

Policy Regimes and Performance of the Agricultural Sector in Latin America and the Caribbean During the Last Three Decades

MAX SPOOR

In a review of the policy regimes and agricultural output performance in Latin America and the Caribbean (LAC) during the past three decades, the linear sequence of pre-reform, crisis and reform, and post-reform recovery is qualified, focusing on a sample of nine LAC countries. The sector did quite well during the ISI policy regime, criticized for its price discrimination, and does not show the assumed characteristics of the 'lost decade' during most of the 1980s, as even agricultural exports (in constant terms) remained important, only to suffer from drops in international prices. Residually treated in the macro-oriented reforms, it has never regained the growth rates under the SAP policy regime, while it was expected that it would benefit more than others. These unorthodox conclusions are founded on a detailed investigation into agricultural output and export performance, correlating it with a reform index (on a country basis).

Keywords: Latin America and the Caribbean (LAC), structural adjustment, agricultural sector performance, policy regimes

INTRODUCTION

The agricultural sector historically has been critical to the performance of the economies of Latin America and the Caribbean (LAC), whether measured in the supply of wage goods (in the form of food), inputs for the agro-industry or export revenues. In spite of this important role, the sector represented in the past three decades not more than 10–15 per cent of the regional GDP.¹

Max Spoor, Institute of Social Studies (ISS), PO Box 29776, 2502 LT The Hague, The Netherlands.
e-mail: spoor@iss.nl

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¹ According to Reca and Echeverria (1998), the share of the agricultural sector in LA as a whole declined from 15 per cent of GDP in the 1970s to 10 per cent in the 1990s. However, for the countries considered here, according to data of the CEPAL the percentages are 11.5 and 9.5 per cent, respectively. That is, the proportion of agriculture is less than in the region as a whole, and the decline is less dramatic as well.

Three observations should be made in relation to this opening statement. First, the recognition of the importance of agriculture has been, on the whole, more verbal than factual; a pattern which suggests that there is a 'paradox of agriculture' in Latin America (Weeks 1995; Spoor 1997; Reca and Echeverria 1998).

Second, such a paradox becomes even sharper after assessing the performance of agriculture through the dominant policy regimes in Latin America in the past three decades. Beyond issues of verbal recognition, there seems to be a contradiction between *policies* actually implemented and outcomes, as analysed from the perspective of the agricultural sector. During *import substitution* (ISI), for example, even when the priorities were on the process of industrialization, substantial growth of the agricultural sector can be observed. Conversely, during *structural adjustment* (SAP), while the promotion of exports (mainly agricultural products) was amongst the priorities, there was no significant impact on agricultural performance. Actually, agriculture became the 'stepchild of reform' (Spoor 1997). Third, there is a certain asymmetry in the perception of the role of agriculture in many studies: while it is true that agriculture has an impact on the aggregate, it is not generally true that macroeconomic performance is representative of the agricultural sector per se. In particular, the characterization of the 1980s as a 'lost decade' does not do justice to the performance of the agricultural sector.

This article examines how macroeconomic and sector policies implemented over the last three decades have influenced agricultural development in a selected, but representative group of countries of LAC. These are Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Jamaica, Mexico and Peru.² The analysis focuses on output and export performance of the agricultural sector in relation to distinctive policy regimes, namely ISI – identified with state intervention – and SAP and stabilization – equalled with reform.

The paper is structured so as to emphasize that the mainstream periodization of the past three decades, namely: *pre-reform* (<1980s), *crisis and reform* (1980s) and *post-reform recovery* (1990s) becomes deficient for the analysis of the agricultural sector in LAC. In the second section, it will be seen that agricultural performance indeed does not conform itself to such a categorization, as indicated by sectoral data for the region and the selected group of countries. Relevant in this respect is that during the ISI period the agricultural sector developed at substantial and sustained rates, mainly because public sector support compensated for the existing price discrimination against agriculture. Further, as far as the agricultural sector is concerned, rather than crisis and liberalization reforms in the 1980s, there was still dynamism well into the decade, while the tenor of the policies implemented during this period was typically interventionist. Finally, the apparently positive performance of the agricultural sector after market deregulation and external opening in the 1990s is to be taken cautiously. There is no substantial difference of trend with respect to the previous periods of state intervention. Meanwhile, other sources of vulnerability seem to emerge as a

² The selection follows the recently completed CEPAL research project 'Growth, Employment and Equity' (1997–2000). Division of Economic Development, Santiago: CEPAL.

consequence, such as those arising in relation to international volatility and internal distribution. In the third section, the comparison of indicators of policy regime with agricultural performance will confirm that the generally assumed positive correlation between reform and output performance proves not true for the agricultural sector. On the basis of these findings, the main features of the development of the agricultural sector in the selected countries are discussed in order to illustrate why the observed patterns did not conform to the standard categorization. In the last section, general conclusions will be drawn, emphasizing that the performance of the agricultural sector seemed equally or more affected by public support, infrastructural investment, credit policies and aggregate domestic demand, rather than relative prices alone (Streeten 1993; De Janvry and Sadoulet 1993).

POLICY AND AGRICULTURAL PERFORMANCE: A COMPLEX PICTURE

From ISI to SAP: Intervention and Reforms

During the ISI period, crucial aspects of the policy regime that directly affected agriculture were as follows. On the negative side, there was price discrimination against tradable goods (due to overvalued exchange rates and export taxes), and price controls to support infant industries that led to low procurement prices for food staples and wage-goods items. On the positive side, there was public support to the agricultural sector through investments in infrastructure, extension services, education and research. Equally or more important were the implicit transfers to this sector through input subsidies and negative real interest rates, emphasized by lenient default policies and the condoning of outstanding debts. These transfers seem to have compensated largely for the effects of price discrimination. State intervention was also reflected in redistributive land reforms, the build-up of various institutions that were to support agricultural producers, such as development banks (Thorpe 1997), and high levels of public investment.

With the demise of the ISI model in the 1980s, SAP became the new fundament of the policy regime (Killick 1989; Mosley et al. 1991). On the whole, the model aimed at liberalizing domestic markets in order to provoke a price-led supply response. Weeks (1995, 70–3) characterized the policy shifts experienced by 17 Latin American countries in the mid- and late 1980s, differentiating between highly (HL), moderately (ML) and not liberalized (NL). As all of the countries discussed in this article (except Jamaica) also appeared in his study, it makes possible to use this type of differentiation, expanding it into the 1990s (see Table 1). While in the late 1980s Argentina and Peru could still be considered as non-reformers (measured as to the degree of liberalization), by the mid-1990s they had joined the group of early reformers (Bolivia and Chile).

The early measures of SAP concerned the *apertura* or openness versus foreign markets (Smith et al. 1993; Ramos 1997). Some countries such as Mexico had already in the early 1980s lowered their high import tariffs. Chile did so even since 1973, when the new military regime introduced a strict neo-liberal approach

Table 1. Degree of liberalization (trade regimes) in the 1980s and 1990s

<i>Mid/late 1980s</i>		<i>Mid/late 1990s</i>	
HL	Bolivia, Chile, Mexico	HL	Argentina, Bolivia, Chile, Peru
ML	Colombia, Costa Rica	ML	Brazil, Colombia, Costa Rica, Mexico
NL	Argentina, Brazil, Peru	NL	–

Source: Adapted by the author from Weeks (1995), applied to the current decade.

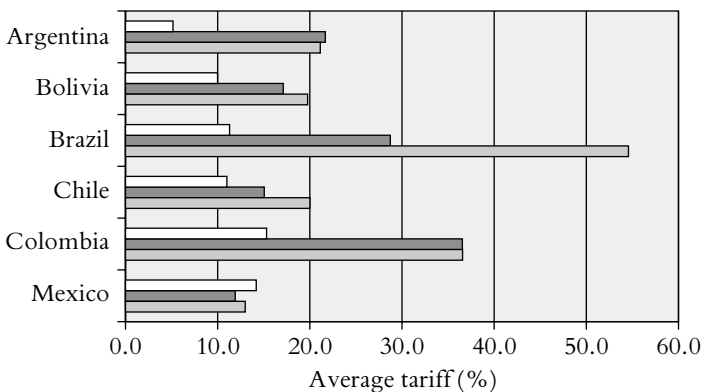
in economic policies (Krueger et al. 1991; Weeks 1995). Next to lowering import tariffs, trade reforms tended to the elimination of quota systems and the correction of overvalued exchange rates through real depreciation. The latter also meant taking away administrative controls and multiple exchange regimes.

All LAC economies have in one way or another reformed their trade regimes, thus the non-liberalized category referred to by Weeks does not apply anymore in the 1990s. Only Mexico might be now considered as moderately liberalized, while initially (as an early reformer) it appeared in the first category of Table 1.

CEPAL/IICA (1997) has made a comparison between three sub-periods, 1984–7, 1988–90 and 1991–3, encompassing largely the decade in which most changes in trade policy took place. In Figure 1, a sample of these changes is presented by showing the average import tariffs of food, indicative for the tendency towards external market liberalization. The tariff barriers that were crucial to the ISI model, by the mid-1990s had indeed been dramatically lowered, although it should be noted that most of the reforms were implemented towards the late 1980s and deepened in the early 1990s, much later than originally thought.

Another component of the changing trade regime was exchange rate policies. Actually, depreciation of the real exchange rates of LAC currencies was seen as a

Figure 1. Tariffs for food imports (1984–93)



'fundamental' policy reform in order to stabilize the external account, which implied to take away the existing price-bias against agricultural exports. As we have seen only in some cases, such as Chile and Mexico, the trade regime was radically changed jointly with the fiscal reforms. Some others, such as Argentina and Brazil, continued with high tariffs in the midst of stabilization plans, and even with substantial export taxes in the former case until early 1990s (Maletta 1995, 132), which again exemplifies the large differentiation in reforms between countries.

Central to the policy shift was the reduction of the size of the state, seen as the main cause of market distortions and the source of bureaucratic failures. Most critically, public sector credit restraints were the cornerstone of the battle against inflation. Programmes of orthodox and heterodox orientation were introduced, such as the *Plan Austral* (1985) and *Plan de Convertibilidad* (1991) in Argentina, the mega-stabilization in Bolivia (1985), and the series of stabilization programmes *Plan Cruzado*, Bresser, Summer, Coller and Cardozo in Brazil between 1986 and 1994 and in Mexico between 1987 and 1988 (later on in response to the crisis of 1994). They used combinations of fiscal and monetary policy to re-establish price stability after periods of sometimes galloping inflation (Bruno et al. 1992; Killick 1995; Dijkstra 1997).

Of the trade and fiscal policies implemented in this framework, the elements that most directly touched upon the agricultural sector were the liberalization of domestic market prices, elimination or 'slimming' of sectoral institutions, the squeezing of credit volumes, while also the previously important agenda of land redistribution through administrative reforms was abandoned, and replaced by (re)allocation through land markets (Gomez Oliver 1994; Weeks 1995; Spoor 1997; Thorpe 1997).

An Overview of Agricultural Output Trends

What then was the actual performance of agriculture in the 1970s and the 1980s? While the GDP of LAC grew at high and sustained average rates of 5.9 per cent (1970–5) and 5.5 per cent (1975–80), agricultural sector GDP did reasonably well with growth rates of respectively 3.4 and 3.6 per cent. Table 2 shows that in the early 1980s the debt crisis and a general depression in the world economy hit the national economies of LAC very hard, causing a severe drop to only 0.3 per cent

Table 2. Average growth national economy and agricultural sector Latin America and Caribbean (1970–95)

<i>Growth rates (% p.a.)</i>	<i>1970–5</i>	<i>1975–80</i>	<i>1980–5</i>	<i>1985–90</i>	<i>1990–5</i>
GDP (%) (1)	5.9	5.5	0.3	1.6	3.3
Agr. GDP (%) (2)	3.4	3.6	2.7	1.3	3.1
Share of (2) in (1)*	–	8.4	9.4	9.3	9.3

Sources: CEPAL/IICA (1997); CEPAL (1998b, 1998c) FAOSTAT.

* End of period; agricultural GDP/total GDP.

of average GDP growth (1980–5). The agricultural sector saw its growth rate diminish to 2.7 per cent, while having a slightly increased share of agriculture in overall GDP.³

With gradually declining population growth rates, sectoral GDP per capita improved its growth rate towards the end of the 1970s, while in the early 1980s it was far from stagnation. The generally assumed character of ‘lost decade’ during the 1980s does not strictly apply for the agricultural sector. The share of agricultural GDP was moderate, around 8–9 per cent of overall GDP, and yet it grew from the 1970s to the 1980s. During the first half of the decade a substantial increase in land productivity takes place, and output growth is close to the 3 per cent level. Moreover, by looking at country-specific data, it is noted that the growth of the agricultural sector is rather uniform across countries, and relatively steady on a year to year scrutiny.

During the second half of the decade, there is apparently a loss of dynamism of the agricultural sector (though the growth rate is still a positive 1.3 per cent). Again, a closer look at the country experiences and annual growth shows that the lower growth rate is fully explained by a one year dramatic drop in 1986 in Brazil (collapse of the coffee price) and another – less dramatic – drop in Argentina in 1988. The rest of the countries denote a steady annual growth. Trends were none the less affected by the unfavourable development of international market prices for the traditional agro-exports of LAC during the 1980s, at least compared with the last years of the 1970s.

The agricultural sector was also subject to elimination of (or reduced access to) subsidies, credit and public support services. Interestingly enough, the sectoral data suggest that there are at least some instances in which earlier public interventions in market-led modernization have paid off (such as in Chile and Costa Rica). In some other cases, where long-term public support was followed by a process of market liberalization and deregulation, recovery came by also using careful measures of re-regulation during apparent contractionary periods (such as Brazil, Bolivia, Colombia, but also in Chile).⁴

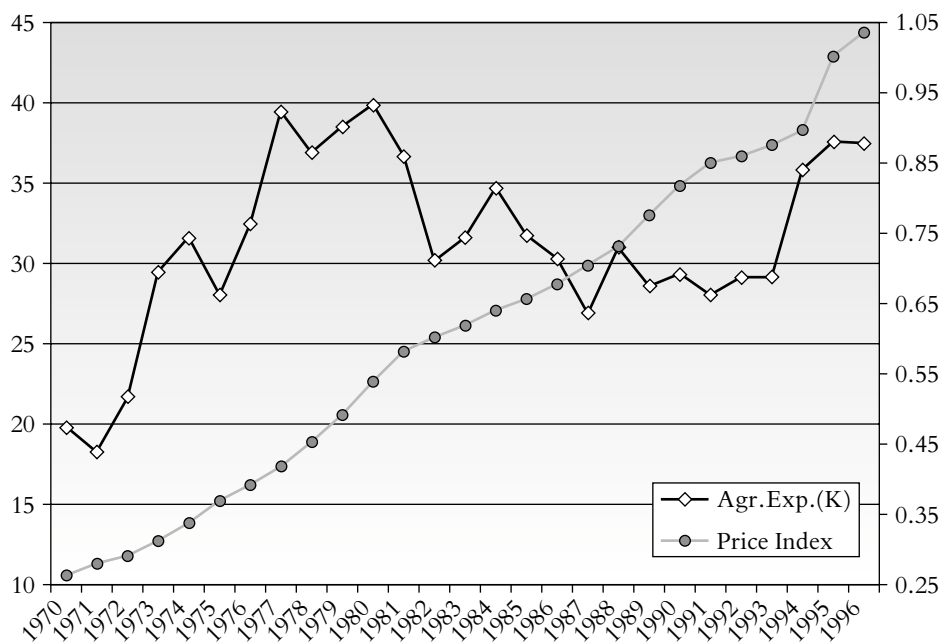
The Evolution of Agricultural Exports and Prices

Agricultural exports showed high and consistent growth rates during the 1970s, which contradicts at least part of the argument of domestic price discrimination

³ Real growth can be overestimated when some agricultural prices were still controlled, or at least a smaller increase than the overall GDP deflator would indicate. However, when one compares the product data in Table 2 with growth rates of volume output, they seem reasonably consistent.

⁴ The growth rates of GDP and the share produced by the agricultural sector can be depicted for the countries of our study (except Jamaica) using patterns of crises and recovery: early, late and prolonged crisis during the 1980s, after which (not always directly) adjustment followed (with swift and slow recovery). Chile, Colombia, Bolivia and Costa Rica belong to the countries that had to cope with an early crisis, and where swift recovery is already showing in the 1985–90 period. Brazil and Mexico show a pattern of decline that culminated in a late crisis/with slow recovery. Although for Brazil the GDP growth rate already had dropped to 0.9 per cent in the first half of the 1980s, this was moderated by a surprisingly good performance of the agricultural sector with 3.8 per cent per annum of sectoral GDP. Finally, for various reasons (such as political turmoil), Argentina and Peru show a prolonged crisis in the 1980s.

Figure 2. Agricultural exports (constant values) and price index



Sources: Agricultural Export Values: FAOSTAT.
 Price Index: WB-World Development Indicators (1999).

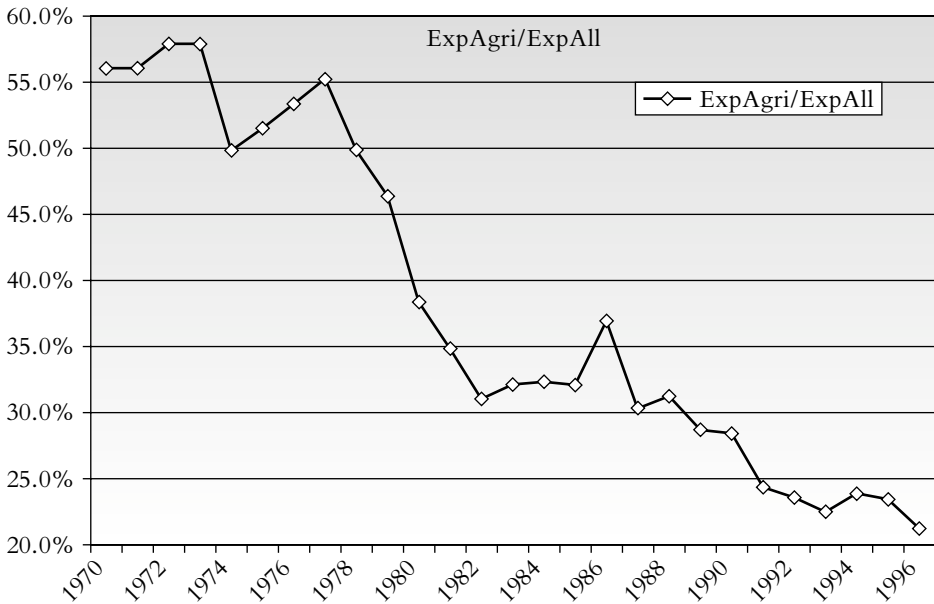
against tradables under the ISI model, and is coherent with a rather stable insertion of agricultural exports into world markets (Figure 2).⁵

The figure, by plotting exports in constant units, emphasizes the fact that there is a real improvement during the decade of ‘import substitution’. The price index (see footnote 8) is also plotted, which serves to highlight a main point in this paper, namely that the performance of the agricultural sector seems independent of the price trend. The decay of exports in the 1980s happens not as a result of price deterioration. Conversely, export performance does not follow in the 1990s a trend as steep as it was in the 1970s, although the price signals seem to have been equally positive.

Figure 3 shows the ratio of agricultural exports over total exports during the (nearly) three decades under analysis. The obvious thing to note is that there is a constant loss of importance of agricultural exports as compared with non-agricultural exports. This same fact can be, however, read in the perspective that exports of agricultural products seem to have served to provide the foreign exchange for the development of non-agricultural products, generally more import-intensive in the infant stage of development.

⁵ According to data of FAOSTAT, Latin American agricultural exports [as share of world agricultural exports] remained stable during the period 1960–85 (11.9, 11.1, 11.0, 11.9 and 11.7 per cent as averages of subsequent five-year periods). It dropped to 9.9 per cent in the period 1985–90 and 8.0 per cent during 1990–5 (explained by a significant drop in agro-exports from the Caribbean).

Figure 3. Agricultural exports (total for nine countries)/total exports



Nevertheless, the development of agricultural exports in the 1980s warrants specific attention. Looking at five-year average growth rates, it can be inferred that the decline of agricultural exports went hand in hand with that of total exports (nearly horizontal trend), denoting that the export crisis was across the board. This is generally explained by a severe external shock, in particular during 1982–3, when external demand and prices dropped dramatically. However, there is a relative increase of the ratio towards the mid-1980s, partially reverting the sharp negative slope of the years before. It could be suggested that the reason for this partial shift of the trend follows from the explanation proposed in the previous paragraph. If there was an export crisis in the early 1980s, this would translate into a foreign exchange crisis, and thus into an import crisis. Agriculture helped to overcome the plausible ‘import bottleneck’ that affected more acutely the non-agricultural export sector. As such, the agricultural sector was indeed a buffer for the economy, despite, as noticed in the introduction to this article, its importance in percentage terms seeming less impressive.

Some specific remarks can be made at this point. A careful evaluation of export volume trends (using FAOSTAT data) confirms that the major agricultural commodities, namely coffee, cotton, maize, meat, rice, soybeans and wheat, grew at a sturdy 12.2 per cent per annum in the 1980–5 period. Meanwhile, the volume trend for the same products slowed down, though still positive, at 1.7 per cent per annum in the second half of the 1980s.

The continuous decline of the share of agricultural exports on total exports, though noticeable, did not imply a decline for the former, but a drastic

improvement for the latter. Noticeable in this context is the recuperation of non-agricultural exports for countries such as Argentina, Brazil, Colombia and Costa Rica. For example, in Argentina the ratio of non-agricultural exports on agricultural exports grew from 1.41 to 1.83 through the 1975–80 period to the 1990–5 period; in Brazil the pattern is even higher, from 1.71 to 3.06. In Chile, rapidly growing fruit, fishery and forestry exports, tended to revert the pre-existent high proportion of non-agricultural on agricultural exports, from 5.85 to 3.86 during the same periods.

POLICY REGIMES AND AGRICULTURAL PERFORMANCE

Policy Reforms and Performance: Empirical Evidence

In order to substantiate the above observations on the differentiated performance of the agricultural sector, an empirical linkage will be made between changes in policy regimes and output performance. A policy reform index is used that measures the changes in policy regime, in particular focusing on the reform, taken from Morley et al. (1999). A low index is identified with protective policies (and a declining index with a deepening of regulation and state intervention), while a high index is identified with a deregulated, free market environment.⁶ Therefore, instead of using a fixed chronological periodization (such as identifying the 1970s with protectionist IS and the 1980s with market liberalization), the analysis here is driven by an annually changing index of reform.

The performance of the agricultural sector is indicated by the output of the sector in real terms, since this is where the generalizations about performance are usually made.⁷ Considering that policies take time to be implemented, and even more time to influence the economic environment and agents' behaviour, added to the fact that agents' decisions need time to materialize into noticeable output measures, the approach taken here is to consider a minimum of two lags between policy changes and performance.⁸

The basis for this empirical study is straightforward: by using a graphic presentation two trends are shown for each of the countries under consideration: a 2-lags index of policy and an estimate of output. The nature of this exercise, it should be reminded, is not to prove the effectiveness (or otherwise) of market deregulation policies in improving the performance of the agricultural sector. Rather, it is more simply to show that generalizations made about the relationship

⁶ The Policy Reform Index developed by Morley et al. (1999) consists of five elements. These elements are: commercial, financial reform, capital account liberalization, privatization and tax reform. Together they construct the general reform index. In this article this general reform index is related to the output performance, while the commercial reform index is linked with agricultural exports.

⁷ Aggregate agricultural value added (including forestry and fisheries) is used for the performance index. Methodologically this is better than focusing on exports, as it covers both output for the domestic market as well as for external markets.

⁸ This is a rather conservative approach that should reveal any influence of policy on outcomes. More sophisticated lag structures could be proposed, but in such case the results would be vulnerable to critics of 'data mining'.

between liberalization (state-intervention) and success (crisis) of the agricultural sector do not match the empirical data of the country cases. In the subsequent sections, some explanations are given as to why this may not be necessarily the case. The graphs plotted below are ordered by size of the agricultural sector.

From Figure 4, a number of key observations can be made:

- (i) The assumed negative correlation between 'state interventionism' (and import substitution policies) and performance of the agricultural sector, based on the 'price discrimination argument' does not appear, as can be noted for the cases of Brazil, Mexico, Argentina, Colombia and Bolivia.
- (ii) There are no clear signs of adjustment and reform during or right after the macro-economic crisis in the early 1980s. Rather, there seems to be an emphasis or continuation of state interventionism. In most cases, a decline in the reform index during the first half of the 1980s (and in some cases longer) can be noted.
- (iii) There is no evidence of a 'lost decade' for the agricultural sector during most of the 1980s. Some of the dips that can be observed (such as in Mexico, Brazil and Bolivia) took place in the mid-1980s onwards, and are surprisingly coinciding with an increase in the reform index.
- (iv) The linking of policy reform index and output performance show that reforms implemented in the late 1980s and 1990s do not necessarily lead to a significant shift from the pre-existing trend of agricultural output. Though there is no deterioration, there is no departure from the long-run trend of growth.

The sub-sector of agriculture that is most linked to the macro-economy and external markets is the production of tradables. It seems therefore worth examining whether the effect of reforms was rather felt in the agro-export sector than in the agricultural sector as a whole.

In Figure 5, the development of the commercial trade reform index, one of the five elements of Morley's composite index, is plotted against the trend of agricultural exports, in constant terms.⁹

The following observations can be made:

- (i) In spite of the assumed negative impact of the protective ISI policy regime, a strong growth of exports during the 1970s, already noted previously, can be observed for most countries of our sample. This coincides with a low commercial reform index. Exceptions to this rule may be Mexico (an early reformer in this field), and partly Bolivia (where reforms take place in the second part of the 1970s only; see Morales 1991) and Argentina (reforming in late 1970s). Chile, which was a 'consistent opener', starts from a very low

⁹ The deflator chosen in this case is the food price index of the US. In country studies, the export unit price is often used, which is constructed for each country and product on the basis of prices and volumes effectively traded. Constructing such an indicator in this case is laborious, but moreover subject to estimation and aggregation problems. On the other hand, considering that the major importer of agricultural export products for Latin American countries is the US, the retail-food price index seems an acceptable indicator of price variations for agro-export products in a representative group of LACs.

Figure 4. Trends of agricultural value added (constant) against general reform index

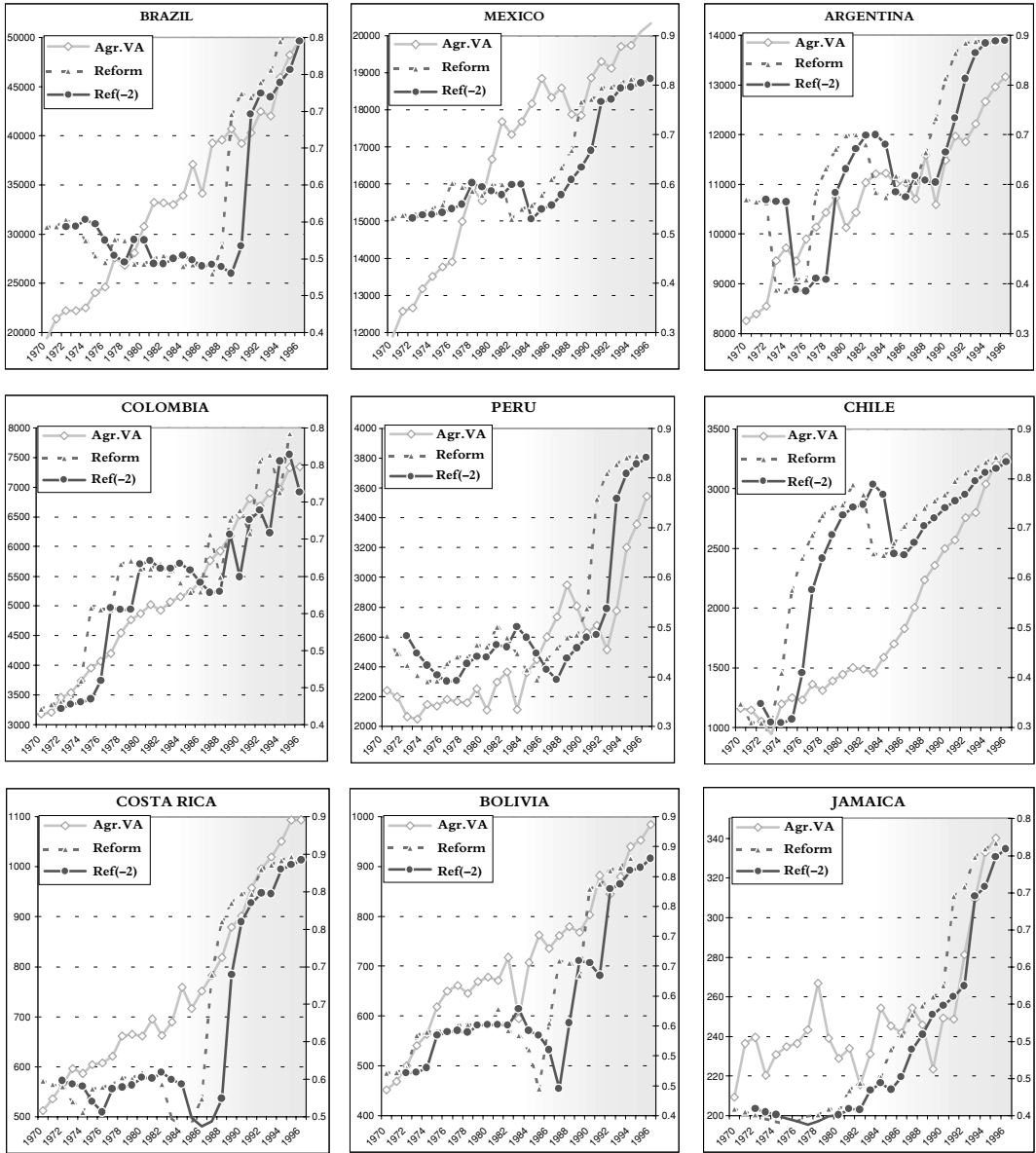
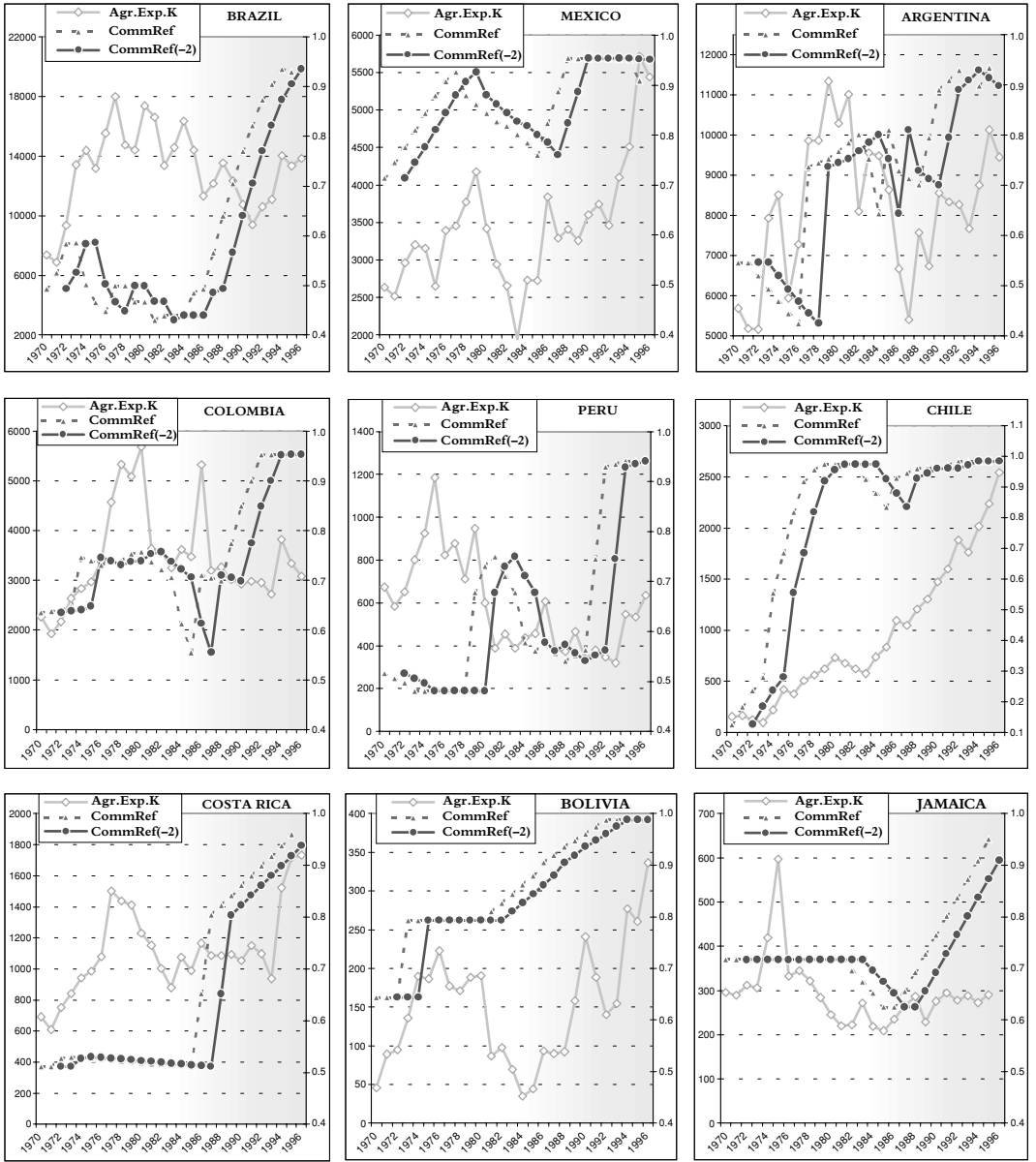


Figure 5. Trends of agricultural exports (constant) against commercial reform index



point. In any event, these 'exceptions' are only in the sense of period or depth of reforms, not in the sense of 'performance', since they all show a growing export pattern in the 1970s.

- (ii) In the early 1980s, all countries do suffer from a drop in export values, but in most cases this was of short duration and growth of agricultural exports resumed quickly. This confirms the discussion in the previous section. Moreover, these plots highlight that, contrary to what is generally assumed, the commercial reform index is actually sliding down until at least the mid-1980s, except in Bolivia.
- (iii) Only the decade of the 1990s seems to come closer to the neo-classical framework, namely that an increased commercial reform index would parallel (or even cause) increased exports. As was noted in the previous section, by the mid-1990s most of the LAC countries were actually 'highly liberalized'. However, growth rates in the last decade seem not to be higher (and in most cases they are even lower) than under the ISI policy regime.

The above findings need to be interpreted, since they are 'against the grain' of mainstream arguments about the roles of intervention and market reform on (agricultural) tradables (see also Spoor 1994, 1995). Some insights are offered in the next sub-sections.

The Import Substitution Policy Regime: Was There an 'Anti-Agriculture Bias'?

The graphical representations of variables linking reform and output/export performance show that state intervention, regulation and protective policies during the IS period were generally favourable to the agricultural sector.

It seems indisputable that there was price discrimination against agricultural products, particularly tradables, with in most cases a severely overvalued exchange rate and export taxes (Krueger et al. 1991). It is, however, more difficult to argue that there was an overall resource transfer out of the agricultural sector, as price discrimination was combined with a substantial package of support measures (public investment, subsidized credit and agricultural services). In particular, this is so when one takes credit subsidies into account, transferred through default in times of inflation or flexible policies on bad debts, public investment programmes and subsidized support services. While presenting the case of a 'bias against agriculture' in domestic price policy, Brandao and Carvalho (1991, 77–8), however, noted for Brazil under ISI that transfers had been positive if credit was included.¹⁰ Buainain and de Rezende (1995) furthermore conclude that the complex of interventionist policies (including a minimum price programme or *MPP*) had actually been able to sustain high growth rates in the agricultural sector until the introduction of adjustment in 1987.¹¹

¹⁰ They also correctly point out that most credit went to commercial farmers, and therefore a large section of the agricultural sector had been taxed. Nevertheless, their conclusion undermines the idea that tradables had been suppressed, as these are actually produced by the large commercial farmers.

¹¹ With the note that the cost of the programme by then had become unsustainable in budgetary terms.

Also labour productivity increased at a higher rate than other sectors in the 1970s (2.2 per cent vs 1.8 per cent for the period 1973–80), as well as in the 1980s (1.9 per cent vs –1.1 per cent during the period 1980–90; see CEPAL (1996, 91–2)). Moreover, the rural population of LAC was still near 43 per cent in the first half of the 1970s, and around 35 per cent a decade later, indicating its importance in the sector in terms of income and employment (CEPAL/IICA 1997).

The solid output performance of the agricultural sector during and in the wake of the ISI policy regime does in fact raise doubt about the critique on interventionist policies that would have supposedly harmed it. Actually, the above mentioned factors such as the agrarian population, productivity of the workforce, public investment and infrastructure creation, credits and subsidies, played a critical role in sustaining a stable path of growth for periods longer than a decade in practically all countries under scrutiny.

Moreover, it should also be considered that the emphasis on industrialization and agro-industrial production added to the encouragement of agricultural production both from the point of view of demand (wage-goods and agro-inputs) and supply (domestically produced equipment and fertilizers). These findings seem consistent with Weeks (1999) and other influential country-specific studies (such as noted by Thorpe 1997).

The 'Lost Decade': Was it Lost for Agriculture?

This section focuses on the economic crisis that affected most of the countries of the region during the first part of the 1980s, and the economic reforms undertaken during and after such crisis in order to restore growth and stability. Though it has been noted that the agricultural sector did not perform as badly as other sectors (CEPAL 1996), the general assumption is that the macro-economic crisis is undistinguished from the performance of each sector in particular. Similarly, macroeconomic policies, whether of the state-intervention or reform types, are seen to affect economic performance to all sectors without distinction.

However, the empirical evidence plotted above cannot be taken to confirm the mentioned statements for the agricultural sector. All countries considered, with the exception of Jamaica (and to a certain degree Argentina), show a solid and sustained output performance during the 'lost decade'. In some cases, such as Mexico, Peru and Brazil, agricultural output even accelerated during the years or immediately after the crisis of the early 1980s. Export performance seems rather mixed, though in most cases there was either a stationary situation (Brazil and Jamaica), or a rapid resumption after a fall (except in Argentina and Peru, but in these cases the relation with reform is ambiguous). On the whole, policy indexes could not be characterized as reform and deregulation, as could be expected in an era dominated by adjustment and stabilization. The general reform indexes were low, and also decreased in most of the cases, indicating that initial response was still interventionist.

These results convey three messages. First, contrary to what is often believed, there was not a 'lost decade' for the agricultural sector. Although the aggregate

growth rate for all countries seemed to have dropped in the second half of this period, this is heavily influenced by two outliers (Brazil and Argentina) in single years. Second, the presumed correlation between deregulation and positive performance of the agricultural sector is also in this period not supported by the evidence. Third, for the given trends there seems to be little justification for drastic reforms, aimed at rescuing a 'stagnated' agricultural sector from the realm of industrialization policies. Indeed, the market deregulation attempts of the 1990s, although they brought about new dynamism in certain sub-sectors, did not significantly change the path of agricultural growth that could be identified in the previous periods. Fourth, a more unstable, near volatile path has been introduced, denoting both the variability of international prices and the changes in domestic demand by constraints of the purchasing power of the urban classes (CEPAL 1996). Curiously, reforms implemented, *when* implemented, seemed to have focused rather on the supply-side, while the main problems were either exogenous (international prices) or related to the demand side.

In sum, there was no 'lost decade' for the agricultural sector, and reforms seemed ineffective during the 1980s. Product-specific data (FAOSTAT) confirm these observations. Land productivity for coffee, cotton, soybeans, sugarcane, fruit, wheat, maize, rice and potatoes was consistently on the rise between 1970 and 1995. Interestingly, the yearly increases in yields for all crops (except fruit and maize) were substantially better in the period 1980–5 (with 3.5 per cent) than in the rest of sub-periods.

Adjustment and Stabilization: Variety and Ambiguity of Results

As stated above, adjustment (SAP) introduced *apertura*, domestic market liberalization and deregulation after the macroeconomic crisis of the 1980s. Critical to these reforms was the removal of price distortions, which were seen as the main impeding factor for the growth of agriculture. However, the evidence plotted in the previous sections does not serve to confirm that the regained dynamism of agriculture in the 1990s was different from the patterns observed in the 1970s and early 1980s, when the policy regime was distinct.

Besides, the shifts towards *apertura* in the economies selected here were neither homogeneous nor clearly identifiable with the standard recipe. As a corollary, it would be difficult to attribute a relatively improved performance in the 1990s to the strict application of mainstream models, as detailed below. Likewise, it remains unclear whether the driving factors for changes in performance were macro reforms (trade regime, exchange rates and fiscal reforms), sectoral reforms focusing on agriculture, or the dynamism derived from international markets (Gomez Oliver 1994).

If one looks carefully at the price policies in LAC economies, in several of them, with examples such as Argentina, Brazil, Colombia and to a lesser degree Mexico, much of the previously dominant package, with minimum price programmes, 'buyer of last resort' policies, consumer subsidies and even large-scale procurement programmes, remained in existence during most of the 1980s.

On a country-specific basis, Chile and Bolivia would be probably the ones that fit into the orthodox adjustment scheme. Peru and Argentina, maybe as a result of foreign inflows, kept appreciated real exchange rates in combination with strong or moderate trade reforms. In the case of Argentina, export taxes were high until the early 1990s, despite the reform (Maletta 1995, 132). Colombia and Brazil still had very high tariffs, even at the end of the 1980s, but yet resorted to real exchange rate depreciation during such periods (IDB 1992).

In cases such as Chile and Mexico, the trade regime was radically changed jointly with fiscal reforms. In Mexico, in particular, restrictive fiscal policy focused particularly on squeezing credit and agricultural subsidies. These were very high until the early 1980s, but dramatically dropped during the 1990s, from 22 per cent of agricultural GDP to less than a quarter of that level (Gomez Oliver 1995, 27). Expenditure contraction was also noticeable, especially public investment, which decreased from 12 per cent of budgetary expenditure in 1980 to less than 6 per cent in 1989 (Gomez Oliver 1995, 27).

Credit policy generally was reformed mainly because of fiscal reasons, since most governments had used rural credit as a distributive instrument rather than for financial intermediation, although the banking system suffered enormous losses. Furthermore, during the 1980s, the predominant ideas about credit moved away from using subsidized credit to promote technological innovation, and to use development banks to reach the peasant farmers, towards an emphasis on real positive interest rates, viable rural financial institutions and market-led access to credit. As Thorpe (1997, 21–2) noted for several cases, this led to a concentration of access of formal credit, mainly favouring commercial producers, and an exclusion of many peasant farmers. Also, the total volume of credit dropped enormously, while real interest rates surged to high levels. According to Buainain and Rezende (1995, 159), in Brazil rural credit loans contracted from a level of around 25 billion USD in 1980 to only around 6 million in 1990, with the major drop taking place after the introduction of a policy of ‘credit squeeze’ in 1987, and the rise of the real interest rate from –33.3 per cent (1986) to 7.0 per cent (1987)! In Mexico, until 1988 real interest rates remained negative, but the credit volume decreased by 40 per cent at constant prices, rising again from that moment onwards, with real positive interest rates (Salcedo Baca 1998, 26–7).

These figures do hide the fact that for some of the gap created by reducing credit volumes, alternative forms of rural finance (re)appeared in the 1980s and early 1990s, such as the traditional money lenders, NGO savings’ and credit schemes (focused on micro finance), and finance as part and parcel of contract farming for (sometimes international) agribusiness. Nevertheless, the fundamental change in rural financial markets, with the squeezing of formal credit, has negatively influenced agricultural production, in particular of those small producers who had indeed been able to benefit from previously generous credit policies. These had provided a form of income support during the non-harvest season, but also the provision of scarce working capital, which otherwise would only be provided at very high interest rates. In the post-reform rural financial markets, most small producers have limited access to credit. In LAC countries

with the liberalization of financial markets, high real interest rates emerged that are largely prohibitive for peasant producers.

In the wake of these reforms, by the late 1980s and early 1990s direct marketing intervention instruments in agriculture were largely dismantled. In some cases price controls were replaced by the more indirect price bands (Brazil, Chile, Colombia and El Salvador) that focused on the dampening of the effect of extreme world market price fluctuations on the domestic market through the use of variable (negative and positive) import tariffs. In others, the minimum price policies remained, but the capacity of state agencies to buy market surpluses became minimal, and therefore the minimum prices only of token significance.

Although somewhat outside the main scope of this article, further questions could be raised about the distributional implications of reform policies. The new development model of LAC, introduced with the structural adjustment of the 1980s and early 1990s (Teitel 1992; Smith et al. 1993; Bulmer-Thomas 1996), is quite 'exclusionary' (Kay 1995; Reca and Echeverria 1998). The dynamics of economic growth is largely to be found in the sectors of commercial farmers who have been able to link up with foreign, mostly transnational capital, integrating themselves in domestic and international agro-business complexes.

The early optimism that existed about the options for small farmers and peasants to modernize through contract farming for agribusiness has not shown to be sufficiently justified (CEPAL 1995, 1998a). Furthermore, there are indications that the gap (in levels of technology, productivity and income) between the commercial and entrepreneurial farmers and the 'non-viable peasants' (*campesinos no-viables*) has become larger than ever (Clemens et al. 1994; Kay 1995; Bulmer-Thomas 1996; Dirven 1997; Reca and Echeverria 1998). Economic policies directed towards an integration of the latter group in agrarian modernization are largely absent, as well as their social counterpart, that could mitigate the human costs of economic adjustment in view of still existing high levels of rural poverty (CEPAL/IICA 1997).

The performance of the LAC agricultural sector, after the demise of the ISI policy regime and with the introduction of SAP, needs careful attention. It was expected that with removing state intervention and the correction of relative prices (through subsidy elimination, exchange rate alignment, etc.) the agricultural sector would benefit more than others. However, it was observed above that the SAP reforms have taken place later than generally would be supposed, namely in the mid-1980s (Mexico, Bolivia and Chile, which resumed reforms) and even the late 1980s/early 1990s (Brazil, Argentina, Costa Rica and Colombia). Output did not resume the same stable and sustained growth path as in the 1970s, nor does it really depart from long-term trends. It has become more volatile (most likely because output performance is much more closely related to the now dominant export-led growth model, and subsequently with very volatile world market prices for agricultural commodities). Finally, this aggregate picture hides an underlying but disturbing trend of smaller dynamic sectors that produce strong growth and large sectors of small producers (the *campesinos*) who are marginalized.

CONCLUSION

This article introduces important qualifications about the nature of policy regimes and presumed outcomes (by neo-classical theory) of both intervention and market reforms in LAC. These findings are consistent with doubts expressed by other authors about the impact of reforms on the agricultural sector (Weeks 1995, 1999; Spoor 1997; Thorpe 1997). This article not only encompasses a larger period and a number of significant countries, but also presents a critical revision of the periods of import substitution and the 'lost decade'. The following paragraphs summarize its main findings:

First, protectionist and interventionist policies applied during the 1970s could be subject to criticisms at various levels (such as the 'price discrimination' argument brought forward in Krueger et al. 1991). However, an overall 'anti-agricultural bias', which would form an important basis for SAPs, does not stand up to the empirical evidence, as agriculture grew at solid and sustained rates in the ISI period.

Second, the characterization of a 'lost decade', that has been derived mainly from the macro (and debt-related) crisis of LAC in the early 1980s, does not correctly represent the performance of the agricultural sector during the whole decade. Actually, there is dynamic growth in the first half of the decade (with substantial increases in land and labour productivity), while there is a 'growth dip' in the second half, mostly coinciding with an increase in reforms.

Third, full market deregulation did not work for the agricultural sector as expected in the sample of countries analysed above. On the one hand, there was little, if any, noticeable change in the already positive trend of output growth that characterized earlier periods of little or no reform. On the other hand, developments during radical attempts of macro-reform did affect the agrarian sector in terms of increasing volatility and deteriorating distribution.

Finally, the mainstream periodization of policy regimes and performance that is used for LAC, namely: *pre-reform* (ISI, 1970s and before), *crisis and reform* (SAP, 1980s), and *post-reform recovery* (1990s), cannot be sustained in light of the above-presented evidence and analysis. The linking of a policy reform index (with as its complement an intervention index) and an agricultural output performance index, in combination with the specific country contexts, show us that there was substantial country variation. However, there are also clear trends that cast doubt on the 'fixed periodization' mentioned above. This heterodox conclusion about the dynamics between the dominant policy regimes and the output performance for agriculture in LAC during the last three decades raises questions about the relative importance of public support and market reforms in relation to the sector. This has more recently come to the policy agenda in the 'second generation' of reforms, which focus on a new role of the public sector towards agriculture. They move away from the initial market-led development paradigm of the SAP policy regime that dominated the continent during part of the 1980s and the 1990s.

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