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ABSTRACT

Since the late 1980s, almost all Latin American countries have gone through a process of far-reaching economic reforms, featuring in particular trade, financial and capital account liberalization. Economic opening has gone hand in hand with large financial inflows, particularly in the first half of the 1990s. Increased openness has brought new sources of economic growth but it has also increased volatility and sensitivity to external shocks. At first the reforms seemed to be working as promised. Economic growth increased, inflation declined and there was a big surge in foreign capital inflows. But somewhere around 1995 or thereabouts, growth faltered, particularly in the countries of South America. So did exports.They had been expected to be the leading sector in the post reform growth model, but unlike the Asian experience export-led growth in Latin America has proved so far to be anything but a development miracle.

This paper analyzes growth trends and the vulnerability to external shocks of the countries in Latin America and the Caribbean over almost a quarter of a century since 1980.[1] It is shown that as a consequence of the process of economic opening to world markets, growth has become export-led in virtually all countries of the region. However, unlike the experience with export-led growth in East Asia, Latin America's new growth strategy seems to come with a number of less virtuous characteristics. *First*, while more reliant on exports, economic growth did not significantly increase after trade opening. Instead, growth slowed down and economic performance was worse in the second half of the 1990s as compared to the first and most countries slipped to negative per capita income growth at the turn of the century. *Second*, vulnerability to fluctuations in global commodity markets (i.e. terms-of-trade shocks and volatility in global demand) remains high and is a first indication of insufficient diversification of trade. This vulnerability to trade shocks cannot by itself explain the dismal growth performance, as in fact for most countries terms of trade and world demand for their exports improved during the 1990s.

Third, for most countries of the region export growth has been below that of world trade, implying lower export penetration in global markets as a result of losses in competitiveness. At the same time, import dependence has risen more strongly than

[1] The authors are grateful to Sandra van Ginhoven and Leandro Serino for excellent research assistance.

the capacity to export. As a result, capital flows have become more important to sustain a growth path built on this paradoxical combination of increasing reliance on exports and a structural rise in the trade deficit. Capital flows in turn have both initiated (to the extent exogenous) and reinforced this pattern by pushing up real exchange rates, cheapening imports and squeezing profits for exporters in the short run. As capital flows themselves have been volatile, to a large part for reasons exogenous to economic conditions of the countries of the region, macroeconomic adjustment has become more difficult to steer and resulting in short-lived booms as access to foreign borrowing eases and demand deflation as it contracts with important implications for employment and wages. The impact of economic reforms, such as further trade liberalization in the context of WTO or the Free Trade Area for the Americas therefore must be studied in conjunction with such macroeconomic constraints.

CONTENTS

1 INTRODUCTION

For most Latin American countries, the 1990s have turned out to be a disappointment. Almost all of them adopted the reforms of the Washington consensus on the promise these would yield efficiency and hence welfare gains. They controlled inflation, sold off state enterprises, lowered tariffs, opened their capital markets, reformed their tax systems, deregulated financial markets and lowered government deficits. In most cases these reforms were implemented in the late 1980s and early 1990s. Things seemed to be going well in the initial post-liberalization phase, prior to the Tequila Crisis in 1995. Growth rates were much higher than they had been in the 1980s, and for some countries were even higher than they had been in the long period between World War II and the debt crisis. Things were expected to get even better in the following years since in many countries the reforms had only recently been adopted and since it takes time to reap their full benefits.

But it is not working out that way for most of the countries in the region. Instead of accelerating, growth has decelerated, especially in the countries of South America. Overall average per capita income growth in the region between 1990 and 1995 was 1.8% per year (table 1). That rate fell to 1.4% per year between 1995 and 2000 and further down to 0.6% in 1999-2001. Only a few countries (Dominican Republic, Haiti, Mexico, Nicaragua and Suriname) did better in the last five years than they did in the first five of the decade. However, also these countries saw a steep fall in growth rates towards the end of the decade and into the twenty-first century. About half of the countries listed in table 1 saw average incomes decline during 1999-2001.

This deceleration of growth is particularly pronounced in South America. In the first half of the 1990s, per capita growth in South America averaged 2.5% per year, while it came to a complete stop in Mexico and Central America, which is almost entirely explained by Mexico's poor growth performance up to the Tequila crisis. However, in the second half of the decade, when the reforms were supposed to bear fruit, growth in South America dropped to 0.8% per year and turned negative around the turn of the century. In Mexico, Central America and the Caribbean growth recovered to a respectable 3.6% per year during 1995-2000, but with a significant slowdown towards the end of the decade.

While disappointing, the growth performance during the final years of the century was still better than the lost decade of the 1980s when nearly all countries in the region suffered negative per capita income growth. However, the recent growth performance has been much worse, in South America in particular, than during the heydays of the import substitution policies of the 1960s and 1970s. This dismal performance is characterized though by significant differences between countries, substantial volatility and recurrent crises in a growing number of countries. Defining years of crises as cases of negative per capita income growth, there were 16 out of 23 countries with two or more years of crisis during 1995–2001, including Argentina, Paraguay and Jamaica which have been in an almost permanent state of crisis since 1995 and Bolivia, Colombia, Ecuador, Peru, Uruguay and Venezuela with three crisis years in the period. The South American countries were in recession more than half (52%) of the time between 1995 and 2001. In Mexico, Central America and the Caribbean the comparable figure was 26%, or, excluding Jamaica, one-fifth the time. For most of the region matters have not improved since 2000 as marked by the severe deepening of the crises in Argentina, Uruguay, and Venezuela and the emergence of a recession in Mexico and much of Central America and the Caribbean following the slowdown of the US economy and a steep decline in maquila industry activity.

In thinking about growth rates or evaluating country performance, it is appropriate to compare current with past performance avoiding periods of extreme volatility. One is looking for estimates of long term growth rates, which one cannot obtain from periods of recession and recovery. For Latin America that suggests a comparison of growth in the 1990s with growth in the twenty-year period prior to the debt crisis (figure 1a). Eight of the twenty-three countries significantly improved their performance (Argentina, Chile, Costa Rica, Dominican Republic, Guyana, El Salvador, Peru, and Uruguay). Growth rates in Bolivia and Nicaragua are about the same and the rest of the countries are doing worse or much worse than they used to do. If one looks at just the last five years, there are only three countries (Dominican Republic, Mexico and Nicaragua) whose performance has been significantly better than the base period and twelve (Argentina, Chile, Colombia, Ecuador, El Salvador, Guyana, Jamaica, Panama, Paraguay, Peru, Uruguay and Venezuela) for which per

capita growth during 1995-2000 was at least two percentage points per year below the base period (see figure 1b).[2]

TABLE 1
Latin America: growth, volatility and recession

	GDP pc growth rates						Volatility[1]			Recession years (#)
	1960-80	1980-85	1985-90	1990-95	1995-2000	1999-2001[3]	1960's and 70's	1980s	1990s	(1995-2001)[2]
Argentina	1.8%	-4.0%	-5.8%	5.1%	1.3%	-3.8%	4.8	5.5	5.7	**4**
Bolivia	1.0%	-3.8%	-3.8%	1.6%	1.0%	-0.5%	4.3	2.7	1.6	**3**
Brazil	4.6%	-1.0%	-0.8%	1.6%	0.9%	1.6%	3.7	4.7	3.0	**2**
Chile	1.5%	-0.7%	4.3%	6.9%	2.9%	2.3%	5.0	6.3	3.5	**1**
Colombia	2.7%	0.1%	2.6%	2.5%	-1.0%	0.2%	1.7	1.6	2.7	**3**
Costa Rica	2.4%	-2.6%	-1.0%	3.0%	2.8%	-0.5%	2.6	4.4	2.8	**2**
Cuba					4.2%	5.4%				**0**
Dominican Republic	3.4%	-0.2%	0.7%	2.4%	5.8%	3.3%	6.9	2.9	4.2	**0**
Ecuador	3.5%	-0.6%	-0.9%	1.2%	-1.9%	2.0%	5.1	4.4	3.1	**3**
El Salvador	1.0%	-3.5%	-2.9%	4.0%	1.0%	0.0%	3.0	5.5	1.9	**2**
Guatemala	2.8%	-3.6%	-3.2%	1.6%	1.2%	0.2%	1.9	2.7	0.7	**1**
Guyana	1.0%	-4.2%	-5.9%	6.8%	2.2%	-0.6%	5.5	4.9	4.2	**2**
Haiti	0.5%	-2.8%	-4.5%	-5.2%	0.0%	-2.2%	4.3	2.9	5.4	**3**
Honduras	1.8%	-1.5%	-1.4%	0.6%	0.2%	1.2%	3.1	2.6	2.7	**1**
Jamaica	0.6%	-1.5%	2.6%	0.3%	-1.4%	-0.5%	5.6	4.6	2.0	**5**
Mexico	3.5%	-0.3%	-0.6%	-0.3%	3.9%	1.6%	2.3	4.3	3.6	**2**
Nicaragua	0.3%	-2.4%	-7.8%	-1.5%	3.2%	3.0%	8.6	4.8	3.2	**0**
Panama	3.1%	1.3%	-1.4%	3.6%	1.8%	-0.2%	2.9	6.1	2.5	**1**
Paraguay	3.8%	-1.3%	-0.6%	0.5%	-1.9%	-1.3%	2.7	5.3	1.6	**5**
Peru	1.6%	-2.0%	-5.8%	3.7%	0.8%	0.0%	2.6	8.0	4.9	**3**
Suriname		-2.9%	-3.3%	0.5%	2.9%	-2.0%		8.8	7.6	**2**
Uruguay	1.5%	-4.4%	-1.3%	3.2%	1.4%	-3.0%	2.8	6.5	3.7	**4**
Venezuela, RB	0.4%	-3.4%	-3.4%	1.1%	-1.4%	1.0%	3.0	4.8	4.4	**3**
Weighted averages										
Latin America and Caribbean	2.8%	-1.4%	-1.6%	1.8%	1.4%	0.6%	1.60	2.56	2.03	**3**
South America	2.7%	-1.9%	-1.9%	2.5%	0.8%	0.1%	2.06	3.43	2.49	**3**
Central Am., Mexico & Carribean (excl. Cuba)[4]	3.2%	-0.5%	-0.9%	0.0%	3.6%	1.5%	1.73	3.58	3.07	**2**
Unweighted averages										
Latin America and Caribbean	2.0%	-2.1%	-2.0%	2.0%	1.3%	0.3%	0.99	2.05	1.23	**2**
South America	2.2%	-2.1%	-1.6%	2.7%	0.2%	-0.2%	1.15	3.09	2.20	**2**
Central Am, Mexico & Carribean (excl. Cuba)[4]	1.8%	-2.0%	-2.4%	1.3%	2.1%	0.7%	1.50	1.70	1.04	**0**

Source: World Bank data.

Notes: 1. Volatility defined as standard deviation of per capita income growth rates.
2. Number of recession years in period. Recession defined as year of negative per capita income growth.
3. For Cuba period refers to 1999-2000.
4. Sub-region also includes Suriname and Guyana.

[2] Actually four, if we include Haiti, which had no per capita income growth during 1995-2000, but

Latin America clearly remains a very volatile region as compared to most other parts of the world (IDB 1995, Rodrik 1999, De Ferranti et al. 2000). The above description of patterns confirms such volatility. However, in terms of growth performance it is not true that volatility has increased during the 1990s. As table 1 shows, volatility (defined as the standard deviation of the per capita income growth rate) in the 1990s was somewhat lower than during the 1980s though generally higher than during the period of high growth of the 1960s and 1970s.

FIGURE 1A
Growth performance in the 1990s compared to 1960-1980

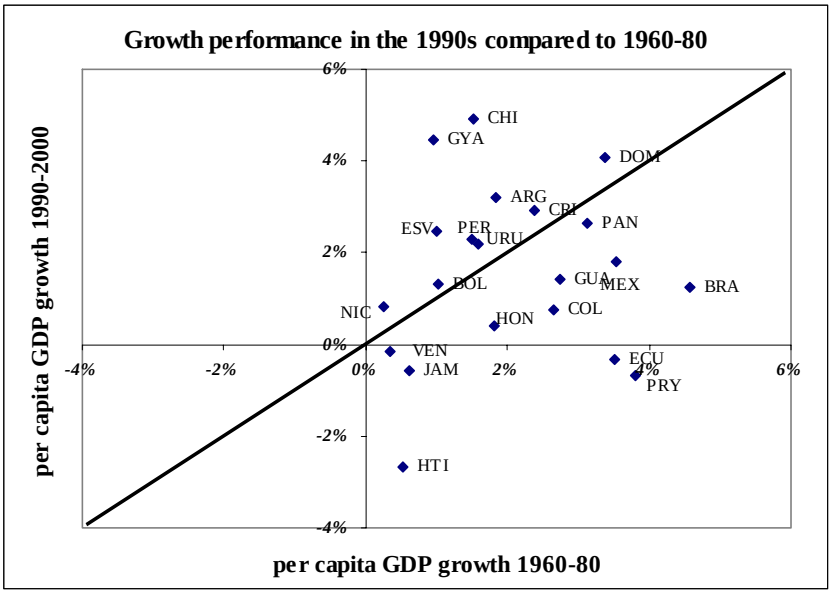
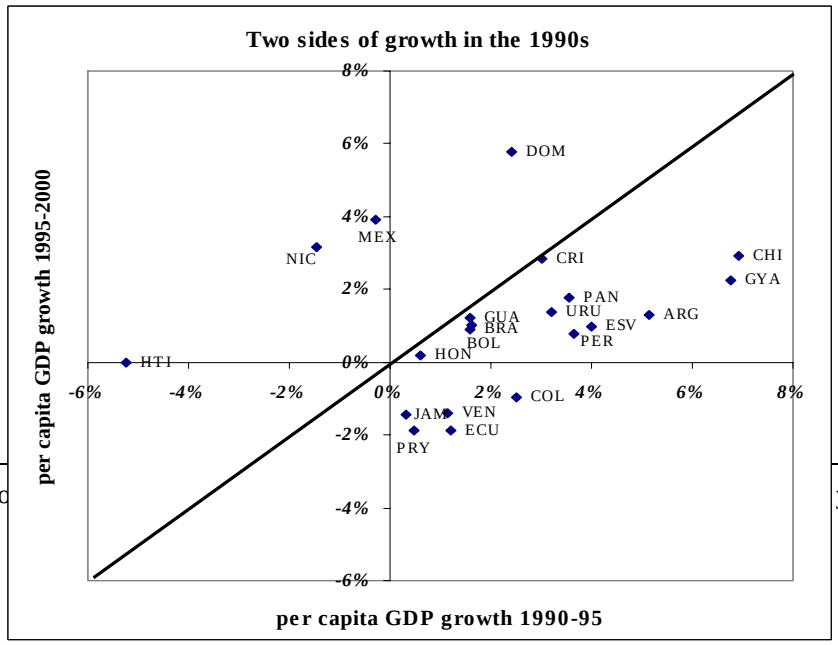


FIGURE 1B
Bright and dark sides of growth in the 1990s



stopped the do year.

In short, at least since 1995 already something seems to have gone wrong, especially in South America, and throughout the region since 2000. What could it be? There are plenty of alternative candidates. It could be that the investment rate has never recovered from the decline it suffered in the 1980s. In that case the growth rate would be lower simply because the growth rate of fixed capital is lower. It could also be that the sharp reduction in the protection of import substitutes has reduced the domestic production of tradable by more than the hoped for expansion of exports has increased it. It could also be that the international environment is now less favourable than it used to be in the 1950-80 period or than it was earlier in the 1990s. Reductions in capital flows after the Tequila Crisis in 1995 and the East Asia financial crisis in 1998 coupled with falling world prices for commodities all may be having a negative impact on the prospects and growth of Latin America. Finally, the effect on growth of the reforms themselves could be perverse. We now consider each of these possibilities.

2 BAD LUCK? EXTERNAL SHOCKS DURING THE 1990S.

2.1 A changing external outlook

The growth strategy of Latin American countries during the 1980s and 1990s is analysed through the economies' performance, taking into account external shocks and the domestic responses as factors of the current account deficit trends.[3] The objective of the present analysis is to identify the nature of the shocks experimented by Latin American countries during the 1980s and 1990s, to compare the different experiences of these countries, and to assess the relationship between external shocks and domestic macroeconomic adjustment. This section concentrates on the nature and size of the external shocks.

The analytical distinction between external shocks and domestic response as causal factors in current account deficits and external debt accumulation has been central to the debates on structural adjustment and economic reforms in developing

[3] The countries under analysis are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Peru, Uruguay and Venezuela. Cuba could not be included due to lack of macroeconomic data for the period at large and Jamaica was excluded for a lack of consistency in the series.

countries. The exogenous and endogenous factors typically show a complex interaction, more complex than standard textbook approaches to macroeconomic adjustment typically assume. Our aim here is to identify the nature of the shocks and their relative size through fairly straightforward and standard decomposition analysis. The same methodology also allows us to assess how key macroeconomic aggregates have responded to changes in the external environment.

The economic reforms of the 1980s and 1990s have led to greater openness and hence one could expect greater sensitivity to shocks emanating from the global economy. However, at the same time, the reforms should be expected to have shifted the economies of the rest of the region towards more competitive and diversified export sectors reducing the traditional sensitivity to terms-of-trade shocks caused by the region's heavy reliance on primary exports. Further, the financial opening process would make capital flows more endogenous to domestic market conditions and flow into more diversified portfolios.

The aggregate picture suggest substantially greater export openness of the Latin American economies, with the region's export share in GDP doubling from about 9 to 20% between 1980 and 2000. The export structure also appear to have become more diversified, reducing the heavy reliance on primary exports in favour of non-traditional manufactures (Figure 2a). However, this outcome is strongly influenced by Mexico's performance, which showed the largest shift away from primary-export dependence during the 1990s. As shown by Figure 2b and Table 2, Brazil and the rest of South America barely reduced their reliance on agricultural and mining exports and also manufactured exports remained strongly natural resource-based. The Central American economies followed Mexico's patterns influenced by substantial growth of maquila and other assembly industries.

There was a recovery of capital flows towards the region in the 1990s facilitated by the settling of much of the commercial bank debt overhang of the 1980s under Brady agreements, the financial opening, privatization of public enterprises and macroeconomic stabilization policies. However, probably equally important were events in global capital markets exogenous to the region, including the entrance of large institutional investors (such as pension funds) as global investors. Capital inflows to Latin America averaged 3% of GDP per year during the decade. However,

much of the boom took place in the early part of the 1990s, particularly towards Argentina, Brazil, Chile, Colombia and Mexico, with a larger share going to some of the smaller economies in the latter part of the decade. However, by that time several global financial crises led to sudden stops in capital flows, particularly portfolio investments, temporarily after the 1995 Mexican peso crisis and most strongly after the 1997-8 Asian and Russian financial crises. From 2000 onwards, also direct foreign investment to the region decline (except for Brazil), affecting most in particular maquila industries in Mexico and Central America (Cepal 2003).

FIGURE 2A
Latin America and the Caribbean: export structure, 1988 and 1998

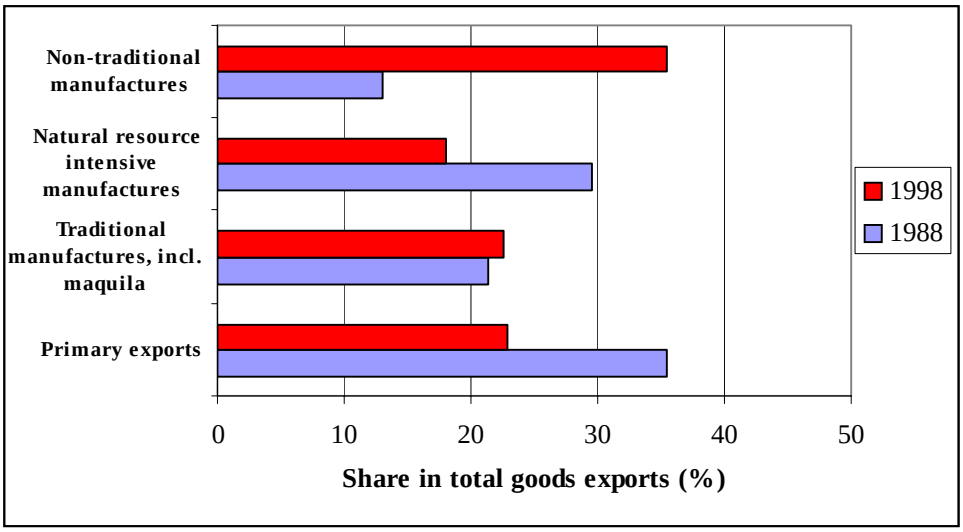


FIGURE 2B
South America (excluding Brazil): export structure, 1988 and 1998

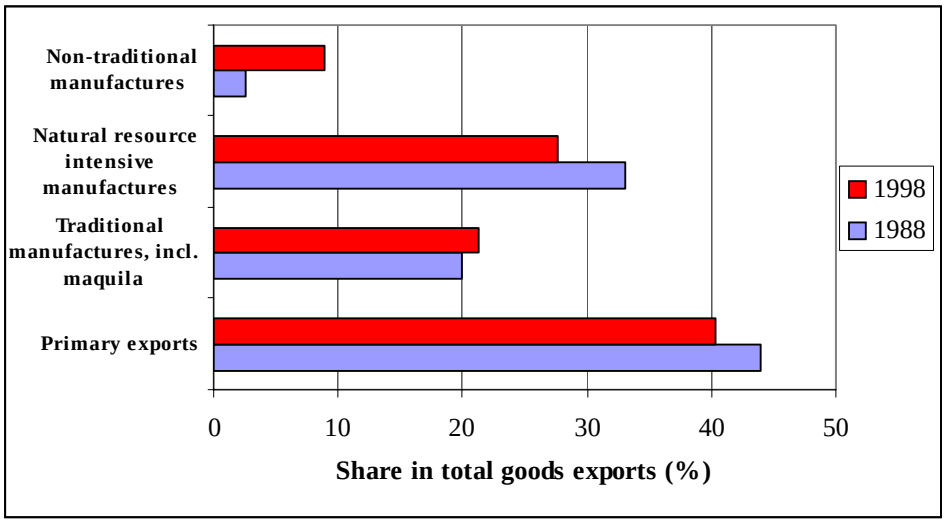


TABLE 2
Latin America and the Caribbean: changing export structures in the 1990s

	Mexico		Brazil		South America (excl. Brazil)		Central America		Caribbean (engl. speaking)		Latin America and Caribbean	
	1988	**1998**	**1988**	**1998**	**1988**	**1998**	**1988**	**1998**	**1988**	**1998**	**1988**	**1998**
Primary exports	42.9	10.0	18.8	19.6	44.0	40.4	63.8	41.7	27.8	28.2	35.5	22.9
Manufactures	56.7	89.9	80.1	79.2	55.6	57.8	35.7	58.2	72.0	70.2	63.9	76.2
Trad. manufactures[1]	*10.8*	*20.0*	*29.2*	*28.9*	*20.0*	*21.3*	*23.6*	*31.1*	*19.1*	*21.0*	*21.3*	*22.6*
Natural resource intens. manufactures[2]	*20.6*	*8.3*	*31.5*	*24.1*	*33.1*	*27.6*	*6.9*	*8.9*	*50.4*	*47.3*	*29.5*	*18.1*
Non-traditional manufactures[3]	*25.3*	*61.6*	*19.4*	*26.2*	*2.5*	*8.9*	*5.2*	*18.2*	*2.5*	*1.9*	*13.1*	*35.5*
Other	0.4	0.1	1.1	1.2	0.4	1.8	0.5	0.1	0.2	1.6	0.6	0.9
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: CEPAL.
Note: 1. Includes food processing, textiles, as well as maquila.
2. Refers to natural resource-based products with large scale economies. Includes petrochemicals, paper cement, paper and basic metals.
3. Includes durable consumption goods, machinery and equipment and other manufactures.

2.2 Decomposition methodology

In short, external structures of the economies of the region have changed and with that the degree of vulnerability to shocks in the global economy, but with clear differences across the countries. To assess the nature and degree of shocks we adapt a basic balance-of-payments decomposition methodology originating from Balassa (1981) and refined by Avila and Bacha (1987) and FitzGerald and Sarmad (1997). We follow the latter approach here. The methodology is detailed in appendix A.1.

In the methodology, external shocks and policy responses are determinants of changes in the current account of the balance of payments. Imports are linked to the domestic absorption, and the export volumes are linked to the world trade volume (a measure of export penetration). Interest payments are linked to the dollar interest rate and the debt stock. The primary external shocks refer to the terms of trade (export and import prices), interest rate to be paid on the external debt, and the world trade volume. Secondary external shocks are the debt accumulation burden and other external variables such as investment income, remittances and official transfers. Though determined by external variables, these are also sensitive to domestic policies and private adjustment behaviour. Finally, the domestic response variables comprise domestic absorption, and trade ratios (import demand and export supply). The former

is influenced in first instance by fiscal and monetary policies, the latter by trade policies.

Since 1980, most Latin American countries were subject to a large number of external shocks, such as the changes in terms of trade during the 1980s, the increase in world interest rates in the early 1980s, fluctuations in the volume of world trade (downward trend in the early 1980s and upwards since then), the bank credit crunch (1980s), and the portfolio and direct foreign investment boom (both in the early 1990s). More recent shocks to most Latin American countries were the Mexican crisis (1994-1995), the rise in the international price of oil (1996 and 2000), the Asian financial crisis (1997), the Russian crisis (1997), the collapse of international oil prices and coffee prices (1998-1999), the Brazilian financial crisis (1999), and the slowdown of the global economy and collapse of global stock market prices in 2001 and 2002. In almost half of the countries under analysis structural reforms started during the second half of the 1980s; for the others, reforms started during the first half of the 1990s. As a result, the period 1985-1989 and 1990-1994 present imbalances and instabilities in some economies, resulting from uncompleted reforms and even lags. The periods 1995-1999 and beyond are then useful in identifying post-reform new trends in domestic policies to face external shocks, and in growth strategies.

For the sake of the comparative analysis we have harmonized the periods, even though the timing of major shocks may differ from country to country. The country studies use a periodization that fits the economic history of the country. In the analysis below, we show five-year period averages for external shocks and domestic adjustment. This allows us to focus on patterns of adjustment in the medium-run, rather than on annual fluctuations. The limitation of this approach is, of course, that the observed shifts may obscure substantial within-period volatility.

2.3 External shocks

Table 3 shows the weighted regional average effect of the external shocks and domestic adjustment on the current account deficit (change from the previous period as percentage of GNP).[4] Countries are classified by major shocks in table 4, and the

[4] The complete table is provided in Appendix A.2. The appendix also provides the decomposition results for the unweighted regional average and those for the individual countries.

frequencies of shocks are shown in table 5. Please note that in table 4 we report changes in the current account *deficit*, meaning that a positive sign refers to an increase in the deficit and an adverse external shock.

TABLE 3
Latin America and Caribbean: sources of changes in the current account deficit
(weighted period averages, changes with respect to preceding five-year period as % of GNP)

	1985-1989 from 1980-84	1990-1994 from 1985-89	1995-1999 from 1990-94	1999-2001 from 1995-1999
Observed change in current account deficit	***-0.18***	***0.98***	***-0.22***	***-3.08***
External shocks	**4.28**	**0.48**	**-3.64**	**-9.66**
Terms of trade shock	5.31	1.84	-0.39	-3.83
Interest rate shock	0.74	-0.09	-0.07	-0.07
World trade shock	-1.77	-1.27	-3.18	-5.75
Other external variables	**-0.96**	**-0.37**	**0.35**	**-0.65**
Domestic adjustment	**-2.72**	**2.66**	**4.13**	**6.88**
Consumption contraction	-0.17	-0.24	-0.03	0.18
Investment reduction	-0.28	0.21	0.10	0.06
Trade ratios	-2.28	2.69	4.06	6.64
Import ratio	*-0.94*	*4.18*	*5.48*	*2.03*
Export penetration	*-1.34*	*-1.49*	*-1.43*	*4.62*
Interaction effects	**-0.77**	**-1.78**	**-1.05**	**0.35**

Source: Appendix A.2. Please note that in the table we report changes in the current account *deficit*, meaning that a positive sign refers to an increase in the deficit and an adverse external shock.

Current account deficits widened for the region as a whole during the first half of the 1990s and reduced somewhat in the second half and strongly during 1999-2001, consistent with the surge and stops in capital inflows. In the aggregate most of the external shocks came through the trade channel, both negatively and positively. On the bright side, the region benefited from growing world trade (helping to reduce the external imbalance). On the dark side, there was an – on average – negative effect due to the falling terms of trade during the late 1980s and early 1990s. Shifting trade ratios have dominated domestic adjustment patterns. World trade expansion had an increasing positive effect in reducing the current account deficit in more than 60% of the countries under analysis. Interest-rate shocks and debt accumulation were relatively unimportant in explaining shifts in the external imbalance during the 1990s.

Terms-of-trade shocks have been large and mostly negative in at least half of the country cases. They were particularly strong and adverse in the first half of the

1990s, explaining on average 1.8% points of GNP of the widening current account deficit (of 1.0% of GNP). Terms of trade have moved more favourably in the latter half of the 1990s and 1999-2001, particularly because of falling import price costs. Central American and Caribbean countries, in particular, witnessed positive terms-of-trade shocks during 1995-99, but declining export prices produced strong adverse shocks during 1999-2001, explaining part of the declining economic performance in the sub-region in the final period. Adverse terms-of-trade shocks do not seem to be a prime candidate to explain the growth slowdown in South America, as only oil-exporters Ecuador and Venezuela witnessed a major adverse shock due to declining oil prices in 1995-99.

World trade growth has provided a positive effect on Latin America's external balance for most of the 1980s and 1990s. Nearly all countries in the region witnessed a positive effect on export earnings due to growing world demand for its exports during all episodes. On average, Latin America managed to improve its position in world commodity markets in the late 1980s and early 1990s, as visible from the negative sign for the *export penetration ratio*. In effect, already during 1995-99 a substantial number of countries (Bolivia, Colombia, Ecuador, Honduras, Paraguay, and Venezuela (see appendix A.2) suffered important losses of export competitiveness contributing more than 2% of GNP to widening current account deficits. The overall positive export penetration effect for the region as a whole during that period is mainly explained by the rapid export growth in Chile, Mexico and Central America (except Honduras), but as indicated this dynamics was not sustained in the period thereafter. When taking the simple average (see appendix A.2), the region shows a loss of export competitiveness (as measured through the export penetration ratio) during 1995-99. The effect becomes stronger towards the end of the period and the reduction in the penetration ratio of Latin American exports in world markets heavily contributed to widening current account deficits in 1999-2001, both when taking the weighted and unweighted measure.

We take this dismal export performance in the most recent period as a worrisome empirical fact. The precise causes are not immediately clear. Country experiences seem to vary. In many cases exchange rate appreciation during surge in capital inflows seems to have been part of the story, as it undermined competitiveness

and counteracting export incentives provided by trade liberalization. Lessening of the initial trade creation effects of regional trade agreements, such as Mercosur, NAFTA and the Andean pact, along side with financial woes in many countries leading to contractionary macroeconomic adjustment with spill-over effects to exports of neighbouring countries has been a factor in several parts of the region in different degrees. However, macroeconomic factors unlikely provide the full story. Microeconomic adjustment of firms to the trade opening process seems to have been slow and the capacity to improve efficiency in many sectors appears to have been limited. In part this could be due to an apparent volatility and footloose nature of foreign direct investment in certain sectors, which has been affecting in particular the maquila industry in Mexico and Central America lately. Other factors limiting efficiency improvements in many countries are inadequacies in infrastructure and insufficient supplies of skilled labour.

Perhaps, the most dramatic aspect of the adjustment process of the 1990s has been the rise in import ratios, i.e. import de-substitution, contributing on average 4.4 and 5.5 percentage points of GDP during 1990-94 and 1995-99 to the external imbalance (see table 3). This effect is consistent with the import liberalization policies and rising capital inflows (and associated real exchange rate appreciation). However, the continued steep rise in the import ratio during 1995-99 and 1999-2001, when capital inflows started to slow down, would reflect structurally higher import dependence. Greater reliance on direct investment in financing the external balance and related imports of new technologies and rising intra-industry trade seem important factors behind this trend (De Ferranti et al. 2002, CEPAL 2003).

Other external variables, like *worker remittances* and *official transfers* played a substantial role in some countries of the region, but these have not been sources of major shocks for the Latin American economy as a whole. As discussed in the country studies, increases in worker remittances induced substantial positive balance of payments shocks of larger than 2% of GNP in Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Nicaragua, and Paraguay during the 1990s. In Costa Rica, El Salvador and Nicaragua this effect was largely offset by reductions in official transfers.

TABLE 4
Classification of countries by major shocks and domestic adjustment shifts (> |2| per cent of GNP)[1]

Type of external shock and domestic adjustment	1985-1989		1990-1994		1995-1999		1999-2001	
	Negative	**Positive**	**Negative**	**Positive**	**Negative**	**Positive**	**Negative**	**Positive**
Terms of trade	Brazil Chile Ecuador Mexico Paraguay Peru Venezuela	Bolivia	Argentina Bolivia Brazil Colombia Costa Rica Uruguay Venezuela	El Salvador	Ecuador Nicaragua	Costa Rica El Salvador Guatemala Honduras Nicaragua Paraguay	Costa Rica El Salvador Nicaragua	Venezuela
Interest rate shock	Argentina Brazil	Chile Costa Rica Ecuador		Mexico	Ecuador	Nicaragua		
World trade		Argentina Bolivia Ecuador El Salvador Guatemala Mexico Peru Uruguay Venezuela	Chile	Bolivia Brazil Dom. Rep. Ecuador Honduras Mexico Paraguay Peru Uruguay Venezuela		Bolivia Brazil Colombia Costa Rica Dom.Rep. Ecuador El Salvador Guatemala Honduras Mexico Nicaragua Paraguay Uruguay Venezuela		Argentina Bolivia Chile Colombia Costa Rica Dom. Rep. Honduras Mexico Paraguay Peru Venezuela
Debt accumulation burden	Chile	Argentina Brazil Peru	Argentina Brazil Peru	Chile Costa Rica	Brazil	Nicaragua		Nicaragua
Other external variables	Argentina Chile Ecuador Peru	Dom. Rep. El Salvador Honduras		Argentina Bolivia Costa Rica Ecuador El Salvador Honduras Peru	Costa Rica	Dom. Rep. Ecuador Peru	Costa Rica	Honduras
Domestic spending		Chile	El Salvador Honduras Paraguay	Costa Rica Ecuador	Paraguay	Nicaragua		Chile Costa Rica Dom. Rep. El Salvador Nicaragua
Trade ratios	Bolivia Costa Rica Dom. Rep. El Salvador	Brazil Chile Colombia Ecuador Mexico Paraguay	Argentina Brazil Colombia Dom. Rep. El Salvador Guatemala Honduras Mexico Paraguay Peru Uruguay		Argentina Bolivia Brazil Chile Colombia Costa Rica Ecuador El Salvador Guatemala Honduras Mexico Nicaragua Paraguay Peru Uruguay Venezuela		Guatemala Honduras Mexico Nicaragua Venezuela	

Source: Appendix A.2.
Note: 1. Negative shock or negative domestic adjustment effect refer to contributions to rising current account deficit.

TABLE 5
Frequency of sizeable shocks and domestic adjustment shifts per period[1]: number of countries (out of 17)

Type of shock and domestic adjustment	1985 -1989[2]		1990 -1994[2]		1995 -1999		1999 -2001[3]	
	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive
Terms of trade	7	1	7	1	2	6	3	1
Interest rate	2	3	0	1	1	1	0	0
World trade	0	9	1	10	0	14	0	11
Debt accumulation	1	3	3	2	1	1	0	1
Other external variables	4	3	0	7	1	3	1	1
Domestic spending	0	1	3	2	1	1	0	5
Trade ratios	4	6	11	0	16	0	5	0
Of which:								
Import ratio	3	5	12	0	14	0	6	1
Export penetration	4	7	2	5	7	5	4	4

Source: Appendix A.2.
Note: 1. Sizeable shocks are larger than |2| per cent of GNP (period average). Negative shock refers to contribution to rising current account deficit.
2. Does not include Nicaragua, hence 16 country cases.
3. Does not include Ecuador, hence 16 country cases.

3 FAILED ADJUSTMENT OR POLICIES? THE NATURE OF DOMESTIC ADJUSTMENT

3.1 *Methodology*

The external shock decomposition methodology also allows assessing how domestic variables have shifted in response to the observed shocks (see appendix A.1). These results are also reported in tables 3-5 above. We complement this analysis by another macroeconomic decomposition of economic growth with major aggregate demand components.This decomposition provides a link between the external and domestic adjustment process and growth performance as influenced by demand

composition effects.[5]

3.2 Trade adjustment versus domestic spending

As might be expected from the trade opening process, the adjustment of the trade ratios dominate the domestic adjustment process in the 1990s. Consumption booms did not form (on average) a major source of rising current account deficits; neither was contracting consumption a key source of domestic adjustment. During the 1990s investment, particularly private investment increased to contribute to widening deficits, but the average impact remaining rather small. This type of adjustment, together with our earlier conclusion regarding the shift in trade ratios, suggests that the import liberalization and financial opening helped to raise the import content of aggregate demand thereby compromising a sustainable growth path once access to foreign financing becomes more limited. At the same time, as discussed, the region lost export competitiveness as apparent from a lower export penetration ratio contributing to a wider current account deficit (see table 3 and further below).

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[5] Emphasizing demand effects, one may explain output growth as a result of changes in exogenous spending, and the parameters on imports, consumption and taxes according to the Keynesian model:
Y = C+I+G+E-M
C = c(1-t)Y
M = m.Y
T = t.Y
C is private consumption, I is gross private investment, G is total government spending, E is exports, M is imports and c, t and m are average propensity to consume, the average tax rate and the import ratio. With this simple Keynesian model it follows that:

$$Y = \frac{1}{(s + t + m - t.s)}(G + I + E)$$

where s is average private saving rate out of disposable income.

The overall change in aggregate output can now be calculated. The impact of a change in exports over any time period is the observed change in E times the multiplier 1/(s+t+m-ts). The impact of a change in investment and government spending is calculated in the same way. The impact of changes in imports, saving and taxes is the change in the multiplier resulting from the change in s, t or m times the initial level of I, G and E. Each of these component changes measures the change in aggregate demand that would be observed if that variable, and only that variable were changed. By construction, the sum of these six sources of change sums to the overall observed change except for a small cross-product term, which is caused by the fact that the observed changes are not instantaneous. The decomposition in growth rates becomes:

$$\frac{\Delta Y}{Y} = m\frac{\Delta E}{Y} + \Delta m_{|m}\frac{E}{Y} + m\frac{\Delta G}{Y} + \Delta m_{|t}\frac{G}{Y} + m\frac{\Delta I}{Y} + \Delta m_{|s}\frac{I}{Y} + \textit{Interraction terms}$$

where m is the Keynesian multiplier and Δm_m, Δm_t, and Δm_s are the changes in the multiplier due to changes in the respective leakage effects (imports, m, taxation, t, and savings, s).

Only in a few country cases, adjustments in domestic spending made a substantial impact on reducing the current account deficit. In the early 1990s, Costa Rica and Ecuador reduced domestic spending mainly through a contraction of public and private consumption. In contrast, expanding domestic spending contributed to widening deficits in Honduras and El Salvador where post-war reconstruction pushed up the investment rate financed largely from foreign aid. In Nicaragua the same elements pushed up public consumption to drive the growth rate in that period. During 1995-99 domestic spending adjustment hardly played a role in explaining shifts in the external balance in most countries, but during 1999-2001 reductions in aggregate demand helped to achieve substantial reductions in the current account deficit in Chile, Dominican Republic and the Central American countries (again, except Honduras).

3.3 Domestic adjustment and economic growth

While only very few countries created an export dynamics exceeding the growth of the world economy (i.e. larger export penetration ratio), there was a growing number of countries in the region whose growth rate mainly if not entirely relied on export growth. This result following from the macroeconomic decomposition of growth is summarized in Tables 6a-c for the 1980s, 1990s, and 2000-1, respectively. During the lost decade of the 1980s, there were only three economies with moderate to high growth rates (defined here as GDP growth over 4% per annum) during at least part of the decade and which relied on export-led growth. These are Chile, Colombia and Jamaica, which recovered from weak growth in the early 1980s through export expansion (table 6a). Throughout the 1990s, only Chile, Costa Rica, Dominican Republic, and Guatemala managed to pursue an export-led growth path at moderately high rates (table 6b). Colombia sustained moderate to high growth during the first part of the 1990s, mainly building on a private investment boom, but this bubble burst in the second half of the decade pushing the economy into recession. Jamaica´s economy fell into a slum during the entire decade, falling exports being an important factor.

In contrast, many other economies in the region (15 out of 18) became export-led growth economies with positive GDP growth at some point during the 1990s.

However, only the four earlier indicated countries managed to sustain that condition at a moderate to high growth rate. During the second half of the 1990s, they were joined by Mexico and Nicaragua. All represent cases of restructured export sectors and dynamic performance of non-traditional, non-primary commodities. All other cases either never managed to achieve even moderately high growth rates based on exports. During 1999-2001, all countries (except Argentina and Guatemala) relied on export-led growth, but with output growing very slowly or falling. For Uruguay, the economic collapse of its major trading partners of Mercosur induced a steep decline in export earnings, explaining most of the economy's decline during 2000-1. Decline of maquila exports explains much of the economic downfall in the stellar exporters of the 1990s, Costa Rica, Dominican Republic, and Mexico, despite stimulus given to domestic investment. In Bolivia and El Salvador, in turn, the collapse in domestic investment is the major factor underlying the recession at the beginning of the century, despite positive export growth.

TABLE 6a
Latin America: Main demand sources of growth, 1980s

1980s	Export-led			Public sector demand	Private sector demand
	With private investment	*With consumption boom*	*Exports only*		
Negative or zero GDP growth (< 0.5%)	Bolivia (-) (80-84)		Costa Rica (80-84) El Salv (-) (80-84) Guatemala (-) (80-84) Jamaica (80-84)	Argentina (+) (85-89) Peru (-) (85-89) Nicaragua (-) (85-89)	Argentina (-) (80's) Peru (-) (80-84) Uruguay (-) (80-84) Venezuela (-) (80-84)
Low GDP growth (0.5 - 4%)		El Salv (85-89)	Bolivia (85-89) Costa Rica (85-89) Ecuador (80's) Guatemala (85-89) Mexico (80's) Paraguay (80's) Uruguay (85-89) Venezuela (85-89)	Brazil (80's) Colombia (80-84) Honduras (80-84) Nicaragua (80-84)	Chile (80-84) Dom. Rep. (80's) Honduras (85-89)
Moderate to high GDP growth (>4%)	Chile (85-89)		Colombia (85-89) Jamaica (85-89)		

TABLE 6b
Latin America: Main demand sources of growth, 1990s

1990s	Export-led			Public sector demand	Private sector demand
	With private investment	*With consumption boom*	*Exports only*		
Negative or zero GDP growth (< 0.5%)	Jamaica (-/+) (95-00) Paraguay (+/-) (95-00)		Venezuela (95-00)		Colombia (-) (95-00) Ecuador (95-00) Venezuela (95-00)
Low GDP growth (0.5 - 4%)	Ecuador (90-94) Nicaragua (90-94) Venezuela (90-94)	Brazil (90-94)	Argentina (95-00) Brazil (95-00) El Salv (95-00) Mexico (90-94) Paraguay (90-94) Peru (95-00) Uruguay (90´s)	Honduras (95-00)	Bolivia (95-00) Honduras (90-94) Jamaica (90-94)
Moderate to high GDP growth (>4%)	Bolivia (90-94) Chile (90-94) Dom Rep. (95-00) El Salv (90-94) Guatemala (90's) Mexico (95-00) Nicaragua (95-00)		Chile (95-00) Costa Rica (90's) Dom Rep. (90-94)	Argentina (90-94)	Colombia (90-94) Peru (90-94)

TABLE 6c
Latin America: main demand sources of growth, 2000-01

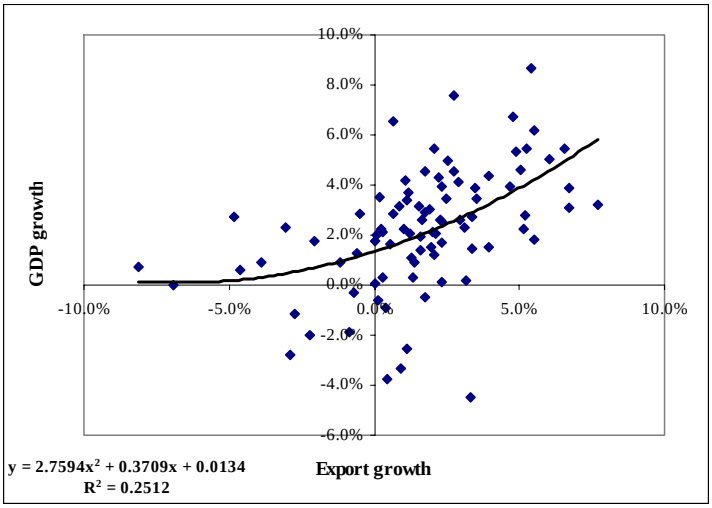
2000-1	Export-led			Public sector demand	Private sector demand
	With private investment	*With consumption boom*	*Exports only*		
Negative or zero GDP growth (< 0.5%)	Bolivia (-/+) (00-01) Costa Rica (+/-) (00-01) Dom.Rep. (+/-) (00-01) El Salv. (-/+) (00-01) Jamaica (+/-) (00-01) Mexico (00-01) Peru (-/+) (00-01)		Uruguay (-) (00-01)		Argentina (-) (00-01)
Low GDP growth (0.5 - 4%)	Colombia (00-01) Ecuador (00-01)		Brazil (00-01) Chile (00-01) Honduras (00-01) Nicaragua (00-01) Paraguay (00-01) Venezuela (00-01)	Guatemala (00-01)	
Moderate to high GDP growth (>4%)					

Source: Appendix A.4.
Note: Cases of negative growth report main source of output decline. These cases are indicated with (-) addendum after country name. In case of export-led growth in combination with other major factor (private investment): (-/+) means private investment decline, but export increase and (+/-) means private investment increase but export decline.

This sums up the gloomy picture for much of the region. Export penetration ratios have fallen during the 1990s, suggesting the region's decrease in export

competitiveness. At the same time, there is a rising number of countries whose growth rate by and large depends on export dynamics. However, less than a handful of countries have managed to convert export-led growth in moderate-to-high overall growth. All others rely on export growth but loose global competitiveness. With the slowdown of world demand around the turn of the century, this but emphasizes the fundamental weakness in the region's growth strategy and the promise of even more gloomy prospects ahead. The more so, because – as shown by the current account decomposition – export growth during the 1990s was mainly driven by the expansion of world trade, rather than by greater penetration of world markets by Latin American exports. The global recession of the early 2000s thus has hit hard on the region's growth performance.

FIGURE 4
Latin America: export and GDP growth link during the 1980s and 1990s



4 CONCLUSIONS

Latin America's growth performance in the post-market reform period has been rather dismal to say the least. In this paper we have tried to disentangle some patterns across the countries of the region of this poor growth performance. We have done so mainly by looking at some macroeconomic descriptives that likely have influenced the growth outcome. Hence we come up with a 'what has happened' story,

more so than with a ‘why it happened” story. Nonetheless, some indications seem clear. The trade and financial opening process has enhanced trade and exports have become more important as an engine of growth. Compared with the import substitution years, this has made the Latin American economies more volatile, but volatility in the 1990s has not been worse than that of the 1980s. Countries have suffered varying degrees of ‘bad luck’ in terms of adverse external shocks, particularly in the terms of trade. However, they have also been favoured during the liberalization process by strong world trade growth. Import liberalization and increased capital flows, particularly in the early post-reform period, have pushed up import demand quite strongly. This, however, has not been matched by an equally strong export growth; more so, most countries in the region have lost competitiveness as measured by the average export penetration ratio. The market reforms do not appear to have unleashed an investment drive in tradable goods production required to achieve the required efficiency improvements to strengthen the region’s position in global markets and generate an export-led growth process based on productivity improvements. Instead, the greater reliance on export growth has moderated the aggregate growth performance. It seems to imply that the real challenge of improving the efficiency of the economies of the region towards a sustainable, high-growth path needed to achieve substantive poverty reduction has yet to be taken up. The drastic policy reforms of the early 1990s by themselves clearly have not produced the durable shot in the arm they were supposed to give.

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APPENDICES

APPENDIX A.1

A methodology for estimating external shocks and domestic response[6]

The UNCTAD methodology

The UNCTAD methodology is based on the decomposition of the current account deficit (*D*) in any one year (*t*) between imports of goods and non-factor services (*M*), net payments of factor services to abroad (*V*), exports of goods and non-factor services (*E*) and unrequited transfers received from abroad (*T*)[7]:

$$D_t = M_t + V_t - E_t - T_t \quad (1)$$

Imports and exports are disaggregated between price indices (P_m, P_x) and volumes (*J*, *X*) at constant domestic currency prices:

$$M_t = P_{mt}.J_t \quad (2)$$

$$E_t = P_{xt}.X_t \quad (3)$$

Import volume is linked to real domestic absorption (*A*) – in other words, consumption (*C*) plus investment (*I*) - by a single coefficient (*j*):

$$J_t = j_t.A_t \quad (4)$$

$$A_t = C_t + I_t \quad (5)$$

Export volume (*X*) is linked to world trade volume (*W*) by an 'overall export coefficient' (*x*) which in effect measures export penetration as the country's share of world trade:

$$X_t = x_t.W_t \quad (6)$$

Finally, factor services payments to abroad (*V*) are broken down into net interest payments to abroad (V_i), net investment income payments to abroad (V_d) and net workers' remittances from abroad (*R*). Net interest payments abroad are defined as the

6 Adapted from FitzGerald and Sarmad (1997).

7 Set out in Avila and Bacha (1987: 177-204).

product of the current dollar interest rate (r) and the debt stock (in local currency at the official exchange rate) from the previous year (F_{t-1}):

$$V_t = V_{it} + V_{dt} - R_t \quad (7)$$

$$V_{it} = r_t.F_{t-1} \quad (8)$$

It should be recalled that all the coefficients (x, j, r) are in practice derived from these equations, so that the definitional identities do always sum to the observed current account deficit (D).

Substituting (2) to (8) into (1) and dividing through by national income at current prices yields the complete decomposition formula:

$$D_t/Y_t = p_{mt}.j_t(C_t - I_t)/Z_t + r_t.F_{t-1}/Y_t + (V_{dt} - R_t)/Y_t - p_{xt}.x_t.W_t/Z_t - T_t/Y_t \quad (9)$$

where national income at current prices (Y_t) is equal to the product of national income at constant prices (Z_t) and the implicit GNP deflator (P_{yt})[8]:

$$Y_t = P_{yt}.Z_t \quad (10)$$

$$P_{mt} = P_{mt}/P_{yt} \quad (11)$$

$$P_{xt} = P_{xt}/P_{yt} \quad (12)$$

Finally, a base year or years (s) is chosen in order to separate out the partial derivatives (d) of the variables, which then define the separate effects identified in the UNCTAD study:

$$d[D_t/Y_t] =$$

$$[j_s.A_s/Z_s]dp_{mt} - [x_s.W_s/Z_s]dp_{xt} \qquad \text{terms-of-trade effect}$$

[8] The UNCTAD study uses the GDP deflator as the GNP deflator was apparently unavailable; the authors recognize that this is not technically correct, but suggest that the resultant error is small - our own estimates did not bear this out.

$+[F_{s-1}/Y_s]\mathrm{d}r_t$	interest-rate shock
$- x_s.p_{xs}.\mathrm{d}[W_t/Z_t]$	world-trade effect
$+ r_s.\mathrm{d}[F_{t-1}/Y_t]$	debt accumulation burden
$+ \mathrm{d}[(V_{dt} - R_t - T_t)/Y_t]$	other external variables
$+ j_s.p_{ms}.\mathrm{d}[A_t/Z_t]$	domestic absorption
$+ [p_{ms}.A_s/Z_s]\mathrm{d}j_t$	import replacement
$- [p_{xs}.W_s/Z_s]\mathrm{d}x_t$	export penetration
$+$ *interaction terms*	(13)

The first three phrases define the exogenous ‘external shock’; the next two are ‘debt accumulation burden’ and ‘other external variables’, which respond to both internal and external conditions but which are taken as autonomous; and the last three are defined as ‘domestic policy response’, although more appropriately should be termed as ‘domestic adjustment’, since the changes may be caused both by policy intervention and private adjustment behaviour. The difference between the sum of the explicitly defined terms and the observed change in the normalized current account deficit is defined as ‘interaction terms’ and not further analysed.

The ‘residual’

A significant weakness in the UNCTAD methodology is concealed by these ‘interaction terms’ in the methodology, renamed 'residual' in the corresponding statistical tables in UNCTAD (1987). The missing terms are in fact the second-order effects arising from the product of two or more partial differentials which should tend to zero for small changes in the variables but which, in the presence of relatively large shifts associated with adjustment to external shock, can be as significant as the current

account deficit itself.[9] These effects are particularly important if we are trying to identify the shifts in the structural coefficients over a number of years, which should come about where 'adjustment' (as opposed to demand restriction) has taken place.

In the calculus, the derivative of a product is expressed as the limiting value of the sum of the partial differentials:

$$y = u.v$$

$$\delta y/\delta x = u.\delta v/\delta x + v.\delta u/\delta x + \delta u.\delta v/\delta x$$

$$dy/dx = \lim [\delta y/\delta x] \text{ as } \delta x \text{ tends to } 0$$

$$= u.dv/dx + v.du/dx$$

In equation (13) above, the 'residual' is in fact equivalent to the '$\delta u.\delta v/\delta x$' terms, which are not only relatively large but also have economic significance, because they reflect the fact that the variable changes associated with shock and adjustment are not marginal, and thus the simplifications may not in fact be valid. This is particularly true of the terms-of-trade shock.

The difference (R) between the *observed* change in the normalized deficit and the specified terms as defined in (13) is in fact made up of the following three

[9] For instance, Appendix Table B (UNCTAD 1987, p. 175) shows a mean modular value for the residual of 1% of GNP, while the mean modular value of the observed deficit increase is itself only 4% of GNP. Thus, in this case the effects listed in equation (13) only explicitly accounts for three-quarters of the observed variations in D_t, although, being based on national accounting identities, it should 'explain' the variations entirely.

'interaction effects'[10]:

R = sum of the secondary effects of:

interactions between:

domestic demand and unit imports

$[A_t/Z_t - A_s/Z_s][j_t.p_{mt} - j_s.p_{ms}]$

displacement and import price

$+ A_s/Z_s[j_t - j_s][p_{mt} - p_{ms}]$

less interactions between:

world demand and unit exports

$- [W_t/Z_t - W_s/Z_s][x_t.p_{xt} - x_s.p_{xs}]$

penetration and export price

$- [W_s/Z_s][x_t - x_s][p_{xt} - p_{xs}]$

plus interactions between:

debt stock and interest rate

$+ [r_t - r_s][F_t/Y_t - F_s/Y_s]$ (14)

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[10] The algebra is rather intricate, but the method can be clearly seen by taking just the debt term, which is the last phrase in (14). Leaving aside the normalization procedure and the lag for simplicity of exposition and taking differences between two years (1,2), the observed change in the contribution of the debt term (V_i) in (8) to the current account deficit (D) in (9) has the form

$$dV_i = r_2.F_2 - r_1.F_1$$

while what is in fact estimated by the UNCTAD methodology in (13) is:

$$dV_i^* = F_1[r_2 - r_1] + r_1[F_2 - F_1]$$

The difference between these two is the contribution (R_f) of the debt term to the 'residual' (R), formed by the product of the changes in the debt and the interest rate, and appearing as the last phrase in [14]:

$$R_f = dV_i - dV_i^* = [r_2 - r_1][F_2 - F_1]$$

This residual clearly tends to zero for small changes in the variables (r, F) but in fact their changes are large (frequently greater than 10% in one year) and thus their product becomes significant compared to d[D/Y] itself, which is measured in single percentage points of GNP.

The residual (R) clearly tends to zero for small changes in the variables, but in practice it is significantly large in both the UNCTAD study and our own.

These five phrases might be expected to have determinate signs, derived from the respective demand and supply elasticities. The first phrase (the interaction between the domestic demand level and the cost of the imports generated by a unit increase in that demand) might be expected to have a negative sign through the income effect, unless demand adjustment is in fact 'forced' by external variables. The second phrase (interaction between import displacement and relative import prices) is presumably negative if the real exchange rate stimulates more efficient use of imported inputs and changes consumption patterns. Under the small-country assumption, we can assume that world demand is not affected by export prices, but to the extent that faster world trade improves market opportunities and primary commodity prices, the third interaction phrase (between world demand and unit exports) might be expected to be positive. The fourth (export penetration and relative export prices) should also be greater than zero for a positive supply elasticity, unless the so-called 'backward-sloping supply curve for exports' obtains, which is all too common under adjustment to foreign exchange shocks. There is no reason, however, to expect a determinate relationship between changes in the accumulated debt stock and the world interest rate so that no sign can be assigned to the fifth phrase.[11]

Under the (strong) assumption that all the phrases are 'well behaved' in the sense indicated above, the sum of these interaction effects (i.e. the residual, R) might be expected to be negative, therefore.

Domestic absorption

In the UNCTAD methodology, real domestic absorption (A_t) as proportion of real GNP (Z_t) is defined as the indicator of 'domestic spending' and one of the 'domestic policy actions' - the other being 'trade ratios'.

[11] In principle, a possible exception could be the interest rate charged to LDCs (r), which might be regarded as reflecting the world capital market valuation of the creditworthiness of individual countries, which in turn would reflect domestic policy. However, in practice it would appear that credit - and aid - is rationed to reflect sovereign risk, the interest rate premium being relatively small and not reflecting LDC country risk (Vos, 1994).

However,

$$Y = C + I + E - M \tag{15}$$

so that as in (5) absorption (A) is:

$$A = C + I = Y - E + M \tag{16}$$

if we set out (16) in terms of (2), (3), (4), and (6), we have:

$$A_t.P_{yt} = Z_t.P_{yt} - x_t.W_t.P_{xt} + j_t.A_t.P_{mt} \tag{17}$$

Substituting (11) and (12) into (17) and rearranging, we find that the domestic spending indicator is in fact:

$$A_t / Z_t = \left[\frac{1 - p_{xt}.x_t.W_t / Z_t}{1 - p_{mt}.j_t} \right] \tag{18}$$

All the variables on the right hand side of (18) are in fact defined as independent already in the UNCTAD methodology, so the left-hand side should not really be treated as a further variable at all. At most if, say, investment (I) is treated as autonomous consumption (C) cannot be taken as independent.

APPENDIX A.2:

Decomposition of changes in current account deficit (% of GNP; changes between period averages)

LATIN AMERICA

Weighted average	_	_	_	
Period Average	**1985-1989 /a**	**1990-1994 /a**	**1995-1999**	**1999-2001 /b**
Weights	**1980-1984**	**1985-1989**	**1990-1994**	**1995-1999**
	(1)	**(2)**	**(3)**	**(4)**
Observed deficit increase	-0.18	0.98	-0.22	-3.08
External shocks				
TOTAL	4.28	0.48	-3.64	-9.66
Terms trade deterioration	5.31	1.84	-0.39	-3.83
Import price effect	3.10	-2.64	-1.53	-4.71
Export price effect	2.21	4.48	1.14	0.89
Interest rate shock	0.74	-0.09	-0.07	-0.07
World trade retardation	-1.77	-1.27	-3.18	-5.75
Other external Variables				
TOTAL	-0.96	-0.37	0.35	-0.65
Debt accumulation burden	-0.73	-0.32	0.44	-0.17
Change direct inv income	0.19	-0.07	-0.04	-0.65
Change remittances	-0.20	-0.08	-0.16	0.18
Change official transfers	-0.21	0.10	0.11	-0.02
Domestic adjustment				
TOTAL	-2.72	2.66	4.13	6.88
Domestic spending	-0.45	-0.04	0.08	0.24
Consumption contraction	-0.17	-0.24	-0.03	0.18
Private consumption	-0.17	-0.28	0.07	-0.03
Public consumption	0.01	0.03	-0.09	0.21
Investment reduction	-0.28	0.21	0.10	0.06
Private investment	0.02	0.28	0.24	-0.64
Public investment	-0.30	-0.08	-0.13	0.71
Trade ratios	-2.28	2.69	4.06	6.64
Import replacement	-0.94	4.18	5.48	2.03
Export penetration	-1.34	-1.49	-1.43	4.62
Interaction effects				
TOTAL	-0.77	-1.78	-1.05	0.35
Import shock	-0.31	-1.10	-0.59	-0.84
Demand / Unit imports	-0.11	0.05	-0.14	-0.07
Displacement / Price	-0.20	-1.15	-0.45	-0.77
Export shock	0.46	0.84	-0.31	1.19
Demand / Unit exports	0.13	0.25	-0.22	1.16
Penetration / Price	0.33	0.60	-0.09	0.02
Debt shock	-0.93	-1.53	-0.15	0.01
Stock / Interest	-0.93	-1.53	-0.15	0.01

Source: World Bank data and IMF, International Financial Statistics, and country tables below.
Note: a. Does not include Nicaragua.
b. Excluding Ecuador, and Uruguay for which no complete, comparable data are available.

LATIN AMERICA

Simple average	_	_	_	
Period average	**1985-1989 /a**	**1990-1994 /a**	**1995-1999**	**1999-2001 /b**
Weights	**1980-1984**	**1985-1989**	**1990-1994**	**1995-1999**
	(1)	**(2)**	**(3)**	**(4)**
Observed deficit increase	-1.18	0.92	-0.58	-1.05
External shocks				
TOTAL	-0.11	-2.12	-5.96	-1.26
Terms trade deterioration	2.55	1.12	-0.74	1.07
Import price effect	1.77	-1.93	-1.77	0.81
Export price effect	0.78	3.05	1.03	0.26
Interest rate shock	-0.27	-0.56	-0.61	-0.08
World trade retardation	-2.39	-2.68	-4.61	-2.25
Other External Variables				
TOTAL	0.05	-1.28	-1.00	-0.88
Debt accumulation burden	0.30	0.50	-0.50	-0.06
Change direct inv income	0.76	-1.00	-0.13	-0.07
Change remittances	-0.15	-1.13	-1.14	-0.72
Change official transfers	-0.85	0.34	0.76	-0.03
Domestic Adjustment				
TOTAL	-0.12	5.28	6.39	0.77
Domestic spending	-0.20	0.27	0.21	-1.30
Consumption contraction	0.07	-0.26	-0.25	-0.96
Private consumption	0.22	0.01	-0.14	-0.90
Public consumption	-0.14	-0.27	-0.11	-0.06
Investment reduction	-0.27	0.54	0.46	-0.34
Private investment	0.14	0.50	0.44	-2.11
Public investment	-0.41	0.04	0.02	1.77
Trade ratios	0.07	5.00	6.18	2.07
Import replacement	0.40	6.59	5.71	0.75
Export penetration	-0.32	-1.59	0.47	1.32
Interaction effects				
TOTAL	-1.00	-0.95	-0.01	0.33
Import Shock	-0.59	-1.35	-0.62	-0.55
Demand / Unit imports	-0.13	0.11	-0.01	-0.09
Displacement / Price	-0.45	-1.45	-0.60	-0.46
Export Shock	0.08	1.15	0.49	0.84
Demand / Unit exports	0.28	0.41	0.43	0.28
Penetration / Price	-0.19	0.74	0.06	0.56
Debt Shock	-0.50	-0.74	0.11	0.04
Stock / Interest	-0.50	-0.74	0.11	0.04

Source: World Bank data and IMF, International Financial Statistics, and country tables below.
Note: a. Does not include Nicaragua.
b. Excluding Ecuador, and Uruguay for which no complete data are available.

COUNTRY TABLES[12]

ARGENTINA				
Period average	1987-1990	1990-1994	1995-1999	1999-2001
	1980-1986	1987-1990	1990-1994	1995-1999
Observed deficit increase	-3.37	5.61	1.32	-0.59
External shocks	2.42	1.19	-2.33	-1.93
Terms trade deterioration	0.62	3.11	-1.00	-0.01
Import price effect	-0.50	-0.55	-0.73	-0.69
Export price effect	1.12	3.66	-0.27	0.68
Interest rate shock	4.91	-1.45	0.11	0.30
World trade retardation	-3.11	-0.47	-1.44	-2.22
Other external variables	-3.14	6.98	0.61	0.20
Debt accumulation burden	-3.39	8.02	0.82	0.69
Change direct inv income	0.95	-1.43	-0.35	-0.55
Change remittances	-0.01	0.09	-0.01	-0.01
Change official transfers	-0.70	0.31	0.15	0.08
Domestic adjustment	-0.87	4.92	3.64	0.80
Domestic spending	-0.50	-0.04	-0.07	-0.06
Trade ratios	-0.37	4.95	3.72	0.87
Import replacement	-0.75	4.82	4.60	0.15
Export penetration	0.38	0.13	-0.89	0.72
Interaction effects	-1.78	-7.48	-0.60	0.33

Note: Change in periods: 1980-1986 instead of 1980-1984 and 1987-1990 instead of 1985-1990 to avoid measurement problems due to change in exchange rate regime after hyperinflation.

BOLIVIA				
Period average	1987-1990	1990-1994	1995-1999	1999-2001
	1980-1987	1987-1990	1990-1994	1995-1999
Observed deficit increase	-4.21	1.54	0.80	-1.17
External shocks	-10.09	3.62	-3.77	-1.51
Terms trade deterioration	-5.52	4.79	0.05	0.71
Import price effect	-6.54	1.05	-1.69	-1.13
Export price effect	1.02	3.75	1.74	1.84
Interest rate shock	-0.72	1.05	-0.18	-0.26
World trade retardation	-3.85	-2.22	-3.64	-1.96
Other external variables	-1.20	-3.53	-1.03	-0.50
Debt accumulation burden	0.87	-0.58	-0.19	-0.04
Change direct inv income	-1.39	-1.92	-1.11	0.31
Change remittances	-0.01	0.01	-0.37	-0.41
Change official transfers	-0.67	-1.05	0.64	-0.35
Domestic adjustment	8.85	1.00	5.29	0.51
Domestic spending	-0.11	0.19	-0.18	-1.22
Trade ratios	8.97	0.81	5.47	1.73
Import replacement	7.35	2.93	2.93	-1.46
Export penetration	1.62	-2.12	2.54	3.18
Interaction effects	-1.78	0.45	0.31	0.34

Note: Change in periods: 1980-1987 instead of 1980-1984 and 1987-1990 instead of 1985-1989 to avoid measurement problems due to change in exchange rate regime after hyperinflation.

[12] More detailed country tables, included a disaggregation of domestic spending and interaction effects are available upon request from the authors. Please write to vos@iss.nl.

BRAZIL				
Period average	1985-1989	1990-1995	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1995	1995-1999
Observed deficit increase	-1.66	2.63	1.98	0.48
External shocks	5.15	-0.92	-4.13	-0.03
Terms trade deterioration	3.21	2.84	-1.73	1.65
Import price effect	-2.30	1.27	-2.73	3.17
Export price effect	5.51	1.58	1.00	-1.52
Interest rate shock	1.93	-0.71	-0.39	-0.18
World trade retardation	0.02	-3.05	-2.00	-1.50
Other external variables	-2.80	1.24	1.77	1.56
Debt accumulation burden	-2.90	2.90	1.31	1.02
Change direct inv income	0.08	-1.22	0.26	0.54
Change remittances	-0.02	-0.34	0.17	0.02
Change official transfers	0.04	-0.11	0.02	-0.02
Domestic adjustment	-4.05	2.88	5.59	-0.46
Domestic spending	-0.31	0.41	0.77	0.27
Trade ratios	-3.74	2.47	4.83	-0.73
Import replacement	-1.14	2.11	3.90	-0.38
Export penetration	-2.60	0.37	0.93	-0.35
Interaction effects	0.04	-0.56	-1.26	-0.58

CHILE				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	-6.74	-0.88	1.17	-2.71
External shocks	0.53	3.16	-2.38	-0.67
Terms trade deterioration	3.85	0.83	-1.35	1.79
Import price effect	11.58	-6.32	-7.05	0.50
Export price effect	-7.73	7.15	5.70	1.29
Interest rate shock	-3.24	-1.08	-0.43	0.22
World trade retardation	-0.07	3.41	-0.60	-2.68
Other external variables	5.79	-3.92	-1.10	-0.05
Debt accumulation burden	3.89	-3.18	-0.68	0.51
Change direct inv income	2.21	-0.73	-0.56	-0.55
Change remittances	0.01	0.10	-0.02	0.00
Change official transfers	-0.31	-0.10	0.16	0.00
Domestic adjustment	-8.39	-0.73	5.62	-2.06
Domestic spending	-2.04	-0.04	1.58	-2.42
Trade ratios	-6.35	-0.69	4.03	0.36
Import replacement	-2.87	8.10	6.68	0.87
Export penetration	-3.47	-8.79	-2.64	-0.51
Interaction effects	-4.67	0.61	-0.97	0.06

COLOMBIA				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	-5.31	2.58	3.99	-5.02
External shocks	0.98	0.00	-5.67	-2.50
Terms trade deterioration	0.49	2.37	-0.73	0.75
Import price effect	2.35	-1.32	-3.38	1.85
Export price effect	-1.86	3.69	2.65	-1.10
Interest rate shock	0.65	-0.64	-0.37	-0.03
World trade retardation	-0.16	-1.73	-4.57	-3.22
Other external variables	-0.31	-1.34	0.39	-0.23
Debt accumulation burden	0.96	-0.42	-0.25	0.67
Change direct inv income	0.50	-0.73	-1.03	0.34
Change remittances	-0.97	0.06	0.43	-0.93
Change official transfers	-0.80	-0.24	1.24	-0.31
Domestic adjustment	-5.56	3.80	9.36	-2.17
Domestic spending	-0.73	-0.11	1.24	-1.36
Trade ratios	-4.83	3.91	8.12	-0.81
Import replacement	-2.05	6.70	5.73	-1.71
Export penetration	-2.78	-2.79	2.39	0.90
Interaction effects	-0.43	0.12	-0.09	-0.13

COSTA RICA				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	-3.55	-1.52	-1.14	0.05
External shocks	-7.79	2.35	-8.47	0.22
Terms trade deterioration	-1.82	2.98	-1.99	3.25
Import price effect	-10.78	-4.76	-2.59	0.20
Export price effect	8.96	7.74	0.60	3.06
Interest rate shock	-4.67	0.52	0.03	-0.12
World trade retardation	-1.30	-1.15	-6.51	-2.90
Other external variables	-0.61	-4.68	3.69	2.69
Debt accumulation burden	-0.36	-2.49	-0.89	0.02
Change direct inv income	0.97	-2.90	3.84	2.49
Change remittances	1.02	-2.43	-0.67	0.17
Change official transfers	-2.23	3.14	1.41	0.01
Domestic adjustment	5.93	0.42	4.87	-2.91
Domestic spending	0.92	-0.48	-0.05	-2.45
Trade ratios	5.02	0.90	4.92	-0.46
Import replacement	7.69	9.61	9.46	3.58
Export penetration	-2.68	-8.71	-4.53	-4.03
Interaction effects	-1.08	0.39	-1.23	0.04

DOMINICAN REPUBLIC				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	1.93	-1.91	-4.35	1.87
External shocks	-1.18	-6.99	-1.58	3.53
Terms trade deterioration	-0.21	-0.11	0.46	1.42
Import price effect	-1.26	-0.71	0.51	1.05
Export price effect	1.05	0.59	-0.05	0.37
Interest rate shock	-0.30	-0.71	0.39	0.12
World trade retardation	-0.67	-6.17	-2.44	1.99
Other external variables	-1.74	0.47	-2.80	-0.35
Debt accumulation burden	1.00	-0.09	-0.49	-0.20
Change direct inv income	0.36	1.42	0.85	-0.14
Change remittances	-2.21	-0.63	-2.01	-0.42
Change official transfers	-0.89	-0.22	-1.14	0.42
Domestic adjustment	4.91	3.62	0.00	-1.10
Domestic spending	1.26	-0.38	-1.52	-2.01
Trade ratios	3.65	4.00	1.52	0.90
Import replacement	12.69	-0.23	-0.65	-0.52
Export penetration	-9.04	4.23	2.16	1.43
Interaction effects	-0.06	0.99	0.03	-0.21

ECUADOR				
Period average	1985-1989	1990-1994	1995-1999	2000-2002
	1980-1984	1985-1989	1990-1994	1995-99[a/]
Observed deficit increase	8.93	-10.54	-5.71	-0.59
External shocks	10.99	-4.34	-4.33	-4.13
Terms trade deterioration	15.31	1.76	2.50	0.76
Import price effect	14.08	-2.88	2.03	3.45
Export price effect	1.23	4.64	0.47	-2.68
Interest rate shock	-2.05	-1.81	3.15	0.64
World trade retardation	-2.26	-4.29	-9.98	-5.53
Other external variables	7.01	-3.95	-7.04	-3.80
Debt accumulation burden	1.93	0.86	-0.57	0.07
Change direct inv income	5.87	-3.69	-2.01	0.53
Change remittances	0.00	-1.66	-4.60	-3.57
Change official transfers	-0.79	0.53	0.14	-0.76
Domestic adjustment	-6.27	-2.57	4.78	6.05
Domestic spending	-1.91	-2.47	-0.84	0.53
Trade ratios	-4.35	-0.10	5.62	5.52
Import replacement	-1.80	1.70	1.24	0.82
Export penetration	-2.56	-1.80	4.38	4.70
Interaction effects	-2.81	0.32	0.88	1.23

Note: a/ Please note that the data of the last column are not strictly comparable with the previous period changes, as from the data in the final column are based on a new set of the balance-of-payments data using a revised methodology. The revised data series are available only for 1993-2002.

EL SALVADOR				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	-1.21	-0.17	-1.19	0.71
External shocks	-4.98	-6.13	-5.73	2.52
Terms trade deterioration	0.19	-4.45	-3.46	3.01
Import price effect	-4.02	-5.59	-5.47	2.25
Export price effect	4.21	1.14	2.02	0.77
Interest rate shock	0.01	0.04	-0.19	0.01
World trade retardation	-5.18	-1.73	-2.09	-0.50
Other external variables	-3.59	-6.27	0.83	-0.22
Debt accumulation burden	0.13	-0.34	-0.20	0.09
Change direct inv income	-0.40	-0.18	0.03	0.49
Change remittances	0.15	-8.59	-0.99	-1.63
Change official transfers	-3.46	2.85	1.98	0.83
Domestic adjustment	6.27	14.21	5.08	-1.23
Domestic spending	0.85	2.35	0.20	-3.19
Trade ratios	5.41	11.86	4.89	1.95
Import replacement	-3.02	10.55	9.40	5.57
Export penetration	8.44	1.31	-4.51	-3.62
Interaction effects	1.09	-1.98	-1.36	-0.35

GUATEMALA				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	0.07	0.87	-0.54	0.82
External shocks	-1.52	-4.20	-5.95	-1.57
Terms trade deterioration	1.61	-1.87	-2.38	-0.50
Import price effect	4.90	-1.21	-4.33	0.52
Export price effect	-3.30	-0.66	1.95	-1.02
Interest rate shock	0.03	-0.45	-0.16	0.08
World trade retardation	-3.15	-1.89	-3.41	-1.14
Other external variables	-0.55	-1.57	-0.28	-1.23
Debt accumulation burden	0.66	-0.13	-0.21	-0.02
Change direct inv income	0.26	-0.45	0.22	-0.37
Change remittances	-0.38	-1.28	-0.61	-0.33
Change official transfers	-1.08	0.29	0.33	-0.50
Domestic adjustment	1.51	6.86	6.14	3.48
Domestic spending	0.27	0.32	-0.03	-0.26
Trade ratios	1.25	6.54	6.18	3.74
Import replacement	-3.58	5.90	5.23	2.30
Export penetration	4.83	0.63	0.94	1.44
Interaction effects				

HONDURAS				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	-3.82	3.53	-3.08	0.74
External shocks	-4.14	-2.40	-10.40	-3.66
Terms trade deterioration	-1.44	0.14	-2.67	1.29
Import price effect	-2.55	11.63	12.53	-0.27
Export price effect	1.11	-11.48	-15.20	1.56
Interest rate shock	-1.41	1.46	-1.21	-0.62
World trade retardation	-1.29	-3.99	-6.52	-4.33
Other external variables	-0.78	-2.46	-1.74	-4.66
Debt accumulation burden	0.67	0.73	-0.05	-0.39
Change direct inv income	0.46	-0.81	-1.68	-0.91
Change remittances	0.57	-2.27	0.38	-2.12
Change official transfers	-2.49	-0.11	-0.40	-1.24
Domestic adjustment	1.16	6.01	6.54	8.41
Domestic spending	-0.29	2.12	-1.17	-1.64
Trade ratios	1.45	3.89	7.71	10.05
Import replacement	-1.77	-1.86	-0.46	1.70
Export penetration	3.22	5.74	8.17	8.35
Interaction effects				

MEXICO				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	2.49	4.65	-3.49	0.69
External shocks	7.15	-6.08	-3.89	-3.32
Terms trade deterioration	11.42	-1.33	1.12	-1.40
Import price effect	9.60	-6.50	1.24	-7.36
Export price effect	1.82	5.17	-0.12	5.95
Interest rate shock	-1.70	-2.15	0.30	0.03
World trade retardation	-2.56	-2.61	-5.31	-1.95
Other external variables	-0.21	0.61	-0.28	-1.00
Debt accumulation burden	1.18	-0.93	0.24	-0.35
Change direct inv income	-0.87	1.30	-0.15	-0.67
Change remittances	-0.43	0.18	-0.43	0.00
Change official transfers	-0.08	0.06	0.06	0.02
Domestic adjustment	-3.21	13.54	2.89	6.24
Domestic spending	-0.55	0.85	-0.87	0.76
Trade ratios	-2.66	12.69	3.76	5.48
Import replacement	-0.74	12.87	10.85	8.90
Export penetration	-1.92	-0.18	-7.08	-3.42
Interaction effects	-1.25	-3.42	-2.21	-1.23

NICARAGUA				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1991-1994	1995-1999
Observed deficit increase			-0.35	-3.38
External shocks			-12.25	4.81
Terms trade deterioration			2.62	6.91
Import price effect			6.29	2.77
Export price effect			-3.67	4.13
Interest rate shock			-10.69	-1.42
World trade retardation			-4.18	-0.68
Other external variables			-5.94	-7.27
Debt accumulation burden			-6.80	-3.08
Change direct inv income			1.23	0.22
Change remittances			-7.30	-4.60
Change official transfers			6.93	0.18
Domestic adjustment			14.36	-1.52
Domestic spending			1.76	-3.61
Trade ratios			12.60	2.09
Import replacement			15.88	5.38
Export penetration			-3.28	-3.28
Interaction effects			3.49	0.60

Note: Change in period 1991-1995 instead of 1990-1995 to avoid problems with deflators and currency reform following period of hyperinflation.

PARAGUAY				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	-4.22	7.86	2.25	-1.71
External shocks	2.90	-3.10	-12.99	-5.50
Terms trade deterioration	4.00	0.15	-2.62	-0.56
Import price effect	11.26	-10.60	-9.05	13.33
Export price effect	-7.26	10.75	6.43	-13.89
Interest rate shock	0.17	0.27	-0.86	0.22
World trade retardation	-1.26	-3.51	-9.51	-5.16
Other external variables	0.61	-2.14	-0.45	-0.20
Debt accumulation burden	0.61	-0.32	0.00	0.31
Change direct inv income	0.36	-1.55	0.82	-0.28
Change remittances	0.03	-0.51	-2.66	-0.70
Change official transfers	-0.39	0.25	1.39	0.47
Domestic adjustment	-4.18	16.56	15.08	-1.09
Domestic spending	-0.82	2.32	2.79	-1.53
Trade ratios	-3.36	14.24	12.28	0.44
Import replacement	1.47	28.09	6.11	-14.67
Export penetration	-4.83	-13.85	6.18	15.10
Interaction effects	-3.55	-3.47	0.60	5.08

PERU				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	2.34	0.74	-0.52	-3.47
External shocks	2.24	-5.26	-2.48	0.21
Terms trade deterioration	3.99	1.52	-1.31	1.75
Import price effect	-0.07	-2.66	-2.29	1.22
Export price effect	4.06	4.19	0.99	0.53
Interest rate shock	1.46	-0.44	0.27	0.44
World trade retardation	-3.21	-6.34	-1.44	-1.97
Other external variables	0.48	1.66	-2.08	-1.28
Debt accumulation burden	-2.06	4.97	0.36	0.12
Change direct inv income	2.31	-2.42	-2.27	-1.24
Change remittances	-0.10	-0.79	-0.31	-0.15
Change official transfers	0.32	-0.10	0.13	-0.01
Domestic adjustment	0.48	7.34	4.45	-2.40
Domestic spending	-0.26	-0.19	0.48	-1.26
Trade ratios	0.74	7.53	3.97	-1.14
Import replacement	-3.60	5.72	4.44	-0.84
Export penetration	4.34	1.80	-0.47	-0.30
Interaction effects	-0.86	-3.00	-0.40	0.00

URUGUAY				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	-4.51	1.78	0.14	n.a.
External shocks	-7.02	-2.53	-6.50	n.a.
Terms trade deterioration	-0.04	2.22	-1.72	0.24
Import price effect	-2.15	-4.91	-4.88	-0.48
Export price effect	2.11	7.13	3.16	0.72
Interest rate shock	-0.88	-1.44	-0.18	0.02
World trade retardation	-6.10	-3.31	-4.60	n.a.
Other external variables	1.22	-1.96	-0.55	n.a.
Debt accumulation burden	1.13	-1.09	0.23	0.63
Change direct inv income	0.11	-0.78	-0.71	-1.00
Change remittances	0.03	-0.02	-0.01	0.00
Change official transfers	-0.05	-0.07	-0.06	n.a.
Domestic adjustment	1.04	6.42	7.78	n.a.
Domestic spending	1.38	0.70	1.15	0.41
Trade ratios	-0.34	5.71	6.63	n.a.
Import replacement	-0.55	7.04	5.25	0.17
Export penetration	0.21	-1.33	1.38	n.a.
Interaction effects	0.26	-0.14	-0.60	n.a.

VENEZUELA				
Period average	1985-1989	1990-1994	1995-1999	1999-2001
	1980-1984	1985-1989	1990-1994	1995-1999
Observed deficit increase	3.94	-2.00	-1.14	-2.98
External shocks	2.65	-2.31	-8.85	-9.54
Terms trade deterioration	5.15	3.02	1.65	-4.01
Import price effect	4.80	3.27	-8.42	-5.31
Export price effect	0.35	-0.25	10.07	1.30
Interest rate shock	1.50	-1.44	-0.02	-0.07
World trade retardation	-4.00	-3.89	-10.48	-5.47
Other external variables	0.65	0.31	-1.03	-0.65
Debt accumulation burden	0.47	0.08	-1.05	-0.20
Change direct inv income	0.32	0.06	0.44	-0.67
Change remittances	-0.05	0.06	-0.41	0.26
Change official transfers	-0.09	0.10	-0.01	-0.04
Domestic adjustment	0.38	0.14	7.43	6.98
Domestic spending	-0.29	-1.22	-1.66	0.39
Trade ratios	0.67	1.36	9.09	6.59
Import replacement	-0.99	1.39	6.45	2.39
Export penetration	1.65	-0.03	2.64	4.20
Interaction effects	0.26	-0.13	1.30	0.22

APPENDIX A.3
Average current account balance (% of GNP)

	1980-1984	1985-1989	1990-1994	1995-1999	1999-2001
Argentina	-0.14%	3.23%	-2.38%	-3.71%	-3.12%
Bolivia	-9.21%	-5.00%	-6.54%	-7.33%	-6.16%
Brazil	-1.18%	0.48%	-2.15%	-4.13%	-4.61%
Chile	-10.63%	-3.89%	-3.01%	-4.18%	-1.47%
Colombia	-4.38%	0.93%	-1.65%	-5.64%	-0.62%
Costa Rica	-11.15%	-7.60%	-6.08%	-4.94%	-4.99%
Dominican Rep.	-6.18%	-8.11%	-6.20%	-1.85%	-3.72%
Ecuador	-4.32%	-13.25%	-2.72%	2.99%	n.a.
El Salvador	-3.80%	-2.59%	-2.42%	-1.23%	-1.94%
Guatemala	-3.91%	-3.98%	-4.85%	-4.31%	-5.13%
Honduras	-10.84%	-7.02%	-10.55%	-7.47%	-8.21%
Mexico	1.40%	-1.09%	-5.73%	-2.25%	-2.94%
Nicaragua	n.a.	n.a.	-37.31%	-36.97%	-33.59%
Paraguay	-6.99%	-2.77%	-10.63%	-12.88%	-11.18%
Peru	-3.32%	-5.66%	-6.40%	-5.88%	-2.41%
Uruguay	-3.67%	0.84%	-0.95%	-1.08%	n.a.
Venezuela	4.07%	0.13%	2.13%	3.27%	6.25%

Source: World Bank data and IMF, International Financial Statistics.
Note: For Argentina periods are 1980-86 and 1987-90; for Bolivia 1980-87 and 1987-90; Brazil 1990-95 and Nicaragua 1991-95. See also footnotes to country tables.

APPENDIX A.4
Macroeconomic decomposition of economic growth (average annual growth rates)

	Private Sector			Public Sector			External Sector			Interaction effects	GDP growth
	Total	Inves-tment	Savings leakage	Total	Gov-ernment	Tax leak-age	Total	Exports	Import leakage		
ARGENTINA											
1980-1984	-6.8%	-9.5%	2.7%	0.0%	0.0%	0.0%	1.7%	1.1%	0.5%	2.6%	-2.5%
1985-1989	-2.9%	-0.7%	-2.2%	1.9%	1.3%	0.6%	1.7%	1.7%	0.0%	-1.2%	-0.5%
1990-1994	2.6%	3.4%	-0.9%	4.6%	5.5%	-0.8%	-0.7%	0.7%	-1.3%	0.0%	6.6%
1995-2000	0.8%	0.4%	0.4%	0.5%	0.5%	0.0%	1.3%	1.7%	-0.3%	-0.1%	2.6%
2000-2001	-2.3%	-5.0%	2.7%	3.1%	2.9%	0.3%	4.2%	3.3%	0.8%	-9.5%	-4.5%
BOLIVIA											
1980-1984	-0.5%	-1.6%	1.0%	0.2%	0.8%	-0.6%	-1.8%	-2.2%	0.5%	0.1%	-2.0%
1985-1989	0.4%	0.1%	0.4%	-2.0%	-2.1%	0.1%	3.5%	5.2%	-1.7%	0.2%	2.2%
1990-1994	1.2%	1.3%	-0.1%	0.4%	0.6%	-0.2%	2.5%	2.9%	-0.4%	0.1%	4.1%
1995-2000	2.1%	1.5%	0.6%	0.5%	0.8%	-0.2%	0.6%	1.1%	-0.6%	0.2%	3.4%
2000-2001	-6.6%	-6.4%	-0.2%	1.6%	1.6%	0.1%	4.4%	2.1%	2.3%	1.8%	1.2%
BRAZIL											
1980-1984	-0.5%	-0.6%	0.1%	1.9%	1.6%	0.3%	1.4%	1.3%	0.1%	-1.7%	1.1%
1985-1989	-0.2%	-0.1%	-0.1%	2.8%	3.6%	-0.9%	0.0%	0.1%	-0.1%	-0.6%	2.0%
1990-1994	3.3%	1.4%	1.9%	-0.9%	-1.1%	0.2%	1.3%	1.5%	-0.2%	-0.6%	3.1%
1995-2000	0.1%	0.1%	0.1%	0.3%	0.6%	-0.3%	1.0%	1.0%	0.0%	0.8%	2.2%
2000-2001	-1.5%	0.7%	-2.1%	1.3%	-0.4%	1.6%	2.0%	2.0%	0.0%	-0.3%	1.5%
CHILE											
1980-1984	-1.5%	-0.8%	-0.7%	0.3%	0.0%	0.3%	1.7%	-1.2%	2.9%	0.4%	0.9%
1985-1989	3.9%	4.5%	-0.7%	-0.4%	-0.7%	0.3%	3.2%	4.8%	-1.5%	0.0%	6.7%
1990-1994	4.7%	4.2%	0.5%	0.2%	0.3%	-0.1%	3.7%	5.4%	-1.7%	0.1%	8.7%
1995-2000	0.4%	0.3%	0.1%	0.3%	0.3%	0.0%	3.6%	4.0%	-0.4%	0.1%	4.3%
2000-2001	-4.4%	-4.7%	0.4%	0.5%	0.6%	-0.1%	6.6%	5.2%	1.4%	0.0%	2.8%
COLOMBIA											
1980-1984	0.7%	0.9%	-0.3%	1.1%	1.1%	0.0%	0.5%	0.2%	0.3%	0.0%	2.2%
1985-1989	0.6%	1.0%	-0.4%	1.2%	1.2%	0.0%	2.7%	2.7%	0.0%	0.0%	4.5%
1990-1994	3.5%	3.8%	-0.3%	0.6%	0.6%	0.1%	0.1%	1.8%	-1.7%	0.2%	4.5%
1995-2000	-3.9%	-3.8%	-0.1%	2.8%	3.1%	-0.3%	1.8%	1.4%	0.4%	0.1%	0.9%
2000-2001	1.8%	1.6%	0.2%	-0.9%	-0.9%	0.0%	0.5%	1.6%	-1.1%	0.0%	1.4%
COSTA RICA											
1980-1984	-1.1%	-1.1%	-0.1%	0.0%	0.1%	-0.1%	1.3%	0.3%	1.0%	0.2%	0.3%
1985-1989	1.8%	1.6%	0.2%	-0.3%	-0.2%	-0.1%	3.0%	5.0%	-2.0%	0.1%	4.6%
1990-1994	0.9%	0.8%	0.1%	0.1%	0.0%	0.1%	4.3%	5.3%	-0.9%	0.0%	5.5%
1995-2000	0.1%	0.3%	-0.3%	-0.2%	-0.1%	0.0%	4.9%	6.0%	-1.1%	0.2%	5.0%
2000-2001	4.2%	3.6%	0.6%	0.4%	0.6%	-0.2%	-3.7%	-3.9%	0.3%	0.0%	0.9%
DOM. REP.											
1980-1984	-0.7%	1.4%	-2.1%	0.9%	0.9%	0.0%	1.7%	-3.0%	4.8%	0.4%	2.3%
1985-1989	0.8%	3.4%	-2.5%	-0.3%	-0.2%	0.0%	1.6%	-0.5%	2.1%	0.7%	2.8%
1990-1994	0.6%	0.1%	0.5%	0.6%	0.6%	-0.1%	2.6%	1.1%	1.5%	0.4%	4.2%
1995-2000	2.8%	3.2%	-0.4%	1.6%	1.7%	-0.1%	2.5%	2.8%	-0.2%	0.5%	7.6%
2000-2001	3.1%	10.2%	-7.1%	2.1%	-2.2%	4.4%	-2.6%	-4.8%	2.3%	0.0%	2.7%
ECUADOR											
1980-1984	-1.3%	-1.7%	0.4%	0.1%	0.6%	-0.5%	3.2%	2.0%	1.2%	0.1%	2.1%
1985-1989	-0.5%	0.0%	-0.4%	-0.3%	-1.3%	1.0%	2.8%	2.1%	0.7%	0.0%	2.0%
1990-1994	1.3%	1.5%	-0.2%	-0.7%	-0.6%	-0.1%	2.8%	3.5%	-0.7%	0.0%	3.4%
1995-2000	0.6%	1.0%	-0.3%	-0.4%	-0.6%	0.2%	-0.2%	0.0%	-0.2%	0.0%	0.1%
2000-2001	6.0%	8.2%	-2.2%	0.2%	-1.9%	2.1%	-2.6%	1.2%	-3.8%	0.0%	3.7%
EL SALVAD.											
1980-1984	-1.3%	-1.4%	0.1%	0.9%	1.1%	-0.2%	-2.5%	-2.9%	0.4%	0.1%	-2.8%
1985-1989	2.4%	0.3%	2.0%	-1.6%	-2.1%	0.5%	0.3%	1.2%	-1.0%	1.0%	2.1%
1990-1994	4.1%	2.4%	1.7%	-0.4%	-0.1%	-0.3%	2.3%	5.5%	-3.2%	0.1%	6.2%
1995-2000	-1.4%	-1.4%	0.0%	-0.2%	-0.2%	0.0%	4.6%	6.7%	-2.2%	0.2%	3.1%
2000-2001	-2.5%	-2.4%	-0.1%	-0.3%	-0.1%	-0.2%	4.7%	5.5%	-0.8%	0.0%	1.8%

	Private Sector			Public Sector			External Sector			Interaction effects	GDP growth
	Total	Inves-tment	Savings leakage	Total	Gov-ernment	Tax leak-age	Total	Exports	Import leakage		
GUATEMALA											
1980-1984	-1.1%	-1.0%	-0.1%	1.1%	0.8%	0.4%	-1.3%	-2.7%	1.4%	0.1%	-1.1%
1985-1989	1.0%	1.0%	0.1%	0.7%	0.7%	-0.1%	1.1%	1.7%	-0.7%	0.2%	2.9%
1990-1994	2.2%	1.7%	0.5%	0.8%	0.9%	-0.1%	1.2%	2.2%	-1.0%	0.1%	4.3%
1995-2000	1.3%	2.6%	-1.3%	0.8%	-0.3%	1.1%	1.5%	2.3%	-0.8%	0.3%	3.9%
2000-2001	-0.3%	-0.6%	0.2%	2.3%	2.3%	0.0%	0.7%	0.3%	0.4%	-0.5%	2.1%
HONDURAS											
1980-1984	-2.8%	-2.7%	-0.1%	2.7%	2.7%	0.0%	1.6%	0.0%	1.5%	0.3%	1.7%
1985-1989	0.6%	0.8%	-0.1%	1.1%	1.2%	-0.1%	1.0%	0.9%	0.1%	0.5%	3.1%
1990-1994	3.9%	4.0%	0.0%	-0.5%	-0.4%	-0.1%	-0.1%	0.2%	-0.3%	0.3%	3.5%
1995-2000	0.4%	0.4%	0.1%	1.8%	1.7%	0.0%	0.6%	0.6%	0.0%	0.1%	2.9%
2000-2001	1.0%	0.4%	0.6%	-0.5%	-0.3%	-0.2%	2.1%	2.3%	-0.2%	0.0%	2.6%
JAMAICA											
1980-1984	0.1%	-0.7%	0.8%	0.4%	0.6%	-0.2%	-0.3%	2.3%	-2.6%	-0.1%	0.1%
1985-1989	-0.2%	-0.1%	-0.1%	0.8%	0.8%	0.0%	2.1%	2.6%	-0.5%	2.3%	5.0%
1990-1994	4.6%	4.1%	0.6%	-1.5%	-1.5%	0.0%	-1.0%	-0.6%	-0.4%	-0.9%	1.3%
1995-2000	-1.8%	-2.1%	0.3%	0.7%	0.8%	-0.1%	0.7%	0.1%	0.6%	-0.2%	-0.6%
2000-2001	3.8%	3.6%	0.2%	-0.3%	-0.3%	0.1%	-1.9%	-2.0%	0.2%	0.0%	1.7%
MEXICO											
1980-1984	-2.4%	-1.7%	-0.6%	1.4%	1.5%	0.0%	2.3%	1.6%	0.7%	0.6%	1.9%
1985-1989	-0.2%	-0.6%	0.4%	-0.1%	-0.2%	0.1%	1.3%	2.3%	-1.0%	0.6%	1.7%
1990-1994	-1.8%	-1.6%	-0.2%	-0.2%	-0.2%	0.1%	3.3%	4.0%	-0.7%	0.2%	1.5%
1995-2000	2.7%	2.7%	-0.1%	-0.8%	-0.7%	0.0%	3.5%	6.5%	-3.1%	0.0%	5.4%
2000-2001	-0.9%	-2.8%	2.0%	0.6%	0.8%	-0.3%	0.0%	-0.7%	0.7%	0.0%	-0.3%
NICARAGUA											
1980-1984	-0.2%	2.1%	-2.4%	3.8%	4.8%	-1.0%	-3.3%	-4.6%	1.3%	0.4%	0.6%
1985-1989	-3.0%	-0.5%	-2.5%	-5.3%	2.3%	-7.6%	1.8%	0.9%	0.9%	3.2%	-3.3%
1990-1994	2.2%	4.1%	-2.0%	-4.0%	0.7%	-4.6%	2.3%	3.4%	-1.0%	0.9%	1.5%
1995-2000	2.3%	1.0%	1.4%	-0.1%	0.4%	-0.5%	2.8%	4.9%	-2.1%	0.3%	5.4%
2000-2001	-0.9%	0.5%	-1.4%	1.6%	1.1%	0.5%	2.3%	1.9%	0.4%	0.0%	3.0%
PARAGUAY											
1980-1984	-1.7%	-1.8%	0.1%	0.5%	0.4%	0.1%	2.2%	0.5%	1.6%	0.7%	1.7%
1985-1989	-0.9%	-0.9%	0.0%	0.2%	0.2%	0.0%	4.0%	6.7%	-2.7%	0.6%	3.9%
1990-1994	-0.8%	-2.4%	1.5%	0.6%	0.6%	0.0%	3.2%	7.7%	-4.5%	0.3%	3.2%
1995-2000	2.3%	2.2%	0.1%	2.5%	2.5%	0.0%	-4.3%	-8.1%	3.9%	0.2%	0.7%
2000-2001	-1.9%	-5.3%	3.4%	0.3%	0.2%	0.1%	4.3%	3.4%	0.9%	0.0%	2.7%
PERU											
1980-1984	-3.7%	-3.6%	-0.1%	1.8%	1.6%	0.2%	1.9%	1.3%	0.6%	0.4%	0.3%
1985-1989	0.3%	1.1%	-0.8%	-1.2%	-1.6%	0.4%	-1.3%	-0.8%	-0.5%	0.4%	-1.9%
1990-1994	4.3%	3.9%	0.4%	0.1%	0.5%	-0.3%	1.0%	2.1%	-1.1%	0.1%	5.5%
1995-2000	-1.1%	-0.4%	-0.7%	0.9%	0.8%	0.1%	2.6%	2.3%	0.3%	0.0%	2.5%
2000-2001	-2.9%	-3.8%	0.9%	0.2%	0.3%	-0.1%	3.0%	3.2%	-0.2%	0.0%	0.2%
URUGUAY											
1980-1984	-6.0%	-5.8%	-0.2%	0.5%	0.5%	-0.1%	1.8%	0.5%	1.3%	0.0%	-3.8%
1985-1989	0.9%	0.5%	0.4%	0.6%	0.6%	-0.1%	2.4%	3.5%	-1.1%	0.0%	3.9%
1990-1994	2.6%	1.4%	1.2%	-0.3%	-0.1%	-0.2%	1.6%	4.7%	-3.0%	0.1%	3.9%
1995-2000	-0.4%	-0.8%	0.4%	0.3%	0.3%	0.0%	2.0%	3.1%	-1.1%	0.3%	2.3%
2000-2001	-1.3%	-0.1%	-1.2%	0.2%	-0.3%	0.5%	-3.8%	-6.9%	3.1%	5.0%	0.0%
VENEZUELA											
1980-1984	-2.0%	-2.8%	0.9%	0.3%	0.5%	-0.2%	0.1%	0.4%	-0.3%	0.6%	-0.9%
1985-1989	-2.5%	-1.7%	-0.8%	0.9%	0.7%	0.3%	3.8%	2.9%	0.9%	0.3%	2.6%
1990-1994	2.2%	2.9%	-0.7%	-0.3%	-0.6%	0.3%	1.2%	2.5%	-1.2%	0.3%	3.4%
1995-2000	0.1%	0.2%	-0.1%	-0.1%	-0.1%	0.0%	0.6%	1.5%	-0.9%	0.1%	0.6%
2000-2001	0.8%	0.7%	0.1%	0.8%	0.6%	0.2%	1.0%	2.3%	-1.2%	0.0%	2.7%

Source: World Bank data (Word Development Indicators 2003), unless indicated otherwise.