	0	**4**
Jamaica (1992) EFF	**4**	-1	0	-1	**3**
Mongolia* (1993) ESAF	**3**	0	0	0	**3**
Peru* (1993) EFF	**3**	0	0	0	**3**

Notes: Each programme's effectiveness date is indicated in parenthesis. The classification scheme for Overall Trade Restrictiveness is a combined index, which includes tariff and non-tariff barriers. The index ranks from 1 to 10, where 1 is the more open category and 10 is considered as restrictive. EFF means extended fund facility; SAF: structural adjustment facility; ESAF: enhanced structural adjustment facility; SB: stand-by agreement.

* Indicates that the country did not change (i.e., reduced) trade policy restrictiveness from the initial to the final overall rating.

Source: Santos-Paulino (2005).

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