

# Distortions to Agricultural Incentives in Latin America and the Caribbean

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Agricultural Distortions Working Paper 70, September 2008

This is a product of a research project on Distortions to Agricultural Incentives, under the leadership of Kym Anderson of the World Bank's Development Research Group ([www.worldbank.org/agdistortions](http://www.worldbank.org/agdistortions)). The authors acknowledge the invaluable help with data management by Ernesto Valenzuela and with data compilation by Johanna Croser, Esteban Jara, Marianne Kurzweil, Signe Nelgen, Francesca de Nicola and Damiano Sandri, helpful comments from workshop participants, and funding from World Bank Trust Funds provided by the governments of Ireland, Japan, the Netherlands (BNPP) and the United Kingdom (DfID) as well as the Rockefeller Foundation for use of the Bellagio Conference Center. This paper draws on the chapters in *Distortions to Agricultural Incentives in Latin America*, edited by K. Anderson and A. Valdés, Washington DC: World Bank, 2008. A revised version without the Appendix will appear as Ch. 7 in *Distortions to Agricultural Incentives: A Global Perspective, 1955 to 2007*, edited by K. Anderson, London: Palgrave Macmillan and Washington DC: World Bank (forthcoming 2009).

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# **Distortions to Agricultural Incentives in Latin America and the Caribbean**

Kym Anderson and Alberto Valdés<sup>1</sup>

While the vast majority of the world's poorest households depend on farming for their livelihoods, poverty tends to be less heavily centered on rural areas in Latin America than is the case in Africa or South Asia. This is because of the higher levels of development, the larger share of the nonfarm sector in economies, the more extensive urbanization, and the greater concentration of land ownership. Nonetheless, poverty is sufficiently prevalent in numerous parts of Latin America and the Caribbean to continue to be a concern. In the past, farm earnings in the region have often been depressed by the pro-urban, antiagricultural bias of government policies. True, progress has been made over the past two decades in reducing the policy bias, but many trade-reducing price distortions remain between sectors, as well as within the agricultural sectors of most Latin American countries.

This study on Latin America is based on a sample of eight countries, comprising the big four economies of Argentina, Brazil, Chile, and Mexico; Colombia and Ecuador, two of the poorest South American tropical countries; the Dominican Republic, the largest Caribbean economy; and Nicaragua, the poorest country in Central America. Together, in 2000–04, these countries accounted for 78 percent of the region's population, 80 percent of the region's agricultural value added, and 84 percent of the total gross domestic product (GDP) of Latin America.

The key characteristics of these economies—which account for only 4.5 percent of worldwide GDP, but 7.7 percent of agricultural value added and more than 10 percent of agricultural and food exports—are shown in table 1. The table reveals the considerable diversity within the region in terms of stages of development, relative resource endowments, comparative advantages and, hence, trade specialization, and the incidence of poverty and income inequality. This means that these countries represent a rich sample for comparative

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<sup>1</sup> This chapter draws on the introductory and country chapters in Anderson and Valdés (2008), with data updated using Anderson and Valenzuela (2008).

study. Nicaragua's per capita income is only one-seventh the global average, while the incomes of Colombia and Ecuador are one-third of this average. By contrast, the per capita incomes of Argentina and Chile average just one-eighth below and that of Mexico is one-eighth above the global average. Only Argentina, Brazil, and Nicaragua are well above the global average in endowments of agricultural land per capita; the Dominican Republic and Ecuador are well below this average; and Chile, Colombia, and Mexico are a little less than one-third above the average. Income inequality is high throughout the region compared with the rest of the world; the Gini coefficient is near or above 0.5 and averages 0.52. This is well above the Gini coefficient for Africa and Asia. Likewise, the Gini coefficient for land distribution is high in Latin America: 0.58 for Chile, but above 0.7 for Argentina, Brazil, Ecuador, and Nicaragua, compared with an average of less than 0.5 in Asia (World Bank 2007). Even so, there is comparatively little absolute poverty except in the poorest tropical parts of the region.

Though it relies on nearly twice as much agricultural land per capita as the rest of the world, Latin American agriculture is characterized by concentrated land ownership and a structure of production whereby medium and large commercial farms contribute the bulk of agricultural output. It is also a region with a high degree of urbanization. These features are important in understanding the forces behind agricultural policies. So, too, is the fact that, until a few years ago, most countries in the region were experiencing a high degree of macroeconomic instability and high inflation. The manipulation of food prices for urban consumers in an attempt to reduce inflation was (and, in Argentina, still is) a dominant feature driving farm pricing policy.

Most Latin American countries have gone through a process of major economy-wide policy reforms, which began, for some countries, approximately in the mid-1980s (or the 1970s for Chile) and, for others, in the mid-1990s. Reforms centered on macroeconomic stabilization, trade liberalization, deregulation, and some privatization of state agencies. There was a considerable reassessment of the role of government in guiding economic development. Agricultural policies were an integral part of this reform process, although not the principle motivation of the reforms.

This chapter begins with a brief summary of economic growth and structural changes in the region since the 1960s and of agricultural and other economic policies as they affected agriculture before and after the reforms of the mid-1980s to mid-1990s. It then summarizes estimates of the nominal rate of assistance (NRA) and the relative rate of assistance (RRA) to farmers delivered by national farm and nonfarm policies over the past several decades, as

well as the impact of these policies on the consumer prices of farm products. Both farmer assistance and consumer taxation tend to be negative in periods where there is an antiagricultural, pro-urban consumer bias in a country's policy regime. The final sections list the lessons learned and draws out key policy implications for the region.

### **Growth and Structural Changes<sup>2</sup>**

Since 1980, the region's real GDP has grown at an average annual rate of 5.4 percent, or 3.6 percent per capita. These rates are somewhat above the averages of other developing countries of 4.1 percent total and 2.3 percent per capita, but somewhat below Asia's averages of 7.1 percent total and 5.5 percent per capita. The region's comparative growth performance was much less rosy in the 1960s and 1970s, however, before the region moved away from an import-substitution industrialization regime.

Among the focus countries in our study, Chile and Mexico have been the star performers since 1980, while Ecuador and Nicaragua have been the slowest growers. Nicaragua's civil conflict set the country's economy back in the 1980s, but, in the 1990s, that economy grew two times more rapidly than the economy of Ecuador.

The industrial sector has grown much more slowly than overall GDP during the past 25 years, but agriculture has grown even more slowly, at barely half the rate of the rest of the economy, while the service sector has taken the lead. Among our sample countries, the economies of Chile and Mexico have been among the most rapidly growing, and Argentina's and Ecuador's the most slowly growing, apart from Nicaragua, which was disrupted by the prolonged civil conflict in the 1980s.

As a result of the strong growth in service activities during the past two decades, the share of services in GDP has risen from barely one-half to two-thirds, while agriculture's share fell from 9 to 6 percent, on average, in our sample economies. The relative decline of agriculture has been slowest in Argentina, Brazil, and Nicaragua and the most rapid in oil-exporting Ecuador and Mexico, but also in Chile. By 2000–04, agriculture's GDP share ranged from 4 percent in Chile and Mexico to twice that in Brazil and Ecuador, three times that in Colombia and the Dominican Republic, and more than four times that in Nicaragua.

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<sup>2</sup> The economic indicators quoted in this section are from the first 9 tables in the Appendix, based predominately on the compilation of data from the World Bank's *World Development Indicators* and the UN's FAOSTAT databases by Sandri, Valenzuela and Anderson (2007).

The shares of overall employment accounted for by farming activities have fallen somewhat more slowly than agriculture's GDP shares, according to statistics in the FAOSTAT Database of the Food and Agriculture Organization of the United Nations (which, because of definitional differences, is not always consistent with databases within countries). These shares remain at much higher levels than the GDP shares, implying relatively low and slow-growing labor productivity on farms. The most rapid decline has occurred in Brazil, where the employment share in agriculture has fallen from one-half to less than one-sixth during the past 40 years.

Agriculture's average share in exports has also declined by about one-third each decade since the late 1960s. The only exception is Chile, where the share has risen dramatically, from one-eighth to one-third. Chile contrasts markedly with the other rapidly growing economy in our sample, Mexico, where the share of farm products in all goods exports has fallen from 58 percent to only 6 percent.

The declining relative importance of farm exports has been more rapid in Latin America than in the rest of the world: the index of the revealed comparative advantage of Latin America in these products (defined as the share of agriculture and processed food in national exports as a ratio of the share of such products in worldwide merchandise exports) has fallen by about one-third since the 1960s, as has the region's index of trade specialization (defined as net exports as a ratio of the sum of the imports and exports of agricultural and processed food products). There has been a marked upturn in these two indexes during the past decade, however, not only in Chile but in several other reforming Latin American countries, including Argentina and Brazil. The indexes are now at high levels in all countries in the sample apart from Mexico, which is the only country in the sample with a revealed comparative disadvantage in agriculture.

Finally, before examining the region's policy reforms, we note the increases in export orientation. A common indicator is the value of goods and services expressed as a percentage of GDP. Since the early 1990s, this indicator has roughly doubled in the three biggest economies (Argentina, Brazil, and Mexico), but it has changed little in the other countries in our sample, apart from Chile, where it rose a few years earlier. Another indicator is the share of primary agricultural production that is exported. This share has jumped dramatically in the past 20 years, including in Mexico, where it is now over 30 percent as a result of sharply increased specialization within the sector following the agricultural and trade policy reforms begun in anticipation of the North American Free Trade Agreement, which came into effect in 1994. Note, however, that import dependence has also grown as a consequence of trade

specialization. Indeed, 17 of the region's 21 countries on which data are available are net food importers (de Ferranti et al. 2005). Only Argentina was a net exporter of cereals during 2003–05, even though all eight countries in our sample (excepting Mexico) are more than 100 percent self-sufficient in agricultural products in aggregate and even though the share of these countries in global exports of agriculture and food jumped from 6.8 to 9.6 percent between 1990–94 and 2000–04.

### **The Evolution of Agricultural and Trade Policies**

Like most other regions, Latin America shows a diverse range of policies, political structures, and institutions, but there has been, to some extent, a common evolution in the ideology motivating economic policies, beginning in the 1960s.

#### ***Prior to the reforms of the mid-1980s and early 1990s***

Until approximately the mid-1980s, agricultural price interventions in the region were largely a by-product of a development strategy based on a claim that the best way to grow the economy was to adopt a protectionist policy to encourage import-substitution industrialization. This policy also raised budgetary resources in the form of import tax revenue, which was supplemented in some countries (such as Argentina) through agricultural export taxes. Both sets of approaches harmed the region's most competitive farmers and were offset only slightly by farm credit and fertilizer subsidies.

Between the 1950s and the 1980s, there were concerns about high rates of inflation, especially where urban populations had strong political influence. Policy makers were under pressure to avoid large increases in food prices, which would potentially impact wage rates and thereby (according to then prevailing theory) accelerate inflation through the so-called cost-push effect.

In addition to fiscal and inflation objectives that made farm export taxes attractive, there was, in the 1950s and 1960s, a widespread belief among the region's policy makers and followers of the structuralist school associated with Prebisch (1950, 1959, 1964)—notwithstanding the seminal book by Schultz (1964)—that the efficiency losses generated through the extraction of rents in agriculture were low and that the main impact would be to reduce land rents and land values. Argentina is a prime example of a case in which the view persisted that farmers in Latin America were unresponsive to price incentives. While the

belief in this unresponsiveness has now largely disappeared, a few countries—Argentina is one—still tax agricultural exports to generate fiscal revenues and lower consumer food prices.

An empirical study of agricultural pricing policies led by Krueger, Schiff, and Valdés (1991) included five Latin American countries for the period 1960–84. Its main findings are fourfold. First, over the period examined and for the farm products selected, the direct interventions affecting importables were positive, on average, while the direct interventions on exportables were negative. Second, aggregating over all selected products, one sees that the net effect was negative, indicating that the direct tax on exportables dominated the protection on importables. Third, the rate of indirect taxation on agriculture (because of industrial protection policies and the overvaluation of the real exchange rate) was large and dominated the rate of direct taxation. Fourth, direct price policies stabilized agricultural prices relative to world prices, while indirect policies contributed little, if at all, to food price stability. The study found that direct protection for agricultural importables averaged 13 percent, while, for exportables, it amounted to –6 percent. The indirect taxation rate in the region averaged 21 percent so that the total taxation rate (direct and indirect) averaged 28 percent. The highest direct taxation was found in Argentina and the Dominican Republic (about 18 percent). As a percent of agricultural GDP, net income transfers out of agriculture (direct and indirect) reached 84 percent in Argentina, 56 percent in Chile, 43 percent in the Dominican Republic, and 42 percent in Colombia.

### *Economic reforms from the mid-1980s to early 1990s*

By the 1980s, there was disillusionment with the results of the import-substitution strategy and wider acceptance of theoretical developments regarding the causes of inflation and macroeconomic instability in general. During the 1980s and early 1990s, a macroeconomic framework designed for open economies gradually displaced the closed economy approach in most Latin American countries. Governments introduced economy-wide reforms with special emphasis on macroeconomic stabilization, deregulation, unilateral trade liberalization, and privatization.

The goal of the reformers was to create a better climate for productivity and private investment in all economic sectors, including agriculture. In most Latin American countries, the major change in trade policy was the partial or total removal of most quantitative restrictions on imports and exports, the elimination of export taxes, and a program of gradual

reduction in the levels of import tariffs. This yielded incentives to move resources from import-competing to export-oriented sectors, including in agriculture, which enhanced competitiveness and led to greater integration with the world economy.

By the mid-1990s, the exchange rate was recognized as the most important “price” affecting the agricultural economy. At the outset of the reforms, it was expected that trade liberalization and the reduction of the fiscal deficit would lead to a depreciation of the real exchange rate (Krueger, Schiff, and Valdés 1988). Yet, the reforms were followed by a significant appreciation of the currency that was associated with the opening of the capital account, greater inward foreign investment, and a major increase in domestic real interest rates. Reforms in the service sector also played a critical role. Deregulation and privatization had a major impact on the availability in the marketplace of the more-reliable and lower-cost services used in agriculture such as ports, airlines, and shipping transport.

The timing of reforms differed somewhat across countries. Colombia, for example, became a more open economy through export promotion beginning in 1967; it adopted a more ambitious liberalization of trade in 1990 and then went into a policy reform reversal beginning in 1992.

In Chile, the controlled markets of 1950 to 1974 were followed by radical economic reforms toward trade liberalization, deregulation, and privatization between 1978 and 1982, before a second phase of reforms beginning in 1984.

Mexico introduced strong policy changes starting in the mid-1980s, before the signing of the North American Free Trade Agreement. The changes involved more openness, deregulation, and privatization, a reduction in credit subsidies, and major changes in the role of government in the marketing of farm products.

A wide variety of policy instruments have been applied to influence agricultural prices, even during the post-reform period. Colombia, for example, has had minimum support prices, in addition to import tariffs, price compensation schemes, procurement agreements, a monopoly on grain imports by a government agency, export licenses and subsidies, and safeguards on imports; moreover, until 1990, all imports of inputs were subject to prior import licenses. Then, in 1995, tariffs and tariff surcharges associated with price bands on more than 100 products were introduced.

Mexico is another leader in interventions, including in the transition from highly government-controlled markets before the mid-1980s to more market-oriented policies. Its policies include price support programs (before the mid-1980s and in conjunction with state trading), credit and input subsidies, and direct income payments to farmers (*ProCampo*).



Argentina has simpler interventions. Agricultural exportables that are also wage goods have been subjected to export taxes, complemented by export bans in some years. The return to sizeable export taxes in late 2001 and their subsequent rises has been controversial, with the most recent rises leading to prolonged protests by farmers in urban areas in mid-2008.

### **Estimates of Latin American Policy Indicators**

The net effect of these various interventions on farmer and consumer incentives are quantified using the common methodology (Anderson et al. 2008) that has been adopted by the authors of this volume and the four preceding regional volumes. After a brief word on methodology, a summary of results follows.<sup>3</sup>

#### ***Methodology***

The nominal rate of assistance (NRA) is defined as the percentage by which government policies have raised gross returns to producers above what they would be without the government's intervention (or lowered them, if the NRA is below zero). If a trade measure is the sole source of government intervention, then the measured NRA will also be the consumer tax equivalent (CTE) rate at that same point in the value chain. The NRAs are based on estimates of assistance to individual industries at the farmgate. The targeted degree of coverage of the products for which agricultural NRA estimates are generated is 70 percent of the gross value of farm production at undistorted prices. The authors of the country case studies also provided guesstimates of the NRAs for noncovered farm products. For countries with non-product-specific agricultural subsidies or taxes, such net subsidies are then added to product-specific assistance to obtain NRAs for total agriculture and also for tradable agriculture for use in generating a relative rate of assistance (RRA, defined below).

Farmers are affected not only by the prices of their own outputs, but also—albeit indirectly because of the changes to factor market prices and the exchange rate—by the incentives nonagricultural producers face. In other words, not just absolute but relative prices and, hence, relative rates of government assistance affect producer incentives. The direction of the economy-wide effect of distortions to agricultural incentives may be captured by the

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<sup>3</sup> Annual estimates and additional details may be found in the appendix.

extent to which the tradable parts of agricultural production are assisted or taxed relative to producers of other tradables. By generating estimates of the average NRA for nonagricultural tradables, it is then possible to calculate an RRA, which is defined in percentage terms as:  $RRA = 100[(1+NRA_{ag}^t/100)/(1+NRA_{nonag}^t/100) - 1]$ , where  $NRA_{ag}^t$  and  $NRA_{nonag}^t$  are the weighted average percentage NRAs for the tradable parts of the agricultural and nonagricultural sectors, respectively. Since the NRA cannot be less than -100 percent if producers are to earn anything, neither can the RRA. And, if both these sectors are equally assisted, the RRA is zero. Although this measure cannot fully capture the ultimate impacts on resource allocations to various sectors including nontradables (a computable general equilibrium model is need for that), it is nonetheless useful in comparing policy biases across time and countries. If the RRA is below (above) zero it indicates that a country's trade policy regime has an anti- (pro-)agricultural bias.

In calculating the NRA for producers of agricultural and nonagricultural tradables, the methodology seeks to include distortions generated by dual or multiple exchange rates. Such direct interventions in the market for foreign currency were common in Latin America in the 1970s and 1980s, but not since the reforms. However, some authors of the Latin American country studies had difficulty finding an appropriate estimate of the extent of this distortion, so the impact on NRAs has been included only for the Dominican Republic, Ecuador, and Nicaragua. Its exclusion for the other five countries means the estimated (typically) positive NRAs for importables and (typically) negative NRAs for exportables are smaller than they should be for these countries. In cases where the NRA for importables dominates that for exportables, this omission would lead to an underestimate of the average (positive) NRA for such tradables sectors. This applies to nonagricultural sectors for all the countries studied in this chapter. In the most common cases in earlier decades where, for the farm sector, the estimated NRA for importables is dominated by a negative NRA for exportables, the estimate of the sectoral average NRA for agriculture would be less negative than it should be, and, hence, so would the RRA estimate.<sup>4</sup>

To obtain the values of farmer assistance and consumer taxation, the NRA estimates of the country authors have been multiplied by the gross value of production at undistorted prices to obtain an estimate in constant U.S. dollars of the direct gross subsidy equivalent of

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<sup>4</sup> Other reasons for exchange rate misalignment are discussed in some country studies, but they are not quantified. Several country studies document the significant instability of real exchange rates, which has important influences on the relative profitability of tradable versus nontradable products. Furthermore, in some countries, Brazil in particular, the high instability of the nominal exchange rate because of short-term speculative trading and political uncertainties may influence producer incentives, but, for the purposes of this project and the reasons given in Anderson et al. (2008), they are not considered policy distortions.

assistance to farmers. This is then added up across products for each country and then across countries for any or all products to get regional aggregate transfer estimates for the countries under study. An aggregate estimate for the rest of the region is obtained by assuming that the weighted average NRA for the countries not under study is the same as the weighted average NRA for the countries under study and that the share of each country in the region's gross value of farm production at undistorted prices is the same each year as the share of the country in the region's agricultural GDP measured at distorted prices. These gross subsidy equivalent values are also expressed on a per farmworker basis.

To obtain comparable value estimates of the consumer transfer, the CTE estimate at the point at which a product is first traded is multiplied by consumption (obtained from the FAO SUA-FBS Database), valued at undistorted prices, to obtain an estimate in constant U.S. dollars of the tax equivalent to consumers of primary farm products. This, too, is added up across products for a country and across countries for any or all products to obtain regional aggregate transfer estimates for the countries under study.

### *Estimates of NRAs in agriculture*

On average (whether simple or weighted), agricultural price and trade policies in Latin America reduced farmer earnings throughout the postwar period right through to the 1980s. The extent (when expressed as a nominal tax equivalent) peaked at more than 20 percent in the 1970s, but still averaged close to 10 percent in the later 1980s. The only countries in our sample that received positive assistance from farm policies during that period were Chile and (at least from the late 1970s, but only to a minor extent) Mexico and Colombia. Argentina, Brazil, the Dominican Republic, and Ecuador each had negative rates of assistance that averaged well above 20 percent for at least one five-year subperiod, and, apart from the Dominican Republic, each had a negative average NRA even in the 1990s, as did Nicaragua. However, by the mid-1990s, Brazil and the Dominican Republic had joined Chile and Colombia in that they had positive average NRAs. Meanwhile, Mexico had raised its assistance considerably before engaging in reform following negotiations to join the World Trade Organization and the North American Free Trade Agreement, while Argentina had all but eliminated its discrimination against its exporters in the 1990s, only to reinstate explicit export taxes again in late 2001 when it abandoned its fixed exchange rate with the U.S. dollar and nominally devalued by two-thirds. The *NRA<sub>ag</sub>* for the region in the 1990s and the first

half of the present decade averaged only slightly under 5 percent (table 2). Its switch from negative to positive occurred in 1992 (see appendix).

The effect of the policy reforms on NRAs over the past two decades is illustrated in figure 1. For all countries except Chile, the national average NRA was less negative or more positive in 2000–04 than in 1980–84. This is true, too, for the majority of the commodity NRAs for the region, although assistance for several commodities (such as milk and poultry) was cut. This pattern may be seen in figure 2 and table 3, which also illustrate the diversity of the region's average rates across commodities.

There is also a great deal of diversity across commodities within each country's farm sector, and the extent of this diversity (as measured by the standard deviation) diminished, on average, by only about one-quarter during 1990–2004 compared with the prereform period of 1965–89. This is evident in table 4. The table reports the standard deviation of NRAs for covered products, which account for more than two-thirds of the value of agricultural production. This means there is still a great deal that may be gained in terms of improved resource reallocation within the agricultural sector if differences in rates of assistance for different industries are reduced.

One striking feature of the pattern of farm price distortions in the region as a whole is the strong antitrade bias. This is shown for agriculture's import-competing and export subsectors in the region in figure 3 and for each country in table 5 (along with a Trade Bias Index). These estimates reveal that there has been little diminution in the bias over the past four decades, except in Brazil. Indeed, the average NRA for exportable farm products has been negative throughout virtually the whole period analyzed in all countries other than Chile (plus Brazil during the past decade and Colombia in the present decade), while the regional average NRA for import-competing farm industries has increased from near zero in the 1970s to 20 percent or more in the period since 1990 (with Chile again an exception with its NRA for import-competing industries falling to near zero). That is, despite the lower taxation of farm export industries, the region's antitrade bias has persisted because the average NRA for import-competing farm products has been rising recently in several of the countries under study.

The contributions to the overall NRA for agriculture for the region as a whole provided by covered products, noncovered products, and non-product-specific assistance are summarized in table 5. Non-product-specific assistance has added only one or two percentage points during the past four decades. Input price distortions have also contributed little, on average, to the overall regional NRA in agriculture, reducing the negative value slightly in

the 1980s and adding slightly to the positive value during the past decade or so. In Chile, input distortions have reduced the positive NRA in the farm sector because of protectionist policies that have raised the price of imported or import-competing farm inputs. This has also been the case of Argentina since the early 1990s and, to a smaller extent, of Colombia since the 1960s. There is little in the way of domestic producer subsidies or taxes, on average, in the region; the main exception is positive support measures in Mexico and slightly negative support measures in Argentina (see appendix tables).

The dollar value of the positive or negative assistance to farmers arising from agricultural price and trade policies has been nontrivial. The antiagricultural bias peaked for the region in the 1975-84 period at nearly US\$17 billion per year in constant 2000 dollar terms, assuming that the Latin American countries not under study had the same NRAs as the countries under study, keeping aside the case of Mexico (see the bottom row of table 6, panel a). This is equivalent to a gross tax of almost US\$400 for each person engaged in agriculture. Around 60 percent of this US\$17 billion arose because of policies in Brazil. Thanks to the reforms of the past two decades, this taxation has gradually disappeared in all the countries under study except Argentina and Nicaragua. However, the reform has not meant that there is no intervention now. Rather, the old policy has been replaced by positive assistance to farmers in the remaining six countries. This assistance has averaged US\$6 billion per year, or around US\$140 per farmworker, over the 1995-2004 period. The US\$140 is small compared with per capita income for the region (about 4 percent), but it ranges from more than US\$450 in Colombia (one-quarter of that country's per capita GDP in 2000-04) to -US\$1,700 in Argentina (a negative one-third of that country's per capita GDP). The extent of this dramatic transformation in the region as a whole over the past two decades is illustrated in figure 4 for the individual countries and for key products. Table 7 reveals that, as in most other regions of the world, the lion's share of assistance goes to milk, sugar, and rice.

#### ***Assistance to nonfarm sectors and RRAs***

The antiagricultural policy bias of the past was caused not merely by agricultural policies. The significant reduction in border protection for the manufacturing sector and the indirect impact of this on the drop in the price of nontradables after the initiation of the reforms, together with the deregulation and privatization of services, have also been important in the changes in the incentives affecting intersectorally mobile resources. The reduction in assistance to nonfarm tradable sectors has been as responsible for the expansion in

agricultural exports since the early 1990s as the reduction in direct taxation on these agricultural exports.

Quantifying this distortion in nonfarm tradable sectors as accurately as the quantification of the distortion in agriculture has not been possible. Our authors have had to rely on applied trade taxes (for exports, as well as imports) rather than undertaking price comparisons for nonfarm goods, and, hence, they have not captured the quantitative restrictions on trade that were important in earlier decades but that have been less important recently.<sup>5</sup> Nor have they captured distortions in the services sectors; many of these sectors now produce tradables (or would do so in the absence of interventions preventing the emergence of this production). As a result, the NRAs for nonfarm importables are underestimated, and the decline indicated is less rapid than the decline that actually occurred; the situation is similar for nonfarm exportables, except that the actual NRAs would have been negative in most cases. Of these two elements of underestimation, the former bias probably dominated. Thus, the author estimations of the overall NRA for nonagricultural tradables should be considered a lower-bound estimate; this is especially true as we go back in time, so that the decline indicated in the NRA is less rapid than it actually is.<sup>6</sup>

Despite these methodological limitations, the estimated NRAs for nonfarm tradables prior to the 1990s are sizeable. For Latin America as a whole, the average value of the NRAs for nonfarm tradables has steadily declined throughout the past four decades as policy reforms have spread. This has therefore contributed to a decline in the estimated RRA among farmers. Thus, the RRA has fallen from more than –30 percent in the 1970s to an average of less than –1 percent in 2000–04 (see table 5), and this appears (in figure 5) to have been caused as much by falling positive NRAs among nonfarm producers as by falling negative NRAs among farmers. The extent of the change in RRAs among individual countries over the past two decades is striking, particularly in the case of Brazil and the Dominican Republic (the virtual disappearance of negative RRAs) and of Colombia (a switch from negative to positive RRAs). In figure 6 this is depicted by countries being closer to the horizontal line in the middle of the figure (where RRA=0) in 2000-04 than in 1980-84. That figure also shows some movement to the right by countries over that period, indicating the extent to which their antitrade bias within the farm sector has diminished. Were countries to have eliminated both

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<sup>5</sup> The distortions in the prices of the inputs in the production of nonfarm goods have also been ignored, again in contrast to the treatment of price distortions in estimating agricultural NRAs.

<sup>6</sup> This bias is accentuated in those cases where distortions to exchange rates are not included, as noted in the methodology section. Exchange rate distortions have been included only in the studies on the Dominican Republic, Ecuador, and Nicaragua, and these economies are too small for their inclusion to affect noticeably the weighted average NRAs and RRAs for the region as a whole.

their antiagricultural and antitrade policy biases, they would be located on the upper right-hand crossover of the  $RRA=0$  and  $TBI=0$  axes. Unfortunately only Chile and Brazil were close to that point by 2004.

### *The CTEs of agricultural policies*

The extent to which farm policies impact on the retail consumer price of food and on the price of livestock feedstuffs depends on a wide range of factors, including the degree of processing undertaken and the extent of competition along the value chain. We therefore attempt only to examine the importance of the impact of policies on the buyer's price at the level where the farm product is first traded internationally and, hence, where price comparisons are made (for example, for wheat, raw sugar, or beef).<sup>7</sup> To obtain weights to make it possible to sum up across commodities and countries, we calculate the volume of apparent consumption simply as production, plus net imports and then value the result at undistorted prices.

If there were no farm input distortions and no domestic output price distortions such that the NRA was entirely the result of border measures such as an import or export tax, then the CTE would equal the NRA for each covered product. Because these distortions are relatively minor in Latin America and because the NRA tends to be positive for import-competing products and negative for exportables (until recently), then this is the case for the CTE as well. The weighted average CTE for the region has thus been negative for most of the period, averaging around  $-15$  percent until the 1990s and marginally above zero thereafter (Table 8(a)). The variance across products is somewhat less now than before the reforms of the past two decades, but still considerable (Table 8(b)). In proportional terms, the current transfers from consumers are largest in Colombia and Ecuador, but in dollar terms they are also large in Mexico. At its peak in the 1980s, the transfer from producers to consumers in the region amounted to US\$7 billion per year at the producer level for the products covered in this project, whereas, in the present decade, the average transfer occurs from consumers to producers, while the total reaches around US\$6 billion per year (Table 9(a)). Among the covered products, the biggest transfers are for milk, poultry, sugar, and rice (Table 9(b)). But, even if one were to take account also of the assistance for noncovered products, the total per capita transfer from consumers in recent years would amount to less than US\$15.

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<sup>7</sup> The consumer tax at the retail level is probably smaller in percentage terms but larger in value terms, because of the addition of marketing margins in the processing, distribution and retail parts of the value chain.

### **Summary: What Have We Learned?**

The most salient feature of price and trade policies in the Latin American region since the 1960s is the major economic reforms, including significant trade liberalization, in most countries during the later 1980s and early 1990s. Overall levels of nonagricultural protection have declined considerably, most significantly in the industrial sector, and there have been reforms in the service sector (deregulation and privatization). Both changes have improved the competitiveness of the agricultural sector.

More specifically, the following features of the Latin American experience of the past 40 or more years are worth highlighting by way of summarizing the key findings of this regional study.

*The region has seen a gradual movement away from the taxation of farmers relative to nonagricultural producers since the 1970s and the emergence of positive assistance for agriculture since the early 1990s.* The gradual fall in the estimated (negative) RRA for the region, from as high as –40 percent in the early 1970s to less than –2 percent in the past decade, has not been dissimilar to trends in Africa and Asia, but is nonetheless dramatic. Instead of being effectively taxed nearly US\$17 billion per year, as occurred in the 1980s (or US\$400 per person working in agriculture), farmers in the region now enjoy support worth more than US\$5 billion per year, or nearly US\$125 per person employed on farms. An exception is Argentina, where there was a reversal of policy reform that involved a step back to direct export taxation in late 2001, though this has to be seen in the context of the massive devaluation in Argentina at that time when the country abandoned the fixed parity with the U.S. dollar. Thanks to the devaluation, Argentina continued to contribute to the rapid growth of Latin America's share in the global exports of farm products that was stimulated by the gradual elimination of antiagricultural policies.

*The dispersion across Latin America in average NRAs and RRAs for farmers has not diminished much despite the reforms in all countries.* This means there is still lots of scope for reducing distortions in the region's use of resources in agriculture. This finding also indicates that political economy forces are at work in each country and that these are not changing greatly relative to the situation in other countries over time.

*The dispersion in NRAs among farmers within each Latin American country under study has also not diminished much.* This result means there is still scope for reducing distortions in resource use within agriculture even in countries with an average *NRA<sub>ag</sub>* and an



RRA close to zero. As in other regions, the products in Latin America showing the highest rates of distortion and gross subsidy equivalent values are rice, sugar, and milk.

*In particular, the strong antitrade bias in assistance rates within the farm sector remains in place.* In the 1970s, the NRA for import-competing farm industries averaged close to zero in the region. But, since then, it has increased to an average of around 20 percent, while the NRA for agricultural exportables has only become less negative. The fact that the average NRAs for import-competing and exportable agricultural industries have risen almost in parallel means that the (anti-)Trade Bias Index has not fallen much. This may be understandable from a political economy viewpoint, but it nonetheless means that resources are not being allocated efficiently within the farm sector and—because openness tends to promote economic growth—that total factor productivity growth in agriculture is slower than it would be if the remaining interventions were removed.

*The most important instruments of farm assistance or taxation continue to be trade-restrictive measures.* Domestic taxes and subsidies on farm inputs and outputs and non-product-specific assistance have made only minor contributions to the estimates of NRAs for Latin America.

*Because the agricultural taxation or assistance is mostly due to trade measures, movements in the CTE closely replicate changes in farm support or taxation, which means that, before the reforms, food prices were kept artificially low, but, in recent years, they have been above international levels, on average.* It also means there is considerable variation in CTEs across products and across countries in the region. The CTEs are highest for milk, rice, and sugar, but are negative, on average, for maize, beef, and soybeans. The current level of taxation on food consumers in the region as a whole is small, though, amounting to less than US\$15 per capita per year.

*The decline in negative RRAs has been caused as much by cuts in protection in nonagricultural sectors as by reforms in agricultural policies.* This underscores the fact that the reductions in distortions in agricultural incentives in the region have been part of a series of economy-wide reform programs and have not been caused merely by farm policy reforms.

### **Poverty and Policy Implications**

The assistance trends surveyed in this chapter are, in one sense, encouraging for economic policy advisors: the long period of encouraging import substitution in the industrial sector and of taxing primary exports, which so heavily discriminated against the agricultural sector

in Latin America, has been largely relegated to history. However, as the above summary of our findings makes clear, this does not mean that policies are no longer distorting agricultural incentives. And, if Latin America were to follow the policy path chosen by more-advanced economies that involves increasing agricultural assistance as per capita incomes rise, there may be even more distortion in the future. This suggests that vigilance will be needed among economic policy advisors in the years to come. Meanwhile, the opposite policy problem remains in Argentina, where explicit export taxation was reintroduced in late 2001 and has been increased a number of times since then.

Neither taxes on agricultural imports to reduce import competition for the benefit of poor farmers, nor taxes on agricultural exports to lower the cost of food for the urban poor, is the most efficient way to reduce poverty (Winters, McCulloch, and McKay 2004). Poverty-reducing objectives are laudable, but trade policy instruments are almost never the first-best way to achieve them. On the contrary, food trade taxes may even worsen poverty, depending on the earning and spending patterns of poor households and on the alternative tax-raising instruments available. Far more preferable would be microeconomic reforms to mitigate the deep-seated structural problems affecting the competitiveness of factor and goods markets. This is because the reforms have accentuated the differences between commercially oriented farmers and farmers who are less prepared to take advantage of the economic liberalization. Although countries have adopted various policies in place to mitigate the human costs of economic adjustment (especially since the mid-1990s), there were in some cases adverse effects on rural poverty and traditional agriculture was often left behind (Spoor 2000; Valdés and Foster 2007). Many countries in the region have implemented safety net programs – direct income transfers and conditional cash transfers – to aid all poor, including families in agriculture. Nevertheless, the challenge for the years ahead is to improve the coverage and effectiveness of poverty alleviation programs. Such programs are not only good in fighting poverty, but contribute to investing in human capital and act as a form of compensation to reduce the political obstacles to further economic reforms.

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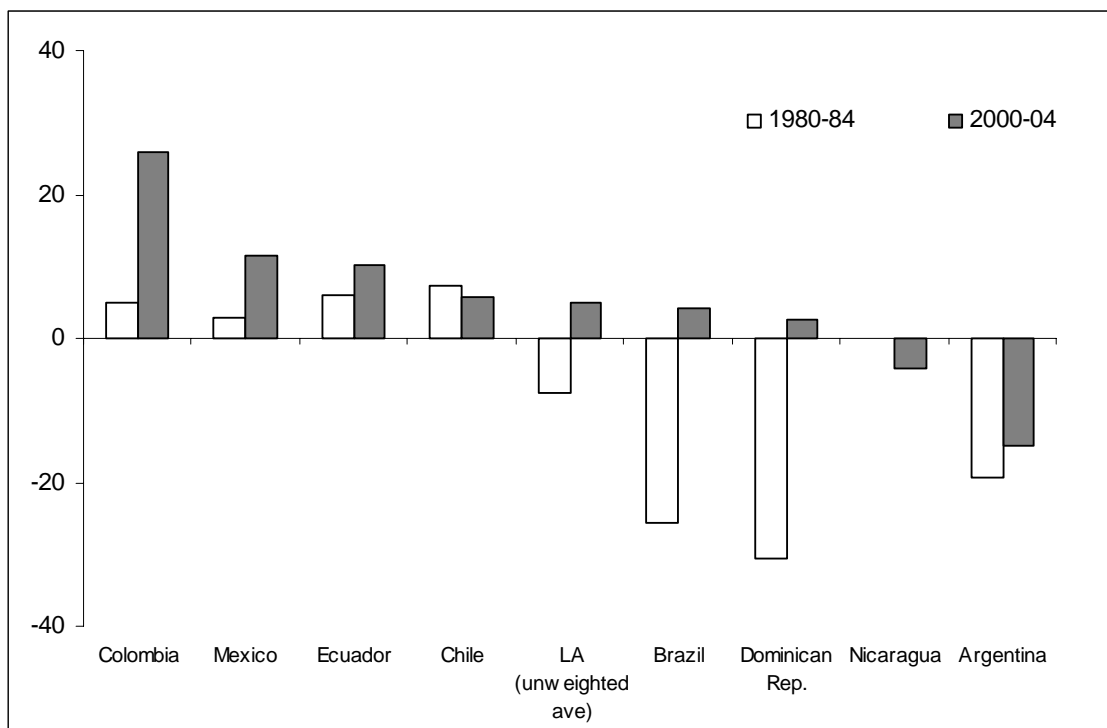
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Figure 1: Nominal rates of assistance to agriculture, individual Latin American countries<sup>a</sup> and unweighted regional average, 1980-84 and 2000-04

(percent)

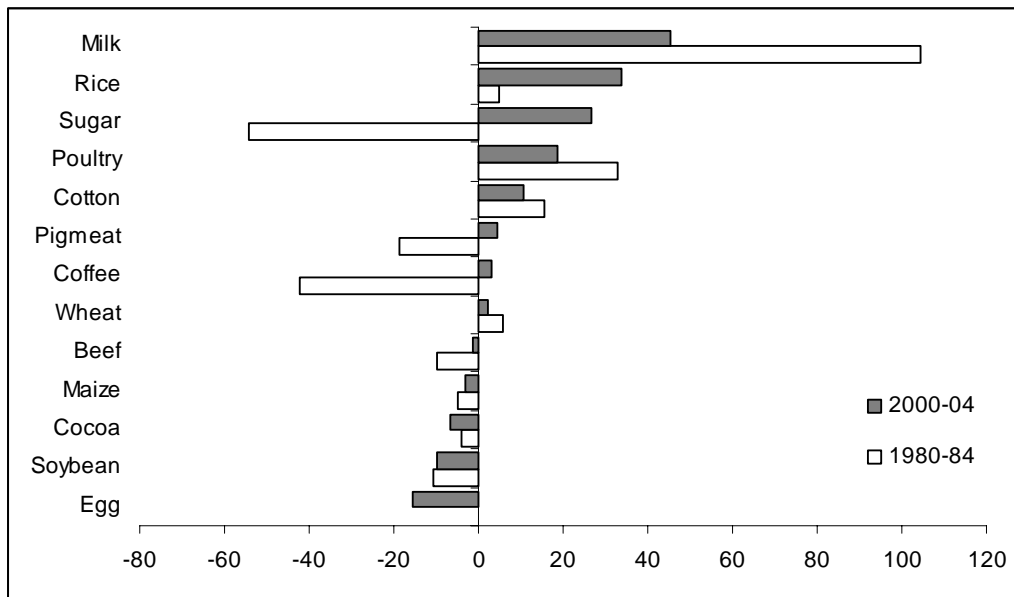


<sup>a</sup> There are no estimates for Nicaragua in 1980-84.

Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

Figure 2: Nominal rates of assistance, by product, Latin America countries, 1980-84 and 2000-04

(percent, weighted<sup>a</sup> average across countries)

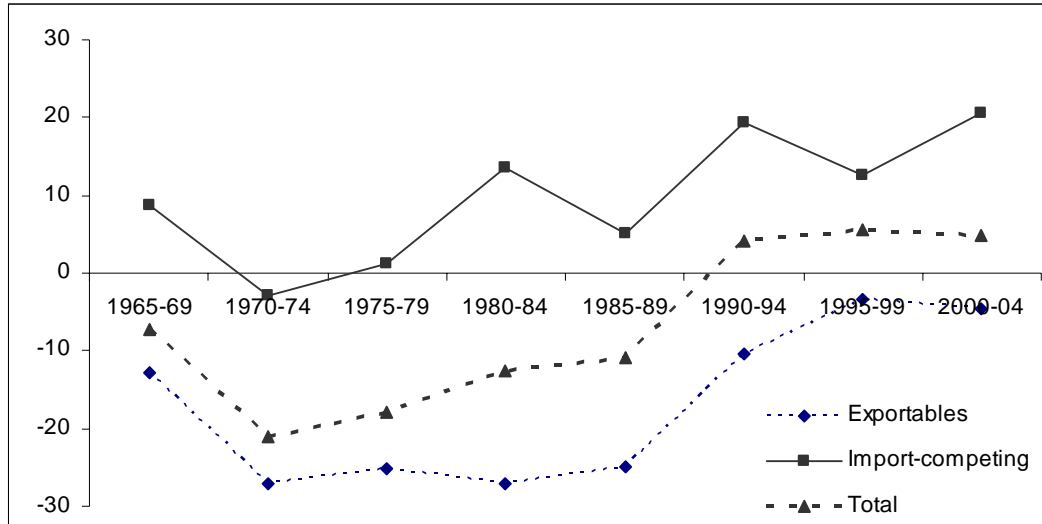


<sup>a</sup> Weights based on gross value of agricultural production at undistorted prices [each NRA (by country, by product) is weighted by the country's value of production of that commodity in a given year]. Products with less than 1 percent of the gross value of regional production are excluded. These include: apples, cassava, cocoa, garlic, onions, palm oil, peanuts and sesame.

Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

Figure 3: Nominal rates of assistance to exportable, import-competing and all<sup>a</sup> agricultural products, Latin America region, 1965 to 2004

(percent, weighted average across countries)

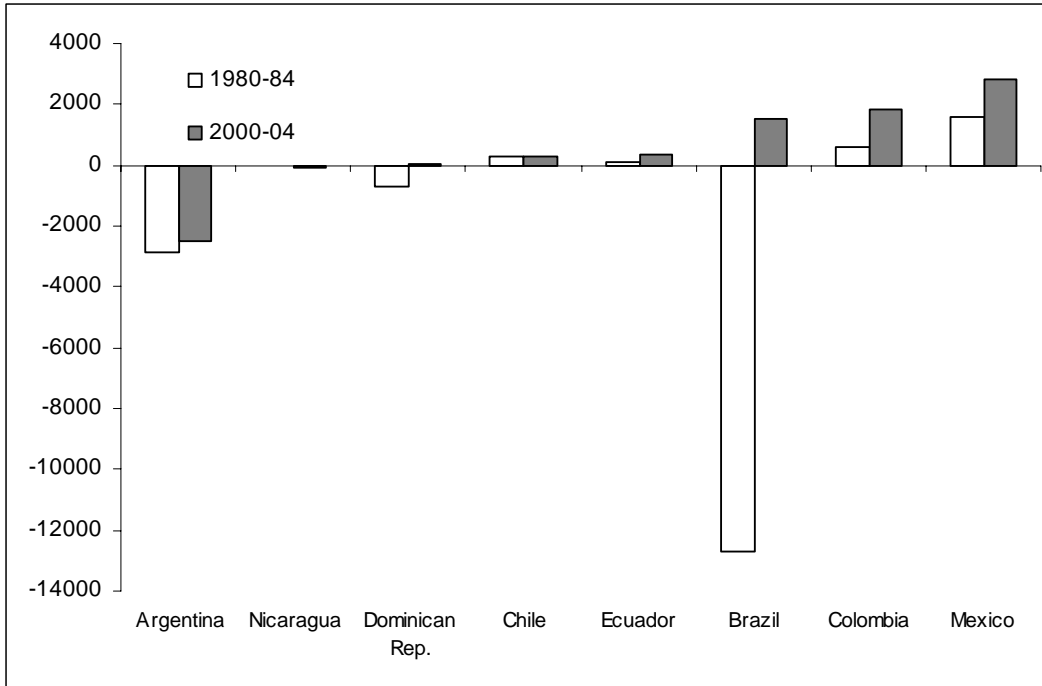


Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

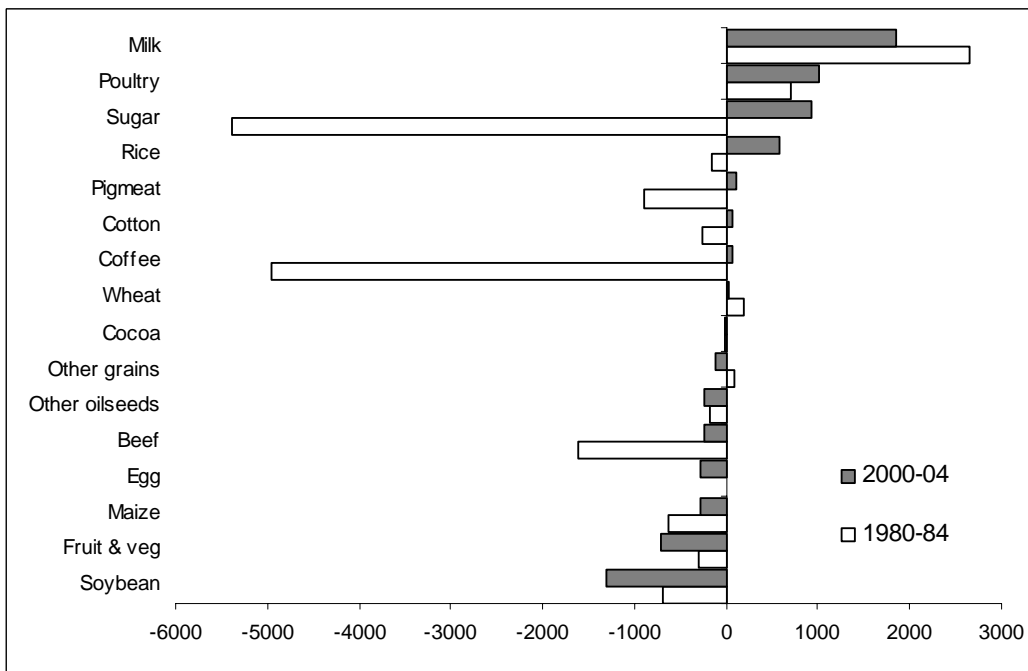
Figure 4: Gross subsidy equivalents of assistance to farmers, Latin American countries, 1980-84 and 2000-04

constant 2000 US\$ million)

(a) Total per country



(b) Total per product

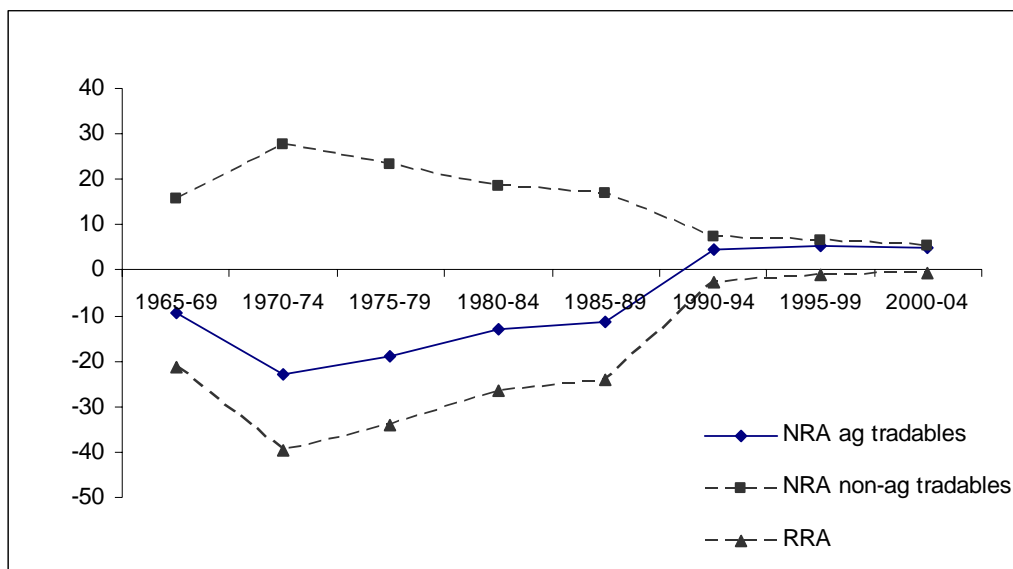


Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).



Figure 5: Nominal rates of assistance to agricultural and non-agricultural tradable products and relative rate of assistance,<sup>a</sup> Latin America region, 1965 to 2004

(percent, weighted averages across eight countries)

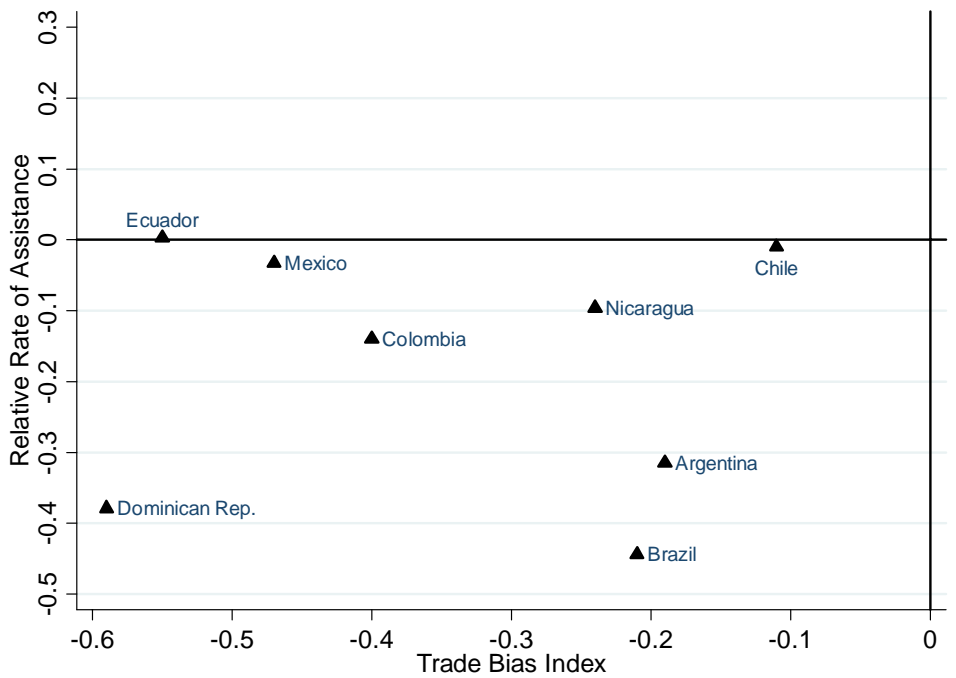


<sup>a</sup> The RRA is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{non-ag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{non-ag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

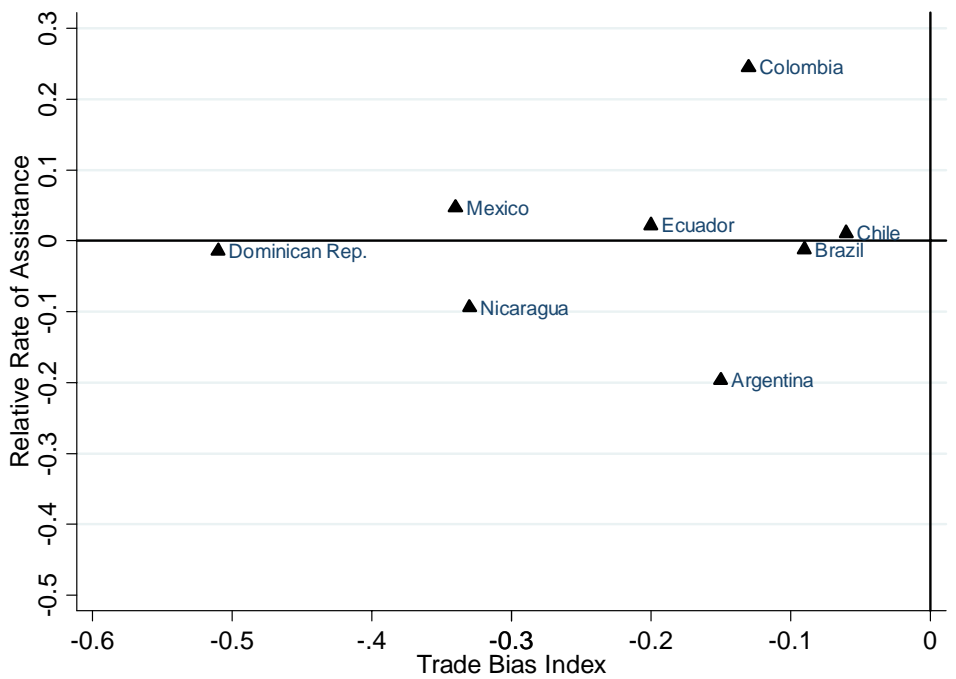
Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

Figure 6: Relationship between RRA and the trade bias index for agriculture, Latin American focus countries, 1980-84 and 2000-04

a. 1980-84



b. 2000-04



Sources: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

Table 1: Key economic and trade indicators, Latin America countries, 2000-04

	Share (%) of world:			National rel. to world (world=100)			Agric trade special- ization index <sup>b</sup>	Pov- erty incid- ence <sup>c</sup>	Gini index for per capita income <sup>d</sup>
	Pop'n	Total GDP	Agric GDP	GDP per capita	Ag land per capita	RCA <sup>a</sup> ag & food			
<b>LA focus countries</b>	<b>6.49</b>	<b>4.49</b>	<b>7.73</b>	<b>69</b>	<b>178</b>	<b>219</b>	<b>0.42</b>	<b>7</b>	<b>52</b>
Argentina	0.61	0.54	1.04	89	426	541	0.85	5	51
Brazil	2.88	1.54	3.38	54	184	355	0.66	8	57
Chile	0.25	0.22	0.24	86	120	386	0.63	2	55
Colombia	0.70	0.24	0.77	35	132	264	0.25	7	59
Dominican Republic	0.14	0.06	0.18	41	54	474	0.29	3	52
Ecuador	0.20	0.07	0.16	33	80	487	0.59	16	44
Mexico	1.62	1.82	1.89	112	133	64	-0.17	7	46
Nicaragua	0.08	0.01	0.06	14	169	952	0.26	44	43
<b>Other LA countries</b>	<b>1.84</b>	<b>0.84</b>	<b>2.05</b>	<b>46</b>	<b>148</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>
Caribbean	0.20	0.07	0.13	36	23	na	na	na	na
Central America	0.52	0.21	0.78	41	55	504	0.26	na	na
South America	1.12	0.56	1.13	50	213	157	0.16	13	na
<b>All LA countries</b>	<b>8.33</b>	<b>5.33</b>	<b>9.78</b>	<b>64</b>	<b>171</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>

<sup>a</sup> Revealed comparative advantage index is the share of agriculture and processed food in national exports as a ratio of that sector's share of global exports.

<sup>b</sup> Primary agricultural trade specialization index is net exports as a ratio of the sum of exports and imports of agricultural and processed food products (world average =0.0).

<sup>c</sup> Percentage of the population living on less than US \$1 per day.

<sup>d</sup> The poverty incidence and Gini index are for the most recent year available between 2000 and 2004, except for Ecuador where they refer to 1998. The weighted averages for the focus countries use population as the basis for weights.

Source: Sandri, Valenzuela and Anderson (2007), compiled mainly from World Bank's *World Development Indicators*.

Table 2: Nominal rates of assistance to agriculture,<sup>a</sup> Latin America countries, 1965 to 2004  
(percent)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Argentina	-22.7	-22.9	-20.4	-19.3	-15.8	-7.0	-4.0	-14.9
Brazil <sup>c</sup>	-6.1	-27.3	-23.3	-25.7	-21.1	-11.3	8.0	4.1
Chile	16.2	12.0	4.5	7.2	13.0	7.9	8.2	5.8
Colombia	-4.7	-14.8	-13.0	5.0	0.2	8.2	13.2	25.9
Dominican Rep.	5.0	-17.5	-21.2	-30.7	-36.4	-1.0	9.2	2.5
Ecuador <sup>c</sup>	-9.6	-22.4	-15.0	5.9	-1.0	-5.3	-2.0	10.1
Mexico	na	na	na	2.9	3.0	30.8	4.2	11.6
Nicaragua <sup>c</sup>	na	na	na	na	na	-3.2	-11.3	-4.2
<b>LA countries focus:</b>								
Unweighted average <sup>b</sup>	-2.8	-15.5	-14.5	-7.7	-8.3	2.3	3.2	4.9
Weighted. average <sup>a</sup>	-7.2	-21.0	-18.0	-12.5	-10.9	4.2	5.5	4.8
Dispersion of individual country av. NRAs <sup>d</sup>	13.8	15.4	10.8	17.4	17.1	13.5	8.6	11.9

<sup>a</sup> Weighted average for each country, including product-specific input distortions and non-product specific assistance as well as authors' guesstimates for non-covered farm products, with weights based on gross value of agricultural production at undistorted prices.

<sup>b</sup> The unweighted average is the simple average across the eight countries of their national NRA (weighted) averages.

<sup>c</sup> Ecuador and Brazil 1965-69 column refers to 1966-69 data; and Nicaragua 1990-94 column to 1991-94 data.

<sup>d</sup> Dispersion of average NRAs across countries is a simple 5-year average of the annual standard deviation around a weighted mean of the national agricultural sector NRA each year.

Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

Table 3: Nominal rates of assistance, key covered farm products, Latin American focus countries,<sup>a</sup> 1955 to 2004

(percent)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Rice	27	5	-10	5	8	12	26	34
Wheat	-2	-15	11	6	6	18	3	2
Maize	-10	-8	-15	-5	-13	0	-4	-3
Other grains	-4	-3	-4	6	2	0	-14	-11
Soybean	3	-5	-15	-11	-21	-10	-4	-10
Other oilseeds	-4	-3	-15	-21	-23	-11	-16	-21
Sugar	17	-61	-46	-54	-43	-20	7	27
Cotton	-7	-2	-14	-16	-23	-12	6	11
Coffee	-27	-26	-32	-42	-29	1	-9	3
Cocoa	6	-16	-13	-4	-14	-16	-12	-7
Fruit & veg	-12	-22	-31	-5	-33	-16	-24	-20
Beef	-23	-21	-11	-10	-4	2	5	-1
Pigmeat	6	-14	-13	-19	-20	6	-3	4
Poultry	110	144	108	33	23	23	8	19
Egg	na	na	na	0	-6	2	-16	-16
Milk	2	-7	19	104	70	45	29	45
<b>All covered products</b>	<b>-13.0</b>	<b>-25.1</b>	<b>-19.6</b>	<b>-14.6</b>	<b>-14.3</b>	<b>0.9</b>	<b>0.8</b>	<b>2.7</b>

*Sources:* Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

Table 4: Dispersion of nominal rates of assistance across covered agricultural products<sup>a</sup>  
within Latin America focus countries, 1965 to 2004<sup>b</sup>  
(percent)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Argentina	18.5	17.8	19.9	15.7	12.1	7.1	9.4	12.6
Brazil	28.1	37.2	41.0	35.9	25.5	27.4	8.5	7.6
Chile	33.0	37.2	30.4	17.0	26.1	16.5	14.7	13.3
Colombia	34.8	21.2	29.9	42.5	34.1	27.2	31.0	46.0
Dominican Rep.	86.5	64.0	89.3	83.0	102.3	137.1	92.6	132.8
Ecuador	99.0	88.6	104.8	106.2	48.5	18.8	27.9	29.6
Mexico	na	na	na	71.9	60.1	57.7	30.6	41.1
Nicaragua	na	na	na	na	na	40.1	35.7	27.7
<b>LA countries studies:</b>								
Unweighted average <sup>c</sup>	50.0	44.3	52.5	53.2	44.1	41.5	31.3	38.8
<i>Product coverage<sup>d</sup></i>	<i>54</i>	<i>65</i>	<i>68</i>	<i>71</i>	<i>68</i>	<i>66</i>	<i>65</i>	<i>69</i>

<sup>a</sup> Dispersion for each country is a simple 5-year average of the annual standard deviation around a weighted mean of NRAs across covered products each year.

<sup>c</sup> Ecuador and Brazil 1965-69 column refers to 1966-69 data; and Nicaragua 1990-94 column to 1991-94 data.

<sup>c</sup> The unweighted average is the simple average across the eight countries of their 5-year simple average dispersion measures.

<sup>d</sup> Share of gross value of total agricultural production at undistorted prices accounted for by covered products in the region.

Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

Table 5: Nominal rates of assistance to agricultural relative to non-agricultural industries, Latin American region, 1965 to 2004

(a) Unweighted averages for 8 focus countries (percent)								
	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Covered products <sup>a</sup>	-9.1	-21.8	-17.0	-8.8	-8.9	1.0	1.1	4.4
Non-covered products	-0.5	-9.2	-10.0	-6.5	-7.5	1.4	0.9	0.4
All agricultural products <sup>a</sup>	-5.4	-17.0	-15.0	-8.3	-9.3	0.4	0.7	2.7
<b>Total agricultural NRA (incl. NPS)<sup>b</sup></b>	<b>-2.8</b>	<b>-15.5</b>	<b>-14.5</b>	<b>-7.7</b>	<b>-8.3</b>	<b>2.3</b>	<b>3.2</b>	<b>4.9</b>
Trade Bias Index <sup>c</sup>	-0.22	-0.18	-0.31	-0.41	-0.33	-0.26	-0.25	-0.26
<b>Assistance to just tradables:</b>								
All agricultural tradables <sup>b</sup>	-6.0	-19.0	-16.4	-7.2	-8.2	2.6	3.5	5.7
All non-agricultural tradables	16.8	20.6	15.6	14.3	13.4	7.7	7.3	6.5
<b>Relative rate of assistance, RRA<sup>d</sup></b>	<b>-19.5</b>	<b>-32.9</b>	<b>-27.7</b>	<b>-18.8</b>	<b>-19.1</b>	<b>-4.8</b>	<b>-3.5</b>	<b>-0.8</b>
(b) Weighted averages for 8 focus countries (percent)								
	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Covered products <sup>a</sup>	-13.0	-25.1	-19.6	-14.6	-14.3	0.9	0.8	2.7
Non-covered products	-3.3	-15.5	-15.0	-10.9	-13.1	0.7	3.8	2.1
All agricultural products <sup>a</sup>	-8.6	-21.7	-18.1	-13.6	-14.0	0.8	1.7	2.5
<b>Total agricultural NRA (incl. NPS)<sup>b</sup></b>	<b>-7.2</b>	<b>-21.0</b>	<b>-18.0</b>	<b>-12.5</b>	<b>-10.9</b>	<b>4.2</b>	<b>5.5</b>	<b>4.8</b>
Trade Bias Index <sup>c</sup>	-0.20	-0.25	-0.26	-0.36	-0.29	-0.25	-0.14	-0.21
<b>Assistance to just tradables:</b>								
All agricultural tradables <sup>b</sup>	-9.3	-23.0	-19.0	-12.9	-11.2	4.4	5.5	4.9
All non-agricultural tradables	15.9	27.8	23.3	18.5	16.8	7.3	6.6	5.5
<b>Relative rate of assistance, RRA<sup>d</sup></b>	<b>-21.4</b>	<b>-39.8</b>	<b>-34.2</b>	<b>-26.6</b>	<b>-24.0</b>	<b>-2.7</b>	<b>-1.0</b>	<b>-0.6</b>

<sup>a</sup> NRAs including product-specific input subsidies.

<sup>b</sup> NRAs including non-product-specific (NPS) assistance, that is, the assistance to all primary factors and intermediate inputs as a percentage of the total primary agricultural production valued at undistorted prices.

<sup>c</sup> Trade Bias Index is  $TBI = (1 + NRA_{ag_x}/100)/(1 + NRA_{ag_m}/100) - 1$ , where  $NRA_{ag_m}$  and  $NRA_{ag_x}$  are the average percentage NRAs for the import-competing and exportable parts of the agricultural sector. The regional average TBI is calculated from the regional averages of the NRAs for exportable and import-competing parts of the agricultural sector.

<sup>d</sup> RRA is defined as  $100 * [(100 + NRA_{ag}^t)/(100 + NRA_{nonag}^t) - 1]$ , where  $NRA_{ag}^t$  and  $NRA_{nonag}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008)..

Table 6: Gross subsidy equivalents of assistance to farmers, total and per farm worker, Latin American countries,<sup>a</sup> 1965 to 2004

## (a) Total (constant 2000 US\$ million)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Argentina	-1699	-2630	-2466	-2850	-1533	-738	-595	-2473
Brazil	-790	-7905	-8141	-12724	-9142	-3578	3101	1509
Chile	482	378	167	267	394	380	465	294
Colombia	-358	-1555	-1719	583	5	905	1562	1835
Dominican Rep.	61	-457	-603	-694	-561	-22	150	39
Ecuador	-192	-477	-453	121	-23	-132	-68	324
Mexico	na	na	-389	1581	762	7426	984	2805
Nicaragua	na	na	na	na	na	-32	-140	-54
<b>LA focus countries</b>	<b>-2496</b>	<b>-12647</b>	<b>-13604</b>	<b>-13716</b>	<b>-10098</b>	<b>4210</b>	<b>5459</b>	<b>4279</b>
<b>All LA countries<sup>a</sup></b>	<b>-3082</b>	<b>-15613</b>	<b>-16794</b>	<b>-16933</b>	<b>-12467</b>	<b>5197</b>	<b>6740</b>	<b>5283</b>

## (b) Per person engaged in agriculture (constant 2000 US\$)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
Argentina	-1094	-1776	-1727	-2030	-1054	-498	-404	-1693
Brazil	-51	-482	-475	-736	-561	-240	224	118
Chile	650	515	216	324	442	401	478	299
Colombia	-119	-483	-483	153	1	244	419	496
Dominican Rep.	88	-641	-859	-1003	-803	-33	238	66
Ecuador	-199	-475	-446	114	-20	-108	-54	260
Mexico	na	na	-51	194	90	867	115	329
Nicaragua	na	na	na	na	na	-81	-351	-137
<b>LA focus countries</b>	<b>-85</b>	<b>-411</b>	<b>-417</b>	<b>-408</b>	<b>-305</b>	<b>132</b>	<b>177</b>	<b>144</b>
<b>All LA countries<sup>a</sup></b>	<b>-81</b>	<b>-390</b>	<b>-396</b>	<b>-386</b>	<b>-283</b>	<b>119</b>	<b>156</b>	<b>124</b>

<sup>a</sup> Assumes the rate of assistance in non-focus countries is the same as the average for the focus Latin American countries excluding Mexico, and that their share of the value of Latin American and Caribbean (excluding Mexican) agricultural production at undistorted prices is the same as their average share of the region's agricultural GDP at distorted prices during 1990-2004, which was 23 percent. Farmer numbers are from FAOSTAT which may differ from national statistics.

Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).



Table 7: Gross subsidy equivalents of policies affecting farmers in Latin America, by product and sub-sector, 1965 to 2004

(a) by product (at undistorted farmgate prices, \$US millions)

	Rice	Wheat	Maize	Other Grains	Soybean	Other oilseeds	Sugar	Cotton	
1965-69	24	-17	-92	0	1	0	8	-19	
1970-74	-40	-216	-162	-1	-55	0	-1829	-8	
1975-79	-230	91	-475	-56	-436	-81	-1619	-159	
1980-84	-55	116	-396	53	-428	-110	-3260	-156	
1985-89	-55	65	-707	10	-1533	-151	-1980	-380	
1990-94	201	395	-17	-5	-386	-92	-988	-158	
1995-99	569	79	-373	-151	-279	-256	233	36	
2000-04	614	30	-307	-113	-1371	-241	970	78	

	Cocoa	Coffee	Fruit & veg	Beef	Pigmeat	Poultry	Egg	Milk	All covered
1965-69	1	-127	-19	-289	1	10	na	2	-516
1970-74	-8	-169	-41	-440	-4	15	na	-29	-2987
1975-79	-32	-815	-163	-404	-53	116	-51	236	-4131
1980-84	-8	-3014	-165	-1027	-565	423	-14	1603	-7003
1985-89	-17	-1738	-623	-327	-504	344	-66	944	-6716
1990-94	-14	30	-610	188	93	533	19	1471	661
1995-99	-10	-536	-977	704	-110	378	-225	1393	476
2000-04	-7	76	-750	-264	111	1048	-285	1915	1504

(b) by sub-sector (at undistorted farmgate prices, US\$ billions)

	GSE for just covered farm products <sup>b</sup>	GSE for just non-covered farm products	Total GSE, all direct assistance to farmers <sup>a</sup>			
			TOTAL	Exportables	Import-competing	Non-tradables
1965-69	-0.5	-0.1	-0.6	-0.7	0.1	0.0
1970-74	-3.0	-1.1	-4.0	-3.9	-0.2	0.0
1975-79	-4.0	-1.5	-5.5	-5.5	0.0	0.0
1980-84	-7.0	-2.2	-8.5	-12.1	2.9	0.0
1985-89	-6.7	-3.1	-7.5	-10.7	0.9	0.0
1990-94	0.7	0.4	3.8	-4.6	5.7	0.0
1995-99	0.5	1.2	5.3	-2.3	3.9	0.0
2000-04	1.5	0.6	4.3	-3.3	5.4	0.0

<sup>a</sup> Gross subsidy equivalents including assistance to nontradables and non-product-specific assistance.

<sup>b</sup> Gross subsidy equivalents including product-specific input subsidies.

Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

Table 8: Percentage consumer tax equivalent of policies affecting covered farm products,<sup>a</sup>  
Latin American countries, 1965 to 2003  
(percent, at primary product level)

(a) aggregate CTEs by country								
	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-03
Argentina	-27.6	-27.2	-25.2	-23.4	-16.6	-5.7	0.0	-9.1
Brazil	2.1	-25.4	-19.8	-25.8	-26.5	-23.1	-2.1	-1.3
Chile	7.1	1.5	2.8	9.0	23.8	18.1	14.2	10.7
Colombia	7.2	-13.4	-5.3	27.4	20.8	16.2	33.9	49.7
Dominican Rep.	12.9	-7.1	-7.7	-27.8	-31.4	7.8	16.6	3.5
Ecuador	-10.5	-25.7	3.9	35.0	17.4	-3.3	4.6	18.5
Mexico	na	na	na	-1.3	0.8	22.3	-1.9	9.9
Nicaragua	na	na	na	na	na	10.5	10.6	9.0
<b>LA countries studied:</b>								
Unweighted average	-0.8	-16.2	-8.8	-1.0	-1.7	4.8	9.5	11.4
Weighted average <sup>b</sup>	-4.7	-22.1	-16.2	-13.4	-12.3	-2.7	1.4	5.1
Dispersion of national CTEs <sup>c</sup>	15.5	13.4	14.5	29.2	26.0	17.4	15.0	18.8
(b) Regional CTEs by product								
	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-03
Rice	30	8	-10	0	6	6	19	30
Wheat	17	0	32	19	8	22	8	13
Maize	-9	-4	-13	-11	-14	-4	-8	-4
Other grains	0	0	-6	-6	-5	-3	-15	-14
Soybean	4	-5	-15	-13	-19	-10	-5	-9
Other oilseeds	0	0	-24	-22	-22	-10	-8	-17
Sugar	28	-60	-44	-54	-41	-18	8	27
Cotton	-6	-1	-14	-24	-23	-23	-7	7
Coffee	-25	-26	-32	-52	-34	-7	-10	-4
Cocoa	6	-16	-13	-4	-16	-16	-12	-7
Fruit & veg	8	10	-12	1	-30	-16	-22	-17
Beef	-27	-23	-14	-11	-6	-11	4	1
Pigmeat	6	-14	-14	-26	-26	3	-3	4
Poultry	110	132	98	26	18	17	7	21
Egg	na	na	-10	0	-6	2	-16	-17
Milk	5	-3	18	70	54	38	28	44
<b>LA countries studied:</b>								
Weighted average <sup>b</sup>	-4.7	-22.1	-16.2	-13.4	-12.3	-2.7	1.4	5.1
Dispersion of regional product CTEs <sup>d</sup>	35.2	46.4	34.6	30.4	23.5	16.3	13.8	18.6

<sup>a</sup> Assumes the CTE is the same as the NRA derived from trade measures (that is, not including any input taxes/subsidies or domestic producer price subsidies/taxes).

<sup>b</sup> Weights are consumption valued at undistorted prices, where consumption (from FAO) is production plus imports net of exports plus change in stocks of the covered products.

<sup>c</sup> Simple 5-year average of the annual standard deviation around a weighted mean of the national average CTE.

<sup>d</sup> Simple 5-year average of the annual standard deviation around a weighted mean of the regional average CTE for the covered products shown above.

Source: Anderson and Valenzuela (2008) based on estimates reported in the Appendix and Anderson and Valdés (2008).

Table 9: Value of consumer tax equivalent of policies affecting covered farm products, Latin American countries, 1965 to 2003

(constant 2000 US\$ million at primary product level)

(a) aggregate CTEs by country								
	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-03
Argentina	-993	-1367	-1442	-1696	-903	-321	-3	-748
Brazil	18	-3097	-3657	-7420	-5849	-5548	-133	43
Chile	-45	-214	71	176	308	318	303	180
Colombia	208	-566	-4	1204	640	622	1218	1160
Dominican Rep.	45	-24	-27	-46	-93	85	96	44
Ecuador	-104	-276	20	309	134	-42	75	350
Mexico	na	na	na	-1358	685	16619	2712	4965
Nicaragua	na	na	na	na	na	22	10	20
<b>LA focus countries</b>	<b>-871</b>	<b>-5545</b>	<b>-5038</b>	<b>-8831</b>	<b>-5078</b>	<b>11755</b>	<b>4276</b>	<b>6013</b>
<b>All LA countries<sup>a</sup></b>	<b>-1054</b>	<b>-6846</b>	<b>-6219</b>	<b>-10902</b>	<b>-6269</b>	<b>14507</b>	<b>5279</b>	<b>5938</b>

(b) Regional CTEs by product <sup>b</sup>								
	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-03
Rice	116	-79	-538	-371	145	156	563	535
Wheat	260	-337	1085	1088	-65	120	-7	-27
Maize	-272	-262	-1012	-1324	-1360	695	-528	543
Other grains	1	-3	-117	-128	44	99	-11	28
Soybean	4	-184	-1057	-906	-1151	-1035	240	-460
Other oilseeds	0	1	-150	-157	-152	-51	-74	-73
Sugar	29	-3320	-2540	-3892	-2009	9666	2092	287
Cotton	-61	-12	-356	-444	-327	-317	-67	56
Coffee	-101	-121	-300	-1581	-512	-56	-105	-21
Cocoa	0	-3	-7	-2	-3	-2	-1	-1
Fruit & veg	-20	-41	-193	-136	-83	731	-46	806
Beef	-924	-1186	-923	-2424	-344	-268	671	115
Pigmeat	4	-14	-167	-1507	-439	26	-22	309
Poultry	44	49	231	603	303	791	462	1231
Egg	na	na	-106	-3	-10	39	0	0
Milk	66	-35	533	2337	881	1157	1110	2682
<b>LA focus countries:</b>	<b>-871</b>	<b>-5548</b>	<b>-5616</b>	<b>-8831</b>	<b>-5078</b>	<b>11755</b>	<b>4276</b>	<b>6013</b>

<sup>a</sup> Assumes the rate of assistance to covered products in non-focus countries is the same as the average for the focus Latin American countries excluding Mexico, and that their share of the value of Latin American and Caribbean (excluding Mexican) agricultural production at undistorted prices is the same as their average share of the region's agricultural GDP at distorted prices during 1990-2004, which was 23 percent. These dollar amounts do not include non-covered farm products, which amount to almost one-third of agricultural output (see last row of Table 4), nor any mark-up that might be applied along the value chain.

<sup>b</sup> Mexico is included in the 5-year product averages for 1975-79: thus, the LA countries total is higher in absolute number than the LA countries total in part (a), which excludes Mexico in this period.

Source: Anderson and Valenzuela (2008) based on estimates reported in Anderson and Valdés (2008).

## **Appendix: Economic Indicators and Annual Estimates of Distortions to Agricultural Incentives for Latin American**

(compiled with the assistance of Johanna Croser, Esteban Jara, Marianne Kurzweil, Signe Nelgen, Francesca de Nicola, Damiano Sandri and Ernesto Valenzuela)

This Appendix summarizes key economic and trade indicators and estimates, for the focus countries of Latin America and the Caribbean, of distortion indicators defined in Anderson et al. (2008). An earlier version of many of these tables appears also in Appendix B in Anderson and Valdés (2008).

Four tables are provided for each country: (a) the Nominal Rate of Assistance to individual farm products covered in the study and their weighted average, using as weights production valued at undistorted prices; (b) the Relative Rate of Assistance to producers of agricultural (relative to non-agricultural) tradables, again using as weights production valued at undistorted prices, and the component parts of the RRA calculation; (c) the weights themselves for individual covered farm products and for the residual non-covered group of products, shown as percentages and so they sum to 100 percent; and (d) the trade status (exportable, import-competing or nontradable) of each covered product each year.

The Nominal Rate of Assistance (NRA) in the case of a product having just its output price distorted by government policies is the percentage by which the domestic producer price exceeds the price that would prevail under free markets, that is, the border price appropriately adjusted to account for differences in product quality, transport costs, processing costs, etc. A negative value indicates the domestic price is below that comparable border price. If producers of that product also are affected by distortions to product-specific input prices, their ad valorem equivalent is accounted for by subtracting the ad valorem input price distortion times its input-output coefficient from the farm industry's output NRA to get the total nominal rate of assistance to production of that farm product.

The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

The original sources of these tables are the Working Paper versions of the chapters in Anderson and Valdés (2008) (and their associated spreadsheets), each of which is downloadable in the Working Paper and Spreadsheet sections of the project's website,

[www.worldbank.org/agdistortions](http://www.worldbank.org/agdistortions). Also available at that website is the complete global distortions database (Anderson and Valenzuela 2008). The references are provided below.

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Appendix Table 1: Growth of real GDP, Latin America countries, 1980 to 2004

(at constant 2000 prices, percent per year, trend-based)

	Agriculture	Industry	Services	Total GDP	<i>GDP per capita</i>	<i>Export volume</i>
<b>LA Focus</b>						
<b>Countries</b>	<b>3.1</b>	<b>4.0</b>	<b>7.0</b>	<b>5.7</b>	<b>3.9</b>	<b>8.3</b>
Argentina	3.8	2.8	6.1	4.8	3.5	7.1
Brazil	3.5	3.1	6.2	5.0	3.2	6.1
Chile	4.1	6.9	7.6	7.2	5.5	9.3
Colombia	2.7	4.0	6.8	5.4	3.4	6.6
Dominican Rep.	3.3	6.7	5.7	5.6	3.8	9.3
Ecuador	2.4	2.0	5.8	4.1	2.0	4.7
Mexico	2.4	5.3	7.7	6.7	4.8	10.4
Nicaragua	1.1	1.7	4.0	2.7	0.4	4.0
<b>Other LA</b>						
<b>Countries</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>4.2</b>	<b>2.1</b>	<b>4.1</b>
Caribbean	na	na	na	3.5	2.1	3.1
Central America	3.5	6.8	6.9	6.3	3.9	7.2
South America	4.4	5.0	7.1	3.7	1.6	3.7
<b>All LA</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>5.4</b>	<b>3.6</b>	<b>7.2</b>

Source: Sandri, Valenzuela and Anderson (2007), compiled from World Bank's *World Development Indicators*.

Appendix Table 2: Exports of goods and services as a share of GDP, Latin America countries, 1975 to 2004

(percent)

	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
<b>LA focus countries</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>13</b>	<b>16</b>	<b>22</b>
Argentina	12	12	10	8	10	18
Brazil	7	10	10	9	8	15
Chile	22	20	32	30	28	35
Colombia	16	12	16	17	13	18
Dominican Republic	21	20	43	48	46	45
Ecuador	24	23	28	27	25	28
Mexico	11	15	20	16	31	29
Nicaragua	35	19	12	21	20	21
<b>Other LA Countries</b>	<b>27</b>	<b>25</b>	<b>24</b>	<b>25</b>	<b>24</b>	<b>26</b>
Caribbean	52	44	37	42	42	42
Central America	32	24	23	25	28	28
South America	24	23	22	23	20	24
<b>All Latin America</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>14</b>	<b>17</b>	<b>23</b>

Source: Sandri, Valenzuela and Anderson (2007), compiled from World Bank's *World Development Indicators*.



Appendix Table 3: Sectoral shares of GDP, Latin America countries, 1965 to 2004

(percent)

	Agriculture				Industry				Services			
	65-69	75-79	85-89	00-04	65-69	75-79	85-89	00-04	65-69	75-79	85-89	00-04
<b>LA Focus Countries</b>	<b>13</b>	<b>11</b>	<b>9</b>	<b>6</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>28</b>	<b>53</b>	<b>53</b>	<b>54</b>	<b>66</b>
Argentina	10	8	8	7	48	48	39	28	42	45	53	65
Brazil	13	11	9	8	30	35	40	32	57	54	51	61
Chile	8	8	8	4	40	37	38	37	53	55	53	59
Colombia	28	23	17	11	27	30	36	26	45	47	47	63
Domin Rep	21	19	14	11	25	30	24	31	53	50	61	57
Ecuador	26	16	15	8	23	37	37	30	51	47	48	61
Mexico	12	10	8	4	27	31	31	24	62	59	61	72
Nicaragua	24	24	26	17	24	28	28	26	52	48	46	56
<b>Other LA Countries</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>9</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>33</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>58</b>
Caribbean	na	na	na	7	na	na	na	32	na	na	na	61
Central America	na	na	20	13	na	na	22	23	na	na	59	64
South America	na	9	9	7	na	41	42	37	na	50	50	56
<b>All LA</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>6</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>29</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>65</b>

Source: Sandri, Valenzuela and Anderson (2007), compiled from World Bank's *World Development Indicators*.

Appendix Table 4: Agriculture's shares of employment, Latin America countries, 1965 to 2004

	(percent)			
	1965-69	1975-79	1985-89	2000-04
<b>LA Focus</b>				
<b>Countries</b>	<b>44</b>	<b>36</b>	<b>27</b>	<b>17</b>
Argentina	17	14	12	9
Brazil	50	40	27	16
Chile	26	22	19	15
Colombia	47	42	31	20
Dominican Republic	52	37	27	16
Ecuador	54	43	35	25
Mexico	47	39	30	21
Nicaragua	55	43	32	19
<b>Other LA</b>				
<b>Countries</b>	<b>49</b>	<b>42</b>	<b>35</b>	<b>28</b>
Caribbean	61	55	51	44
Central America	59	50	42	32
South America	41	34	29	23
<b>All LA</b>	<b>45</b>	<b>37</b>	<b>29</b>	<b>19</b>

Source: Sandri, Valenzuela and Anderson (2007), compiled from FAOSTAT.

Appendix Table 5: Sectoral shares of merchandise exports, Latin America countries, 1965 to 2004

(percent)

	Agriculture and processed food				Other primary				Other goods			
	65-69	75-79	85-89	00-04	65-69	75-79	85-89	00-04	65-69	75-79	85-89	00-04
<b>LA Focus</b>												
<b>Countries</b>	<b>na</b>	<b>55</b>	<b>32</b>	<b>20</b>	<b>na</b>	<b>20</b>	<b>29</b>	<b>17</b>	<b>na</b>	<b>24</b>	<b>38</b>	<b>63</b>
Argentina	90	74	65	48	1	1	5	20	9	25	29	30
Brazil	83	57	35	32	8	12	14	13	9	30	50	54
Chile	8	21	34	34	89	69	56	48	4	10	9	16
Colombia	77	75	54	24	15	5	25	40	8	19	20	37
Domin Rep	na	76	48	42	na	3	0	18	na	20	51	34
Ecuador	97	44	48	43	1	54	50	46	2	2	2	10
Mexico	58	35	14	6	22	39	46	11	20	26	40	83
Nicaragua	87	83	89	85	4	1	1	2	8	16	9	12
<b>Other LA</b>												
<b>Countries</b>	<b>na</b>	<b>21</b>	<b>25</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>10</b>	<b>17</b>	<b>na</b>
Caribbean	na	12	14	na	na	na	na	na	na	21	40	na
Central America	78	75	77	45	5	4	3	5	17	20	19	50
South America	na	10	14	14	na	85	74	71	na	5	12	15
<b>All LA</b>	<b>na</b>	<b>42</b>	<b>31</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>18</b>	<b>33</b>	<b>na</b>

Source: Sandri, Valenzuela and Anderson (2007), compiled from World Bank's *World Development Indicators*.

Appendix Table 6: Indexes of comparative advantage in agriculture and processed food,<sup>a</sup> Latin America countries, 1965 to 2004

(a) Revealed comparative advantage index,<sup>a</sup> world = 1.0

	1965-69	1975-79	1985-89	1995-99	2000-04
<b>LA Focus Countries</b>	<b>na</b>	<b>2.8</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>
Argentina	3.5	3.8	4.4	4.9	5.4
Brazil	3.3	2.9	2.4	3.2	3.6
Chile	0.3	1.1	2.3	3.4	3.9
Colombia	3.0	3.9	3.6	3.2	2.6
Dominican Republic	na	3.9	3.2	1.2	4.7
Ecuador	3.8	2.3	3.2	5.5	4.9
Mexico	2.3	1.8	0.9	0.7	0.6
Nicaragua	3.4	4.3	6.1	7.4	9.5
<b>Other LA Countries</b>	<b>na</b>	<b>1.1</b>	<b>1.7</b>	<b>2.5</b>	<b>na</b>
Caribbean	na	0.6	0.9	1.5	na
Central America	3.1	3.8	5.2	5.4	5.0
South America	na	0.5	1.0	1.6	1.6
<b>All Latin America</b>	<b>na</b>	<b>2.1</b>	<b>2.1</b>	<b>2.2</b>	<b>2.2</b>

(b) Trade specialization index,<sup>b</sup> world = 0.0

	1965-69	1975-79	1985-89	2000-04
<b>LA Focus Countries</b>	<b>na</b>	<b>0.6</b>	<b>0.5</b>	<b>0.4</b>
Argentina	0.7	0.8	0.9	0.9
Brazil	0.6	0.6	0.7	0.7
Chile	-0.5	0.0	0.7	0.6
Colombia	0.7	0.7	0.7	0.3
Dominican Republic	na	0.5	0.5	0.3
Ecuador	0.7	0.7	0.7	0.6
Mexico	0.6	0.2	-0.1	-0.2
Nicaragua	0.7	0.8	0.4	0.3
<b>Other LA Countries</b>	<b>na</b>	<b>0.2</b>	<b>na</b>	<b>na</b>
Caribbean	na	-0.2	na	na
Central America	0.6	0.7	0.6	0.3
South America	na	-0.2	0.0	0.2
<b>All Latin America</b>	<b>na</b>	<b>0.5</b>	<b>na</b>	<b>na</b>

<sup>a</sup> Share of agriculture and processed food in national exports as a ratio of that sector's share of global merchandise exports.

<sup>b</sup> Net exports as a ratio of the sum of exports and imports of agricultural and processed food products.

Source: Sandri, Valenzuela and Anderson (2007), compiled from World Bank's *World Development Indicators*.

Appendix Table 7: Export orientation, import dependence and self-sufficiency in primary agricultural production, Latin America countries, 1965 to 2004  
(percent at undistorted prices)

## (a) Exports as share of production

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
<b>LA focus countries<sup>c</sup></b>	<b>28</b>	<b>27</b>	<b>24</b>	<b>17</b>	<b>17</b>	<b>16</b>	<b>22</b>	<b>27</b>
Argentina	33	22	28	27	28	27	28	28
Brazil <sup>a</sup>	35	40	23	11	12	11	18	26
Chile	1	1	5	23	16	13	13	18
Colombia	21	21	26	25	27	17	18	16
Dominican Rep.	33	35	42	56	22	16	13	9
Ecuador <sup>a</sup>	35	33	30	49	35	35	39	34
Mexico <sup>b</sup>	na	na	na	11	15	16	27	31
Nicaragua	na	na	na	na	na	10	15	14

## (b) Imports as share of apparent consumption

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
<b>LA focus countries<sup>c</sup></b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>6</b>	<b>10</b>	<b>12</b>	<b>16</b>
Argentina	1	1	0	0	0	1	2	1
Brazil <sup>a</sup>	8	7	6	5	3	4	6	5
Chile	7	14	15	13	3	5	7	6
Colombia	2	2	2	3	3	3	6	10
Dominican Rep.	1	1	1	0	1	2	2	1
Ecuador <sup>a</sup>	0	0	1	2	2	2	4	2
Mexico <sup>b</sup>	na	na	na	15	15	25	31	39
Nicaragua	na	na	na	na	na	4	2	2

## (c) Self-sufficiency ratio

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
<b>LA focus countries<sup>c</sup></b>	<b>133</b>	<b>132</b>	<b>126</b>	<b>110</b>	<b>113</b>	<b>107</b>	<b>112</b>	<b>114</b>
Argentina	152	127	140	142	145	136	136	138
Brazil <sup>a</sup>	142	161	122	109	110	107	114	130
Chile	93	87	89	95	115	109	107	115
Colombia	124	124	134	130	136	117	114	108
Dominican Rep.	149	152	173	143	126	117	113	108
Ecuador <sup>a</sup>	152	150	143	132	153	151	157	148
Mexico <sup>b</sup>	na	na	106	94	99	90	95	89
Nicaragua	na	na	na	na	na	107	115	115

<sup>a</sup> 1965-69 is 1966-69

<sup>b</sup> 1980-84 is 1979-84

<sup>c</sup> Excluding Mexico pre-1979 and Nicaragua pre-1990

Source: Compiled using the project's estimates of total agricultural production valued at undistorted prices and the FAO's total agricultural trade value data

Appendix Table 8: Shares of the global value of production and consumption of key covered agricultural products, Latin American studied countries, 2000-04  
(percent)

		Argentina	Brazil	Chile	Colombia	Ecuador	Mexico	Nicaragua	Dominican Republic	Regional	World
<b>Grains</b>	<b>Q</b>	<b>1.0</b>	<b>1.8</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>1.7</b>	<b>0.1</b>	<b>0.0</b>	<b>5.0</b>	<b>100</b>
	<b>C</b>	<b>0.3</b>	<b>2.4</b>	<b>0.2</b>	<b>0.4</b>	<b>0.1</b>	<b>2.4</b>	<b>0.1</b>	<b>0.0</b>	<b>5.9</b>	<b>100</b>
Rice	Q		1.5		0.3	0.2	0.1	0.1	0.1	2.3	100
	C		1.7		0.3	0.2	0.2	0.1	0.1	2.6	100
Wheat	Q	2.5	0.6	0.4	0.0		0.7			4.2	100
	C	0.8	1.9	0.4	0.3		1.1			4.5	100
Maize	Q	1.7	5.3	0.2	0.3	0.1	5.0	0.1		12.8	100
	C	0.6	7.4	0.6	1.0	0.1	8.4	0.2		18.3	100
Cassava	Q								0.1	0.1	100
	C								0.1	0.1	100
Barley	Q						1.2			1.2	100
	C						1.5			1.5	100
Sorghum	Q				0.4		9.4	0.2		10.0	100
	C				0.5		16.2	0.2		17.0	100
Yam	Q										100
	C										100
Millet	Q										100
	C										100
Oat	Q										100
	C										100
Chickpea	Q										100
	C										100
<b>Oilseeds</b>	<b>Q</b>	<b>9.1</b>	<b>10.5</b>		<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>		<b>19.9</b>	<b>100</b>
	<b>C</b>	<b>7.9</b>	<b>7.7</b>		<b>0.5</b>	<b>0.0</b>	<b>1.5</b>	<b>0.0</b>		<b>17.6</b>	<b>100</b>
Soybean	Q	16.0	21.3		0.0	0.1	0.1	0.0		37.5	100
	C	12.4	14.1		0.5	0.0	2.8	0.0		29.9	100
Groundnut	Q							0.4		0.4	100
	C							0.1		0.1	100
Palmoil	Q				1.6					1.6	100
	C				1.3					1.3	100
Rapeseed	Q										100
	C										100
Sunflower	Q	16.4								16.4	100
	C	12.8								12.8	100
Sesame	Q							0.3		0.3	100
	C							0.0		0.0	100
<b>Tropical crops</b>	<b>Q</b>		<b>7.6</b>	<b>0.1</b>	<b>1.9</b>	<b>0.4</b>	<b>1.3</b>	<b>0.2</b>	<b>0.3</b>	<b>11.9</b>	<b>100</b>
	<b>C</b>		<b>3.0</b>	<b>0.2</b>	<b>0.5</b>	<b>0.2</b>	<b>1.1</b>	<b>0.1</b>	<b>0.2</b>	<b>5.3</b>	<b>100</b>
Sugar	Q		11.2	0.5	1.1	0.4	3.5	0.2	0.4	17.3	100
	C		5.2	0.7	0.8	0.4	2.8	0.1	0.3	10.4	100
Cotton	Q		4.7		0.3					5.1	100
	C		4.4		0.4					4.8	100
Coconut	Q										100
	C										100
Coffee	Q		29.4		15.9	1.1	1.7	1.7	2.0	51.7	100
	C		3.5		1.1	0.5	2.0	0.3	1.2	8.7	100
Rubber	Q										100
	C										100
Tea	Q										100
	C										100
Cocoa	Q					2.7				2.7	100
	C					0.2				0.2	100
<b>Livestock products</b>	<b>Q</b>	<b>0.6</b>	<b>1.9</b>	<b>0.1</b>	<b>0.4</b>	<b>0.3</b>	<b>2.2</b>	<b>0.1</b>	<b>0.0</b>	<b>5.6</b>	<b>100</b>

	<b>C</b>	<b>0.7</b>	<b>2.1</b>	<b>0.2</b>	<b>0.5</b>	<b>0.3</b>	<b>3.5</b>	<b>0.1</b>	<b>0.0</b>	<b>7.5</b>	<b>100</b>
Pigmeat	Q		1.0			0.2	1.6			2.8	100
	C		0.9			0.2	2.0			3.1	100
Milk	Q	1.2		0.3	0.7	0.5	1.3	0.1		4.2	100
	C	1.3		0.4	0.8	0.6	5.1	0.1		8.2	100
Beef	Q	2.1	5.8	0.3	1.6	0.4	5.0	0.5		15.7	100
	C	2.8	8.0	0.8	2.4	0.6	4.0	0.3		18.9	100
Poultry	Q		5.1			0.5	3.1	0.1	0.2	8.9	100
	C		5.3			0.6	7.5	0.1	0.2	13.9	100
Egg	Q						1.6			1.6	100
	C						1.9			1.9	100
Sheepmeat	Q										100
	C										100
Wool	Q										100
	C										100
<b>Total of above products</b>	<b>Q</b>	<b>1.3</b>	<b>2.9</b>	<b>0.1</b>	<b>0.4</b>	<b>0.2</b>	<b>1.8</b>	<b>0.1</b>	<b>0.0</b>	<b>7.0</b>	<b>100</b>
	<b>C</b>	<b>1.1</b>	<b>2.7</b>	<b>0.2</b>	<b>0.5</b>	<b>0.2</b>	<b>2.8</b>	<b>0.1</b>	<b>0.1</b>	<b>7.5</b>	<b>100</b>
<b>Production only</b>											
All covered	Q	1.4	3.2	0.2	0.5	0.3	2.3	0.1	0.1	8.0	100
Non-covered	Q	0.9	2.3	0.9	0.8	0.1	1.7	0.0	0.2	7.1	100
All agriculture	Q	1.3	2.9	0.4	0.6	0.2	2.1	0.1	0.1	7.7	100

Source: Authors' calculations using Project data and FAO Production and Commodity Balance Data.

Appendix Table 9: Shares of production exported, and of consumption imported and produced domestically, key covered products, Latin American studied countries, 2000-03

		Argen tina	Brazil	Chile	Colom bia	Ecuad or	Mexic o	Nicara gua	Domi nican Repub lic	Regio nal	World
<b>Grains</b>	<b>X</b>	<b>6.1</b>	<b>0.8</b>	<b>0.2</b>	<b>0.0</b>	<b>0.1</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>7.4</b>	<b>100.0</b>
	<b>M</b>	<b>0.0</b>	<b>3.0</b>	<b>0.5</b>	<b>1.1</b>	<b>0.1</b>	<b>4.2</b>	<b>0.1</b>	<b>0.0</b>	<b>8.9</b>	<b>100.0</b>
Rice	X		0.1		0.0	0.2	0.0	0.0	0.0	0.3	100.0
	M		2.4		0.3	0.0	1.5	0.2	0.1	4.6	100.0
Wheat	X	7.6	0.0	0.0	0.0		0.5			8.1	100.0
	M	0.0	5.5	0.3	1.0		2.7			9.5	100.0
Maize	X	10.8	3.0	0.7	0.0	0.1	0.1	0.0		14.7	100.0
	M	0.1	0.8	1.1	2.0	0.3	5.9	0.0		10.3	100.0
Cassava	X								0.0	0.0	100.0
	M								0.0	0.0	100.0
Barley	X						0.0			0.0	100.0
	M						0.5			0.5	100.0
Sorghum	X				0.0		0.0	0.0		0.0	100.0
	M				0.3		49.8	0.0		50.2	100.0
Yam	X										100.0
	M										100.0
Millet	X										100.0
	M										100.0
Oat	X										100.0
	M										100.0
Chickpea	X										100.0
	M										100.0
<b>Oilseeds</b>	<b>X</b>	<b>9.2</b>	<b>10.2</b>		<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>		<b>19.7</b>	<b>100.0</b>
	<b>M</b>	<b>0.1</b>	<b>0.4</b>		<b>0.3</b>	<b>0.1</b>	<b>1.8</b>	<b>0.0</b>		<b>2.7</b>	<b>100.0</b>
Soybean	X	19.3	26.0		0.0	0.1	0.0	0.0		45.4	100.0
	M	0.2	0.9		0.8	0.2	4.4	0.0		6.7	100.0
Groundnut	X							3.4		3.4	100.0
	M							0.0		0.0	100.0
Palmoil	X				0.6					0.6	100.0
	M				0.0					0.0	100.0
Rapeseed	X										100.0
	M										100.0
Sunflower	X	21.8								21.8	100.0
	M	0.2								0.2	100.0
Sesame	X							0.5		0.5	100.0
	M							0.0		0.0	100.0
<b>Tropical crops</b>	<b>X</b>		<b>10.3</b>	<b>0.0</b>	<b>2.5</b>	<b>0.4</b>	<b>0.8</b>	<b>0.3</b>	<b>0.4</b>	<b>14.7</b>	<b>100.0</b>
	<b>M</b>		<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.8</b>	<b>100.0</b>
Sugar	X		19.3	0.0	2.1	0.1	0.5	0.3	0.8	23.3	100.0
	M		0.0	0.4	0.2	0.1	0.2	0.0	0.1	1.0	100.0
Cotton	X		1.7		0.0					1.7	100.0
	M		2.2		1.0					3.1	100.0
Coconut	X										100.0
	M										100.0
Coffee	X		17.3		11.2	0.2	4.2	1.4	0.2	34.5	100.0
	M		0.0		0.0	0.0	0.1	0.0	0.0	0.2	100.0
Rubber	X										100.0
	M										100.0
Tea	X										100.0
	M										100.0
Cocoa	X					2.3				2.3	100.0
	M					0.0				0.0	100.0



		Argen tina	Brazil	Chile	Colom bia	Ecuad or	Mexic o	Nicara gua	Domi nican Repub lic	Regio nal	World
<b>Livestock products</b>	<b>X</b>	<b>1.1</b>	<b>3.9</b>	<b>0.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.4</b>	<b>0.1</b>	<b>0.0</b>	<b>5.6</b>	<b>100.0</b>
	<b>M</b>	<b>0.0</b>	<b>0.1</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>3.2</b>	<b>0.0</b>	<b>0.0</b>	<b>3.7</b>	<b>100.0</b>
Pigmeat	X		2.6			0.0	1.2			3.8	100.0
	M		0.0			0.0	2.5			2.5	100.0
Milk	X	1.0		0.1	0.2	0.0	0.2	0.1		1.6	100.0
	M	0.1		0.2	0.1	0.0	2.6	0.0		3.0	100.0
Beef	X	3.2	7.1	0.0	0.0	0.0	0.2	0.5		11.1	100.0
	M	0.1	0.5	1.2	0.0	0.0	5.8	0.0		7.6	100.0
Poultry	X		12.9			0.0	0.1	0.0	0.0	13.0	100.0
	M		0.0			0.0	2.9	0.0	0.0	3.0	100.0
Egg	X						0.1			0.1	100.0
	M						2.1			2.1	100.0
Sheepmeat	X										100.0
	M										100.0
Wool	X										100.0
	M										100.0
<b>Total of above products</b>	<b>X</b>	<b>3.0</b>	<b>5.0</b>	<b>0.1</b>	<b>0.5</b>	<b>0.1</b>	<b>0.4</b>	<b>0.1</b>	<b>0.1</b>	<b>9.1</b>	<b>100.0</b>
	<b>M</b>	<b>0.0</b>	<b>0.9</b>	<b>0.3</b>	<b>0.4</b>	<b>0.0</b>	<b>2.8</b>	<b>0.0</b>	<b>0.0</b>	<b>4.4</b>	<b>100.0</b>
<b>All exports</b>	<b>X</b>	<b>2.6</b>	<b>3.7</b>	<b>0.7</b>	<b>0.6</b>	<b>0.4</b>	<b>1.8</b>	<b>0.1</b>	<b>0.1</b>	<b>10.0</b>	<b>100.0</b>
	<b>M</b>	<b>0.2</b>	<b>0.8</b>	<b>0.3</b>	<b>0.3</b>	<b>0.1</b>	<b>2.5</b>	<b>0.1</b>	<b>0.2</b>	<b>4.4</b>	<b>100.0</b>

Source: Authors' derivation using production, trade and domestic supply data in the FAO Commodity Balances at FAOSTAT.

Appendix Table 10: Nominal rates of assistance to agricultural exportables, import-competing products, and the trade bias index,<sup>a</sup> Latin America countries, 1965 to 2004  
(percent)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
<b>Argentina</b>								
NRA agric. exp	-22.7	-22.9	-20.4	-19.3	-15.8	-7.0	-4.0	-14.9
NRA agric. imp-comp	na	na	na	na	na	na	na	na
Trade Bias Index	-0.23	-0.23	-0.20	-0.19	-0.16	-0.07	-0.04	-0.15
Exportables Share	100	100	100	100	100	100	100	100
<b>Brazil<sup>b</sup></b>								
NRA agric. exp	-8.4	-33.2	-30.0	-31.5	-29.5	-18.9	0.4	1.2
NRA agric. imp-comp	41.4	26.6	-1.9	-6.8	-22.5	-15.6	7.8	11.6
Trade Bias Index	-0.35	-0.47	-0.27	-0.21	-0.09	-0.04	-0.07	-0.09
Exportables Share	95	87	70	79	73	73	80	92
<b>Chile</b>								
NRA agric. exp	21.9	35.2	-1.2	-2.0	-1.2	-0.6	-0.5	-0.3
NRA agric. imp-comp	-5.4	-11.3	3.4	10.1	21.3	13.8	12.5	6.3
Trade Bias Index	0.31	0.53	-0.04	-0.11	-0.18	-0.12	-0.12	-0.06
Exportables Share	31	32	33	33	34	39	39	43
<b>Colombia</b>								
NRA agric. exp	-9.8	-17.7	-17.5	-9.2	-8.8	1.7	-1.7	26.0
NRA agric. imp-comp	8.2	-14.8	-2.8	52.7	26.6	16.7	40.0	46.2
Trade Bias Index	-0.15	0.00	-0.11	-0.40	-0.27	-0.11	-0.29	-0.13
Exportables Share	73	70	77	75	71	62	66	75
<b>Dominican Rep.</b>								
NRA agric. exp	-10.9	-27.5	-36.1	-51.7	-61.0	-44.6	-13.4	-29.4
NRA agric. imp-comp	40.8	14.7	15.9	20.2	6.7	69.8	48.5	43.7
Trade Bias Index	-0.37	-0.36	-0.44	-0.59	-0.61	-0.67	-0.42	-0.51
Exportables Share	69	77	73	71	64	62	63	56
<b>Ecuador<sup>b</sup></b>								
NRA agric. exp	-20.6	-40.0	-43.2	-31.1	-26.1	-11.0	-9.3	-3.2
NRA agric. imp-comp	-1.9	-14.5	26.4	53.8	26.7	-1.0	7.8	22.2
Trade Bias Index	-0.19	-0.28	-0.55	-0.55	-0.38	-0.09	-0.15	-0.20
Exportables Share	68	64	67	53	49	52	57	47
<b>Mexico</b>								
NRA agric. exp	na	na	na	-35.1	-27.9	4.7	-16.0	-19.9
NRA agric. imp-comp	na	na	na	21.4	19.2	43.1	8.3	21.4
Trade Bias Index	na	na	na	-0.47	-0.39	-0.27	-0.23	-0.34
Exportables Share	na	na	35	31	34	33	30	34
<b>Nicaragua<sup>b</sup></b>								
NRA agric. exp	na	na	na	na	na	-14.9	-29.1	-18.1
NRA agric. imp-comp	na	na	na	na	na	12.5	17.5	24.9
Trade Bias Index	na	na	na	na	na	-0.24	-0.39	-0.33
Exportables Share	na	na	na	na	na	72	73	81

**All LA focus  
countries  
(unweighted  
average)<sup>c</sup>**

NRA agric. exp	-7.8	-17.7	-25.0	-25.7	-24.3	-11.4	-9.2	-7.5
NRA agric. imp-comp	17.5	0.1	8.3	25.2	13.0	19.7	20.3	25.1
Trade Bias Index	-0.22	-0.18	-0.31	-0.41	-0.33	-0.26	-0.25	-0.26

**All LA focus  
countries (wted. av.)<sup>c</sup>**

NRA agric. exp	-12.8	-27.0	-25.2	-27.1	-25.0	-10.5	-3.5	-4.6
NRA agric. imp-comp	8.7	-2.8	1.1	13.6	5.1	19.4	12.5	20.6
Trade Bias Index	-0.20	-0.25	-0.26	-0.36	-0.29	-0.25	-0.14	-0.21
Exportables Share	84	83	72	67	64	62	67	72

<sup>a</sup> Trade Bias Index,  $TBI = (1+NRA_{ag_x}/100)/(1+NRA_{ag_m}/100) - 1$ , where  $NRA_{ag_x}$  and  $NRA_{ag_m}$  are the average percentage NRAs for the exportable and import-competing parts of the agricultural sector.

<sup>b</sup> Ecuador and Brazil 1965-69 column refers to 1966-69 data; and Nicaragua 1990-94 column to 1991-94 data. For Brazil, NRA import-competing in 1970-74 includes rice only for 1973 and 1974.

<sup>c</sup> Regional averages of the trade bias index are calculated from the regional averages of the NRAs for exportable and import-competing parts of the agricultural sector.

Source: Anderson and Valenzuela (2008) based on estimates reported in Anderson and Valdés (2008).

Appendix Table 11: Nominal rates of assistance for covered farm products, by policy instrument, Latin American region, 1965 to 2004

(percent)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
<b>Argentina</b>								
NRA, agric. inputs	0.0	0.1	0.2	0.5	0.1	-1.0	-4.2	-2.8
NRA, domestic market support	-0.6	-0.8	-0.4	-0.7	-1.5	-1.2	-0.4	-1.4
NRA, border market support	-25.7	-27.1	-24.6	-22.0	-17.2	-6.2	-0.5	-11.6
NRA, agric. total	-26.3	-27.9	-24.7	-22.2	-18.6	-8.3	-5.2	-15.8
<b>Brazil</b>								
NRA, agric. inputs	0.0	0.0	0.0	4.4	2.5	4.7	4.2	2.4
NRA, domestic market support	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NRA, border market support	-6.1	-27.3	-23.3	-32.4	-30.1	-22.7	-2.4	-0.4
NRA, agric. total	-6.1	-27.3	-23.3	-28.0	-27.6	-18.0	1.8	2.0
<b>Chile</b>								
NRA, agric. inputs	-3.7	-3.3	-2.8	-4.4	-5.8	-4.0	-2.1	-1.3
NRA, domestic market support	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NRA, border market support	-2.6	-7.3	5.4	8.5	26.4	17.7	13.4	8.0
NRA, agric. total	-6.3	-10.6	2.5	4.2	20.6	13.7	11.2	6.7
<b>Colombia</b>								
NRA, agric. inputs	-2.1	-1.7	-1.1	-1.6	-2.6	-1.8	-1.5	-1.5
NRA, domestic market support	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NRA, border market support	-4.2	-14.6	-13.5	5.5	1.7	7.9	11.4	30.2
NRA, agric. total	-6.3	-16.4	-14.6	3.9	-0.9	6.1	10.0	28.6
<b>Dominican Rep.</b>								
NRA, agric. inputs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NRA, domestic market support	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
NRA, border market support	5.0	-18.0	-21.2	-30.7	-36.4	-1.0	9.2	2.5
NRA, agric. total	5.0	-17.5	-21.2	-30.7	-36.4	-1.0	9.2	2.5
<b>Ecuador</b>								
NRA, agric. inputs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NRA, domestic market support	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0
NRA, border market support	-14.7	-31.5	-20.8	9.9	-2.2	-6.4	-2.0	12.2
NRA, agric. total	-14.8	-31.5	-20.8	9.9	-0.8	-6.4	-2.0	12.2
<b>Mexico</b>								
NRA, agric. inputs	na	na	3.9	7.7	5.3	5.2	1.6	2.3
NRA, domestic market support	na	na	4.1	5.2	2.9	4.4	1.3	2.8
NRA, border market support	na	na	-11.1	-11.4	-7.1	19.2	-2.8	4.0
NRA, agric. total	na	na	-3.1	1.5	1.1	28.8	0.1	9.2
<b>Nicaragua</b>								
NRA, agric. inputs	na	na	na	na	na	0.0	0.0	0.0
NRA, domestic market support	na	na	na	na	na	-3.2	-2.4	-2.8
NRA, border market support	na	na	na	na	na	0.0	0.0	0.0
NRA, agric. total	na	na	na	na	na	-3.9	-13.9	-7.1

Appendix Table 11 (cont.): Nominal rates of assistance for covered farm products, by policy instrument, Latin American region, 1965 to 2004

(percent)

	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
<b>All LA focus countries (unweighted average)</b>								
NRA, agric. inputs	-1.0	-0.8	-0.5	1.0	-0.1	0.1	-0.5	-0.5
NRA, domestic market support	-0.1	-0.1	0.1	0.6	0.4	0.4	0.1	0.2
NRA, border market support	-7.5	-21.0	-16.4	-10.4	-9.2	0.4	1.5	4.4
NRA, agric. total	-8.6	-21.8	-16.8	-8.8	-8.9	0.9	1.1	4.1
<b>All LA focus countries (weighted average)<sup>a</sup></b>								
NRA, agric. inputs	-0.9	-0.6	0.0	3.8	1.7	2.8	1.2	0.9
NRA, domestic market support	-0.2	-0.2	0.2	1.3	0.7	1.1	0.3	0.6
NRA, border market support	-11.9	-24.4	-19.8	-19.8	-16.8	-3.0	-0.6	1.2
NRA, agric. total	-13.0	-25.1	-19.6	-14.6	-14.3	0.9	0.8	2.7

<sup>a</sup> Weights are based on gross value of agricultural production at undistorted prices.

Source: Anderson and Valenzuela (2008) based on estimates reported in Anderson and Valdés (2008).

Appendix Table 12: Relative rates of assistance to agriculture<sup>a</sup>, Latin America countries, 1965 to 2004

	(percent)							
	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
<b>Argentina</b>								
NRA Agriculture	-22.7	-22.9	-20.4	-19.3	-15.8	-7.0	-4.0	-14.9
NRA Non-Agric.	52.3	35.1	21.1	17.7	15.8	11.0	10.5	5.7
RRA	-49.2	-43.0	-34.2	-31.5	-27.4	-16.2	-13.1	-19.7
<b>Brazil<sup>b</sup></b>								
NRA Agriculture	-6.1	-27.3	-23.3	-25.7	-21.1	-11.3	8.0	4.1
NRA Non-Agric.	na	34.7	35.7	33.6	29.6	8.3	7.8	5.4
RRA	na	-46.1	-43.5	-44.4	-39.1	-17.9	0.2	-1.2
<b>Chile</b>								
NRA Agriculture	3.1	3.5	1.9	6.1	13.6	8.1	7.4	3.5
NRA Non-Agric.	26.1	32.1	11.2	7.2	9.0	5.9	5.3	2.3
RRA	-18.0	-20.0	-8.0	-1.0	4.2	2.2	2.0	1.1
<b>Colombia</b>								
NRA Agriculture	-5.1	-17.8	-15.2	6.2	0.8	10.6	16.6	33.3
NRA Non-Agric.	28.1	24.4	18.9	23.7	23.5	9.6	7.9	7.1
RRA	-25.6	-34.0	-28.7	-14.0	-18.4	1.3	8.1	24.5
<b>Dominican Rep.</b>								
NRA Agriculture	5.3	-18.2	-22.2	-31.4	-37.3	-1.0	9.7	2.8
NRA Non-Agric.	9.1	8.7	10.2	10.4	10.2	9.3	5.8	4.2
RRA	-3.5	-24.8	-29.5	-37.9	-43.0	-9.4	3.6	-1.4
<b>Ecuador<sup>b</sup></b>								
NRA Agriculture	-14.8	-31.5	-20.8	9.9	-0.8	-6.4	-2.6	11.2
NRA Non-Agric.	1.2	-3.2	4.8	9.4	8.6	2.5	5.8	8.5
RRA	-15.8	-29.3	-24.5	0.3	-8.8	-8.8	-8.1	2.2
<b>Mexico</b>								
NRA Agriculture	na	na	na	3.9	3.0	31.2	4.2	11.8
NRA Non-Agric.	na	na	na	7.2	4.0	5.8	3.2	6.8
RRA	na	na	na	-3.3	-1.1	24.1	1.0	4.7
<b>Nicaragua<sup>b</sup></b>								
NRA Agriculture	na	na	na	na	na	-3.2	-11.3	-4.2
NRA Non-Agric.	na	na	na	na	na	7.1	6.1	5.7
RRA	na	na	na	na	na	-9.6	-16.4	-9.4
<b>All LA focus countries (unweighted average)<sup>c</sup></b>								
NRA Agriculture	-6.0	-19.0	-16.4	-7.2	-8.2	2.6	3.5	5.7
NRA Non-Agric.	16.8	20.6	15.6	14.3	13.4	7.7	7.3	6.5
RRA	-19.5	-32.9	-27.7	-18.8	-19.1	-4.8	-3.5	-0.8
<b>All LA focus countries (weighted average)<sup>d</sup></b>								
NRA Agriculture	-9.3	-23.0	-19.0	-12.9	-11.2	4.4	5.5	4.9
NRA Non-Agric.	15.9	27.8	23.3	18.5	16.8	7.3	6.6	5.5
RRA	-21.4	-39.8	-34.2	-26.6	-24.0	-2.7	-1.0	-0.6
Dispersion of national RRAs <sup>e</sup>	17.0	12.7	13.6	20.6	19.1	14.0	10.3	13.4

<sup>a</sup> The RRA is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

<sup>b</sup> Ecuador and Brazil 1965-69 column refers to 1966-69 data; and Nicaragua 1990-94 column to 1991-94 data.

<sup>c</sup> Simple averages of the above (weighted) national averages.

<sup>d</sup> Weighted averages of the above national averages, using weights based on gross value of national agricultural production at undistorted prices.

<sup>e</sup> Dispersion is a simple 5-year average of the standard deviation around a weighted mean of the national agricultural sector NRAs each year.

Source: Anderson and Valenzuela (2008) based on estimates reported in Anderson and Valdés (2008).

Appendix Table 13: Annual distortion estimates, **Argentina**, 1960 to 2005  
(a) Nominal rates of assistance to covered products  
(percent)

	Wheat	Maize	Soybean	Sunflower	Beef	Milk	All
1960	-36	-32	na	na	-40	na	-38
1961	-23	-17	na	na	-40	na	-33
1962	-21	-3	na	na	-44	na	-33
1963	-13	4	na	na	-39	na	-27
1964	-2	1	na	na	-23	na	-13
1965	-18	-9	na	na	-35	na	-26
1966	-6	10	na	na	-25	na	-15
1967	8	-35	na	na	-38	na	-30
1968	-25	-20	na	na	-38	na	-32
1969	-16	-7	na	na	-39	na	-28
1970	-16	-20	na	na	-25	na	-22
1971	-11	-17	na	na	-13	na	-14
1972	-30	-28	na	na	-31	na	-30
1973	-42	-25	na	na	-35	na	-35
1974	-63	-28	na	na	-28	na	-39
1975	-36	-44	na	na	-42	na	-41
1976	-40	-58	na	na	-19	na	-34
1977	-9	-20	-16	-24	-32	na	-24
1978	-19	-11	-15	-36	-14	na	-17
1979	-13	-12	-12	-23	-3	na	-8
1980	-11	6	-7	-25	-4	na	-6
1981	-4	-15	-13	-9	-36	na	-26
1982	-12	-14	-14	-26	-35	na	-27
1983	-27	-28	-27	-33	-31	na	-30
1984	-21	-22	-24	-24	-21	na	-22
1985	-26	-20	-24	-25	-18	na	-22
1986	-21	-32	-33	-32	-7	na	-21
1987	-11	-25	-22	-22	-7	na	-14
1988	-2	-2	-17	-14	-6	na	-11
1989	-25	-30	-38	-39	-22	-3	-25
1990	-30	-31	-36	-39	-19	1	-27
1991	-6	-7	-12	-13	-5	1	-8
1992	-3	-3	-9	-10	-1	0	-4
1993	2	3	-5	-4	3	1	0
1994	-12	1	-6	-14	4	2	-3
1995	-2	-5	-9	-23	4	6	-5
1996	-8	-6	-5	-17	2	5	-4
1997	-14	-4	-5	-11	2	5	-4
1998	-14	-8	-10	-18	2	5	-7
1999	-10	-2	-8	-29	2	5	-6
2000	-14	-7	-8	-27	2	6	-6
2001	-3	-6	-3	-20	2	6	-3
2002	-19	-25	-30	-41	-4	-4	-24
2003	-23	-25	-28	-36	-5	-4	-23
2004	-24	-27	-30	-35	-5	-4	-23
2005	-26	-29	-29	-40	-7	-9	-24

Appendix Table 13 (continued): Annual distortion estimates, **Argentina**, 1960 to 2005  
 (b) Nominal and relative rates of assistance to all<sup>a</sup> agricultural products, to exportable<sup>b</sup> and import-competing<sup>b</sup> agricultural industries, and relative<sup>c</sup> to non-agricultural industries  
 (percent)

	Total ag NRA				Ag tradables NRA			Non-ag tradables	
	Covered products		Non-covered products	All products (incl NPS)	Export-ables	Import-competing	All	NRA	RRA
	Inputs	Outputs							
1960	0	-38	-19	-33	-33	na	-33	66	-60
1961	0	-33	-16	-29	-29	na	-29	63	-57
1962	0	-33	-17	-29	-29	na	-29	61	-56
1963	0	-27	-14	-24	-24	na	-24	59	-52
1964	0	-13	-8	-12	-12	na	-12	58	-44
1965	0	-27	-14	-23	-23	na	-23	56	-51
1966	0	-15	-8	-13	-13	na	-13	54	-44
1967	0	-30	-13	-26	-26	na	-26	53	-52
1968	1	-32	-16	-28	-28	na	-28	50	-52
1969	-1	-27	-15	-23	-23	na	-23	48	-48
1970	-1	-21	-11	-18	-18	na	-18	43	-42
1971	0	-14	-6	-11	-11	na	-11	38	-36
1972	0	-30	-15	-25	-25	na	-25	35	-44
1973	0	-35	-17	-29	-29	na	-29	31	-46
1974	0	-39	-18	-32	-32	na	-32	28	-47
1975	1	-42	-20	-34	-34	na	-34	24	-47
1976	0	-34	-14	-27	-27	na	-27	21	-40
1977	1	-25	-13	-20	-20	na	-20	21	-34
1978	0	-16	-8	-14	-14	na	-14	20	-28
1979	0	-8	-3	-6	-6	na	-7	19	-22
1980	-1	-5	-4	-5	-5	na	-5	19	-20
1981	0	-26	-13	-23	-23	na	-23	19	-35
1982	1	-28	-14	-24	-24	na	-24	17	-35
1983	1	-31	-16	-26	-26	na	-26	17	-36
1984	1	-23	-12	-19	-19	na	-19	16	-31
1985	2	-23	-13	-19	-19	na	-19	16	-30
1986	0	-21	-8	-18	-18	na	-18	16	-29
1987	-1	-13	-6	-12	-12	na	-12	16	-24
1988	0	-11	-4	-9	-9	na	-9	17	-22
1989	0	-25	-11	-21	-21	na	-21	15	-31
1990	0	-27	-13	-23	-23	na	-23	12	-32
1991	0	-8	-3	-6	-6	na	-6	11	-16
1992	0	-4	-1	-3	-3	na	-3	11	-13
1993	-1	1	1	0	0	na	0	10	-9
1994	-4	1	0	-3	-3	na	-3	11	-12
1995	-4	-1	0	-4	-4	na	-4	11	-13
1996	-3	-1	0	-3	-3	na	-3	10	-12
1997	-4	0	0	-3	-3	na	-3	10	-12
1998	-4	-2	0	-5	-5	na	-5	11	-15
1999	-6	-1	0	-5	-5	na	-5	11	-14
2000	-4	-2	0	-5	-5	na	-5	10	-13
2001	-5	3	0	-2	-2	na	-2	9	-10
2002	-1	-23	-20	-23	-23	na	-23	3	-25
2003	-2	-21	-20	-22	-22	na	-22	3	-25
2004	-1	-22	-20	-22	-22	na	-22	4	-25
2005	-1	-22	-20	-23	-23	na	-23	3	-25

<sup>a</sup> NRAs including assistance to nontradables and non-product specific assistance.

<sup>b</sup> NRAs including products specific input subsidies.

<sup>c</sup> The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.



Appendix Table 13 (continued): Annual distortion estimates, **Argentina**, 1960 to 2005  
(c) Value shares of primary production of covered<sup>a</sup> and non-covered products,  
(percent)

	Wheat	Maize	Soybean	Sun- flower	Beef	Milk	Non- covered	Total
1960	20	12	na	na	43	na	25	100
1961	16	13	na	na	50	na	20	100
1962	15	12	na	na	48	na	25	100
1963	17	11	na	na	47	na	25	100
1964	23	10	na	na	41	na	25	100
1965	22	10	na	na	43	na	25	100
1966	13	14	na	na	48	na	25	100
1967	11	21	na	na	43	na	25	100
1968	20	13	na	na	42	na	25	100
1969	12	12	na	na	38	na	37	100
1970	13	16	na	na	36	na	35	100
1971	8	16	na	na	38	na	38	100
1972	9	11	na	na	46	na	34	100
1973	17	15	na	na	36	na	33	100
1974	22	15	na	na	30	na	33	100
1975	10	12	na	na	44	na	34	100
1976	11	19	na	na	37	na	33	100
1977	12	11	8	2	34	na	33	100
1978	8	13	9	7	31	na	32	100
1979	9	8	9	4	37	na	33	100
1980	15	8	8	4	37	na	28	100
1981	7	12	8	3	43	na	27	100
1982	9	8	9	5	42	na	27	100
1983	13	10	9	5	34	na	29	100
1984	8	9	17	7	31	na	27	100
1985	7	15	17	11	24	na	26	100
1986	9	11	16	9	28	na	27	100
1987	7	8	17	5	35	na	27	100
1988	5	8	29	8	23	na	27	100
1989	1	5	16	7	38	8	25	100
1990	10	5	23	8	23	7	24	100
1991	9	6	22	8	23	6	25	100
1992	9	7	18	5	25	12	25	100
1993	9	7	18	5	24	13	24	100
1994	9	7	21	9	18	13	23	100
1995	13	8	19	11	16	11	23	100
1996	12	9	21	9	15	11	23	100
1997	14	8	19	8	16	11	23	100
1998	9	9	23	9	16	11	24	100
1999	9	7	23	10	16	12	24	100
2000	11	7	24	7	17	10	24	100
2001	11	6	27	8	13	10	24	100
2002	13	8	36	6	9	5	23	100
2003	9	7	40	5	9	7	23	100
2004	9	6	39	4	11	7	23	100
2005	9	7	36	4	12	9	23	100

<sup>a</sup> At farmgate undistorted prices, US\$

Appendix Table 13 (continued): Annual distortion estimates, **Argentina**, 1960 to 2005  
 (d) Trade status<sup>a</sup> of covered products

	Wheat	Maize	Soybean	Sun- flower	Beef	Milk
1960	X	X	na	na	X	na
1961	X	X	na	na	X	na
1962	X	X	na	na	X	na
1963	X	X	na	na	X	na
1964	X	X	na	na	X	na
1965	X	X	na	na	X	na
1966	X	X	na	na	X	na
1967	X	X	na	na	X	na
1968	X	X	na	na	X	na
1969	X	X	na	na	X	na
1970	X	X	na	na	X	na
1971	X	X	na	na	X	na
1972	X	X	na	na	X	na
1973	X	X	na	na	X	na
1974	X	X	na	na	X	na
1975	X	X	na	na	X	na
1976	X	X	na	na	X	na
1977	X	X	X	X	X	na
1978	X	X	X	X	X	na
1979	X	X	X	X	X	na
1980	X	X	X	X	X	na
1981	X	X	X	X	X	na
1982	X	X	X	X	X	na
1983	X	X	X	X	X	na
1984	X	X	X	X	X	na
1985	X	X	X	X	X	na
1986	X	X	X	X	X	na
1987	X	X	X	X	X	na
1988	X	X	X	X	X	na
1989	X	X	X	X	X	X
1990	X	X	X	X	X	X
1991	X	X	X	X	X	X
1992	X	X	X	X	X	X
1993	X	X	X	X	X	X
1994	X	X	X	X	X	X
1995	X	X	X	X	X	X
1996	X	X	X	X	X	X
1997	X	X	X	X	X	X
1998	X	X	X	X	X	X
1999	X	X	X	X	X	X
2000	X	X	X	X	X	X
2001	X	X	X	X	X	X
2002	X	X	X	X	X	X
2003	X	X	X	X	X	X
2004	X	X	X	X	X	X
2005	X	X	X	X	X	X

<sup>a</sup> Exportable (X), import-competing (M) and nontradables (H).

Source: Sturzenegger and Salazni (2007)

Appendix Table 14: Annual distortion estimates, **Brazil**, 1966 to 2005(a) Nominal rates of assistance to covered products  
(percent)

	Rice	Wheat	Maize	Soy- bean	Sugar	Cotton	Coffee	Beef	Pig- meat	Poultr y	All
1966	na	44	-9	0	na	-16	na	na	na	na	-8
1967	na	41	-9	0	na	-5	na	na	na	na	-6
1968	na	38	-9	0	na	-9	na	na	na	na	-6
1969	na	43	-9	0	na	-6	na	na	na	na	-5
1970	na	69	-9	-3	-35	4	na	na	na	na	-9
1971	na	53	7	7	-45	-6	na	na	na	na	-8
1972	na	4	20	0	-78	-7	na	na	na	na	-35
1973	19	-30	-5	-24	-82	1	na	na	na	na	-36
1974	-3	5	-12	-3	-89	8	na	na	na	na	-49
1975	-4	39	0	-6	-84	-9	na	na	na	na	-37
1976	1	81	-5	-16	-36	-9	na	na	na	na	-11
1977	-13	115	-3	-23	-55	-29	na	na	na	na	-22
1978	-32	80	-17	-14	-40	-9	na	na	na	na	-21
1979	-7	14	-35	-19	-47	-30	na	na	na	na	-27
1980	-28	17	-37	-10	-68	-17	-43	1	na	-21	-32
1981	-25	76	-35	-15	-61	-27	-43	14	na	6	-29
1982	51	107	22	1	-60	-11	-41	19	7	4	-10
1983	2	4	-26	-17	-64	-25	-57	7	-7	-20	-35
1984	-4	3	-48	-17	-66	-23	-53	36	1	-10	-34
1985	18	3	-45	-28	-59	-14	-27	-23	-9	-37	-33
1986	60	29	-14	30	-56	-15	5	35	-13	34	2
1987	-12	-4	-49	-23	-50	-32	-43	-21	-15	-29	-34
1988	5	-23	-38	-28	-63	-16	-46	-34	-52	-40	-38
1989	-52	-34	-23	-56	-48	-67	-14	55	-8	3	-31
1990	4	-7	-23	-26	-54	-35	-19	22	-48	18	-21
1991	9	-14	-29	-34	-49	-36	-23	-38	12	-24	-30
1992	11	-21	-31	-32	-30	18	20	-47	24	-28	-26
1993	7	42	-15	-24	-40	-6	26	-40	24	-21	-19
1994	-6	25	-18	62	-38	-23	53	-18	55	-11	7
1995	25	4	-5	-3	-25	9	3	6	2	0	-1
1996	15	6	4	-6	-12	8	5	4	2	2	0
1997	19	1	3	2	-2	8	10	4	5	4	4
1998	19	25	15	1	1	4	10	2	-4	-7	4
1999	7	5	2	-1	-13	4	6	6	1	6	2
2000	10	9	5	-2	10	12	4	-1	-5	-1	2
2001	16	-2	-14	-3	3	13	5	6	1	6	1
2002	11	-1	5	-14	-4	8	19	1	4	4	-1
2003	20	-3	-1	0	-1	22	3	6	2	1	2
2004	23	0	3	7	2	1	4	5	0	2	5
2005	19	-1	16	-2	0	7	2	2	3	2	3

Appendix Table 14 (continued): Annual distortion estimates, **Brazil**, 1966 to 2005  
 (b) Nominal and relative rates of assistance to all<sup>a</sup> agricultural products, to exportable<sup>b</sup> and import-competing<sup>b</sup> agricultural industries, and relative<sup>c</sup> to non-agricultural industries  
 (percent)

	Total ag NRA				Ag tradables NRA			Non-ag tradables	
	Covered products		Non-covered products	All products (incl NPS)	Export-ables	Import-competing	All	NRA	RRA
	Inputs	Outputs							
1966	0	-8	-8	-8	-10	44	-8	na	na
1967	0	-6	-6	-6	-8	41	-6	na	na
1968	0	-6	-6	-6	-8	38	-6	na	na
1969	0	-5	-5	-5	-7	43	-5	na	na
1970	0	-9	-9	-9	-14	69	-9	35	-33
1971	0	-8	-8	-8	-13	53	-8	35	-32
1972	0	-35	-35	-35	-38	4	-35	36	-52
1973	0	-36	-36	-36	-44	8	-36	34	-52
1974	0	-49	-49	-49	-57	-1	-49	35	-62
1975	0	-37	-37	-37	-48	4	-37	34	-53
1976	0	-11	-11	-11	-17	12	-11	34	-33
1977	0	-22	-22	-22	-29	11	-22	33	-41
1978	0	-21	-21	-21	-24	-17	-21	39	-43
1979	0	-27	-27	-27	-32	-20	-27	38	-47
1980	5	-36	-32	-29	-33	-28	-29	39	-49
1981	5	-34	-29	-28	-32	-22	-28	35	-46
1982	4	-14	-10	-6	-19	49	-6	32	-29
1983	4	-39	-35	-33	-39	0	-33	31	-49
1984	4	-38	-34	-33	-35	-32	-33	30	-48
1985	3	-35	-33	-31	-35	-26	-31	30	-47
1986	10	-12	-2	2	-6	7	2	38	-26
1987	3	-37	-34	-28	-35	-31	-28	38	-48
1988	11	-49	-38	-28	-41	-29	-28	24	-42
1989	-15	-17	-31	-21	-30	-33	-21	18	-32
1990	3	-24	-21	-13	-22	-20	-13	13	-23
1991	3	-33	-30	-20	-33	-21	-20	11	-28
1992	8	-34	-26	-20	-28	-21	-20	7	-25
1993	5	-24	-19	-14	-25	-3	-14	5	-18
1994	4	2	7	10	14	-14	10	6	4
1995	2	-3	-1	5	-3	4	5	7	-2
1996	5	-4	0	4	-1	8	4	7	-2
1997	4	0	4	11	3	7	11	9	2
1998	5	-1	4	9	1	16	9	9	0
1999	5	-3	2	11	2	4	11	8	3
2000	3	-1	2	6	1	7	6	9	-3
2001	2	-1	1	3	1	13	3	5	-2
2002	3	-3	-1	1	-1	7	1	4	-3
2003	2	0	2	4	2	14	4	4	0
2004	2	4	5	7	4	16	7	4	3
2005	-3	6	3	4	2	14	4	4	1

<sup>a</sup> NRAs including assistance to nontradables and non-product specific assistance.

<sup>b</sup> NRAs including products specific input subsidies.

<sup>c</sup> The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

Appendix Table 14 (continued): Annual distortion estimates, **Brazil**, 1966 to 2005  
(c) Value shares of primary production of covered<sup>a</sup> and non-covered products,  
(percent)

	Rice	Wheat	Maize	Soy- bean	Sugar	Cotton	Coffee	Beef	Pig- meat	Poul- try	Non- covered
1966	na	1	20	2	na	9	na	na	na	na	67
1967	na	1	22	2	na	7	na	na	na	na	69
1968	na	2	19	2	na	10	na	na	na	na	67
1969	na	2	21	3	na	10	na	na	na	na	64
1970	na	4	27	6	19	11	na	na	na	na	32
1971	na	5	22	6	21	15	na	na	na	na	31
1972	na	4	14	6	33	10	na	na	na	na	32
1973	9	2	13	11	28	7	na	na	na	na	30
1974	7	3	10	8	36	5	na	na	na	na	31
1975	12	3	10	10	29	3	na	na	na	na	33
1976	13	2	17	17	13	6	na	na	na	na	31
1977	10	2	11	23	16	8	na	na	na	na	32
1978	15	2	15	16	16	6	na	na	na	na	31
1979	11	4	17	16	15	6	na	na	na	na	30
1980	11	2	9	9	14	2	12	10	na	3	27
1981	5	2	11	9	12	3	23	8	na	3	24
1982	6	1	8	9	18	3	9	9	2	3	32
1983	4	1	7	9	19	2	13	8	2	3	32
1984	3	1	12	11	18	3	9	6	2	2	32
1985	3	1	11	11	14	3	14	7	2	1	32
1986	4	2	9	6	13	3	4	7	2	3	46
1987	3	2	9	8	13	2	13	11	2	3	32
1988	4	3	10	12	13	3	10	11	2	3	31
1989	6	2	7	16	7	4	6	6	1	2	42
1990	3	2	9	10	13	3	6	9	5	4	37
1991	5	1	11	9	11	4	6	14	2	6	32
1992	3	1	13	9	10	2	4	15	2	6	35
1993	4	2	11	13	9	1	4	15	2	6	33
1994	4	1	10	9	8	2	8	9	2	5	43
1995	3	1	9	9	10	1	5	18	3	7	33
1996	4	1	9	13	11	2	7	18	3	6	27
1997	4	1	9	16	11	1	7	14	3	7	29
1998	4	1	7	14	10	1	10	13	2	8	30
1999	5	1	9	14	7	2	8	15	3	9	28
2000	3	1	9	16	7	2	7	17	3	8	26
2001	3	1	10	16	7	2	5	15	3	10	27
2002	3	1	9	20	7	2	5	14	3	10	28
2003	4	1	10	24	7	2	3	13	3	9	24
2004	4	2	8	23	6	3	5	14	3	9	23
2005	5	2	6	23	7	2	5	15	4	8	24

<sup>a</sup> At farmgate undistorted prices

Appendix Table 14 (continued): Annual distortion estimates, **Brazil**, 1966 to 2005  
 (d) Trade status<sup>a</sup> of covered products

	Rice	Wheat	Maize	Soy-bean	Sugar	Cotton	Coffee	Beef	Pig-meat	Poultry
1966	na	M	X	X	na	X	na	na	na	na
1967	na	M	X	X	na	X	na	na	na	na
1968	na	M	X	X	na	X	na	na	na	na
1969	na	M	X	X	na	X	na	na	na	na
1970	na	M	X	X	X	X	na	na	na	na
1971	na	M	X	X	X	X	na	na	na	na
1972	na	M	X	X	X	X	na	na	na	na
1973	M	M	X	X	X	X	na	na	na	na
1974	M	M	X	X	X	X	na	na	na	na
1975	M	M	X	X	X	X	na	na	na	na
1976	M	M	X	X	X	X	na	na	na	na
1977	M	M	X	X	X	X	na	na	na	na
1978	M	M	M	X	X	X	na	na	na	na
1979	M	M	M	X	X	X	na	na	na	na
1980	M	M	M	X	X	X	X	X	na	X
1981	M	M	M	X	X	X	X	X	na	X
1982	M	M	X	X	X	X	X	X	M	X
1983	M	M	X	X	X	X	X	X	M	X
1984	M	M	M	X	X	X	X	X	M	X
1985	M	M	M	X	X	X	X	X	M	X
1986	M	M	M	X	X	X	X	X	M	X
1987	M	M	M	X	X	X	X	X	M	X
1988	M	M	M	X	X	X	X	X	M	X
1989	M	M	M	X	X	X	X	X	M	X
1990	M	M	M	X	X	M	X	X	X	X
1991	M	M	M	X	X	M	X	X	X	X
1992	M	M	M	X	X	M	X	X	X	X
1993	M	M	M	X	X	M	X	X	X	X
1994	M	M	M	X	X	M	X	X	X	X
1995	M	M	M	X	X	M	X	X	X	X
1996	M	M	M	X	X	M	X	X	X	X
1997	M	M	M	X	X	M	X	X	X	X
1998	M	M	M	X	X	M	X	X	X	X
1999	M	M	M	X	X	M	X	X	X	X
2000	M	M	M	X	X	X	X	X	X	X
2001	M	M	X	X	X	X	X	X	X	X
2002	M	M	X	X	X	X	X	X	X	X
2003	M	M	X	X	X	X	X	X	X	X
2004	M	M	X	X	X	X	X	X	X	X
2005	M	M	X	X	X	X	X	X	X	X

<sup>a</sup> Exportable (X), import-competing (M) and nontradables (H).

Source: Lopes et al. (2007)

Appendix Table 15: Annual distortion estimates, **Chile**, 1960 to 2005(a) Nominal rates of assistance to covered products  
(percent)

	Wheat	Maize	Sugar	Apple	Grape	Beef	Milk	All
1960	35	-28	na	4	6	-18	209	12
1961	20	-42	na	0	1	-13	204	9
1962	6	-5	na	-1	-2	0	198	16
1963	-7	-18	na	33	34	3	198	13
1964	-3	-4	na	17	18	-16	198	3
1965	22	-2	na	14	11	-21	81	4
1966	52	-27	na	-2	-9	-26	34	1
1967	-7	1	na	37	37	-27	17	-8
1968	-12	-9	na	33	30	-30	15	-14
1969	-19	3	na	31	30	-25	3	-14
1970	-1	-8	na	31	33	-19	39	-2
1971	17	-16	na	49	39	-16	13	1
1972	-6	-9	na	75	57	-38	-15	-16
1973	-68	31	na	11	3	-32	13	-16
1974	-39	-48	na	13	32	-18	13	-19
1975	-35	-51	69	-1	3	-1	25	-13
1976	-23	-19	-9	-1	-1	0	23	-6
1977	96	-17	10	-2	-1	0	0	15
1978	6	2	71	-1	-1	23	9	13
1979	-16	-8	55	-2	-1	0	54	3
1980	1	-13	26	-2	-1	8	17	6
1981	7	-9	-17	-2	-1	-1	-3	-3
1982	6	6	52	-1	-1	-1	-1	3
1983	3	-6	52	-3	-2	-1	-1	2
1984	22	-31	27	-4	-3	30	22	13
1985	20	-28	91	-2	-1	43	80	27
1986	41	-7	63	-1	-1	49	47	36
1987	24	-3	44	-1	-1	27	60	25
1988	-10	5	26	-1	-1	28	27	11
1989	-4	-19	21	-1	-1	18	13	5
1990	8	-28	12	-1	-1	-12	-1	-5
1991	40	-8	24	0	-1	20	10	15
1992	30	2	27	0	-1	31	23	20
1993	25	-4	35	0	-1	21	36	19
1994	35	5	6	0	-1	23	43	20
1995	17	5	-4	0	-1	26	18	13
1996	0	1	4	0	-1	16	9	6
1997	26	-4	13	0	-1	10	22	12
1998	42	3	35	0	-1	3	18	12
1999	40	6	63	0	-1	7	11	13
2000	35	4	54	0	0	6	22	15
2001	1	0	36	0	0	2	10	6
2002	3	3	41	0	0	10	0	6
2003	18	0	26	0	0	3	5	6
2004	2	0	15	0	0	-2	-2	0
2005	4	-2	15	0	0	0	-1	1

Appendix Table 15 (continued): Annual distortion estimates, **Chile**, 1960 to 2005  
 (b) Nominal and relative rates of assistance to all<sup>a</sup> agricultural products, to exportable<sup>b</sup> and import-competing<sup>b</sup> agricultural industries, and relative<sup>c</sup> to non-agricultural industries  
 (percent)

	Total ag NRA				Ag tradables NRA			Non-ag tradables	
	Covered products		Non-covered products	All products (incl NPS)	Export-ables	Import-competing	All	NRA	RRA
	Inputs	Outputs							
1960	5	6	8	23	5	15	12	22	-9
1961	3	6	6	21	0	13	9	22	-11
1962	1	15	6	24	-1	20	13	44	-21
1963	1	11	21	35	34	11	18	40	-15
1964	1	2	10	25	17	2	7	40	-24
1965	1	3	9	26	13	5	8	37	-21
1966	-4	4	1	12	-4	3	1	28	-21
1967	-5	-4	17	17	37	-9	6	25	-16
1968	-5	-9	14	14	33	-13	2	26	-20
1969	-7	-8	13	12	30	-14	0	14	-12
1970	-2	0	17	17	32	-2	8	14	-5
1971	-3	4	23	22	48	-2	14	19	-4
1972	-9	-7	24	19	71	-16	11	38	-20
1973	-2	-14	0	2	10	-16	-7	60	-42
1974	-1	-19	10	-1	16	-20	-8	29	-29
1975	-4	-9	0	-4	-1	-11	-8	18	-22
1976	-2	-3	0	0	-1	-5	-4	14	-16
1977	-2	18	3	10	-2	14	9	10	-1
1978	-2	16	4	10	-1	13	8	6	2
1979	-3	6	4	7	-2	7	4	7	-3
1980	-3	9	5	8	-2	9	6	6	0
1981	-3	1	4	3	-2	3	2	5	-3
1982	-3	6	4	5	-1	7	4	5	0
1983	-5	7	7	6	-2	9	5	8	-3
1984	-7	21	11	14	-3	21	13	12	1
1985	-7	34	10	18	-2	28	18	12	5
1986	-6	42	8	19	-1	31	20	10	9
1987	-6	31	8	15	-1	25	16	10	6
1988	-5	15	5	8	-1	13	8	7	2
1989	-5	10	5	5	-1	9	6	7	-1
1990	-5	0	5	1	-1	1	0	7	-6
1991	-5	20	5	9	0	16	9	6	3
1992	-4	23	4	10	0	18	10	5	5
1993	-4	23	5	10	-1	17	10	6	4
1994	-2	22	4	10	-1	17	10	6	5
1995	-2	15	4	8	-1	13	8	5	3
1996	-2	8	5	6	-1	9	6	5	0
1997	-2	14	5	8	-1	13	8	5	2
1998	-2	15	4	9	-1	13	8	6	2
1999	-2	15	4	10	0	13	8	5	3
2000	-2	17	5	10	0	15	8	4	4
2001	-1	7	2	6	0	6	3	3	0
2002	-1	7	1	5	0	5	3	2	0
2003	-1	8	1	5	0	5	3	2	1
2004	-1	1	0	3	0	1	0	1	-1
2005	-1	2	0	3	0	1	0	1	0

<sup>a</sup> NRAs including assistance to nontradables and non-product specific assistance.

<sup>b</sup> NRAs including products specific input subsidies.

<sup>c</sup> The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.



Appendix Table 15 (continued): Annual distortion estimates, **Chile**, 1960 to 2005  
(c) Value shares of primary production of covered<sup>a</sup> and non-covered products,  
(percent)

	Wheat	Maize	Sugar	Apple	Grape	Beef	Milk	Non- covered	Total
1960	14	4	na	1	1	28	4	48	100
1961	15	5	na	2	1	27	4	46	100
1962	16	3	na	4	1	27	4	45	100
1963	23	4	na	3	1	29	4	36	100
1964	21	4	na	3	1	31	4	36	100
1965	14	4	na	2	1	26	5	48	100
1966	10	4	na	4	1	22	7	53	100
1967	13	4	na	2	1	21	8	52	100
1968	12	3	na	2	1	21	7	54	100
1969	14	1	na	3	1	22	8	51	100
1970	13	3	na	4	1	24	6	50	100
1971	11	3	na	3	1	24	9	50	100
1972	8	2	na	2	1	17	7	62	100
1973	5	3	na	4	1	17	9	61	100
1974	13	5	na	2	0	30	8	41	100
1975	20	8	3	2	1	13	8	45	100
1976	16	3	7	2	1	18	8	46	100
1977	7	3	4	3	1	17	9	56	100
1978	8	2	1	2	1	13	8	64	100
1979	10	4	1	2	1	17	5	60	100
1980	7	3	1	2	1	13	7	65	100
1981	5	3	3	2	1	13	7	65	100
1982	4	3	1	2	1	13	7	69	100
1983	5	5	2	2	1	14	7	64	100
1984	8	8	5	2	2	14	7	55	100
1985	9	7	3	2	2	9	4	64	100
1986	10	4	5	3	2	8	4	64	100
1987	10	3	4	3	3	9	4	64	100
1988	12	3	4	2	2	10	5	62	100
1989	11	5	4	2	2	11	7	57	100
1990	7	5	3	3	3	14	8	57	100
1991	5	3	3	4	2	10	6	66	100
1992	5	3	3	4	4	8	6	68	100
1993	4	3	3	2	4	9	6	69	100
1994	4	3	4	3	3	8	6	69	100
1995	4	3	4	3	3	9	7	67	100
1996	5	4	3	4	4	9	8	64	100
1997	4	2	2	3	5	9	7	67	100
1998	4	2	2	2	5	9	7	68	100
1999	3	2	2	3	5	7	7	71	100
2000	4	1	2	3	4	7	6	73	100
2001	6	2	2	2	3	7	8	70	100
2002	6	2	2	3	4	5	7	71	100
2003	5	3	1	3	4	5	6	72	100
2004	6	3	1	3	4	5	7	70	100
2005	4	3	1	3	5	6	8	69	100

<sup>a</sup> At farmgate undistorted prices

Appendix Table 15 (continued): Annual distortion estimates, **Chile**, 1960 to 2005  
 (d) Trade status<sup>a</sup> of covered products

	Wheat	Maize	Sugar	Apple	Grape	Beef	Milk
1960	M	M	na	X	X	M	M
1961	M	M	na	X	X	M	M
1962	M	M	na	X	X	M	M
1963	M	M	na	X	X	M	M
1964	M	M	na	X	X	M	M
1965	M	M	na	X	X	M	M
1966	M	M	na	X	X	M	M
1967	M	M	na	X	X	M	M
1968	M	M	na	X	X	M	M
1969	M	M	na	X	X	M	M
1970	M	M	na	X	X	M	M
1971	M	M	na	X	X	M	M
1972	M	M	na	X	X	M	M
1973	M	M	na	X	X	M	M
1974	M	M	na	X	X	M	M
1975	M	M	M	X	X	M	M
1976	M	M	M	X	X	M	M
1977	M	M	M	X	X	M	M
1978	M	M	M	X	X	M	M
1979	M	M	M	X	X	M	M
1980	M	M	M	X	X	M	M
1981	M	M	M	X	X	M	M
1982	M	M	M	X	X	M	M
1983	M	M	M	X	X	M	M
1984	M	M	M	X	X	M	M
1985	M	M	M	X	X	M	M
1986	M	M	M	X	X	M	M
1987	M	M	M	X	X	M	M
1988	M	M	M	X	X	M	M
1989	M	M	M	X	X	M	M
1990	M	M	M	X	X	M	M
1991	M	M	M	X	X	M	M
1992	M	M	M	X	X	M	M
1993	M	M	M	X	X	M	M
1994	M	M	M	X	X	M	M
1995	M	M	M	X	X	M	M
1996	M	M	M	X	X	M	M
1997	M	M	M	X	X	M	M
1998	M	M	M	X	X	M	M
1999	M	M	M	X	X	M	M
2000	M	M	M	X	X	M	M
2001	M	M	M	X	X	M	M
2002	M	M	M	X	X	M	M
2003	M	M	M	X	X	M	M
2004	M	M	M	X	X	M	M
2005	M	M	M	X	X	M	M

<sup>a</sup> Exportable (X), import-competing (M) and nontradables (H).

Source: Valdes and Jara (2007)

Appendix Table 16: Annual distortion estimates, **Colombia**, 1960 to 2005

(a) Nominal rates of assistance to covered products

(percent)

	Rice	Wheat	Maize	Sorghum	Soybean	Palm-oil	Sugar	Cotton	Coffee	Beef	Milk	All
1960	77	37	-19	-4	10	-4	19	6	-20	-2	-3	-6
1961	75	47	8	-4	-1	-4	35	-5	-4	-2	-3	2
1962	48	31	-14	-4	10	-4	45	-13	-3	-2	-3	0
1963	36	18	-7	-4	4	-4	19	2	-16	-2	-3	-4
1964	83	71	19	-4	12	-4	55	8	-18	-2	-3	-2
1965	100	74	-12	-4	12	-4	80	-11	-25	17	-3	1
1966	45	44	-19	-4	0	-4	62	18	-32	-3	-3	-11
1967	6	47	-14	-4	5	-4	79	4	-29	8	-3	-8
1968	10	49	-10	-4	8	-4	82	3	-25	5	-3	-6
1969	0	50	-19	-4	13	-4	6	-2	-22	5	-3	-7
1970	15	48	-22	-4	16	-5	-3	-3	-26	-10	-4	-14
1971	20	25	-19	-6	4	-7	-20	-11	-23	-3	-5	-10
1972	-5	40	-3	15	-9	-3	-38	-10	-22	-14	-4	-14
1973	-38	-6	-12	-4	-41	-4	-55	-10	-21	-12	-4	-18
1974	-50	-14	-35	-15	-17	2	-80	-9	-17	-11	-2	-25
1975	-37	13	-30	-16	-8	0	-79	0	-17	1	-3	-22
1976	-20	11	-25	-16	-4	-3	-53	3	-28	9	-4	-15
1977	19	52	24	23	8	-1	16	-1	-34	19	-4	-17
1978	-12	86	-3	9	8	-3	26	-2	-23	12	-4	-9
1979	3	39	12	26	9	-3	39	1	-35	11	44	-10
1980	-5	32	28	26	17	-1	-53	5	-21	10	49	-5
1981	3	35	20	28	33	-1	-32	11	-20	5	92	2
1982	53	43	26	41	56	-2	101	20	-22	9	110	12
1983	41	40	4	20	35	-3	68	20	-21	6	121	9
1984	51	23	-7	15	57	-5	82	7	-27	-4	112	2
1985	55	19	8	25	53	-4	143	19	-30	4	70	2
1986	49	31	13	18	33	-4	59	36	-24	15	25	-2
1987	30	52	37	49	25	-2	17	7	-5	8	33	9
1988	56	53	7	16	12	-2	23	0	-28	3	-1	-7
1989	18	39	6	11	38	-4	-12	1	-10	-19	-1	-7
1990	10	64	3	5	35	80	-20	-13	-3	-25	-7	-8
1991	4	70	-12	0	19	21	-4	-7	-3	2	0	-1
1992	22	40	-16	4	13	23	3	13	17	47	3	18
1993	29	30	1	8	6	39	51	41	-5	10	35	16
1994	51	21	18	15	14	4	67	1	-36	11	60	6
1995	32	5	3	0	7	6	38	-7	-30	-1	49	1
1996	43	-12	-8	21	-11	20	57	5	-17	29	37	17
1997	79	13	12	18	-10	6	72	3	-26	5	57	8
1998	69	19	24	20	5	3	70	14	-19	5	51	11
1999	64	40	44	51	28	33	94	20	-14	-6	27	12
2000	66	57	39	35	27	51	119	3	-11	-20	113	20
2001	115	22	26	26	23	65	88	22	18	-24	103	25
2002	80	9	4	16	12	41	149	-3	25	-6	134	41
2003	78	4	8	7	-4	45	104	-1	9	17	76	38
2004	66	7	8	18	-26	34	99	7	-4	-11	57	19
2005	55	21	28	40	na	32	78	34	1	-13	84	22

Appendix Table 16 (continued): Annual distortion estimates, **Colombia**, 1960 to 2005  
 (b) Nominal and relative rates of assistance to all<sup>a</sup> agricultural products, to exportable<sup>b</sup> and import-competing<sup>b</sup> agricultural industries, and relative<sup>c</sup> to non-agricultural industries  
 (percent)

	Total ag NRA				Ag tradables NRA			Non-ag tradables	
	Covered products		Non-covered products	All products (incl NPS)	Export-ables	Import-competing	All	NRA	RRA
	Inputs	Outputs							
1960	-2	-4	-2	-5	-16	13	-7	19	-22
1961	-2	4	6	4	-3	34	8	20	-9
1962	-2	2	2	1	-3	16	3	19	-14
1963	-2	-2	-2	-3	-12	10	-4	19	-20
1964	-2	0	4	0	-14	41	3	19	-14
1965	-2	3	5	3	-5	34	5	20	-13
1966	-2	-9	-3	-8	-17	11	-9	37	-34
1967	-2	-6	-5	-7	-11	-2	-8	32	-30
1968	-2	-4	-3	-5	-9	4	-5	26	-25
1969	-2	-5	-5	-7	-8	-6	-8	26	-26
1970	-3	-11	-8	-12	-18	-3	-14	29	-33
1971	-3	-7	-6	-9	-13	-1	-10	28	-30
1972	-2	-12	-7	-12	-18	-2	-14	24	-31
1973	-1	-17	-15	-17	-18	-26	-21	23	-35
1974	0	-26	-23	-24	-22	-42	-30	19	-41
1975	-1	-21	-18	-20	-22	-31	-25	18	-36
1976	-2	-14	-12	-14	-16	-20	-17	17	-29
1977	0	-16	-3	-14	-21	21	-16	20	-30
1978	-2	-8	-6	-9	-11	-6	-10	20	-25
1979	-1	-9	-1	-8	-18	21	-8	19	-23
1980	-1	-4	2	-3	-13	24	-3	19	-19
1981	-1	3	7	3	-10	43	4	18	-12
1982	-2	13	13	12	-5	72	14	22	-6
1983	-2	11	11	9	-6	64	11	29	-13
1984	-3	5	6	3	-13	60	5	31	-20
1985	-3	4	6	3	-11	51	4	26	-17
1986	-3	2	3	0	-8	27	0	23	-19
1987	-2	11	8	9	2	34	11	23	-10
1988	-2	-4	-1	-5	-13	13	-5	24	-24
1989	-3	-4	-3	-6	-14	7	-6	22	-23
1990	-3	-6	-3	-4	-15	4	-4	17	-18
1991	-2	2	0	1	-2	1	2	9	-7
1992	-2	19	7	16	25	4	20	6	13
1993	-1	17	10	17	10	28	22	7	13
1994	-1	7	8	10	-9	46	13	8	5
1995	-1	2	5	6	-11	34	8	8	0
1996	-1	19	11	21	12	29	26	8	17
1997	-1	10	10	13	-7	51	16	8	7
1998	-2	13	11	13	-3	50	17	9	8
1999	-2	14	9	13	0	36	16	7	9
2000	-1	21	17	20	16	49	25	7	17
2001	-2	27	21	26	20	67	34	7	24
2002	-2	42	21	34	41	40	45	8	34
2003	-2	39	20	31	37	40	40	7	31
2004	-2	21	14	18	16	35	23	6	16
2005	-1	24	16	20	20	42	28	6	20

<sup>a</sup> NRAs including assistance to nontradables and non-product specific assistance.

<sup>b</sup> NRAs including products specific input subsidies.

<sup>c</sup> The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

Appendix Table 16 (continued): Annual distortion estimates, **Colombia**, 1960 to 2005  
(c) Value shares of primary production of covered<sup>a</sup> and non-covered products,  
(percent)

	Rice	Wheat	Maize	Sorghum	Soybean	Palm-oil	Sugar	Cotton	Coffee	Beef	Milk	Non-covered
1960	2	1	6	0	0	0	1	3	26	21	6	34
1961	3	1	5	0	0	0	1	4	22	21	7	36
1962	4	1	4	0	0	0	1	5	23	22	7	33
1963	3	1	5	0	0	0	1	3	21	20	7	39
1964	3	0	5	0	0	0	1	2	25	20	6	37
1965	3	1	5	0	0	0	1	3	23	19	7	38
1966	4	1	5	0	0	0	1	2	25	17	6	38
1967	5	0	4	0	1	0	1	3	22	16	6	41
1968	5	1	4	1	1	0	1	4	23	18	6	37
1969	4	0	4	0	1	0	1	4	22	19	6	37
1970	3	0	4	0	1	0	1	4	27	20	8	32
1971	3	0	4	1	1	0	2	4	21	22	8	34
1972	4	0	3	1	1	0	2	5	19	23	7	34
1973	6	0	4	1	1	0	3	3	20	20	6	35
1974	10	0	3	1	1	0	5	5	12	16	6	41
1975	7	0	3	1	1	0	8	3	15	14	5	41
1976	5	0	3	1	0	0	3	4	26	15	7	35
1977	3	0	2	1	1	0	1	4	52	13	6	16
1978	5	0	2	1	1	0	1	2	37	16	7	26
1979	5	0	3	1	1	1	1	2	37	17	5	28
1980	6	0	3	1	1	1	5	3	31	18	6	26
1981	6	0	3	1	0	1	4	3	28	21	6	28
1982	4	0	3	1	0	1	2	1	29	23	7	30
1983	4	0	3	2	1	1	2	1	31	22	6	28
1984	3	0	3	1	0	1	2	2	28	22	6	31
1985	3	0	2	1	0	1	2	2	31	20	7	30
1986	2	0	2	1	1	1	2	2	38	16	8	27
1987	3	0	2	1	0	1	3	2	26	19	8	33
1988	3	0	2	1	0	1	3	3	27	16	9	34
1989	5	0	3	1	1	1	4	2	17	19	10	36
1990	6	0	3	2	1	1	5	3	18	19	11	30
1991	3	0	3	1	1	1	6	3	18	13	9	43
1992	3	0	2	1	0	1	5	2	14	12	10	49
1993	3	0	2	1	0	1	4	1	14	14	10	50
1994	2	0	2	1	0	1	4	1	21	13	8	48
1995	2	0	2	1	0	1	5	1	21	14	8	46
1996	3	0	2	1	0	1	5	1	16	16	11	44
1997	2	0	1	0	0	1	3	1	21	14	8	47
1998	3	0	1	0	0	2	3	0	20	15	9	47
1999	4	0	2	0	0	2	3	1	16	17	12	45
2000	3	0	2	0	0	1	3	1	16	18	7	48
2001	3	0	2	0	0	1	4	1	12	23	9	45
2002	4	0	3	0	0	2	3	0	12	19	8	48
2003	4	0	3	1	0	2	4	1	14	15	11	45
2004	4	0	3	0	0	2	3	1	13	19	12	42
2005	2	0	2	0	na	1	3	1	11	14	7	59

<sup>a</sup> At farmgate undistorted prices

Appendix Table 16 (continued): Annual distortion estimates, **Colombia**, 1960 to 2005  
 (d) Trade status<sup>a</sup> of covered products

	Rice	Wheat	Maize	Sorghum	Soybean	Palm-oil	Sugar	Cotton	Coffee	Beef	Milk
1960	M	M	M	H	M	H	X	X	X	H	H
1961	M	M	M	H	M	H	X	X	X	H	H
1962	M	M	M	H	M	H	X	X	X	H	H
1963	M	M	M	H	M	H	X	X	X	H	H
1964	M	M	M	H	M	H	X	X	X	H	H
1965	M	M	M	H	M	H	X	X	X	X	H
1966	M	M	M	H	M	H	X	X	X	X	H
1967	M	M	M	H	M	H	X	X	X	X	H
1968	M	M	M	H	M	H	X	X	X	X	H
1969	M	M	M	H	M	H	X	X	X	X	H
1970	M	M	M	H	M	H	X	X	X	X	H
1971	M	M	M	H	M	H	X	X	X	X	H
1972	M	M	M	M	M	H	X	X	X	X	H
1973	M	M	M	M	M	H	X	X	X	X	H
1974	M	M	M	M	M	H	X	X	X	X	H
1975	M	M	M	M	M	H	X	X	X	X	H
1976	M	M	M	M	M	H	X	X	X	X	H
1977	M	M	M	M	M	H	X	X	X	X	H
1978	M	M	M	M	M	H	X	X	X	X	H
1979	M	M	M	M	M	H	X	X	X	X	M
1980	M	M	M	M	M	H	X	X	X	X	M
1981	M	M	M	M	M	H	X	X	X	X	M
1982	M	M	M	M	M	H	X	X	X	X	M
1983	M	M	M	M	M	H	X	X	X	X	M
1984	M	M	M	M	M	H	X	X	X	X	M
1985	M	M	M	M	M	H	X	X	X	X	M
1986	M	M	M	M	M	H	X	X	X	X	M
1987	M	M	M	M	M	H	X	X	X	X	M
1988	M	M	M	M	M	H	X	X	X	X	M
1989	M	M	M	M	M	H	X	X	X	X	M
1990	M	M	M	M	M	M	X	X	X	X	M
1991	M	M	M	M	M	M	X	X	X	X	M
1992	M	M	M	M	M	X	X	X	X	X	M
1993	M	M	M	M	M	X	X	M	X	X	M
1994	M	M	M	M	M	X	X	M	X	X	M
1995	M	M	M	M	M	X	X	M	X	X	M
1996	M	M	M	M	M	X	X	M	X	X	M
1997	M	M	M	M	M	X	X	M	X	X	M
1998	M	M	M	M	M	X	X	M	X	X	M
1999	M	M	M	M	M	X	X	M	X	X	M
2000	M	M	M	M	M	X	X	M	X	X	X
2001	M	M	M	M	M	X	X	M	X	X	X
2002	M	M	M	M	M	X	X	M	X	X	X
2003	M	M	M	M	M	X	X	M	X	X	X
2004	M	M	M	M	M	X	X	M	X	X	X
2005	M	M	M	M	na	X	X	M	X	X	X

<sup>a</sup> Exportable (X), import-competing (M) and nontradables (H).

Source: Guteman (2007)

Appendix Table 17: Annual distortion estimates, **Dominican Republic**, 1955 to 2005(a) Nominal rates of assistance to covered products  
(percent)

	Rice	Sugar	Coffee	Banana	Bean	Garlic	Onion	Tomato	Poultry	All
1955	87	-43	-69	-37	14	566	159	-21	163	-22
1956	131	-28	-65	-27	57	221	260	-18	170	-9
1957	99	-48	-69	-24	28	100	197	-25	159	-22
1958	60	-21	-71	-22	48	192	193	-11	178	-3
1959	43	-10	-65	-23	17	84	136	-35	172	1
1960	51	-34	-63	-21	39	344	246	-18	171	-7
1961	62	-29	-39	-28	28	390	161	-24	177	1
1962	150	-29	-33	-26	37	383	127	17	150	-8
1963	116	-42	-32	-29	37	200	153	-24	141	-17
1964	100	-7	-32	-31	91	246	158	33	121	5
1965	37	36	-32	-30	39	225	161	20	89	13
1966	11	6	-30	-43	64	129	72	-23	91	1
1967	19	7	-36	-28	61	164	76	60	78	6
1968	37	-1	-35	-38	55	146	215	86	34	6
1969	26	-6	-36	-18	47	164	276	60	24	0
1970	27	-2	-64	-44	127	10	26	123	184	-14
1971	21	0	-45	-18	17	29	53	82	40	-2
1972	13	-8	-55	-31	-9	33	20	79	21	-14
1973	-26	-27	-49	24	-9	51	70	113	72	-22
1974	-9	-53	-35	51	-2	57	16	-20	101	-37
1975	-4	-60	-1	109	63	44	54	251	82	-43
1976	-6	-11	-41	21	50	29	12	191	-10	-14
1977	30	16	-75	-34	65	110	83	30	-11	-20
1978	8	26	-65	-32	53	152	30	25	-11	-17
1979	16	18	-64	-36	40	89	217	120	-16	-13
1980	-13	-35	-47	-54	28	130	209	58	-19	-26
1981	45	-53	-25	-53	129	224	162	182	65	-21
1982	41	-32	-44	-49	84	123	66	39	-6	-14
1983	-12	-58	-67	-59	20	12	30	-14	-11	-41
1984	5	-76	-72	-53	71	14	42	-33	-25	-52
1985	68	-64	-61	-29	82	204	180	26	4	-25
1986	12	-68	-65	-48	49	130	268	83	-25	-41
1987	-28	-69	-48	-51	14	19	67	91	-49	-43
1988	-12	-58	-37	-58	54	145	128	119	-21	-25
1989	29	-82	-61	-63	9	198	-3	86	-41	-48
1990	86	-74	-42	-67	65	-19	108	103	-30	-20
1991	142	-74	-15	-54	110	239	77	60	-18	-12
1992	249	-66	-10	-52	132	374	253	123	-5	13
1993	204	-64	0	-44	206	260	214	98	-20	16
1994	72	9	-46	-45	210	285	334	93	-21	-1
1995	87	7	-27	-18	143	250	109	156	-23	9
1996	62	2	-14	-44	97	97	58	8	32	13
1997	53	15	-30	-15	90	246	177	8	28	8
1998	60	10	-19	-35	83	72	149	42	14	10
1999	77	-7	-15	-42	7	384	68	-53	8	6
2000	115	18	-11	-61	82	528	73	-38	6	20
2001	125	6	-43	-68	105	552	98	-8	3	9
2002	95	18	-36	-69	69	418	59	-34	5	3
2003	16	-21	-41	-80	31	108	42	-16	-15	-24
2004	61	-3	-2	-65	113	204	98	6	5	5
2005	105	73	-13	-57	197	306	276	1	36	28

\* Cassava has a zero NRA throughout the period.

Appendix Table 17 (continued): Annual distortion estimates, **Dominican Republic**, 1955 to 2005(b) Nominal and relative rates of assistance to all<sup>a</sup> agricultural products, to exportable<sup>b</sup> and import-competing<sup>b</sup> agricultural industries, and relative<sup>c</sup> to non-agricultural industries

(percent)

	Total ag NRA				Ag tradables NRA			Non-ag tradables	
	Covered products		Non-covered products	All products (incl NPS)	Export-ables	Import-competing	All	NRA	RRA
	Inputs	Outputs							
1955	0	-22	-22	-22	-50	96	-23	8	-29
1956	0	-9	-9	-9	-39	134	-10	8	-16
1957	0	-22	-22	-22	-50	107	-24	7	-29
1958	0	-3	-3	-3	-33	94	-3	8	-10
1959	0	1	1	1	-25	70	1	8	-6
1960	0	-7	-7	-7	-35	86	-8	8	-14
1961	0	1	1	1	-30	92	1	8	-6
1962	0	-8	-8	-8	-30	134	-9	8	-15
1963	0	-17	-17	-17	-39	115	-18	8	-24
1964	0	5	5	5	-19	111	5	8	-3
1965	0	13	13	13	-7	54	14	9	5
1966	0	1	1	1	-15	35	1	9	-8
1967	0	6	6	6	-7	39	7	9	-2
1968	0	6	6	6	-11	43	6	9	-3
1969	0	0	0	0	-14	33	-1	9	-9
1970	0	-14	-14	-14	-30	46	-15	9	-22
1971	0	-2	-2	-2	-11	24	-2	9	-10
1972	0	-14	-14	-14	-23	11	-15	9	-22
1973	0	-22	-22	-22	-28	-11	-23	9	-30
1974	0	-37	-37	-37	-49	3	-39	9	-44
1975	0	-43	-43	-43	-54	20	-44	9	-48
1976	0	-14	-14	-14	-21	0	-14	10	-22
1977	0	-20	-20	-20	-42	30	-22	11	-30
1978	0	-17	-17	-17	-33	15	-18	11	-25
1979	0	-13	-13	-13	-31	14	-13	11	-22
1980	0	-26	-26	-26	-40	-4	-27	11	-34
1981	0	-21	-21	-21	-48	65	-22	9	-28
1982	0	-14	-14	-14	-37	38	-14	11	-22
1983	0	-41	-41	-41	-60	-6	-42	12	-48
1984	0	-52	-52	-52	-74	9	-53	9	-57
1985	0	-25	-25	-25	-62	59	-26	9	-32
1986	0	-41	-41	-41	-65	11	-42	10	-47
1987	0	-43	-43	-43	-58	-26	-44	10	-49
1988	0	-25	-25	-25	-47	0	-26	10	-33
1989	0	-48	-48	-48	-73	-11	-49	12	-54
1990	0	-20	-20	-20	-61	36	-21	11	-28
1991	0	-12	-12	-12	-52	61	-13	10	-21
1992	0	13	13	13	-46	111	13	9	4
1993	0	16	16	16	-40	94	17	9	7
1994	0	-1	-1	-1	-25	47	-1	8	-8
1995	0	9	9	9	-14	45	9	8	1
1996	0	13	13	13	-11	56	13	7	6
1997	0	8	8	8	-13	54	9	7	2
1998	0	10	10	10	-10	44	11	4	7
1999	0	6	6	6	-19	43	6	4	2
2000	0	20	20	20	-12	59	21	4	16
2001	0	9	9	9	-33	63	10	5	5
2002	0	3	3	3	-32	51	3	4	-1
2003	0	-24	-24	-24	-49	4	-25	4	-28
2004	0	5	5	5	-22	41	5	4	1
2005	0	28	28	28	-10	81	30	4	25

<sup>a</sup> NRAs including assistance to nontradables and non-product specific assistance.<sup>b</sup> NRAs including products specific input subsidies.<sup>c</sup> The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.



Appendix Table 17 (continued): Annual distortion estimates, **Dominican Republic**, 1955 to 2005(c) Value shares of primary production of covered<sup>a</sup> and non-covered products, (percent)

	Rice	Sugar	Coffee	Ban- ana	Bean	Cass- ava	Garlic	Onion	Tom- ato	Poultry	Non- covered
1955	3	17	10	4	2	2	0	0	0	2	60
1956	3	15	9	6	1	4	0	0	0	2	60
1957	3	19	8	4	1	3	0	0	0	2	60
1958	5	15	7	6	1	3	0	0	0	2	60
1959	6	14	6	8	2	2	0	0	0	2	60
1960	5	17	5	8	1	2	0	0	0	2	60
1961	6	14	5	9	1	2	0	0	0	2	60
1962	2	22	7	5	1	2	0	0	0	2	60
1963	2	22	7	4	1	2	0	0	0	2	60
1964	3	15	11	4	1	2	0	0	0	2	60
1965	8	8	11	5	2	3	0	0	0	3	60
1966	8	12	9	4	1	3	0	0	1	2	60
1967	7	13	9	2	1	2	0	0	2	2	60
1968	7	12	9	3	1	2	0	0	2	3	60
1969	7	15	9	2	1	2	0	0	1	3	60
1970	6	13	14	3	1	2	0	0	1	1	60
1971	6	15	9	2	1	2	0	0	2	1	60
1972	5	15	11	2	2	2	0	0	2	1	60
1973	7	16	10	1	2	2	0	0	1	1	60
1974	6	26	4	0	1	1	0	0	0	1	60
1975	3	31	3	0	1	1	0	0	0	1	60
1976	8	15	10	1	1	2	0	0	0	3	60
1977	5	9	16	1	1	4	0	0	0	3	60
1978	7	9	16	0	2	2	0	0	0	3	60
1979	8	9	14	1	2	2	0	0	0	5	60
1980	8	14	10	0	2	2	0	0	0	4	60
1981	6	24	5	1	1	1	0	0	0	2	60
1982	6	15	11	1	2	1	0	0	0	3	60
1983	9	18	7	1	2	1	1	0	0	3	60
1984	6	23	5	1	1	1	0	0	0	2	60
1985	7	17	9	1	2	2	0	0	0	3	60
1986	6	13	13	1	1	1	0	0	0	4	60
1987	8	11	10	2	2	1	1	0	0	5	60
1988	5	7	11	4	2	1	0	1	0	9	60
1989	5	14	7	2	2	1	0	0	0	9	60
1990	7	11	9	3	2	1	0	1	0	7	60
1991	5	14	8	3	1	2	0	0	0	6	60
1992	5	12	7	5	2	2	0	0	0	7	60
1993	6	11	6	4	2	2	0	1	0	8	60
1994	5	9	12	4	1	2	0	0	0	6	60
1995	6	7	14	2	1	2	0	1	0	7	60
1996	7	10	11	3	1	2	0	1	0	4	60
1997	6	9	14	2	1	2	0	0	0	4	60
1998	6	8	14	1	1	2	0	0	0	7	60
1999	6	7	10	5	2	2	0	1	1	7	60
2000	7	7	9	4	1	2	0	1	0	9	60
2001	6	7	7	6	1	2	0	1	0	9	60
2002	6	6	9	7	1	2	0	1	1	8	60
2003	6	6	8	7	1	1	0	1	0	9	60
2004	8	6	9	7	1	2	0	1	0	7	60
2005	8	4	11	6	1	2	0	0	0	7	60

<sup>a</sup> At farmgate undistorted prices

Appendix Table 17 (continued): Annual distortion estimates, **Dominican Republic**, 1955 to 2005(d) Trade status<sup>a</sup> of covered products

	Rice	Sugar	Coffee	Ban- ana	Bean	Cass- ava	Garlic	Onion	Tom- ato	Poultry
1955	M	X	X	X	M	H	M	M	X	M
1956	M	X	X	X	M	H	M	M	X	M
1957	M	X	X	X	M	H	M	M	X	M
1958	M	X	X	X	M	H	M	M	X	M
1959	M	X	X	X	M	H	M	M	X	M
1960	M	X	X	X	M	H	M	M	X	M
1961	M	X	X	X	M	H	M	M	X	M
1962	M	X	X	X	M	H	M	M	X	M
1963	M	X	X	X	M	H	M	M	X	M
1964	M	X	X	X	M	H	M	M	X	M
1965	M	X	X	X	M	H	M	M	X	M
1966	M	X	X	X	M	H	M	M	X	M
1967	M	X	X	X	M	H	M	M	X	M
1968	M	X	X	X	M	H	M	M	X	M
1969	M	X	X	X	M	H	M	M	X	M
1970	M	X	X	X	M	H	M	M	X	M
1971	M	X	X	X	M	H	M	M	X	M
1972	M	X	X	X	M	H	M	M	X	M
1973	M	X	X	X	M	H	M	M	X	M
1974	M	X	X	X	M	H	M	M	X	M
1975	M	X	X	X	M	H	M	M	X	M
1976	M	X	X	X	M	H	M	M	X	M
1977	M	X	X	X	M	H	M	M	X	M
1978	M	X	X	X	M	H	M	M	X	M
1979	M	X	X	X	M	H	M	M	X	M
1980	M	X	X	X	M	H	M	M	X	M
1981	M	X	X	X	M	H	M	M	X	M
1982	M	X	X	X	M	H	M	M	X	M
1983	M	X	X	X	M	H	M	M	X	M
1984	M	X	X	X	M	H	M	M	X	M
1985	M	X	X	X	M	H	M	M	X	M
1986	M	X	X	X	M	H	M	M	X	M
1987	M	X	X	X	M	H	M	M	X	M
1988	M	X	X	X	M	H	M	M	X	M
1989	M	X	X	X	M	H	M	M	X	M
1990	M	X	X	X	M	H	M	M	X	M
1991	M	X	X	X	M	H	M	M	X	M
1992	M	X	X	X	M	H	M	M	X	M
1993	M	X	X	X	M	H	M	M	X	M
1994	M	X	X	X	M	H	M	M	X	M
1995	M	X	X	X	M	H	M	M	X	M
1996	M	X	X	X	M	H	M	M	X	M
1997	M	X	X	X	M	H	M	M	X	M
1998	M	X	X	X	M	H	M	M	X	M
1999	M	X	X	X	M	H	M	M	X	M
2000	M	X	X	X	M	H	M	M	X	M
2001	M	X	X	X	M	H	M	M	X	M
2002	M	X	X	X	M	H	M	M	X	M
2003	M	X	X	X	M	H	M	M	X	M
2004	M	X	X	X	M	H	M	M	X	M
2005	M	X	X	X	M	H	M	M	X	M

<sup>a</sup> Exportable (X), import-competing (M) and nontradables (H).

Source: de los Santos and Pablo Peña (2007)

Appendix Table 18: Annual distortion estimates, **Ecuador**, 1966 to 2003

(a) Nominal rates of assistance to covered products

(percent)

	Rice	Maize	Soybean	Sugar	Coffee	Cocoa	Banana	Beef	Pigmeat	Poultry	Milk	All
1966	-5	26	42	1	-20	25	-31	0	2	289	-22	-12
1967	-26	26	51	-5	-17	13	-35	-13	15	322	-25	-16
1968	1	42	58	-7	-16	7	-35	-13	17	289	-4	-11
1969	4	19	52	-28	-23	-23	-38	-20	-9	240	-5	-20
1970	16	-15	20	-45	-37	-26	-38	-22	-7	189	17	-22
1971	6	53	-43	-38	-43	-18	-56	-21	19	239	-26	-32
1972	8	83	3	-34	-45	-15	-56	-24	-16	266	-47	-35
1973	-31	39	-43	-57	-35	7	-48	-31	-31	160	-46	-32
1974	-38	39	25	-61	-48	-29	-45	-49	-34	289	-39	-37
1975	-26	52	41	-63	-49	5	-54	96	-28	223	1	-26
1976	7	57	34	-28	-72	4	-54	99	-21	262	19	-24
1977	10	87	15	19	-79	-41	-52	96	-5	277	21	-32
1978	-4	89	35	59	-54	-21	-50	101	2	257	11	-12
1979	4	64	24	120	-56	-14	-52	-16	6	251	61	-10
1980	-10	63	27	-31	-23	-1	-56	-15	18	220	68	-7
1981	-5	50	23	-29	-43	-15	-62	58	47	440	80	4
1982	38	62	23	40	-54	-1	-20	125	40	446	63	25
1983	46	91	15	-27	-47	21	-35	83	29	249	39	17
1984	55	47	-28	-30	-30	-24	-22	59	32	222	41	11
1985	94	55	16	70	-46	-12	-40	97	45	218	54	15
1986	81	39	40	30	-29	-7	-46	76	0	99	29	6
1987	-18	72	16	-42	-1	-10	-42	35	-19	120	19	0
1988	-23	27	-39	-28	-54	-21	-51	-14	-18	58	40	-16
1989	-6	4	-10	-35	-13	-18	-9	13	16	33	-22	-9
1990	-16	7	7	-32	5	-20	-7	-19	-22	26	-25	-12
1991	-30	10	1	-15	-22	-18	-11	-11	-27	30	17	-9
1992	-17	9	-5	-35	-25	-33	-15	-21	-31	6	-4	-16
1993	-3	28	-5	-15	1	-8	-3	23	-11	15	24	5
1994	35	38	-7	21	-37	-4	-7	-4	-9	24	35	0
1995	31	23	-2	0	14	-17	-11	-2	-8	43	19	6
1996	37	5	-16	42	-6	-9	-7	7	-31	41	-7	0
1997	73	29	-1	33	-40	-3	-22	5	-34	38	2	-7
1998	54	51	-12	41	-40	-13	-24	35	14	24	32	7
1999	-19	42	-6	28	-36	-17	-19	-19	5	-4	-13	-15
2000	28	48	-6	22	-30	-4	-35	1	12	9	-4	-4
2001	92	55	35	-15	13	-11	-3	49	39	29	16	19
2002	12	56	26	38	13	-3	8	53	93	90	7	28
2003	27	41	-6	7	4	-9	1	24	58	-30	16	6

Appendix Table 18 (continued): Annual distortion estimates, **Ecuador**, 1966 to 2003  
 (b) Nominal and relative rates of assistance to all<sup>a</sup> agricultural products, to exportable<sup>b</sup> and import-competing<sup>b</sup> agricultural industries, and relative<sup>c</sup> to non-agricultural industries  
 (percent)

	Total ag NRA				Ag tradables NRA			Non-ag tradables	
	Covered products		Non-covered products	All products (incl NPS)	Export-ables	Import-competing	All		
	Inputs	Outputs							
1966	0	-12	0	-7	-14	-5	-12	2	-13
1967	0	-16	0	-10	-21	-8	-16	1	-18
1968	0	-11	0	-7	-19	6	-11	2	-13
1969	0	-20	0	-13	-28	-1	-20	-1	-19
1970	0	-22	0	-15	-34	7	-22	1	-22
1971	0	-32	0	-23	-44	-6	-32	-2	-30
1972	0	-35	0	-25	-41	-25	-35	-4	-32
1973	0	-32	0	-23	-35	-27	-32	-5	-28
1974	0	-37	0	-26	-46	-21	-37	-6	-33
1975	0	-26	0	-18	-47	8	-26	-1	-25
1976	0	-24	0	-17	-49	28	-24	3	-26
1977	0	-32	0	-24	-56	36	-32	6	-36
1978	0	-12	0	-9	-33	31	-12	7	-18
1979	0	-10	0	-7	-32	29	-10	9	-17
1980	0	-7	0	-5	-28	30	-7	2	-9
1981	0	4	0	2	-46	61	4	11	-6
1982	0	25	0	15	-26	80	25	16	8
1983	0	17	0	10	-29	51	17	8	8
1984	0	11	0	7	-27	47	11	9	2
1985	0	15	0	10	-27	76	15	15	0
1986	0	6	0	5	-28	45	6	12	-5
1987	0	0	0	0	-17	11	0	6	-6
1988	0	-16	0	-12	-45	7	-16	6	-21
1989	0	-9	0	-7	-14	-5	-9	3	-12
1990	0	-12	0	-10	-8	-16	-12	-1	-11
1991	0	-9	0	-8	-14	-5	-9	3	-12
1992	0	-16	0	-14	-20	-12	-16	-1	-15
1993	0	5	0	4	-3	13	5	4	1
1994	0	0	0	0	-10	15	0	7	-7
1995	0	6	0	5	1	11	6	7	-1
1996	0	0	0	0	0	0	0	5	-5
1997	0	-7	-2	-6	-15	7	-8	5	-12
1998	0	7	-3	4	-14	30	4	9	-4
1999	0	-15	-3	-13	-18	-9	-15	3	-18
2000	0	-4	-4	-1	-19	7	-3	5	-8
2001	0	19	-3	15	2	32	17	10	7
2002	0	28	-3	22	5	41	26	13	12
2003	0	6	-3	5	-1	10	5	7	-1

<sup>a</sup> NRAs including assistance to nontradables and non-product specific assistance.

<sup>b</sup> NRAs including products specific input subsidies.

<sup>c</sup> The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

Appendix Table 18 (continued): Annual distortion estimates, **Ecuador**, 1966 to 2003  
(c) Value shares of primary production of covered<sup>a</sup> and non-covered products,  
(percent)

	Rice	Maize	Soybean	Sugar	Coffee	Cocoa	Banana	Beef	Pigmeat	Poultry	Milk	Non-covered
1966	4	1	0	7	10	5	18	4	3	0	12	36
1967	4	1	0	6	9	5	19	4	3	0	13	36
1968	3	1	0	8	8	6	20	4	3	1	11	36
1969	4	1	0	7	7	7	22	5	3	1	11	33
1970	3	1	0	6	9	7	23	5	3	1	11	31
1971	2	2	0	7	8	6	27	5	3	1	14	26
1972	2	1	0	6	8	7	21	4	3	1	16	30
1973	4	3	0	5	7	8	18	5	5	1	16	29
1974	6	3	0	11	8	8	14	5	3	1	13	29
1975	7	3	0	14	7	7	16	2	4	1	11	28
1976	5	2	0	5	19	8	15	2	4	1	9	30
1977	4	1	0	4	24	16	12	2	3	1	8	25
1978	3	1	1	3	15	18	12	2	4	1	10	29
1979	4	2	1	3	18	14	11	6	4	1	8	28
1980	6	2	1	8	11	12	13	5	4	1	7	32
1981	7	2	1	4	11	4	13	5	4	1	9	40
1982	4	2	1	3	13	4	10	4	5	1	11	42
1983	4	2	0	4	14	5	6	5	5	2	12	41
1984	4	3	1	3	15	12	5	5	5	2	11	33
1985	3	2	1	2	18	15	5	4	5	2	10	33
1986	5	2	1	3	21	8	8	4	5	3	11	29
1987	8	2	2	4	12	7	9	5	6	3	13	29
1988	11	2	3	3	20	7	5	6	4	3	15	23
1989	9	2	2	4	12	5	17	5	4	3	17	21
1990	7	2	2	4	10	5	21	6	5	3	17	19
1991	7	2	2	3	8	4	27	11	7	4	10	16
1992	8	2	2	4	6	4	27	10	6	4	14	15
1993	8	2	2	3	6	3	25	9	6	4	14	18
1994	6	1	1	2	15	3	23	9	4	4	12	19
1995	6	2	1	3	13	3	24	10	4	4	14	16
1996	5	2	1	2	11	3	26	8	5	5	15	17
1997	4	2	0	1	7	3	35	7	5	6	12	18
1998	5	0	0	3	4	2	28	9	5	5	14	23
1999	7	1	0	2	5	3	32	10	4	7	14	16
2000	7	2	1	3	5	3	18	12	7	10	15	17
2001	3	2	1	3	2	2	29	11	6	8	17	16
2002	4	1	1	2	1	4	25	13	5	6	18	20
2003	4	1	1	2	1	4	23	13	5	15	14	18

<sup>a</sup> At farmgate undistorted prices

Appendix Table 18 (continued): Annual distortion estimates, **Ecuador**, 1966 to 2003  
(d) Trade status<sup>a</sup> of covered products

	Rice	Maize	Soybean	Sugar	Coffee	Cocoa	Banana	Beef	Pigmeat	Poultry	Milk
1966	X	M	M	X	X	X	X	M	M	M	M
1967	X	M	M	X	X	X	X	M	M	M	M
1968	X	M	M	X	X	X	X	M	M	M	M
1969	X	M	M	X	X	X	X	M	M	M	M
1970	X	M	M	X	X	X	X	M	M	M	M
1971	X	M	M	X	X	X	X	M	M	M	M
1972	X	M	M	X	X	X	X	M	M	M	M
1973	X	M	M	X	X	X	X	M	M	M	M
1974	X	M	M	X	X	X	X	M	M	M	M
1975	M	M	M	X	X	X	X	M	M	M	M
1976	M	M	M	X	X	X	X	M	M	M	M
1977	M	M	M	X	X	X	X	M	M	M	M
1978	M	M	M	X	X	X	X	M	M	M	M
1979	M	M	M	X	X	X	X	M	M	M	M
1980	M	M	M	X	X	X	X	M	M	M	M
1981	M	M	M	X	X	X	X	M	M	M	M
1982	M	M	M	X	X	X	X	M	M	M	M
1983	M	M	M	M	X	X	X	M	M	M	M
1984	M	M	M	M	X	X	X	M	M	M	M
1985	M	M	M	X	X	X	X	M	M	M	M
1986	M	M	M	M	X	X	X	M	M	M	M
1987	M	M	M	M	X	X	X	M	M	M	M
1988	M	M	M	X	X	X	X	M	M	M	M
1989	M	M	M	X	X	X	X	M	M	M	M
1990	M	M	M	X	X	X	X	M	M	M	M
1991	M	M	M	X	X	X	X	M	M	M	M
1992	M	M	M	X	X	X	X	M	M	M	M
1993	M	M	M	X	X	X	X	M	M	M	M
1994	X	M	M	X	X	X	X	M	M	M	M
1995	X	M	M	M	X	X	X	M	M	M	M
1996	X	M	M	X	X	X	X	M	M	M	M
1997	X	M	M	M	X	X	X	M	M	M	M
1998	X	M	M	M	X	X	X	M	M	M	M
1999	M	M	M	M	X	X	X	M	M	M	M
2000	M	M	M	X	X	X	X	M	M	M	M
2001	X	M	M	X	X	X	X	M	M	M	M
2002	M	M	M	X	X	X	X	M	M	M	M
2003	M	M	M	X	X	X	X	M	M	M	M

<sup>a</sup> Exportable (X), import-competing (M) and nontradables (H).

Source: Valenzuela, Sandri and Wong (2007)

Appendix Table 19: Annual distortion estimates, **Mexico**, 1979 to 2007(a) Nominal rates of assistance to covered products  
(percent)

	Bar ley	Bea n	Bee f	Cof fee	Egg	Mai ze	Mil k	Pig mea t	Pou ltry	Ric e	Sor ghu m	Soy bea n	Sug ar	To mat o	Wh eat	All cov ere d
1979	-40	15	-17	-12	-10	-10	115	-13	188	-9	-25	-2	0	-55	-13	-3
1980	-9	15	-9	-7	24	14	144	-11	156	-16	8	25	-52	-52	-6	5
1981	18	-12	16	-84	32	58	220	-6	178	-17	4	44	-2	-20	17	26
1982	-48	2	-8	-93	-10	39	83	-33	158	-4	14	29	0	-43	-7	-3
1983	51	244	-50	-93	-16	1	59	-50	101	-30	-20	31	4	24	-3	-21
1984	71	1	-38	-95	-29	19	204	-18	82	31	12	104	22	2	42	0
1985	11	46	-2	7	-5	16	324	-9	108	89	11	73	21	-51	121	22
1986	7	-29	-15	-68	-21	18	165	-57	44	-33	6	30	21	-35	20	-8
1987	-42	-31	-33	-70	-1	64	105	-51	122	-22	18	60	-5	-55	18	-10
1988	-11	-21	-13	-84	10	4	40	4	99	-44	-13	10	-19	-35	29	-8
1989	-28	-53	26	-33	-15	16	93	10	108	-17	-14	20	-13	-53	4	10
1990	-21	-17	34	-6	-11	27	265	-6	161	-11	-13	7	18	-27	48	23
1991	50	4	32	-13	-11	42	129	1	136	9	4	73	85	-57	77	24
1992	47	-11	43	-26	2	30	116	16	81	15	0	30	88	39	47	38
1993	40	-10	48	-28	15	30	195	4	103	55	5	26	86	-31	64	34
1994	25	-20	30	-45	15	10	170	17	90	33	-16	-6	54	-41	72	25
1995	-40	-45	-20	-55	-15	-14	24	-23	10	4	-1	-15	-15	-72	0	-19
1996	-12	-21	13	-22	-11	-20	34	-22	10	8	-21	-10	33	-45	30	-7
1997	-13	7	31	-32	-6	-17	63	-10	28	-4	-19	-16	41	-32	17	5
1998	4	-2	24	-32	-22	-5	87	9	24	-1	-15	-4	56	-33	40	10
1999	-11	-4	10	1	-27	-7	95	23	16	12	-18	19	126	-11	38	12
2000	-4	12	12	-35	-21	9	85	-2	55	27	-6	-8	105	-18	60	17
2001	2	41	-1	-34	-13	11	96	4	42	60	-11	21	97	-41	86	16
2002	-8	-13	14	-28	-20	-6	107	23	72	69	-9	-6	69	-39	60	17
2003	-23	-15	-16	-27	-16	-11	79	5	42	17	-11	5	67	-47	51	1
2004	-1	-27	-23	-45	-9	-18	61	-13	27	14	-22	-25	70	-40	49	-6
2005	0	19	0	na	0	9	1	0	5	17	9	17	55	0	9	7
2006	0	32	0	na	0	9	18	3	11	14	6	41	32	0	12	9
2007	0	12	0	na	1	0	0	0	8	21	0	5	77	0	0	5

Appendix Table 19 (continued): Annual distortion estimates, **Mexico**, 1979 to 2007  
 (b) Nominal and relative rates of assistance to all<sup>a</sup> agricultural products, to exportable<sup>b</sup> and import-competing<sup>b</sup> agricultural industries, and relative<sup>c</sup> to non-agricultural industries  
 (percent)

	Total ag NRA				Ag tradables NRA			Non-ag tradables	
	Covered products		Non-covered products	All products (incl NPS)	Export-ables	Import-competing	All		
	Inputs	Outputs							
1979	4	-7	7	-1	-28	13	-1	8	-9
1980	6	-1	24	9	-23	23	9	10	0
1981	11	15	39	30	-18	48	30	10	18
1982	7	-11	-8	-4	-38	13	-4	9	-12
1983	6	-27	-9	-19	-50	-3	-19	4	-22
1984	9	-8	11	3	-47	26	3	4	-1
1985	9	13	43	26	-21	46	27	6	19
1986	5	-13	-3	-7	-29	3	-7	2	-9
1987	5	-15	-1	-8	-46	15	-8	3	-11
1988	4	-11	-2	-7	-38	13	-7	5	-11
1989	4	5	12	10	-6	19	10	4	6
1990	8	15	35	26	6	35	27	5	21
1991	3	20	20	23	-17	46	23	5	17
1992	3	35	48	41	38	43	42	6	34
1993	6	28	33	34	2	51	34	6	27
1994	6	19	21	30	-6	40	30	7	22
1995	2	-22	-15	-15	-45	-7	-15	2	-17
1996	2	-9	-3	-3	-18	-2	-3	2	-5
1997	1	4	7	9	-6	10	9	4	5
1998	1	8	11	13	-9	19	13	4	9
1999	1	10	16	17	-1	21	17	4	13
2000	1	16	15	20	-5	28	20	6	14
2001	2	14	9	19	-20	31	19	7	11
2002	2	15	4	18	-13	26	19	7	11
2003	3	-2	-4	4	-30	16	4	7	-3
2004	2	-9	-10	-4	-31	6	-4	6	-10
2005	0	7	0	10	31	4	10	13	-3
2006	0	9	1	12	17	8	12	13	-1
2007	0	5	0	10	32	2	10	13	-3

<sup>a</sup> NRAs including assistance to nontradables and non-product specific assistance.

<sup>b</sup> NRAs including products specific input subsidies.

<sup>c</sup> The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.



Appendix Table 19 (continued): Annual distortion estimates, **Mexico**, 1979 to 2007  
(c) Value shares of primary production of covered<sup>a</sup> and non-covered products,  
(percent)

	Bar ley	Bea n	Bee f	Cof fee	Egg	Mai ze	Mil k	Pig mea t	Pou ltry	Ric e	Sor ghu m	Soy bea n	Sug ar	To mat o	Wh eat	No n- cov ere d
1979	1	3	23	1	4	11	6	14	2	1	4	2	3	7	4	17
1980	1	3	19	0	3	14	5	11	2	1	4	1	7	5	4	22
1981	1	5	15	3	3	13	4	11	2	1	5	1	4	4	4	26
1982	1	2	17	4	4	8	6	18	2	1	3	1	3	6	5	19
1983	0	1	21	4	4	13	5	16	2	1	4	1	3	3	3	20
1984	0	2	18	4	5	13	3	15	3	0	4	1	2	3	4	23
1985	1	2	17	1	5	16	3	13	3	1	5	1	3	6	3	22
1986	1	4	19	2	7	11	3	13	4	1	4	1	3	6	4	18
1987	1	3	20	3	5	8	3	12	3	1	4	1	4	10	3	19
1988	0	2	21	7	5	10	5	9	2	1	5	0	4	5	3	20
1989	1	3	20	1	6	10	4	7	3	1	4	2	5	6	5	24
1990	1	6	16	1	6	13	2	8	3	0	4	1	4	5	3	27
1991	0	4	16	1	5	11	4	8	3	0	3	1	2	11	3	28
1992	0	3	16	0	5	16	5	7	4	0	4	1	3	5	3	28
1993	0	5	14	0	5	16	3	6	3	0	2	1	3	10	3	29
1994	0	4	16	1	5	15	4	6	4	0	2	1	4	6	3	29
1995	1	4	16	1	5	16	5	6	5	0	3	0	5	9	3	20
1996	1	4	11	1	6	17	6	7	6	0	5	0	3	8	3	21
1997	1	3	12	1	6	15	5	8	6	0	4	0	4	7	3	25
1998	0	4	13	1	6	13	5	6	8	0	4	0	3	7	2	27
1999	0	3	15	1	7	13	5	5	8	0	3	0	2	7	2	28
2000	1	2	15	1	7	11	6	7	7	0	3	0	2	7	2	28
2001	1	2	16	0	7	11	5	7	8	0	3	0	3	6	2	28
2002	1	4	15	0	7	13	5	5	7	0	3	0	3	6	2	28
2003	1	3	18	0	7	12	5	6	7	0	3	0	3	6	2	26
2004	1	3	20	0	6	13	5	7	8	0	3	0	3	7	1	24
2005	1	2	9	na	6	8	11	6	13	0	2	0	4	3	2	33
2006	1	2	11	na	6	9	9	6	11	0	2	0	5	4	2	33
2007	0	2	9	na	6	11	10	4	11	0	3	0	3	4	2	34

<sup>a</sup>At farmgate undistorted prices

Appendix Table 19 (continued): Annual distortion estimates, **Mexico**, 1979 to 2004  
 (d) Trade status<sup>a</sup> of covered products

	Rice	Wheat	Mai ze	Sorghum	Soybean	Barley	Sugar	Coffee	Bea n	Tomato	Beef	Pigmeat	Poultry	Egg	Milk
1979	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1980	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1981	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1982	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1983	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1984	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1985	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1986	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1987	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1988	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1989	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1990	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1991	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1992	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1993	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1994	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1995	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1996	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1997	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1998	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
1999	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
2000	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
2001	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
2002	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
2003	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
2004	M	M	M	M	M	M	M	X	M	X	X	M	M	M	M
2005	M	M	M	M	M	M	X	M	M	X	M	M	M	M	M
2006	M	M	M	M	M	M	X	M	M	X	M	M	M	M	M
2007	M	M	M	M	M	M	X	M	M	X	M	M	M	M	M

<sup>a</sup> Exportable (X), import-competing (M) and nontradables (H).

Source: Soloaga and Lara (2007) and OECD (2007).

Appendix Table 20: Annual distortion estimates, **Nicaragua**, 1991 to 2004

(a) Nominal rates of assistance to covered products

(percent)

	Rice	Mai- ze	Sor- ghum	Soy- bean	Grou- ndnut	Ses- ame	Sugar	Cof- fee	Bean	Beef	Poul- try	Milk	All
1991	-10	2	-33	31	0	-39	2	-44	10	-10	94	65	-8
1992	-6	17	-13	52	-1	-42	44	-26	-11	-15	97	18	-6
1993	3	30	-14	8	-15	12	43	-20	86	-19	82	12	1
1994	-25	30	-19	10	-21	27	55	-42	-23	-27	70	19	-15
1995	16	0	-24	15	-30	-38	50	-62	-10	-21	86	26	-14
1996	-5	15	-25	-38	-18	-31	74	-37	-17	-38	33	6	-18
1997	23	26	-5	-37	-35	-15	62	-53	-12	-35	33	-12	-20
1998	32	31	0	-21	-37	-45	60	-59	13	-35	30	39	-16
1999	28	20	-4	0	-15	-42	60	-43	-7	-26	22	8	-13
2000	71	57	8	-5	-18	-47	52	-31	-16	-28	32	17	-6
2001	49	12	0	-2	-45	-30	35	-14	-31	-27	14	8	-11
2002	61	13	-23	-21	-30	-39	43	-7	-17	-24	33	-15	-8
2003	21	-12	-15	-30	-42	-43	35	-44	-34	-17	na	7	-16
2004	34	9	-20	-53	-37	-43	35	-19	-4	-16	na	na	-9

Appendix Table 20 (continued): Annual distortion estimates, **Nicaragua**, 1991 to 2004  
 (b) Nominal and relative rates of assistance to all<sup>a</sup> agricultural products, to exportable<sup>b</sup> and import-competing<sup>b</sup> agricultural industries, and relative<sup>c</sup> to non-agricultural industries  
 (percent)

	Total ag NRA				Ag tradables NRA			Non-ag tradables	
	Covered products		Non-covered products	All products (incl NPS)	Export-ables	Import-competing	All		
	Inputs	Outputs							
1991	-3	-5	-8	-5	-15	12	-5	7	-12
1992	-3	-2	-7	-2	-14	13	-2	7	-9
1993	-3	4	-1	5	-8	19	5	7	-2
1994	-3	-12	-17	-10	-24	6	-10	7	-16
1995	-3	-12	-19	-9	-29	22	-9	6	-14
1996	-2	-15	-21	-15	-28	4	-15	5	-19
1997	-2	-18	-23	-15	-33	15	-15	6	-20
1998	-2	-14	-20	-12	-31	30	-12	6	-17
1999	-2	-11	-15	-6	-24	17	-6	8	-13
2000	-2	-3	-6	-1	-19	52	-1	6	-6
2001	-3	-8	-10	-4	-20	24	-4	6	-10
2002	-3	-5	-8	-3	-18	31	-3	5	-8
2003	-3	-13	-14	-10	-19	0	-10	6	-15
2004	-3	-6	-7	-2	-14	16	-2	6	-8

<sup>a</sup> NRAs including assistance to nontradables and non-product specific assistance.

<sup>b</sup> NRAs including products specific input subsidies.

<sup>c</sup> The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

Appendix Table 20 (continued): Annual distortion estimates, **Nicaragua**, 1991 to 2004  
(c) Value shares of primary production of covered<sup>a</sup> and non-covered products,  
(percent)

	Rice	Maize	Sorghum	Soybean	Groundnut	Sesame	Sugar	Coffee	Bean	Beef	Poultry	Milk	Non-covered
1991	8	4	2	0	0	2	3	11	4	40	2	3	20
1992	10	5	2	0	0	2	3	7	4	42	2	4	18
1993	12	6	2	0	1	1	3	6	4	44	3	5	13
1994	11	4	2	1	1	1	3	9	6	43	3	4	13
1995	10	5	1	1	2	3	3	17	4	33	3	4	15
1996	9	7	2	1	2	2	3	11	8	33	3	5	14
1997	10	4	1	1	2	1	3	16	6	36	3	4	13
1998	10	4	1	1	2	1	2	17	9	34	3	3	13
1999	7	4	1	0	3	0	2	18	9	33	4	8	10
2000	6	5	1	0	3	1	2	14	11	36	4	8	8
2001	6	5	1	0	3	0	2	7	11	37	6	10	11
2002	7	6	2	0	3	0	2	6	9	40	5	11	10
2003	5	6	1	0	3	1	3	8	10	38	na	9	16
2004	5	5	1	0	4	1	3	6	8	41	na	na	24

<sup>a</sup> At farmgate undistorted prices

Appendix Table 20 (continued): Annual distortion estimates, **Nicaragua**, 1991 to 2004  
 (d) Trade status<sup>a</sup> of covered products

	Rice	Maize	Sorghum	Soybean	Groundnut	Sesame	Sugar	Coffee	Bean	Beef	Poultry	Milk
1991	M	M	M	M	X	X	X	X	X	X	M	M
1992	M	M	M	M	X	X	X	X	X	X	M	M
1993	M	M	M	M	X	X	X	X	X	X	M	M
1994	M	M	M	M	X	X	X	X	X	X	M	M
1995	M	M	M	M	X	X	X	X	X	X	M	M
1996	M	M	M	M	X	X	X	X	X	X	M	M
1997	M	M	M	M	X	X	X	X	X	X	M	M
1998	M	M	M	M	X	X	X	X	X	X	M	M
1999	M	M	M	M	X	X	X	X	X	X	M	M
2000	M	M	M	M	X	X	X	X	X	X	M	X
2001	M	M	M	M	X	X	X	X	X	X	M	X
2002	M	M	M	M	X	X	X	X	X	X	M	X
2003	M	M	M	M	X	X	X	X	X	X	na	X
2004	M	M	M	M	X	X	X	X	X	X	na	na

<sup>a</sup> Exportable (X), import-competing (M) and nontradables (H).

Source: Berthelon, Kruger and Saavedra (2007)

Appendix Table 21: Annual distortion estimates for **Latin America**, 1955 to 2005

## (a) Nominal rates of assistance to covered products

(percent)

	Rice	Wheat	Maize	Sorghum	Barley	Soybean	Groundnut	Palm-oil	Sunflower	Sesame	Sugar	Cotton	Coffee
1955	87	na	na	na	na	na	na	na	na	na	-43	na	-69
1956	131	na	na	na	na	na	na	na	na	na	-28	na	-65
1957	99	na	na	na	na	na	na	na	na	na	-48	na	-69
1958	60	na	na	na	na	na	na	na	na	na	-21	na	-71
1959	43	na	na	na	na	na	na	na	na	na	-10	na	-65
1960	70	-22	-27	-4	na	10	na	-4	na	na	-22	6	-21
1961	72	-9	-12	-4	na	-1	na	-4	na	na	-11	-5	-6
1962	61	-12	-6	-4	na	10	na	-4	na	na	-18	-13	-5
1963	48	-11	0	-4	na	4	na	-4	na	na	-33	2	-17
1964	86	-1	6	-4	na	12	na	-4	na	na	10	8	-19
1965	83	-11	-9	-4	na	12	na	-4	na	na	53	-11	-26
1966	29	14	-6	-4	na	0	na	-4	na	na	14	-11	-31
1967	2	9	-16	-4	na	1	na	-4	na	na	14	-3	-28
1968	14	-15	-12	-4	na	1	na	-4	na	na	11	-6	-25
1969	5	-8	-9	-4	na	2	na	-4	na	na	-9	-5	-23
1970	18	4	-14	-4	na	-1	na	-5	na	na	-31	2	-30
1971	19	15	-3	-6	na	7	na	-7	na	na	-39	-7	-26
1972	0	-11	6	15	na	-1	na	-3	na	na	-72	-8	-27
1973	4	-41	-11	-4	na	-25	na	-4	na	na	-78	-1	-25
1974	-16	-43	-19	-15	na	-4	na	2	na	na	-87	4	-22
1975	-10	-7	-15	-16	na	-6	na	0	na	na	-80	-7	-19
1976	-2	2	-16	-16	na	-16	na	-3	na	na	-34	-7	-35
1977	-8	44	-5	23	na	-22	na	-1	-24	na	-49	-24	-40
1978	-28	19	-14	9	na	-14	na	-3	-36	na	-33	-8	-27
1979	-5	-5	-22	-18	-40	-16	na	-3	-23	na	-33	-25	-37
1980	-25	-2	-10	10	-9	-8	na	-1	-25	na	-62	-11	-34
1981	-16	23	0	6	18	-11	na	-1	-9	na	-50	-20	-41
1982	48	13	21	19	-48	-1	na	-2	-26	na	-48	-8	-40
1983	8	-14	-13	-14	51	-16	na	-3	-33	na	-54	-19	-48
1984	10	8	-22	13	71	-16	na	-5	-24	na	-56	-19	-48
1985	34	35	-17	12	11	-22	na	-4	-25	na	-45	-10	-28
1986	48	11	-6	7	7	6	na	-4	-32	na	-41	-9	-23
1987	-8	3	-12	22	-42	-18	na	-2	-22	na	-40	-25	-33
1988	5	-2	-17	-9	-11	-22	na	-2	-14	na	-48	-12	-47
1989	-39	-16	-11	-11	-28	-50	na	-4	-39	na	-38	-62	-14
1990	7	1	-3	-10	-21	-27	na	80	-39	na	-41	-31	-13
1991	9	24	1	3	50	-20	0	21	-13	-39	-27	-30	-14
1992	18	13	-2	0	47	-20	-1	23	-10	-42	-9	16	13
1993	17	31	8	5	40	-17	-15	39	-4	12	-10	3	8
1994	7	23	-4	-11	25	36	-21	4	-14	27	-11	-20	9
1995	28	1	-8	-2	-40	-5	-30	6	-23	-38	-15	6	-18
1996	22	4	-8	-19	-12	-6	-18	20	-17	-31	1	7	-6
1997	32	-2	-6	-16	-13	0	-35	6	-11	-15	11	7	-13
1998	30	7	3	-14	4	-3	-37	3	-18	-45	14	5	-5
1999	17	8	-1	-16	-11	-4	-15	33	-29	-42	23	5	-5
2000	29	9	6	-4	-4	-4	-18	51	-27	-47	36	11	-6
2001	48	14	-1	-9	2	-3	-45	65	-20	-30	29	13	5
2002	32	-2	-4	-8	-8	-21	-30	41	-41	-39	26	7	16
2003	28	-4	-8	-10	-23	-13	-42	45	-36	-43	19	21	0
2004	31	-7	-9	-21	-1	-8	-37	34	-35	-43	22	1	0
2005	27	-13	5	11	na	-13	na	32	-40	na	18	9	1

Continued over

Appendix Table 21(a) (continued):

	Cocoa	Apple	Ban- ana	Grape	Bean	Garlic	Onion	Tom- ato	Beef	Pig- meat	Poul- try	Egg	Milk
1955	na	na	-37	na	14	566	159	-21	na	na	163	na	na
1956	na	na	-27	na	57	221	260	-18	na	na	170	na	na
1957	na	na	-24	na	28	100	197	-25	na	na	159	na	na
1958	na	na	-22	na	48	192	193	-11	na	na	178	na	na
1959	na	na	-23	na	17	84	136	-35	na	na	172	na	na
1960	na	4	-21	6	39	344	246	-18	-26	na	171	na	27
1961	na	0	-28	1	28	390	161	-24	-26	na	177	na	26
1962	na	-1	-26	-2	37	383	127	17	-27	na	150	na	26
1963	na	33	-29	34	37	200	153	-24	-25	na	141	na	22
1964	na	17	-31	18	91	246	158	33	-16	na	121	na	20
1965	na	14	-30	11	39	225	161	20	-21	na	89	na	14
1966	25	-2	-32	-9	64	129	72	-23	-19	2	147	na	0
1967	13	37	-34	37	61	164	76	60	-24	15	147	na	-4
1968	7	33	-35	30	55	146	215	86	-25	17	88	na	1
1969	-23	31	-36	30	47	164	276	60	-25	-9	75	na	-2
1970	-26	31	-37	33	127	10	26	123	-20	-7	187	na	8
1971	-18	49	-53	39	17	29	53	82	-11	19	115	na	-5
1972	-15	75	-53	57	-9	33	20	79	-26	-16	108	na	-17
1973	7	11	-43	3	-9	51	70	113	-28	-31	117	na	-12
1974	-29	13	-42	32	-2	57	16	-20	-22	-34	192	na	-9
1975	5	-1	-51	3	63	44	54	251	-32	-28	145	na	3
1976	4	-1	-51	-1	50	29	12	191	-6	-21	64	na	5
1977	-41	-2	-51	-1	65	110	83	30	-13	-5	89	na	2
1978	-21	-1	-49	-1	53	152	30	25	-1	2	78	na	1
1979	-14	-2	-52	-1	17	89	217	-55	-6	-13	164	-10	85
1980	-1	-2	-56	-1	15	130	209	-52	-2	-10	21	24	96
1981	-15	-2	-62	-1	-9	224	162	-20	-5	-4	49	32	139
1982	-1	-1	-22	-1	7	123	66	-42	-8	-24	48	-10	80
1983	21	-3	-37	-2	211	12	30	24	-22	-41	18	-16	70
1984	-24	-4	-26	-3	5	14	42	2	-11	-13	29	-29	136
1985	-12	-2	-38	-1	49	204	180	-51	-8	-7	25	-5	78
1986	-7	-1	-47	-1	-27	130	268	-35	5	-46	38	-21	53
1987	-10	-1	-43	-1	-29	19	67	-55	-17	-41	16	-1	61
1988	-21	-1	-53	-1	-17	145	128	-35	-14	-9	5	10	24
1989	-18	-1	-13	-1	-51	198	-3	-53	14	5	32	-15	23
1990	-20	-1	-11	-1	-16	-19	108	-27	8	-27	54	-11	38
1991	-18	0	-13	-1	6	239	77	-57	-4	2	21	-11	42
1992	-33	0	-18	-1	-6	374	253	39	0	15	6	2	33
1993	-8	0	-6	-1	-3	260	214	-31	0	9	15	15	57
1994	-4	0	-10	-1	-16	285	334	-40	5	31	19	15	57
1995	-17	0	-11	-1	-39	250	109	-71	-1	-11	4	-15	23
1996	-9	0	-9	-1	-19	97	58	-45	8	-14	7	-11	19
1997	-3	0	-21	-1	7	246	177	-32	8	-6	15	-6	33
1998	-13	0	-24	-1	1	72	149	-33	6	4	5	-22	39
1999	-17	0	-21	-1	-4	384	68	-11	4	14	10	-27	33
2000	-4	0	-38	0	7	528	73	-18	0	-2	20	-21	49
2001	-11	0	-9	0	28	552	98	-41	-1	5	21	-13	50
2002	-3	0	-1	0	-12	418	59	-39	5	20	31	-20	57
2003	-9	0	-8	0	-17	108	42	-47	-3	7	11	-16	38
2004	na	0	-65	0	-22	204	98	-40	-8	-8	11	-9	32
2005	na	0	-57	0	23	306	276	0	-2	2	4	na	11

\* Cassava has a zero NRA throughout the period.



Appendix Table 21 (continued): Annual distortion estimates for **Latin America**, 1955 to 2005(b) Nominal and relative rates of assistance to all<sup>a</sup> agricultural products, to exportable<sup>b</sup> and import-competing<sup>b</sup> agricultural industries, and relative<sup>c</sup> to non-agricultural industries

(percent)

	Total ag NRA				Ag tradables NRA			Non-ag tradables	
	Covered products		Non-covered products	All products (incl NPS)	Exportables	Import-competing	All	NRA	RRA
	Inputs	Outputs							
1955	0	-22	-22	-22	-50	96	-23	8	-29
1956	0	-9	-9	-9	-39	134	-10	8	-16
1957	0	-22	-22	-22	-50	107	-24	7	-29
1958	0	-3	-3	-3	-33	94	-3	8	-10
1959	0	1	1	1	-25	70	1	8	-6
1960	0	-17	-6	-13	-27	22	-17	26	-34
1961	-1	-12	0	-7	-21	30	-10	23	-27
1962	-1	-12	-4	-9	-22	27	-12	27	-31
1963	-1	-13	-5	-9	-21	20	-13	29	-33
1964	-1	-5	1	-2	-12	32	-4	30	-26
1965	-1	-11	1	-5	-15	23	-8	30	-30
1966	-1	-9	-6	-7	-12	12	-8	34	-32
1967	-1	-13	-3	-8	-12	3	-9	33	-32
1968	-1	-13	-4	-8	-13	4	-10	30	-31
1969	-1	-12	-4	-8	-12	1	-10	30	-31
1970	-1	-13	-6	-11	-16	10	-12	29	-32
1971	-1	-10	-2	-7	-11	8	-8	29	-29
1972	-1	-26	-14	-21	-27	-7	-24	27	-40
1973	0	-31	-22	-28	-34	-9	-30	28	-45
1974	0	-42	-34	-39	-46	-17	-41	26	-53
1975	0	-35	-28	-32	-42	-4	-34	25	-47
1976	0	-15	-10	-13	-19	3	-14	25	-31
1977	0	-20	-15	-19	-26	15	-19	24	-35
1978	-1	-15	-12	-15	-18	-10	-15	24	-32
1979	1	-14	-9	-11	-21	2	-12	18	-25
1980	4	-19	-10	-12	-24	3	-13	21	-28
1981	5	-17	-4	-8	-26	24	-8	19	-22
1982	4	-12	-6	-5	-21	27	-5	20	-21
1983	3	-27	-19	-21	-34	6	-22	17	-33
1984	4	-23	-16	-16	-31	8	-17	17	-29
1985	3	-15	-8	-9	-28	23	-9	16	-22
1986	5	-11	-3	-3	-13	9	-3	21	-20
1987	2	-22	-17	-15	-29	0	-16	19	-29
1988	5	-25	-17	-15	-30	0	-15	15	-26
1989	-7	-11	-20	-12	-25	-7	-13	13	-23
1990	3	-12	-5	-3	-18	11	-3	10	-11
1991	2	-8	-6	-2	-21	18	-2	8	-9
1992	4	-1	3	6	-7	19	6	6	0
1993	3	0	3	7	-11	30	7	6	1
1994	3	6	8	12	4	19	13	7	6
1995	1	-7	-1	0	-9	4	0	6	-6
1996	2	-3	2	3	-3	5	3	6	-2
1997	1	1	5	7	-2	14	8	7	0
1998	1	3	6	8	-3	22	8	8	1
1999	1	2	7	9	-2	17	9	6	3
2000	1	5	8	10	-1	23	10	7	2
2001	0	6	6	9	-2	30	10	6	3
2002	1	2	1	5	-6	25	6	5	1
2003	1	-3	-2	0	-8	15	0	5	-4
2004	1	-4	-2	-1	-7	9	-1	4	-5
2005	-2	2	3	3	-2	11	2	4	-2

<sup>a</sup> NRAs including assistance to nontradables and non-product specific assistance.<sup>b</sup> NRAs including products specific input subsidies.<sup>c</sup> The Relative Rate of Assistance (RRA) is defined as  $100 * [(100 + \text{NRA}_{\text{ag}}^t) / (100 + \text{NRA}_{\text{nonag}}^t) - 1]$ , where  $\text{NRA}_{\text{ag}}^t$  and  $\text{NRA}_{\text{nonag}}^t$  are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

Appendix Table 21 (continued): Annual distortion estimates for **Latin America**, 1955 to 2005(c) Value shares of primary production of covered<sup>a</sup> and non-covered products,  
(percent)

	Rice	Wheat	Maize	Sorghum	Soybean	Sun-flower	Sugar	Cotton	Coffee	Cocoa
1955	3	na	na	na	na	na	17	na	10	na
1956	3	na	na	na	na	na	15	na	9	na
1957	3	na	na	na	na	na	19	na	8	na
1958	5	na	na	na	na	na	15	na	7	na
1959	6	na	na	na	na	na	14	na	6	na
1960	1	10	7	0	0	na	2	1	11	na
1961	2	8	8	0	0	na	1	2	10	na
1962	2	8	7	0	0	na	3	2	10	na
1963	2	9	7	0	0	na	3	1	9	na
1964	1	12	7	0	0	na	2	1	11	na
1965	2	12	7	0	0	na	1	1	9	na
1966	1	4	12	0	1	na	1	4	6	0
1967	1	4	14	0	1	na	1	3	6	0
1968	2	6	11	0	1	na	1	5	6	0
1969	1	5	11	0	1	na	1	5	6	0
1970	1	6	13	0	2	na	7	4	8	0
1971	1	5	12	0	2	na	8	6	6	0
1972	1	4	9	0	2	na	15	5	5	0
1973	6	5	10	0	5	na	14	4	4	0
1974	6	6	9	0	5	na	22	3	2	0
1975	8	4	8	0	6	na	19	2	3	0
1976	8	3	12	0	9	na	9	4	7	0
1977	6	3	8	0	13	0	9	5	12	1
1978	8	3	10	0	9	1	8	3	10	1
1979	4	4	10	1	7	1	6	2	7	0
1980	6	4	9	1	5	0	9	1	10	0
1981	3	3	10	1	5	0	8	2	14	0
1982	3	3	7	1	5	1	9	1	9	0
1983	2	3	8	1	5	1	9	1	11	0
1984	2	3	10	1	7	1	9	2	9	0
1985	2	2	11	1	7	1	8	2	11	0
1986	2	3	8	1	5	1	7	2	8	0
1987	2	3	7	1	6	1	8	1	10	0
1988	2	3	8	1	8	1	7	1	10	0
1989	4	3	7	1	11	1	5	2	5	0
1990	2	3	9	1	8	1	8	2	5	0
1991	3	3	8	1	6	1	6	2	5	0
1992	2	3	10	1	6	1	6	1	4	0
1993	2	3	10	1	7	1	5	1	4	0
1994	2	2	9	1	7	1	5	1	7	0
1995	2	3	9	1	6	1	6	1	6	0
1996	2	3	10	1	8	1	6	1	6	0
1997	2	3	8	1	9	1	6	0	6	0
1998	2	2	7	1	9	1	5	0	7	0
1999	3	2	8	1	8	2	4	1	5	0
2000	2	3	8	1	10	1	4	1	5	0
2001	2	3	8	1	10	1	4	1	3	0
2002	2	4	8	1	13	1	4	1	3	0
2003	2	3	9	1	17	1	4	1	2	0
2004	2	3	8	1	16	1	3	1	3	na
2005	2	3	6	0	16	1	5	1	4	na

Continued over

Appendix Table 21(c) (continued): ...

	Apple	Banana	Bean	Cassava	Tomato	Beef	Pigmeat	Poultry	Egg	Milk	Non-covered
1955	na	4	2	2	0	na	na	2	na	na	60
1956	na	6	1	4	0	na	na	2	na	na	60
1957	na	4	1	3	0	na	na	2	na	na	60
1958	na	6	1	3	0	na	na	2	na	na	60
1959	na	8	2	2	0	na	na	2	na	na	60
1960	0	1	0	0	0	29	na	0	na	3	34
1961	0	1	0	0	0	31	na	0	na	3	33
1962	0	0	0	0	0	30	na	0	na	3	34
1963	0	0	0	0	0	30	na	0	na	3	35
1964	0	0	0	0	0	28	na	0	na	3	34
1965	0	0	0	0	0	29	na	0	na	3	35
1966	0	1	0	0	0	16	0	0	na	3	49
1967	0	1	0	0	0	14	0	0	na	3	51
1968	0	1	0	0	0	15	0	0	na	3	48
1969	0	1	0	0	0	16	0	0	na	3	49
1970	0	2	0	0	0	17	0	0	na	3	36
1971	0	1	0	0	0	18	0	0	na	3	37
1972	0	1	0	0	0	16	0	0	na	3	37
1973	0	1	0	0	0	13	0	0	na	2	35
1974	0	0	0	0	0	9	0	0	na	2	34
1975	0	1	0	0	0	11	0	0	na	1	36
1976	0	1	0	0	0	9	0	0	na	2	34
1977	0	1	0	0	0	9	0	0	na	2	30
1978	0	1	0	0	0	10	0	0	na	2	32
1979	4	0	1	0	2	16	4	1	1	3	29
1980	0	0	1	0	1	16	3	2	1	2	28
1981	0	0	1	0	1	16	3	2	1	2	28
1982	0	0	1	0	1	17	5	2	1	3	30
1983	0	0	0	0	1	17	5	2	1	2	30
1984	0	0	0	0	1	14	4	2	1	2	30
1985	0	0	1	0	1	12	4	2	1	2	30
1986	0	0	1	0	1	14	4	2	2	2	35
1987	0	0	1	0	2	16	4	2	1	2	30
1988	0	0	1	0	1	15	3	2	1	3	30
1989	0	0	1	0	1	13	2	2	1	3	37
1990	0	1	2	0	1	13	4	3	1	3	33
1991	0	1	1	0	3	15	3	3	1	4	33
1992	0	1	1	0	1	16	3	3	1	5	35
1993	0	1	1	0	3	15	3	3	1	4	34
1994	0	1	1	0	1	12	2	3	1	4	39
1995	0	1	1	0	2	16	3	4	1	4	32
1996	0	1	1	0	2	15	3	4	1	5	28
1997	0	1	1	0	2	13	3	4	1	5	31
1998	0	1	1	0	2	13	2	5	1	5	33
1999	0	1	1	0	2	15	2	6	2	5	32
2000	0	1	1	0	2	16	3	6	2	5	31
2001	0	1	1	0	2	15	4	6	2	5	31
2002	0	1	1	0	2	13	3	6	2	4	31
2003	0	1	1	0	2	13	3	6	2	4	28
2004	0	0	1	0	2	15	3	6	2	4	28
2005	0	0	0	0	1	12	3	6	1	3	33

\* Barley, groundnut, sesame, palmoil, grape, onion and garlic are omitted due to very low shares (<0.5 percent of the gross value of regional production).

<sup>a</sup> At farmgate undistorted prices, US\$

Source: Anderson and Valenzuela (2008), based on spreadsheets of authors of Chapters 2-9 of Anderson and Valdés (2008).

Appendix Table 22: Annual distortion estimates of nominal rates of assistance to non-agricultural industries by trade status, Latin American countries, 1955 to 2005  
(percent)

	Argentina			Brazil			Chile			Colombia		
	Import-ables	Export-ables	Total tradables	Import-ables	Export-ables	Total tradables	Import-ables	Export-ables	Total tradables	Import-ables	Export-ables	Total tradables
1955	na	na	na	na	na	na	na	na	na	na	na	na
1956	na	na	na	na	na	na	na	na	na	na	na	na
1957	na	na	na	na	na	na	na	na	na	na	na	na
1958	na	na	na	na	na	na	na	na	na	na	na	na
1959	na	na	na	na	na	na	na	na	na	na	na	na
1960	103	-3	66	na	na	na	38	0	22	44	0	19
1961	100	-3	63	na	na	na	38	0	22	44	1	20
1962	97	-2	61	na	na	na	77	0	44	43	1	19
1963	94	-2	59	na	na	na	69	0	40	43	0	19
1964	91	-2	58	na	na	na	69	0	40	44	0	19
1965	88	-2	56	na	na	na	63	0	37	44	1	20
1966	86	-2	54	na	na	na	48	0	28	61	1	37
1967	83	-1	53	na	na	na	43	0	25	54	2	32
1968	80	-1	50	na	na	na	45	0	26	49	2	26
1969	78	-1	48	na	na	na	24	0	14	49	1	26
1970	70	-1	43	52	0	35	24	0	14	55	1	29
1971	63	-1	38	51	0	35	32	0	19	55	1	28
1972	57	-1	35	53	0	36	66	0	38	51	0	24
1973	51	0	31	50	0	34	105	0	60	47	0	23
1974	46	-1	28	48	0	35	51	0	29	37	-2	19
1975	41	-1	24	47	0	34	32	0	18	38	-1	18
1976	37	-1	21	46	0	34	25	0	14	35	-1	17
1977	36	0	21	44	0	33	17	0	10	36	1	20
1978	35	-1	20	52	0	39	10	0	6	35	1	20
1979	35	-1	19	51	0	38	13	0	7	33	1	19
1980	34	-1	19	53	-2	39	10	0	6	33	-2	19
1981	33	1	19	47	-2	35	9	0	5	32	0	18
1982	32	-1	17	44	-1	32	8	0	5	34	2	22
1983	31	-2	17	42	-1	31	15	0	8	43	2	29
1984	31	-3	16	41	-2	30	22	0	12	50	2	31
1985	30	-4	16	40	-2	30	23	0	12	45	2	26
1986	29	-3	16	51	-1	38	18	0	10	48	1	23
1987	29	-1	16	51	-1	38	18	0	10	50	0	23
1988	28	1	17	34	-1	24	14	0	7	47	0	24
1989	25	1	15	26	-5	18	14	0	7	45	0	22
1990	22	3	12	24	-14	13	14	0	7	38	0	17
1991	19	4	11	17	-5	11	11	0	6	26	0	9
1992	18	4	11	13	-9	7	10	0	5	12	0	6
1993	17	4	10	11	-7	5	10	0	6	12	1	7
1994	16	6	11	14	-12	6	10	0	6	13	1	8
1995	16	6	11	15	-7	7	10	0	5	13	0	8
1996	16	6	10	13	-2	7	10	0	5	13	1	8
1997	16	5	10	14	0	9	10	0	5	14	1	8
1998	17	6	11	15	0	9	11	0	6	14	1	9
1999	17	6	11	13	-2	8	10	0	5	14	2	7
2000	15	6	10	13	1	9	8	0	4	14	2	7
2001	15	5	9	8	1	5	6	0	3	14	2	7
2002	14	-2	3	7	0	4	5	0	2	14	4	8
2003	14	-2	3	7	0	4	3	0	2	13	2	7
2004	14	-1	4	7	1	4	2	0	1	13	2	6
2005	14	-2	3	6	0	4	2	0	1	13	2	6

Table 22 (cont.): Annual distortion estimates of nominal rates of assistance to non-agricultural industries by trade status, Latin American countries, 1955 to 2005  
(percent)

	Dominican Republic			Ecuador			Mexico			Nicaragua		
	Import-ables	Export-ables	Total tradables	Import-ables	Export-ables	Total tradables	Import-ables	Export-ables	Total tradables	Import-ables	Export-ables	Total tradables
1955	20	0	8	na	na	na	na	na	na	na	na	na
1956	20	0	8	na	na	na	na	na	na	na	na	na
1957	20	0	7	na	na	na	na	na	na	na	na	na
1958	20	0	8	na	na	na	na	na	na	na	na	na
1959	20	0	8	na	na	na	na	na	na	na	na	na
1960	20	0	8	na	na	na	na	na	na	na	na	na
1961	20	0	8	na	na	na	na	na	na	na	na	na
1962	20	0	8	na	na	na	na	na	na	na	na	na
1963	20	0	8	na	na	na	na	na	na	na	na	na
1964	20	0	8	na	na	na	na	na	na	na	na	na
1965	20	0	9	na	na	na	na	na	na	na	na	na
1966	25	-3	9	8	-2	2	na	na	na	na	na	na
1967	27	-4	9	9	-3	1	na	na	na	na	na	na
1968	26	-3	9	14	-3	2	na	na	na	na	na	na
1969	27	-4	9	13	-8	-1	na	na	na	na	na	na
1970	28	-3	9	13	-6	1	na	na	na	na	na	na
1971	27	-3	9	8	-7	-2	na	na	na	na	na	na
1972	26	-3	9	-1	-6	-4	na	na	na	na	na	na
1973	27	-3	9	-3	-6	-5	na	na	na	na	na	na
1974	27	-3	9	-1	-8	-6	na	na	na	na	na	na
1975	29	-4	9	12	-6	-1	na	na	na	na	na	na
1976	30	-5	10	18	-5	3	na	na	na	na	na	na
1977	38	-8	11	21	-5	6	na	na	na	na	na	na
1978	33	-7	11	19	-1	7	na	na	na	na	na	na
1979	36	-8	11	19	1	9	12	0	8	na	na	na
1980	35	-8	11	19	-7	2	12	0	10	na	na	na
1981	24	-2	9	35	-6	11	12	0	10	na	na	na
1982	38	-9	11	43	-3	16	12	0	9	na	na	na
1983	43	-12	12	35	-11	8	12	0	4	na	na	na
1984	23	-2	9	35	-10	9	12	0	4	na	na	na
1985	23	-2	9	47	-11	15	12	0	6	na	na	na
1986	23	-2	10	36	-7	12	12	0	2	na	na	na
1987	23	-2	10	25	-8	6	12	0	3	na	na	na
1988	26	-3	10	24	-8	6	12	0	5	na	na	na
1989	40	-11	12	15	-5	3	12	0	4	na	na	na
1990	30	-6	11	6	-6	-1	12	0	5	na	na	na
1991	23	-2	10	12	-3	3	12	0	5	11	0	7
1992	20	0	9	6	-7	-1	13	0	6	11	0	7
1993	18	2	9	12	-2	4	13	0	6	11	0	7
1994	16	2	8	14	-1	7	13	0	7	11	0	7
1995	17	1	8	15	-3	7	12	0	2	10	0	6
1996	12	2	7	9	-1	5	12	0	2	8	0	5
1997	11	3	7	10	-2	5	21	0	4	8	1	6
1998	8	0	4	18	-3	9	19	0	4	9	1	6
1999	8	0	4	5	-1	3	21	0	4	11	1	8
2000	8	0	4	9	0	5	18	0	6	8	1	6
2001	10	0	5	16	0	10	18	0	7	8	1	6
2002	9	0	4	20	1	13	17	0	7	7	1	5
2003	9	0	4	10	1	7	17	0	7	8	1	6
2004	9	0	4	na	na	na	15	0	6	9	1	6
2005	9	0	4	na	na	na	na	na	13	na	na	na

Source: Anderson and Valenzuela (2008), based on spreadsheets of authors of Chapters 2-9 of Anderson and Valdés (2008).

Appendix Table 23: Gross subsidy equivalents of assistance to farmers, Latin American countries, 1960 to 2005<sup>a</sup>

(US\$ million)

ISO Code	AR	BR	CL	CO	DO	EC	MX	NI	Total
1960	-428	na	90	-65	-20	na	na	na	-423
1961	-356	na	87	50	2	na	na	na	-217
1962	-405	na	100	8	-30	na	na	na	-327
1963	-342	na	118	-50	-62	na	na	na	-335
1964	-215	na	107	9	16	na	na	na	-84
1965	-464	na	141	45	36	na	na	na	-242
1966	-217	-247	91	-138	2	-37	na	na	-545
1967	-407	-188	129	-125	17	-51	na	na	-625
1968	-469	-179	115	-89	16	-34	na	na	-639
1969	-474	-144	95	-129	-2	-64	na	na	-717
1970	-424	-217	132	-265	-62	-78	na	na	-913
1971	-267	-215	195	-188	-9	-109	na	na	-594
1972	-564	-1613	200	-304	-77	-141	na	na	-2498
1973	-1206	-2965	19	-570	-165	-152	na	na	-5037
1974	-1616	-7646	-7	-1090	-411	-250	na	na	-11019
1975	-1968	-5720	-38	-888	-655	-190	na	na	-9458
1976	-724	-1124	-3	-676	-126	-191	na	na	-2844
1977	-1009	-3483	153	-895	-159	-334	na	na	-5727
1978	-765	-2733	145	-553	-149	-120	na	na	-4176
1979	-516	-3907	131	-548	-101	-102	-190	na	-5233
1980	-396	-9164	201	-231	-342	-78	1590	na	-8420
1981	-2333	-9458	102	260	-422	36	5731	na	-6084
1982	-2071	-1621	127	904	-158	213	-653	na	-3259
1983	-2163	-8466	129	701	-444	123	-3026	na	-13145
1984	-1924	-9792	256	254	-786	106	525	na	-11361
1985	-1148	-8830	317	217	-329	152	4192	na	-5429
1986	-1213	579	397	-27	-563	70	-1028	na	-1785
1987	-770	-8401	361	614	-423	4	-1250	na	-9866
1988	-678	-6997	201	-386	-237	-200	-1102	na	-9399
1989	-1849	-10242	155	-450	-509	-134	1882	na	-11147
1990	-1999	-4213	24	-275	-238	-175	4961	na	-1915
1991	-519	-5593	329	142	-152	-175	4819	-39	-1189
1992	-297	-5462	438	1445	141	-307	8429	-17	4369
1993	39	-4152	414	1496	190	106	7413	42	5548
1994	-282	4466	457	1204	-15	-2	6471	-98	12201
1995	-469	2045	428	853	130	141	-3334	-92	-298
1996	-467	1678	339	2342	185	-4	-764	-168	3141
1997	-491	4169	476	1593	140	-234	2166	-187	7632
1998	-789	3761	491	1555	164	117	3068	-147	8220
1999	-628	3185	485	1096	93	-356	3837	-71	7641
2000	-625	1877	551	1619	273	-23	4792	-10	8454
2001	-304	922	279	2018	145	467	4935	-54	8409
2002	-3433	318	265	2403	40	733	4608	-42	4891
2003	-4251	1530	254	1966	-350	169	1116	-150	284
2004	-4430	3236	166	1522	75	na	-1146	-27	-604
2005	-4930	2404	203	2737	520	na	2570	na	3503

Source: Anderson and Valenzuela (2008), based on spreadsheets of authors of Chapters 2-9 of Anderson and Valdés (2008).

Appendix Table 24: Share of regional value of agricultural production, Latin American studied countries, 1960 to 2005<sup>a</sup> (percent)

ISO Code	AR	BR	CL	CO	DO	EC	MX	NI	TOTAL, studied countries
1960	38.8	na	11.7	41.5	8.1	na	na	na	100.0
1961	37.1	na	12.9	42.9	7.0	na	na	na	100.0
1962	38.3	na	11.3	40.5	9.9	na	na	na	100.0
1963	39.8	na	9.4	40.6	10.2	na	na	na	100.0
1964	40.8	na	9.6	42.0	7.6	na	na	na	100.0
1965	44.5	na	12.3	37.1	6.1	na	na	na	100.0
1966	20.7	38.0	9.5	21.6	3.8	6.4	na	na	100.0
1967	18.7	40.9	9.2	22.0	3.4	5.8	na	na	100.0
1968	21.1	36.1	10.2	23.0	3.6	6.0	na	na	100.0
1969	23.6	35.8	8.9	22.2	4.0	5.5	na	na	100.0
1970	27.5	27.4	8.8	25.3	5.0	6.0	na	na	100.0
1971	26.9	29.6	9.6	24.0	4.7	5.1	na	na	100.0
1972	19.5	39.8	9.1	22.2	4.6	4.9	na	na	100.0
1973	22.9	45.5	5.6	18.3	4.1	3.7	na	na	100.0
1974	17.8	55.1	4.1	15.8	3.9	3.3	na	na	100.0
1975	19.7	53.3	3.1	15.2	5.2	3.5	na	na	100.0
1976	12.6	50.0	5.4	22.3	4.3	5.4	na	na	100.0
1977	16.1	51.9	4.8	20.2	2.6	4.5	na	na	100.0
1978	19.2	45.2	5.2	22.5	3.1	4.7	na	na	100.0
1979	16.8	31.1	4.0	15.3	1.7	3.0	28.1	na	100.0
1980	11.0	45.3	3.7	11.1	1.9	2.4	24.6	na	100.0
1981	13.1	43.7	4.0	9.9	2.5	2.0	24.7	na	100.0
1982	14.1	41.0	4.1	12.0	1.9	2.3	24.6	na	100.0
1983	13.5	41.3	3.3	12.2	1.7	2.0	25.9	na	100.0
1984	14.3	43.3	2.7	10.8	2.2	2.1	24.6	na	100.0
1985	9.6	45.9	2.9	11.1	2.2	2.5	25.8	na	100.0
1986	11.7	42.7	3.6	12.3	2.3	2.6	24.8	na	100.0
1987	10.2	47.0	3.8	11.2	1.5	2.2	24.2	na	100.0
1988	12.4	39.7	4.0	13.0	1.5	2.6	26.7	na	100.0
1989	9.5	54.9	3.2	9.0	1.2	2.0	20.3	na	100.0
1990	11.5	44.7	4.2	10.2	1.6	2.5	25.3	na	100.0
1991	10.8	37.6	5.1	12.7	1.6	3.0	28.2	1.0	100.0
1992	12.5	36.5	5.9	12.1	1.5	3.0	27.4	1.0	100.0
1993	12.2	37.9	5.3	11.3	1.5	3.0	27.7	1.0	100.0
1994	11.3	44.7	4.6	11.7	1.6	3.1	22.1	1.0	100.0
1995	12.9	41.3	5.3	13.3	1.5	3.0	21.8	1.0	100.0
1996	14.2	40.0	5.2	10.7	1.4	3.5	23.9	1.1	100.0
1997	14.6	38.1	5.4	12.3	1.6	3.7	23.0	1.2	100.0
1998	15.6	39.7	5.4	11.5	1.5	2.6	22.5	1.2	100.0
1999	15.3	34.5	6.0	10.1	1.9	3.3	27.5	1.4	100.0
2000	15.2	36.7	6.1	9.4	1.6	2.6	27.1	1.4	100.0
2001	15.9	34.4	5.3	8.6	1.8	3.5	29.2	1.4	100.0
2002	16.6	35.5	5.5	7.8	1.7	3.7	27.9	1.4	100.0
2003	18.3	38.7	5.0	6.0	1.4	3.6	25.6	1.4	100.0
2004	17.0	41.1	5.4	7.1	1.3	na	26.9	1.2	100.0
2005	17.9	43.9	5.4	10.9	1.5	na	20.9	na	100.0

<sup>a</sup> The shares of studied countries in part (a) have been ‘scaled down’ in part (b) to account for the fact that the studied countries are not all countries of the region, the assumption being that the share for the non-studied group of countries at undistorted prices is the same as its share of regional agricultural value added at distorted prices (from the World Bank’s *World Development Indicators*).

Source: Anderson and Valenzuela (2008), based on spreadsheets of authors of Chapters 2-9 of Anderson and Valdés (2008).

Appendix Table 25: Summary of NRA data for studied Latin American countries

Country	ISO Code	Max. number of years	Maximum number of products	Number of NRA observations	2000-04		
					Weighted average NRA <sup>a</sup>	Standard deviation NRA <sup>a</sup>	Gross value of production <sup>b</sup>
Argentina	AR	46	6	213	-14.9	12.6	16.2
Brazil	BR	40	10	331	4.1	7.6	36.6
Chile	CL	46	7	307	5.8	13.3	5.3
Colombia	CO	46	11	505	25.9	46.0	7.5
Dominican Rep.	DO	51	10	510	2.5	132.8	1.5
Ecuador	EC	38	11	418	10.1	29.6	3.1
Mexico	MX	26	15	390	11.6	41.1	26.6
Nicaragua	NI	14	12	165	-4.2	27.7	1.3
<b>All LA studied countries<sup>c</sup></b>		<b>51</b>	<b>27</b>	<b>2839</b>	<b>4.8</b>	<b>23.9</b>	<b>98.1</b>

<sup>a</sup> Weighted average NRA and standard deviation NRA for covered products, in percent, using the gross value of production at undistorted prices as weights.

<sup>b</sup> Gross value of production at undistorted prices, in current US\$ billions.

<sup>c</sup> The regional averages are weighted using the 5-year average annual value of production by country.

Source: Anderson and Valenzuela (2008), based on spreadsheets of authors of Chapters 2-9 of Anderson and Valdés (2008).



Appendix Table 26: Summary of NRA data by major product, Latin American region, 2000-04

Product	Number of countries	2000-04		Gross value of production <sup>a</sup>	Countries included (by ISO Code)
		Unweighed average NRA, %	Weighted Average NRA, %		
Apple	1	-0.2	-0.2	0.15	CL
Banana	2	-43.7	-24.3	0.69	DO, EC
Barley	1	-6.8	-6.8	0.18	MX
Bean	3	19.8	-3.3	0.88	DO, MX, NI
Beef	7	-0.7	-1.3	14.30	AR, BR, CL, CO, EC, MX, NI
Cassava	1	0.0	0.0	0.02	DO
Cocoa	1	-6.7	-6.7	0.08	EC
Coffee	6	-11.9	3.3	3.20	BR, CO, DO, EC, MX, NI
Cotton	2	8.4	10.7	0.86	BR, CO
Egg	1	-15.7	-15.7	1.84	MX
Garlic	1	361.9	361.9	0.00	DO
Grape	1	-0.4	-0.4	0.20	CL
Groundnut	1	-34.5	-34.5	0.04	NI
Maize	7	7.4	-3.1	8.07	AR, BR, CL, CO, EC, MX, NI
Milk	6	35.1	45.3	4.26	AR, CL, CO, EC, MX, NI
Onion	1	74.0	74.0	0.01	DO
Palmoil	1	47.4	47.4	0.14	CO
Pigmeat	3	14.3	4.5	2.93	BR, EC, MX
Poultry	5	18.2	18.8	5.78	BR, DO, EC, MX, NI
Rice	6	50.7	33.7	1.87	BR, CO, DO, EC, MX, NI
Sesame	1	-40.5	-40.5	0.01	NI
Sorghum	3	-0.4	-10.3	0.87	CO, MX, NI
Soybean	6	-6.0	-9.9	13.00	AR, BR, CO, EC, MX, NI
Sugar	7	41.6	26.5	3.71	BR, CL, CO, DO, EC, MX, NI
Sunflower	1	-31.9	-31.9	0.91	AR
Tomato	2	-27.5	-37.0	1.68	DO, MX
Wheat	5	15.3	2.0	2.91	AR, BR, CL, CO, MX
<b>All covered products</b>	<b>8</b>	<b>4.1</b>	<b>2.7</b>	<b>68.6</b>	

Source: Anderson and Valenzuela (2008), based on spreadsheets of authors of Chapters 2-9 of Anderson and Valdés (2008).

<sup>a</sup> Gross value of production at undistorted prices (US\$billion).