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The Domestic Impact of Export Restrictions: The Case of Argentina

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Executive Summary*

The world is experiencing a period of high food prices, which is estimated to have increased poverty by around 100 million people (Zoellick 2008). Because several structural factors underlie this phenomenon, high prices are expected to prevail for a number of years (Trostle 2008, FAO 2008). Among the factors aggravating the problem are export controls being imposed by some food exporting countries on major food exports. Export controls can take the form of quantitative restrictions and embargoes or price-based restrictions in the form of export taxes. Such controls are undertaken in order to mitigate the impact on domestic prices, but by reducing international supply, they have been shown to actually exacerbate the increase of international prices. Much attention has been given to the detrimental impact such controls can have on world prices. G-8 leaders argued in their July 8 Statement on Global Food Security, that it is "imperative to remove export restrictions and expedite the current negotiation at the WTO aimed at introducing stricter disciplines on these trade actions which prolong and aggravate the situation, and hinder humanitarian purchases of food commodities."

The question of whether these policies meet their stated domestic objectives, namely of mitigating food prices and poverty in the policy-implementing countries, has received less attention and is the subject of this paper. Since Argentina is a country with a long record of substantial export taxes and quantitative restrictions on food exports, it is a good case study from which lessons could be drawn, although it must be kept in mind that each country presents a different set of circumstances, which should be taken into consideration. Based on data from Argentina, this paper argues that such policies have in fact harmed the economic and social performance of the country. The argument is based on simulations of the socio-economic impacts that the dismantling of the country's export barriers prevailing in mid-2007 could have.

Key findings and conclusions of this paper include:

- An elimination of export barriers in Argentina would increase production and employment levels of primary agriculture: it would could increase GDP between 2 and 4 percent and lead to an expansion of employment by 300,000 jobs, with the bulk of employment benefiting relatively unskilled workers living close to the poverty line.

- Since income gains materialize at a slower pace and an elimination of export barriers would instantaneously raise consumer prices, temporary adjustment mechanisms would be required in order to reduce the social costs of adjustment.

- Although the government would be faced with an immediate loss of revenues from an elimination of export taxes, it would be compensated by additional collection of income tax triggered by higher producer prices and expanded production. Moreover, as the federal government is obliged to share revenues collected from income taxes with the provinces, which is not the case with revenue collected from export taxes, it stands to lose revenue from an elimination of export taxes whereas the provinces would gain. Other taxes, such as land taxes, could also provide additional government revenue.

- Quantitative restrictions imposed on beef should be eliminated in the short run as they reduce prices faced by farmers significantly more than those for consumers in addition to triggering rent-seeking activities.

- Export taxes should also be eliminated because they decrease GDP and increase poverty, but in a gradual manner so as to reduce the socio-economic and fiscal adjustment costs.

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- Export taxes should be as uniform as possible; differential tax treatment weakens the cohesiveness of the agro-industrial chain to push for openness.

- Whereas in some emergency situations, food price controls may be justified, such controls were maintained too long in Argentina and contributed to a distorted official inflation rate. The long-run costs of losing credibility in terms of country risk and access to international financing is higher than the country's short-run benefits. Moreover, price controls are regressive.

- The imposition of domestic export restrictions has harmed the competitiveness of Argentina's agricultural sector more than tariff and non-tariff barriers imposed by its trading partners.

- There should be improved multilateral and regional disciplines on export controls – akin to those, which exist for import restrictions.

I Introduction

The paper is arranged as follows: this section presents some general characteristics regarding the importance of agro-industries and export taxation in Argentina. The paper then addresses the impact of export barriers on poverty using both macroeconomic and micro-simulations. Section II presents the analysis on the basis of macroeconomic data, while Sections III and IV complete the discussion with micro-simulations. Section III contains estimates of the impact of export barriers on the cost of Argentina's basic food basket, while Section IV discusses the income effects of dismantling barriers and presents the micro-simulation estimates. Section V addresses the likely comparative-static effects of liberalization on employment. Section VI presents Argentina's long-run stagnation in beef production and its social effects. This discussion highlights what can happen when a sector is taxed heavily. Section VII analyzes the fiscal effects of dismantling export barriers. Section VIII presents a discussion of the recent events that have triggered a high level of tension between the rural sector and the government. The paper concludes with some policy suggestions.

I.1 Importance of agro-industrial chains (AIC)

Some basic data reveal the importance of Argentina's agro-industrial sector:[1]

- It generates 18.5 percent of Gross Domestic Product (GDP).
- The direct and indirect employment resulting from its activity and its backward and forward interrelationships accounts for 35.6 percent of total employment – half of this corresponding to direct and the remainder to indirect employment (Llach et al (2004).
- The AIC accounts for approximately 56 percent of exports making it the most important net foreign exchange earning sector (about 20 billion U.S. dollars in 2006).

I.2 Legal aspects

Export taxes are not regulated by the Congress but administratively imposed and modified by the Executive Branch. Such administrative actions do not require prior analysis as is the case for amendments to other taxes, such as the income and the value added taxes. Export taxes have low collection costs and low evasion rates. The amount collected goes to the National Treasury and is distributed by the Executive Branch based on its own criteria, an obscure form of administering fiscal resources.

I.3 Levels and escalations of barriers

I.3.1 Export taxes

After a decade of practically not imposing any trade barriers against its exports, in early 2002 the Government of Argentina reintroduced export taxation across the board, with higher rates on some agro-industrial and petroleum products. At the time, the country was in a deep social and economic crisis. Export taxes were seen as a fast way of obtaining resources for alleviating the increasing poverty rate, which was above 50 percent for some time. Under these circumstances, such policies were not opposed since the needs and objectives were clearly understood. More than six years later, with the country having experienced rapid economic growth, that crisis has been left well behind. Nevertheless, export barriers on agro-industrial products are much higher today than they were during the economic crisis of 2002.

The last review of Argentina's commercial policies undertaken by the World Trade Organization (WTO) Trade Policy Review Mechanism shows that, since 2002, export taxes applied on agro-industrial products have grown significantly (WTO 2007). Moreover, from that time onward (WTO data is from early 2006),

[1] Nogués and Porto (2007) present the details of the agro-industrial chains (AIC) that are included in this sector.

serious quantitative restrictions (QRs) and higher tax rates have been applied on an important subset of these products (more detailed discussion to follow in later sections).

With regard to export taxes, the WTO report gives the following average rates for Argentina from 2002 to 2006 according to sections of the "Harmonized System" under the World Customs Organization: i) vegetable and animal fats and oils from 9.0 to 18.2 percent; ii) tobacco and beverages from 6.8 to 14.4 percent; iii) leathers and furs from 2.9 to 4.3 percent; iv) wood and byproducts from 2.9 to 4.1 percent; and v) footwear: from 2.6 to 4.4 percent.

This study uses data prevailing in 2006 and early 2007. Table 1 presents the rates prevailing in mid-2007, including the *ad-valorem* equivalents of quantitative restrictions affecting wheat and beef producers.

Table 1: Export taxes and QRs (ad-valorem equivalents) on Argentina's agro-industrial exports

Primary Products	**%**	**Agro-industrial Sectors**	**%**
Rice	10	Processed beef	33[a]
Wheat	32.5 [a]	Other meat products	15
Other cereals and grains	22.4	Vegetable oils and fats	24
Vegetables, fruit, nuts, etc.	10	Dairy products	5
Oilseeds	27.5	Processed rice	10
Sugar cane	10	Sugar	5
Vegetable fibers (cotton and others)	10	Other processed foodstuffs	5
Other crops	10	Tobacco, beverages, etc.	5
Beef	38 [a]	Tea, yerba mate, tea, etc.	5
Animal products	15	Other manufactures based on natural resources	5
Milk	10		
Wool, silk, etc.	10		
Fishery products	5		

[a] Includes tax equivalent of QRs

Source: WTO (2007) and analysis detailed below.

It may be observed that the primary goods whose exports are affected by the highest export barriers include beef, wheat, and oilseeds: the two former as a result of export taxes and QRs, whereas in the case of oilseeds, the barrier consists entirely of high export taxes. On the other hand, in the case of the agro-industrial sectors, the most serious barriers are levied on the processing of beef and on edible oils and vegetable fats.[2]

Differential export taxes (DETs) are the norm - primary products are levied at rates that are higher than those applied at the processing stage of the agro-industrial chains.[3] This leads to the strong presumption that their elimination would have more positive effects on production and employment in primary sectors than on the agro-industrial sectors. However, as noted in Section V, simulations show that production in the latter sectors would also increase.

I.3.2 Quantitative restrictions

QRs applied to beef exports are administered by the ONCCA (Oficina Nacional de Comercialización y Control Agropecuario) on the basis of flexible criteria. As discussed in Section VI, meat processors that have benefited from government-awarded export quotas are receiving rents that are equivalent to the difference between the price paid to the primary producer and the international export price. As the former

[2] Section VI presents a discussion on the possible links between barriers applied on beef exports and poverty.
[3] At times (mainly in WTO forums), the Government has argued that DETs are necessary in order to compensate for import tariff escalation by some industrial countries.

dropped steeply following the implementation of QRs, rents for the processors increased at the expense of primary producers. This intra-sector redistribution, occurring also in wheat and dairy products, plays a role in maintaining the *status quo* in favor of restrictions: the concentrated segment with political influence supports QRs, while less politically influential primary producers have found it difficult to organize to protect their interests.[4] The short-term benefit for the beef-producing industrial sector is obvious, but over the medium and long term, it will result in the accelerated liquidation of reproductive capital (cows), so eventually all participants in this chain stand to lose by maintaining high taxation on primary exports.[5]

I.3.3 Multilateral and regional regulations

Multilateral and regional trade regulations show a clear contrast between the treatment of import and export barriers. Despite the two major crises the country has faced since opening its economy (the *tequila* crisis in 1995 and the 2002 devaluation), Argentine import tariffs have remained stable. This must be attributed to the Uruguay Round Agreement resulting in the binding of the maximum tariff rate at 35 percent, and to the Mercosur common external tariff.

In contrast, there are no meaningful rules or established disciplines on export controls in regional or multilateral agreements. Since Argentina's trade policy is the responsibility of the Executive, governments since the 1930s have resorted to export taxes in times of crisis and as a mechanism to increase government revenues; the Menem presidencies were the exception to this trend.

Although the re-imposition of export taxes was justified by the serious nature of the 2001-2002 crisis and the objective of reducing the social costs of adjustment, their instability and their discretional use more recently demonstrates how the lack of international disciplines and the absence of domestic cohesiveness have negatively impacted the agro-industrial chains, and risk to undermine Argentina's comparative advantage. This vacuum of international rules and obligations is worsened by a political system (executive and legislative powers) featuring a striking absence of agro-industrial representation.

As a result, in recent years, implementation of taxes to agro-industrial exports has been a spasmodic reaction to fiscal needs and increasing food prices. In spite of this, inflation has been increasing rapidly (around 30 percent per annum) and not surprisingly, the incidence of poverty is also increasing. Macroeconomic adjustment should not fall on trade policy but on fiscal-monetary-exchange rate policies. Unfortunately, the government has been slow in reacting (Section VIII).

I.4 Other features of Argentina's export policies

Argentine export policies have two additional features that should be emphasized. First, while several countries apply export taxes, they usually do so out of safety and environmental considerations, to counter tariff escalation in importing countries, or to protect market power and infant industries (Piermartini 2004).[6] This means that the number of products that are taxed is usually small. Argentina, however, applies broader and highly restrictive policies on its exports.

Secondly, estimates show that for several important products, restrictive policies on exports are more distorting and consequently more harmful to Argentina than global agricultural protectionism (Anderson and Valenzuela 2007, Nogués and Porto 2007).

[4] As discussed in Section VIII, this is changing.
[5] Slaughter of cows has recently been increasing above historical rates.
[6] More recently, given the increase in international food prices, other efficient agricultural producers are taxing exports while importers are reducing barriers (FAO 2007), pushing international food prices upwards (Trostle 2008).

II Export Policies, Poverty, and Growth: Macroeconomic Approach

The micro-simulations of impacts on poverty and indigence presented in Section IV differ from the macroeconomic focus summarized in this section. In fact, they are based on microeconomic information such as individual product prices and household incomes. However, the aggregate results show that both methodologies support the conclusion that the dismantling of export barriers would reduce the incidence of poverty.

The macroeconomic approach to the analysis of the impact of dismantling export policies on poverty has two main steps. The first determines the impact that growth has had on the incidence of poverty, i.e. the poverty-GDP elasticity. The second step determines the impact that elimination of export barriers could have on GDP. Using these parameters, multilateral organizations such as the World Bank and the Inter-American Development Bank have built scenarios showing the effects of the elimination of trade barriers (multilateral as well as regional) on poverty (for example, World Bank 2002 and Giordano et. al. 2007).

The remainder of this section presents estimates of the impact of dismantling export policies on poverty, followed by a brief discussion of the relationship between trade policies and long-run economic growth.

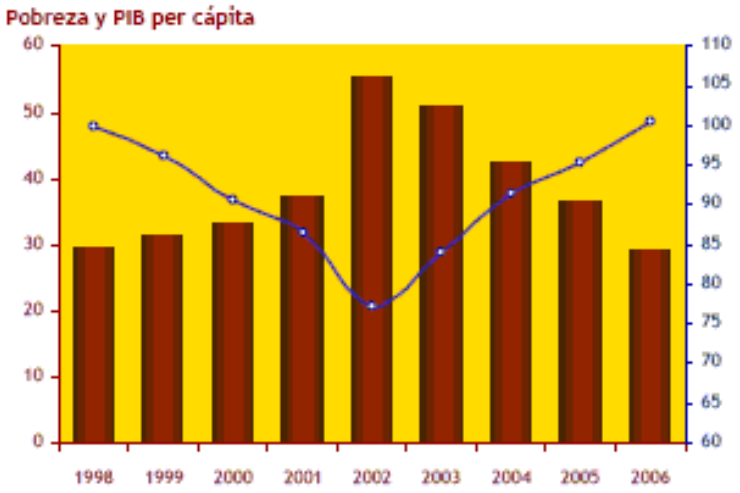
II.1 Macroeconomic approach

Usually multilateral organizations work with regional average values for the incidence of poverty-GDP elasticity. However, in view of Argentina's past instability in connection with these two variables, this elasticity was estimated directly with national data. The data show that over the past twenty years there have been periods in which economic growth was accompanied by increases of poverty, as was the case when major structural reforms were implemented from 1990 to 1998, and others, such as the period from 2002 onwards, in which economic growth was accompanied by an important reduction of poverty (Graph 1).

The poverty-GDP elasticity estimated with data from 1998 to 2006 is -2.5 (statistically significant). The results also show that growth has diminishing effects on the incidence of poverty.[7] The last finding would imply that using a poverty-GDP elasticity of -2.5 would overestimate the poverty impact of growth associated with the elimination of barriers on exports. As a result of these diminishing effects, as well as the fact that growth associated with the elimination of export barriers would be partially based on higher food prices, the simulations on the impact of barrier elimination on poverty will use the following (conservative) poverty-GDP elasticity values: -0.5; -1.0; and -1.5.[8]

[7] The underlying values of the parameters are statistically significant (Nogués and Porto 2007, chapter IV).
[8] Gasparini *et al.* (2007) find that for several Latin American countries the poverty-GDP elasticity is around -1.5.

Graph 1: Per capita GDP and poverty incidence



Source: SEL Consultores (2007).

To determine the possible impact of the elimination of export barriers on GDP, this paper uses a World Bank general equilibrium model specifically designed to analyze the effects of alternative trade policies on the agro-industrial sectors (Anderson and Valenzuela 2007). In this model, known as GTAP-Agr, Argentina is individually characterized and simulations based on it show that elimination of export taxes would increase aggregate agro-industrial value added by about 32.6 percent.[9] Once again, and for the purpose of being conservative, the simulations used agro-industrial growth rates substantially lower than 32.6 percent: 15, 20, and 25 percent. Given the share of agro-industry in GDP (18.5 percent), the simulations used the following impacts on GDP growth rates from elimination of export taxes: 2.8, 3.7 and, 4.6 percent.

With these central values for the two main parameters (poverty-GDP elasticity and GDP growth), nine possible scenarios of the impact of the elimination of export taxes on poverty were constructed. Table 2 shows that, under these assumptions, the incidence of poverty would decline in a range that fluctuates between -1.4 and -6.9 percent. The latter figure implies around half million people leaving poverty.

II.2 Dynamic considerations

These estimations are comparative-static in nature and therefore do not incorporate the possible dynamic effects of trade policies on the rate of economic growth. Once again, this is done with the purpose of being conservative, but it is important to remember that the literature documenting the international experience expresses a solid opinion in regard to the positive impact of trade liberalization on economic growth rate (for example, Sachs and Warner 1995 and Wacziarg and Welch 2003). Given the high level of Argentina's export barriers, their dismantling would represent an important trade liberalization program, spurring agro-industrial investment and general economic growth.[10]

[9] It is important to stress that the GTAP-Agr model does not incorporate the effects of QRs and increases in tax rates implemented since mid-2007.

[10] Although it was not one of its important objectives, the Nogués-Porto report (2007) shows some econometric results sustaining this hypothesis for Argentina.

Table 2: Simulation of the impact of eliminating export taxes on the incidence of poverty (%)

Poverty-GDP Elasticity	***GDP Growth***		
	2.8%	**3.7%**	**4.6%**
-0.5	-1.4	-1.85	-2.3
-1.0	-2.8	-3.0	-4.0
-1.5	-4.0	-5.55	-6.9

Source: Nogués and Porto (2007).

III Export Taxes, QRs, and the Cost of the Basic Food Basket

Micro-simulations rely on two main sets of data: the cost of the basic food basket (BFB) and family income from the household survey. This section estimates the impact of eliminating export barriers on the costs of the basic food basket (BFB) and the basic total basket (BTB), while the next presents the micro-simulation estimates. As seen below, both the macroeconomic approach and the micro-simulations show relatively similar results.

The cost of the BFB compared to income is used to estimate the incidence of indigence, while the cost of the BTB (which includes food plus other basic consumption goods and services) is used to quantify the incidence of poverty.[11] Estimates rely on two simplifying assumptions: first, that elimination of export taxes on foodstuffs and beverages in the BFB does not affect the prices of other consumption goods included in the BTB; and second, that adjustment of consumption prices to the elimination of export barriers is instantaneous.[12]

The following table shows the structure of Argentina's BFB by product category estimated with prices prevailing in December 2006 – the last month before the government began manipulating the cost of living index As seen, beef, cereals (mainly bread), and dairy products have the highest shares.[13]

Table 3: Cost Structure of the BFB, December 2006

Product Category	Weight (%)
Cereals and byproducts	16.5
Beef	30.1
Chicken meat	2.5
Dairy products	13.4
Fruits	6.4
Vegetables	6.7
Potatoes, etc.	5.5
Vegetable oils	3.6
Sugar	1.5
Other	13.8
Total	100

Source: Nogués and Porto (2007, chapter II).

For each item in the BFB (some 50 products), prices were adjusted proportionally to the rate of export taxes eliminated. Estimating the impact of eliminating QRs on consumer prices was not as simple, as a

[11] In Argentina, the cost of the BTB is estimated as a simple adjustment to the cost of the BFB through an Engel's coefficient (Nogués and Porto 2007, appendix to chapter IV).

[12] Econometric results tend to support this second hypothesis. This evidence consists of determining the speed of adjustment of domestic prices to variations in international prices using the Baffes and Gardner (2003) approach. The following table shows that in the cases of beef, wheat, maize, and soybean, the first period of adjustment is relatively high. Once again, the hypothesis of instantaneous adjustment leads to conservative simulations, particularly in first-year effects ,as prices are likely to increase at a slower pace than assumed.

Product	Adjustment coefficient	Adjustment over first period
Beef	0.614	67%
Wheat	0.604	64%
Maize	0.674	85%
Soybean	0.979	99%

All coefficients are statistically significant. (Nogués and Porto 2007, chapter III).

[13] In the BFB, beef is over represented. This has serious consequences, as argued in the policy recommendations.

brief discussion of beef illustrates. In this case, the outstanding conclusion refers to the differential impact of QRs on the prices paid by consumers. Because price controls were applied in different commercialization points including retail sales, estimates could not rely on official price statistics.

Because of this, estimates resorted to the opinions of a group of analysts knowledgeable of the agro-industrial meat chain who concluded that elimination of QRs on beef could increase consumer prices up to 10 percentage points above the export tax of 15 percent. Therefore, simulations were performed assuming that elimination of QRs could increase meat consumer prices anywhere between 15 percent (the export tax on meat exports) and 25 percent.

Wheat exports have also been affected by QRs. In this case, the quantitative analysis concluded that the impact on the price of bread associated with the elimination of QRs on wheat and wheat flour would be proportional to its input share. Under these criteria, the elimination of export taxes and QRs on wheat exports would increase bread consumer prices by 3.5 percent (Nogués and Porto 2007, chapter VII).

Under these assumptions Table 4 shows the likely impact of eliminating export taxes and QRs on the cost of the BFB and BTB.

Table 4: Impact of eliminating export taxes and QRs on the cost of the BFB and the BTB

Policy	Cost of BFB (pesos)	Variation (%)[a]	Cost of BTB (pesos)[a]	Variation (%)
Elimination of export taxes	161.5	9.6	334.4	4.5
Elimination of taxes + QRs[b]	165.2	12.0	337.7	5.6
Elimination of taxes +QRs[c]	168.9	14.5	341.4	6.7

[a] Proportional variation from base period
[b] Assumed that the elimination of QRs on meat exports would increase consumer prices by 5 percentage points over and above the impact of eliminating the 15 percent export tax.
[c] Assumed that the elimination of QRs on meat exports would increase consumer prices 10 percentage points over and above the impact of eliminating the 15 percent export tax.

Source: Nogués and Porto (2007, chapter V).

IV Micro-simulations

In Argentina, the incidence of poverty is measured as the proportion of people earning less than the cost of the BTB, while the incidence of indigence is measured as the proportion of people earning less than the cost of the BFB. The previous section quantified the costs of these baskets while this section explains how income is determined and then presents the micro-simulation estimates.

IV.1 Income effect

Personal income data for measuring poverty is taken from the periodic household survey (Encuesta Permanente de Hogares). On the theoretical basis of neoclassical trade models, it can be shown that income is a function of prices (Porto 2003). Under this assumption, Porto and Sanguinetti (2005) estimated income-price equations for people of different skill levels and living in different parts of the country. Their results show that the income-price elasticity values were quite similar across these dimensions and fell around 0.7. For the simulations we used income-price elasticities of 0.7 and 1.0.[14]

IV.2 Micro-simulation estimates

Under these assumptions, Graphs 2 and 3 show the time-paths of the incidence of poverty and indigence corresponding to unitary income-price elasticity and a meat QR effect on consumer prices equivalent to 10 basis points (Table 4).[15] The assumption underlying these time-paths is that consumer prices would raise instantaneously as a result of eliminating export barriers but the income gains would not materialize for another three years. On this basis, the micro-simulation estimates show that the incidence of poverty declines from 24.6 percent in the base period (last quarter of 2006) to 22.5 percent, or by 8.5 percent. This is slightly above the maximum estimate arrived with the macroeconomic approach (Table 2).[16]

Given that indigence is estimated with the cost of the BFB only, these people suffer the full effect of eliminating export taxes, and as seen in Graph 3, end up slightly worse off in the absence of compensatory payments.

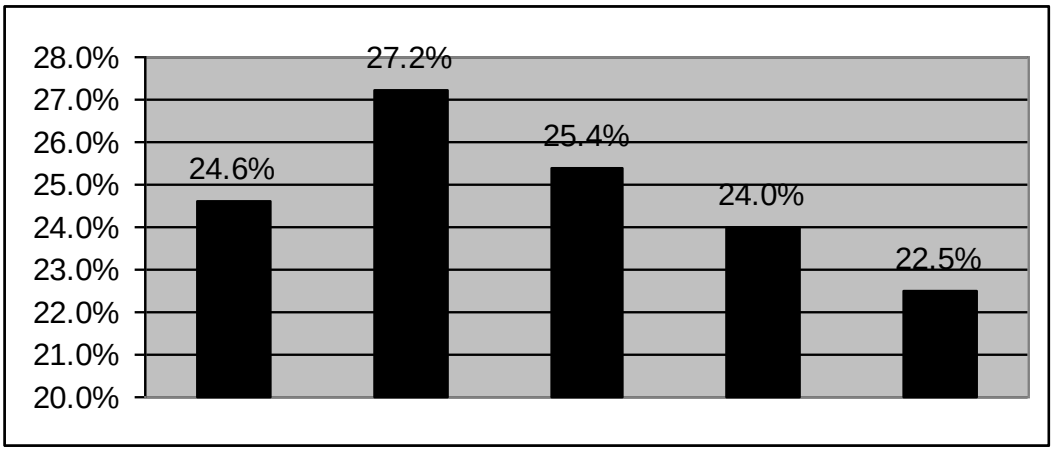
The time-path shown in these graphs is constructed simply by assuming that each year one third of the final income adjustment takes place, so while elimination of export taxes is fully translated to prices in the first year, the income gains materialize at a slower pace. This suggests that in order to reduce the social costs of adjustment for the poor and indigent, temporary compensatory mechanisms need to be put in place. A brief discussion on the fiscal cost of such a program is presented in Section IX on policy suggestions.

[14] Porto and Sanguinetti (2005) used data from the 1990s, when a serious stabilization program was in place. More recently, wages of registered workers have been moving closer to prices, and during the first years following the 2002 crisis, this trend has continued.

[15] In these graphs, the scenario includes elimination of export taxes plus the more severe effect of the QR on consumer meat prices (10 percentage points).

[16] With an income-price elasticity of 0.7, the after-adjustment incidence of poverty is 23.7 percent, which is also lower than the base value of 24.6 percent.

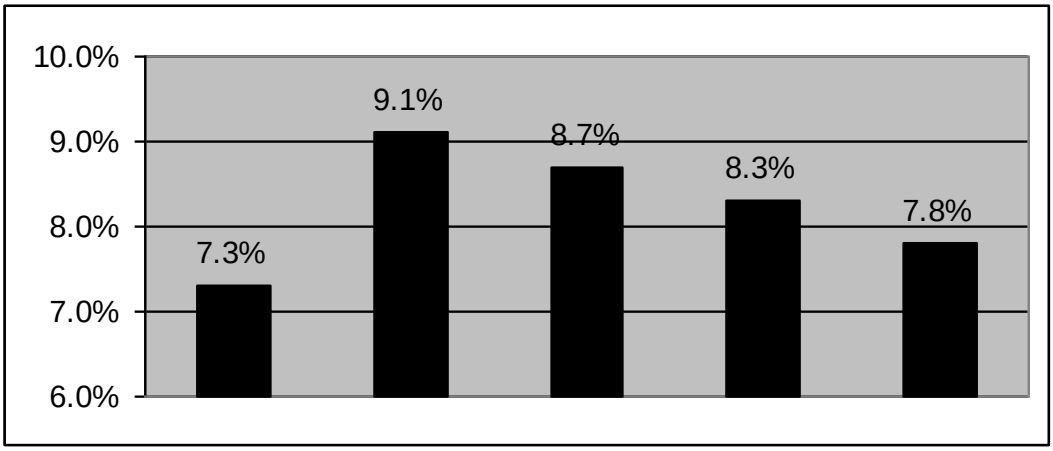
Graph 2: Incidence of poverty with unitary income-price elasticity



Pure price effects would increase poverty for roughly 590,000 persons.

Source: Nogués and Porto (2007, chapter V).

Graph 3: Incidence of indigence with unitary income-price elasticity



Pure price effect would increase indigence for roughly 400,000 persons.

Source: Nogués and Porto (2007, chapter V).

V Agro-industrial Employment and Export Barriers

This section estimates the possible impacts of eliminating of export taxes on production and employment in the primary agricultural and agro-industrial sectors.[17] A simple methodology was followed. First, for each agro-industrial sector estimate of production increases from export liberalization were available from Anderson and Valenzuela (2007). On the basis of sectoral employment-production coefficients and assuming fixed proportions, the direct employment effects were estimated. The second step expands these results to include indirect employment effects.

The results summarized in Table 5 show that elimination of export barriers would increase production and employment levels of primary agriculture more than that of the processing stages of the agro-industrial chains. This is because differential export taxes – higher tax levels for primary than industrial producers – increase effective protection of the processing stages to the detriment of primary producers.[18] Therefore, the elimination of these barriers would have a more positive impact on the primary producers than on the industrial sectors. In any case, because net export taxes also discriminate against processing, these higher value added segments of the agro-industrial chains stand to gain as well.

Table 5: Impacts of the elimination of export taxes on production and employment levels: weighted averages (by production, %)

Sectors	*Production*	**Employment**	
		Skilled	Unskilled
Primary	12.2	12.9	13
Agro-industrial	8.4	2.9	1.7
Total	10	7.1	6.5

Source: Based on data provided to the author by Kym Anderson and Ernesto Valenzuela from their model (2007). Nogués and Porto (2007, chapter VI).

Using conservative assumptions, the estimates in Table 6 show that when indirect employment multipliers associated with the expansion of agro-industrial sectors are incorporated, approximately 300,000 jobs would be generated through the elimination of export taxes. As mentioned above, the bulk of this employment would benefit relatively unskilled workers living close to the poverty line.

Table 6: Jobs generated both directly and indirectly from elimination of export taxes in GTAP-Agr sectors

Agro-industrial Sectors	**Base Employment**	***Employment Generated***		
		Direct	Multiplier	Direct + Indirect
Primary	1,296,000	168,000	1.62	272,160
Agro-industrial	500,000	10,000	3.74	37,400
Total	1,796,000	178,000	N.A.	309,560

Note: Base employment levels are from 2005. The figure given for agro-industrial sectors is approximate. Multipliers are weighted average (by value added) of sector specific values of the 1997 input-output table.

Source: Nogués and Porto (2007).

[17] These estimates are based on results summarized in Anderson and Valenzuela (2007). I am grateful to these authors for having shared the disaggregated results for Argentina's different agro-industrial sectors included in their model.

[18] The rates of export taxes used in Anderson and Valenzuela (2007) are prior to the implementation of QRs on beef, wheat, and dairy products that started to be implemented in 2006. To this extent, the impact effect of eliminating export barriers on output and employment presented in this section are underestimates of the true effects: once again, a conservative assumption.

VI Beef and Poverty

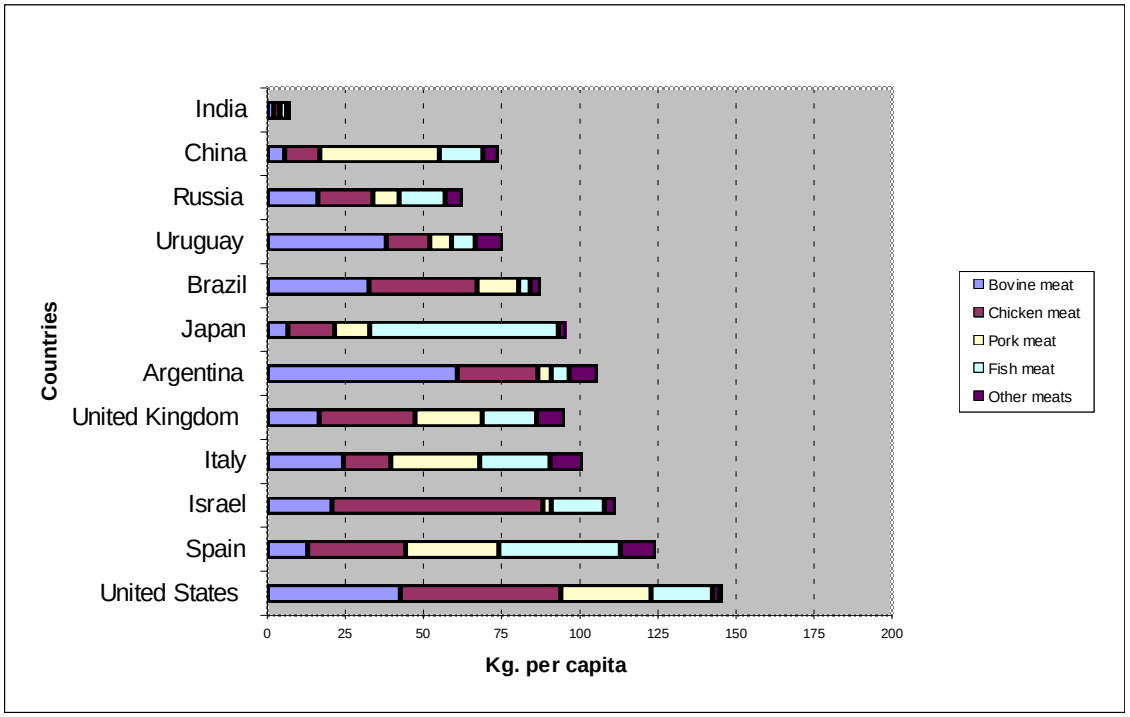
The purpose of this section is to summarize the causes that have led to the long-run stagnation of Argentina's beef producing sector. The discussion serves to illustrate what could happen to other sectors if their exports continue to be taxed heavily.

VI.1 Price-setting scenario

Beef production has remained stagnant for more than 20 years, and in the process, Argentina lost its position as the world's largest beef exporters, which it held in the early 1970s. This section argues that this decline is caused to a greater extent by governmental controls on meat prices than by sanitary problems or multilateral protectionism. This experience should be an eye opener because it could serve as a precedent for cereal production if the government continues to implement high export barriers.

Argentina has always been associated with cattle breeding in the Pampas. It is therefore not surprising that beef is the most important protein-based consumption product of the population. Nevertheless, the high level of consumption shown in Graph 4 can also be attributed to relatively low meat prices. In Argentina, there is a vicious circle; during times of high beef prices, different types of controls have been implemented by successive governments. By maintaining low prices, consumption levels remain artificially high, affecting the cost of living and the BFB (Graph 4). In this way, the stage is set for the next round of controls when meat prices rise again, and governments seek to avoid reporting increasing levels of poverty. However, these policies have not been a successful means of combating poverty.

Graph 4: Structure of annual per capita meat consumption, 2005



Source: Nogués and Porto (2007, chapter VIII).

VI.2 Competition

Monopolistic competition is sometimes pointed to as the cause of high meat prices, but this is unlikely. Despite its relative decline over the last few decades, cattle breeding is still the most territorially widespread farming activity in the country, and one of the most vital employment-generating rural activities. Its importance is further enhanced when livestock-related industries such as the dairy and leather products, as well as the industries that provide inputs and services to these producers, like transport, are included.

The production chain starts with cattle breeding, undertaken mainly by outdoor grazing in thousands of farms. Both breeders and fatteners have a series of marketing options for their production, such as auction fairs, direct sales, and the Liniers cattle market. The relative importance of these marketing channels have shifted over time in response to economic and demographic changes, but competition among the different and numerous buyers has prevailed for decades.

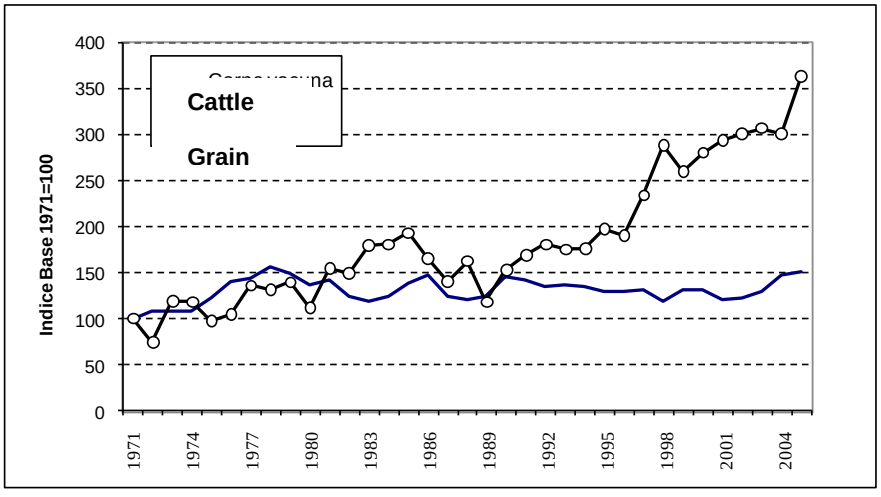
Also, the meat processing and packaging industry consists of several hundred establishments that can be grouped into two main and sometimes overlapping actors: i) the major "consumer" slaughterhouses that supply the domestic market, and ii) the exporting meat packers that produce cooled or frozen boneless cuts, which are mostly exported. Here also and unlike in other countries, actors are numerous and competition is believed to prevail.

In a nutshell, there is a relatively high number of players at the different points along the beef production chain (Nogués *et al.* 2007, for a more detailed discussion). Price distortions that have led to stagnation stem more from government interventions than from concentrated markets or import protection abroad (Nogués *et al.* 2008 for a more detailed discussion).

VI.3 Production and exports

Although cattle breeding occurs throughout Argentine territory, over the last few decades there have been some important changes. As shown in Graph 5, the most outstanding feature has been an increase of crop farming activity at the expense of livestock rearing.

Graph 5: Beef and grain production



Note: Index numbers were set based on the physical volume in metric tons of beef production and grain production, defined as the total volume of cereal, oilseed, and cotton crops.

Source: Based on data from the Secretariat of Agriculture (SAGPyA) and ONCCA.

As Table 7 shows, the stagnation of beef production in Argentina relative to competitors such as Brazil and Uruguay is alarming. All three countries share similar natural conditions and sanitary and trade barriers abroad but only Argentina has experienced stagnation.

Table 7: Beef production and exports (000 tons)

	Argentina		Brazil		Uruguay		Paraguay	
	Production	**Exports**	**Production**	**Exports**	**Production**	**Exports**	**Production**	**Exports**
1990	3,007	474	5,008	249	350	192	192	94
1995	2,688	520	5,360	500	350	143	226	69
2000	2,720	342	6,520	800	462	272	245	88
2005	3,120	740	7,817	1,875	600	400	219	143
2006	3,034	565	9,020	2,084	641	513	317	222
2007	3,218	539	9,470	2,189	669	535	284	189
2007/1990 (%)	7%	14%	89%	779%	91%	178%	48%	101%

Source: Nogués *et al.* (2008).

VI.4 Livestock activity and poverty

The 2002 Agricultural Census shows that primary meat producers with fewer than 200 heads employ 62 percent of the total labor force involved in cattle rearing despite accounting for only 16 percent of the national stock. Table 8 shows that out of the 480,000 workers employed in this activity, 292,000 were working in cattle ranches with 200 or fewer cattle heads. A significant share of these jobs is to be found in the northeastern and northwestern areas of the country, where the incidence of poverty is relatively high. These are precisely the areas to which livestock rearing activity has largely moved in recent years as cereal production has expanded in the Pampas.

Table 8: Employment in cattle farms

Regions	**Total**	**Up to 200 head**	**More than 200 head**	**Poverty incidence (%)[1]**
Country total	469,975	291,568	178,407	45.2%
Pampa	242,737	100,118	142,619	41.7%
Northeast	128,516	106,611	21,905	57.7%
Northwest	74,447	66,017	8,430	56.9%
Cuyo	8,625	7,084	1,541	43.8%
Patagonia	15,650	11,738	3,912	34.4%

[1] The regional ranking of the incidence of poverty has remained stable for a long period of time.

Source: Based on National Agricultural and Livestock Census tables 2002 (Nogués *et al.* 2008).

Graph 6 shows that poverty incidence tends to be higher in the provinces with a greater number of cattle rearing jobs per 1,000 inhabitants. In summary, the evidence supports the hypotheses that cattle rearing generates employment for low-skill workers in poor parts of the country and that supporting its development and integration in international trade would very likely reduce the incidence of poverty. In contrast, the governmental control policies implemented over the last decades have resulted in production stagnation.

The dismantling of discriminatory policies against cattle breeding should be accompanied by measures that defuse the risk of increasing urban poverty. Subsidies aimed at the poor will be required and are preferable to price controls that subsidize the low as well as the high-income sectors of the population (more in Section IX).

Graph 6: Relationship between poverty and the number of cattle-rearing jobs

Source: Based on Census and INDEC (Instituto Nacional de Estadísticas y Censos) data (Nogués *et al.* 2008).

VII Fiscal Impacts of Eliminating Export Taxes

This section quantifies the impact an elimination of export taxes in the agro-industrial sector would have on tax collection and distribution. The calculation was made using 2006 rates and tax collection data. The following effects are discernible:

- Direct effect: Equivalent to a revenue loss to the Treasury of 8,167 million pesos collected from 2006 agro-industrial exports.
- Indirect effect 1: Additional collection from the income and other taxes assuming quantities produced remain unchanged.
- Indirect effect 2: Additional government revenue from income and other taxes associated with the expansion of agro-industrial production triggered by higher producer prices from elimination of export barriers. The numbers reported in Table 9 are based on conservative assumptions regarding agricultural output response.

Table 9 shows the detailed effects and the legal jurisdiction breakdown between the central government and the provinces. Estimates show a consolidated loss of 2,179 million pesos, an amount that should be easy to finance with some reduction in unproductive expenditures and some multilateral financing, for example.[19] Estimates show that even in the worst-case scenario, once all the adjustments are completed, some 73 percent of the total initial revenue loss would be recovered with the current tax structure of the country.

Regarding the timing of the different effects:

- The direct effect on collection loss is immediate.
- Indirect effect 1 can also occur quite quickly, for example by withholding the income tax at Customs.
- Indirect effect 2 takes a longer time to be felt since output response to the domestic price increases produced by the elimination of export taxes develops gradually.

Table 9: Tax collection effects of eliminating export taxes (millions of pesos)

Effect	Tax	Consolidated Impact	National Treasury	Provinces
Direct	Export taxes	-8,167	-8,167	--
Indirect 1	Income and other taxes	5,359	2,857	2,508
Indirect 2	Taxes on expansion of agro-industry	628	368	260
Total Consolidated	Assumes conservative output response	-2,179	-4,946	2,768

Source: Nogués and Porto (2007, chapter X).

The salient point refers to the distribution of the different revenue effects. Thus, while the Treasury of the National Government stands to lose 4,946 million pesos, the provinces stand to gain 2,768 million pesos. Because export taxes are not shared, provinces from which the resources are withdrawn become dependent on the Central Government in order to finance part of their expenditures.[20]

[19] An equivalent land tax could also be implemented. See discussion in last section.
[20] The current system has its legal basis in the "Codigo Aduanero," a Law that dates back to the 1976 military government. This legal basis, nevertheless, has been challenged by several political actors (opposition parties) and constitutional experts.

VIII Recent Developments

I now turn to a discussion of the recent increases in export taxes and the tensions that these and other measures have triggered between the farm sector and the Central Government. On March 11, 2008, the government announced new and higher variable export taxes on soybeans and oilseeds and slightly lower but also variable rates on maize and wheat.[21] Primary producers opposed the new measures, and an upheaval began in the countryside that eventually resulted in the blockade of the country's major freeways and roads. The blockade ended on April 1, but tensions continued and in June, President Cristina Fernández-Kirchner decided to send Resolution 125, which had implemented the variable rates, to the Congress for ratification.

Not enough time has elapsed between these events and the writing of this paper to offer a balanced opinion on the impacts of the blockade. Therefore, this section will attempt to answer the following questions: i) why did primary producers decide to take such drastic actions? ii) how much did these actions cost? iii) what triggered the waning of the tensions? iv) what are the net benefits or costs to producers? and, v) what was the outcome of the Congressional vote?

VIII.1 Causes of the road blockade

Increasing export taxes on some products to 40-50 percent with marginal rates higher than 90% was the "straw that broke the camel's back." An increasing number of major primary sectors were now impacted by higher export controls. Dairy producers have suffered the consequences of export reference prices and price controls. As mentioned above, beef and wheat producers have suffered the consequences of export taxes and export quotas including prohibitions. Maize and soybean producers have seen their incomes reduced by ever increasing rates. Table 10 shows the recent escalation of the variable export tax rates. The announcement of March 11 came at a time when soybean and sunflower producers were beginning their harvest.

Table 10: Export tax rates (%)

Product	2006/2007	November 7, 2007	March 11, 2008*
Soybean	27.5	35	44
Sunflower	27.5	35	39
Wheat	20	28	27
Maize	20	25	24

* Variable rates corresponding to international prices prevailing that date.
Source: http://www.lanadon.com/ar/anexos/informe/08/37085.pdf.

The March 11 announcement signaled a red light not only to soybean and sunflower producers particularly affected by the new measures, but also to others who feared they would be targeted next. The consequences of the variable rates come close to the fixing of maximum sales price, and in any case, they result in a significant reduction in net farm incomes.[22]

[21] As mentioned, export taxes previously increased in early November 2007 (http://www.laopinion-rafaela.com.ar/opinion/2007/11/08/e7b0863.php). In both instances, the measures were supported by political statements in favor of reducing the impact that rising international prices were having on domestic consumers.

[22] By one estimate, the new tax rates imply net margins equivalent to those prevailing in 2003 (Cristini and Bermudez 2008). The following table shows how the rates vary for different international soybean prices.

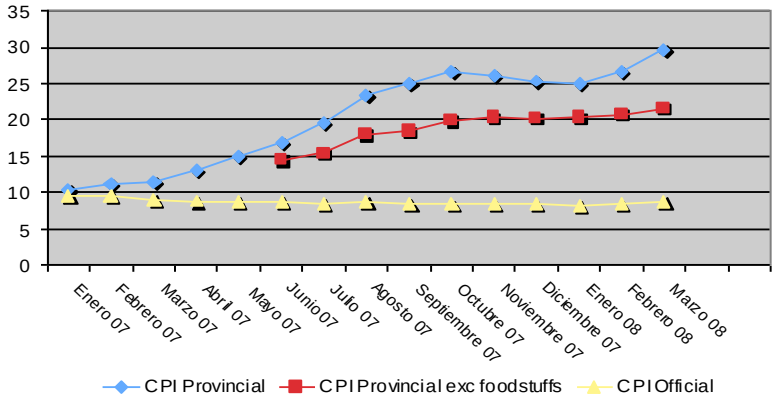
International prices (dollars/ton)	**Export tax rates (%)**
0-200	23.5
201-300	from 23.5% to 28%
301-400	from 28% to 36%
401-500	from 36% to 43%
501-600	from 43% to 49%
More than 600	from 49

Recall that export taxes are applied on gross and not net income. Therefore, rates close to 50 percent imply a drastic cut in incomes that can be supported only by those managing some of the best farmlands in the country. It is therefore not surprising that higher export taxes and rapidly increasing input costs[23] could result in a fraction of marginal lands going out of production. This, plus a less sophisticated and costly technological input package applied to the next planting season, could reduce cereal production levels for the first time after a string of yearly increases.[24]

As mentioned, these measures came just a few months after the previous government of Nestor Kirchner had announced on November 7, 2007, new and higher rates on products listed in Table 10. Since then, the government has justified its measures with the ever-increasing international prices of these products.[25] It is worth recalling that just a couple of years ago, the former Minister of Economics who introduced the variable rates insisted in his book "Sin Atajos" that export taxes should not be higher than 8 percent.

There also are increasingly serious macroeconomic problems as reflected by an increasing rate of inflation. Under these circumstances, the government's manipulation of the cost of living index in order to show lower inflation (Graph 7) stems from two main intentions: i) paying lower interest rate amortization on government-indexed bonds and, ii) controlling price expectations. Not surprisingly, both objectives have not been met, and today Argentina's sovereign risk remains one of the highest in Latin America, and the country has been shut off from access to international capital markets.

Graph 7: National and Provincial estimates of the consumer price index (%)



Source: SEL (2008).

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[23] For example, the following increases in input prices have taken place during the last year: glyphosate from US$2 to US$7 per liter; urea from US$300 to US$600 per ton, and phosphorus from US$450 to US$1,100 per ton (La Nación Rural March 29).

[24] There is always a rate after which the level of production and tax collection begins to decline. Preliminary estimates show that in the northeast, where some 500,000 hectares are planted, the new measures have reduced soybean gross margins by around 60 percent (Cronista Comercial March 26).

[25] The announcement of the new rates were justified on the basis that the following increases in international prices had taken place during the previous six months: soybean: 68 percent; sunflower: 91 percent; maize: 39 percent, and wheat 38 percent (http://www.lanacion.com.ar/anexos/Informe/08/37085.pdf).

In any event, shortly after the announcement of March 11, primary agricultural producers feared that their net incomes would be wiped out. This led to the spontaneous implementation of the road blockade that froze truck traffic carrying agricultural products to the main urban centers and shipping ports. This high degree of rural cohesiveness is a historically unique event that finds the whole countryside (big and small producers alike) united and important segments of the urban population supporting them. How much have these actions cost?

VIII.2 Cost of the road blockade

It will take some time before reasonable estimates of the cost associated with the blockade are completed. Here, some preliminary estimates are attempted. At the microeconomic level, newspaper articles have cited that during March, the country stopped exporting around 4.7 million tons of grains and their derivatives such as vegetable oils. For example, Argentina did not comply with contracts totaling 2.5 million tons of maize exports. Towards the end of the road blockade, some 75 ships were waiting for grains in the ports of Rosario at very high daily demurrage costs. The daily arrival of trucks to these ports during similar weeks declined by 67 percent--from 5,587 in 2007 to 1,861 in 2008 (Cronista Comercial March 26).

At a more macroeconomic level, newspaper articles have reported some cost estimates. The initial numbers raise these costs to around 2,500 million pesos (or around US $800 million). It is unclear how much of these costs can be recovered with the lifting of the blockade. Recent macroeconomic indicators have led most observers to argue that the conflict has contributed to a worsening of the economy.

VIII.3 What triggered the lifting of the blockade?

Two major factors led primary producers to end the blockade. Twenty days after it was implemented, important products in the consumption basket did not reach supermarkets, particularly in urban cities. As a consequence, food prices increased rapidly. Furthermore, despite the government's refusal to back down from the measures announced on March 11, it proposed alternative actions that calmed producers at least temporarily.

Some of the new government measures promised the day before the blockade was lifted include:

- Small and medium farmers producing no more than 500 tons of soybean and oilseeds will be compensated for the difference between the new and the previous 35 percent fixed export tax rate.
- The truck rates faced by producers located more than 400 kilometers from the closest port will be subsidized.
- The wheat export ban will be lifted.
- A new Undersecretary for Rural Development and Family Agriculture will be created under the Secretary of Agriculture.
- Banco Nación will offer subsidized credit lines.

VIII.4 Other consequences.

VIII.4.1 Political effects

To some extent, the lasting tensions are rooted in the ideological vision held by the government that it is just and equitable to heavily tax large landowners and redistribute the proceeds to smaller ones and other poor segments of the population. Improved income distribution is an important objective for Argentina, but the four major agricultural associations came together for the first time in history to argue that the imposition of export taxes is not the right strategy.

This included Sociedad Rural Argentina (SRA), CONINAGRO (Confederación Inter-Cooperativa Agropecuaria), Federación Agraria Argentina (FAA), and Confederaciones Rurales de Argentina (CRA).[26] It is of interest to note that FAA is the organization for the small and medium agricultural producers who gave major political support to the elections of both former President Nestor Kirchner and Cristina Fernández-Kirchner. The new confrontational stance of FAA and its strong alliance with the other organizations is thus a novel development.

It is also important to note the political divisions triggered by the blockade between some provincial governors and the government. At the provincial level, the biggest contributors of export tax revenues are the province of Buenos Aires (30 percent), Córdoba (25 percent), and Santa Fé (21 percent). While the governor of the first remains loyal to the President (in the absence of assistance from the national treasury, there is no way that this province could finance its current expenditures), the governor of Santa Fé is a political competitor, and Córdoba's governor has sided with farmers.

VIII.4.2 Increased public awareness

As discussed in Section VII, unlike Argentina's income and value added taxes, export taxes are not shared with the provinces. The collection of these taxes goes to the national treasury and the Central Government allocates these revenues on discretionary basis. As a consequence of this and other adjustments approved in recent years, the percent of automatic revenue-sharing going to the provinces has dropped from 45-50% to 25-30%

As argued in Section VII, the Central Government not only extracts resources from farmers and the countryside via export taxes; but also decreases provincial revenues from income taxes due to the resulting net reduction of agricultural income. Therefore, provinces lose not only on account of the export taxes but also, from lower receipts of income taxes. A number of newspaper editorials and articles have shown how much the government extracts from the countryside in relation to what it gives back to it. Public dissatisfaction with Argentina's tax structure[27] has increased and the government's popularity has dropped significantly.

VIII.4.3 Legal Issues

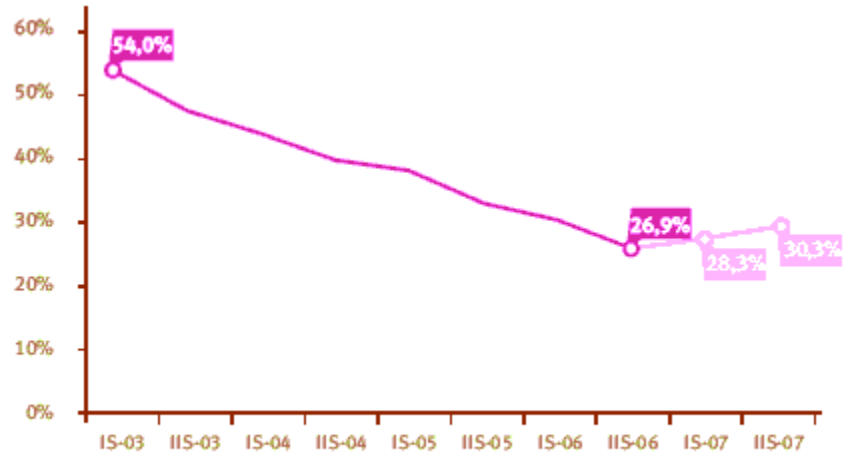
The legal base of these taxes is also being questioned, since they run contrary to the "no taxation without representation" principle. Since they were imposed through a resolution rather than by the legislature, they may be contrary to the letter and spirit of the Constitution, as suggested by some members of the Supreme Court.

VIII.4.4 Social effects

As prices of basic consumer goods rose during the March road blockade and reached new heights, Argentines became poorer. Because the government also manipulates the prices that make up the cost of living index (Graph 8), their real impact does not show up in the official measures of the incidence of poverty. For example, for the month of March, the official CPI showed a monthly inflation of 1.2 percent, but independent analysts put it at 3 percent. This divide between official and independent estimates of consumer price inflation started in January 2007. There is little doubt among analysts that the incidence of poverty has been increasing for several months.[28]

[26] There were also a few industries supplying inputs to the agricultural sector, such as the producers of machinery, that supported the blockade.
[27] In smaller towns (intendencias), the tax-expenditure disequilibria can also be quite acute. For example, the zone of Inriville, a small town in southern Córdoba, sent 100 million pesos in export taxes to the Treasury in 2007, but received only 4 million pesos as revenue from the federal government (La Nación, March 29).
[28] SEL (2008).

Graph 8: Incidence of poverty



Source: SEL (2007).

VIII.5 Congressional vote

As mentioned, in June 2008 President Ferenandez-Kirchner sent Resolution 125 to Congress for approval. Among the justification given for the increase in export taxes was: i) income distribution must improve, ii) distribution cannot improve if the poor are faced with higher food prices iii) Argentina should adjust its trade policies to prevent food prices from rising, just as other countries are doing.

Resolution 125 was approved by a narrow margin (129 to 122) in the Lower House, due to the inclusion of rebate schemes for small farmers. The matter was voted on in the Senate on July 17, and the Vice President ended up casting a tie-breaking vote against the resolution. This close, but decisive vote, has led the President to abolish Resolution 125 (Decree 1176/08), and so the export taxes for soybean, wheat, maize and sunflower are now back to where they were set on November 2007 (Table 10).

In a nutshell, for the first time in decades, the road blockade and the evolving tensions demonstrated to farmers the power of cohesiveness. Four other achievements can be attributed to the strong stance by the countryside: i) partial support from the urban population in the major cities; ii) increased public awareness of a tax system that runs contrary to the Federal spirit of the country and the Constitution; and iii) movement by opposition parties in favor of Congressional intervention. How far these achievements serve to advance the goal of implementing more rational and balanced policies on agro-industrial exports remains to be seen, but the economic, political, legal, and social seeds in favor of reform have been planted.

IX Policy suggestions

The following suggestions are restricted to export barriers having direct microeconomic effects on agro-industries and on poverty:[29]

IX.1 Quantitative restrictions

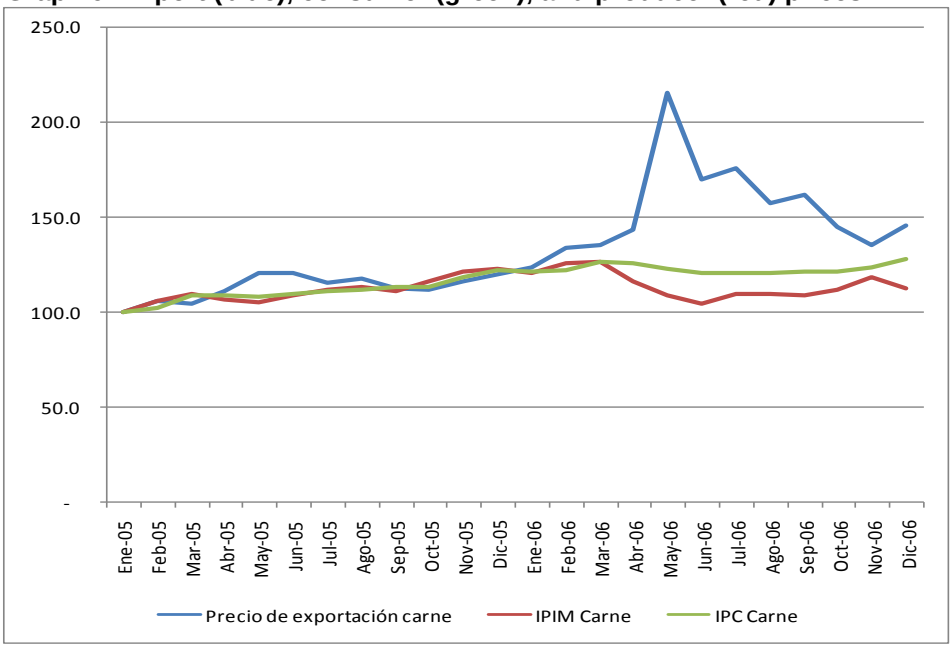
Although there are some arguments in support of export taxes, there are none for QRs:

1. They do not produce government revenues.
2. Their administration requires the creation and financing of a bureaucratic apparatus.
3. They trigger rent-seeking activities and income losses that go well beyond the usual welfare triangles associated with misallocation of resources.
4. In Argentina, their administration has strengthened monopolistic positions in concentrated segments of several agro-industrial chains.
5. They reduce prices faced by farmers significantly more than those for consumers.

Regarding the last two points, the following graph illustrates the price impact of export prohibitions on beef introduced in early 2006. At that time, export prices jumped while prices paid to producers declined quite drastically.[30] Later, when this policy was substituted with a monthly export quota of 40,000 tons, the degree of price divergence declined, but the price gap opened by QRs has been maintained over time. Since then, prohibitions have been often reinstated and during most of 2008, this has been the case.

At the peak of the restrictions, producer prices had declined by around 30 percent while, as mentioned in Section III, consumer prices never declined more than 10 percent and more likely never more than 5 percent. The difference represents pure rent that goes to the exporting companies, namely the most concentrated segment of the beef chain.

Graph 9: Export (blue), consumer (green), and producer (red) prices



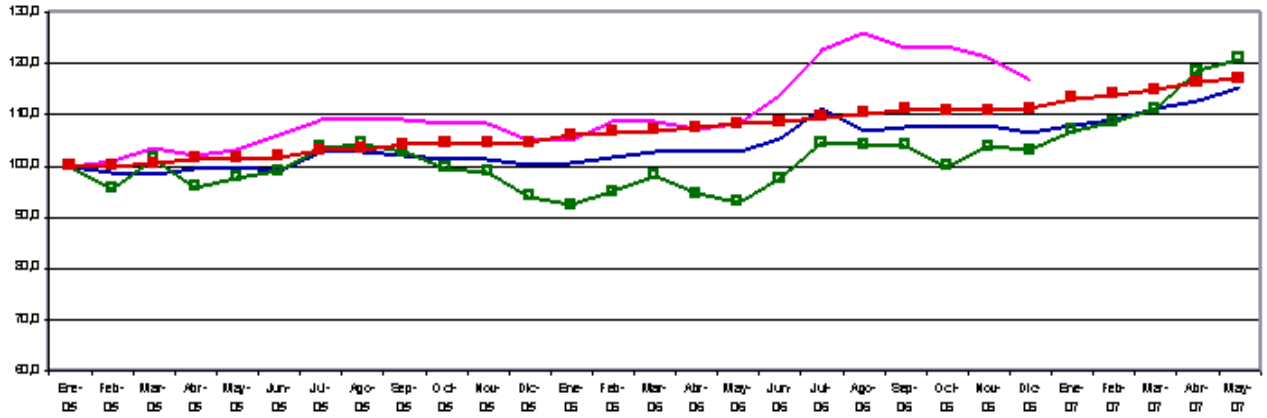
Source: Nogués and Porto (2007, chapter VIII).

[29] Argentina is facing increasing and delicate macroeconomic problems, but this paper has not addressed them in depth.

[30] The initial impact on export prices was due to the fact that the Hilton exports that carry a rent premium were excluded from the prohibition.

The next graph serves to compare Argentina with the price trends in Uruguay, a country whose exports have remained free of governmental interventions. When Argentina introduced prohibitions, prices paid to Uruguay producers increased as international demand shifted to non-restricted markets, but more recently consumer and producer prices have returned closer to historical trends.

Graph 10: Uruguay index of prices paid to producers (pink), by consumers (blue and green) and the cost of living (red)



Based on the above evidence, QRs should be eliminated rapidly for beef exports as well as other products that have been periodically affected by them, such as wheat and dairy products.

IX.2 Price controls

As mentioned, by manipulating food (and other) prices that make up the cost of living, the government has severely distorted the official inflation rate. The long-run costs of losing credibility in terms of country risk and access to international financing is higher than the country's short-run benefits.

Many of the distortions introduced to the official index mirror price controls on basic food items, which are implemented and enforced in big supermarket chains. Nevertheless as mentioned in the previous section, the true inflation rate measured by statistics from provinces that are politically independent from the National Government suggests that these controls have failed and created scarcities and black markets. Again, while some emergency food price controls could be justified, the experience of Argentina suggests that there are risks of maintaining them for too long out of equilibrium.

IX.3 Export taxes

Like quantitative restrictions, export taxes reduce prices and investment incentives with negative impacts on the growth of total agricultural factor productivity. But in contrast to QRs, in Argentina at least, they have a positive effect on treasury revenues. Also, unlike other revenue mechanisms, export taxes are easy to collect and difficult to evade.

On the negative side, analysis shows that export taxes increase the incidence of poverty and reduce GDP, and therefore they should also be eliminated. Nevertheless, the time-path of the socio-economic and fiscal effects suggests that this elimination should be gradual or else accompanied by a social program that would reduce the negative impact of higher food prices on the poorest segments of the population. The experience of Argentina also suggests that if governments wish to avoid creating conflicts with primary producers, they would be wise to set clear rules of the game and refrain from temptations to extract rents whenever world prices increase. Conflicts with rural producers can worsen the price prospects of basic foods, particularly in urban centers.

Finally, Argentina has justified none of its export taxes on the basis of monopoly power or infant-industries arguments. Perhaps for some products it could: soybeans might be one of them. However, setting policies along these lines has its own risks.[31]

IX.4 Differential export taxes

Export taxes that are higher on primary than on processed foodstuffs are intended to strengthen processing incentives. Although at a microeconomic level this might be the case, Argentina remains one of the most efficient agricultural producers, yet has little value added to its primary products. The reason, in my view, is more associated with the long-run macroeconomic instability that has characterized the country than with insufficient micro-incentives to add value. This instability deters investors from creating opportunities with long-run payoffs.

On a more political-economy line of argumentation, differential export taxes benefit the more concentrated parts of the agro-industrial chains and, therefore, strengthen the lobby in favor of the status quo. Thus, tax escalation weakens cohesiveness in favor of openness.

In much the same way that uniform tariffs are preferred to escalated tariffs, export taxes should be as uniform as possible. Over time, the experience of countries like Chile shows that such a structure tends to reduce rent-seeking activities.

IX.5 Land taxes

Taxes on land are significantly less distortionary than on exports, yet to my knowledge, there has not been a debate on whether and how this substitution could take place since the early 1980s.[32] Efforts to elicit this question could have important long-run economic and social implications.

Argentina has a law on taxation of potential income from land but is has never been applied. According to one estimate, implementation of such a tax could collect between two and three times more of the revenue from export taxes collected in 2006 and leave agricultural gross margins unchanged (Sturzenegger 2006).

IX.6 Poverty-targeted subsidies

Because in the short run, elimination of export taxes will likely increase prices more than they increase income, social programs must be created to soften or avoid the costs of adjustments falling on the poor. Table 11 shows the extent to which food subsidy prices through export taxes benefit consumers along the distribution of income. Clearly, around 70 percent of these subsidies are filtered to the highest income groups (deciles 5 to 10). Therefore, on the consumption side, export taxes are also regressive.

Table 11: Share in consumption by income decile (%)

Decile	Bread	Rice	Beef	Dairy products
1-4	30	35	29	16
5-10	70	65	71	84

Source: Nogués and Porto (2007, chapter X).

The numbers in Table 12 indicate that the cost of a food stamp program that would eliminate the short-run poverty effects of price increases from a fast elimination of export taxes is in the order of 0.5-1 percent of GDP.

[31] After the U.S. and Brazil, Argentina is the third soybean producer, with 40,500 tons production (2005/2006) and holding a world market share of around 18 percent (http://www.fyo.com/granos/estadisticas/soja.asp).

[32] The history of the World Bank documents the case of an adjustment loan whose purpose was to substitute export taxation with a land tax. The loan was disbursed anyway in spite of non-compliance by Argentina.

Table 12: Cost of a targeted food subsidy program

				Incidence without income adjustment (%)	
Monthly subsidy ($)	**Maximum income**	**Annual cost, mil $ (% GDP)**	**Persons**	**Poverty**	**Indigence**
100	200	5,000 (.8)	4,141,000	23	.4
50	250	3,500 (.5)	5,835,000	24.4	3.5
Base period				24.6	7.3
Price effect				27.2	9.1

Source: Based on Nogués and Porto (2007, chapter X).

For example, at 2006 prices a subsidy of 50 pesos per month targeted to the poorest 5.8 million would have cost around 5 billion pesos or around 0.5 percent of GDP in 2006. Such a subsidy would have compensated the short-run price increase of removing export taxes while leaving the incidence of poverty at 24.4 percent and the incidence of indigence at 3.5 percent, both lower than the base values. Recall that this would be a short-run program while higher income levels materialize.

IX.7 Subsidies to agro-industries

Again, with the goal of subsidizing food prices, the government has also implemented subsidies targeted to some agro-industrial products. For example, given the increasing trend of international maize prices, the Government subsidized chicken meat producers who use maize as one of their main inputs. This and other similar subsidies were initiated during 2007 when a US $500 million dollar fund was created with 80 percent coming from export taxes on soybeans and US $100 million from the Treasury. Again, the aim of these subsidies is to support the cost of food to all consumers and not just the poor.

Table 13 shows that most of these subsidies have been given to relatively big food processors and not to primary producers. For example, the three sectors receiving the highest amounts were: 30 chicken meat processors with US$52.5 million; nine vegetable oil producers with US$55 million, and 54 wheat milling processors with US$66 million.[33]

Table 13: Subsidies to agro-industries

Number and amount of subsidy receiving enterprises	
Sector	**Number (US$ million)**
Chicken processors	33 (54)
Dairy products	10 (46)
Vegetable oil	9 (56)
Wheat flour	54 (67)
Total cost of subsidies (% GDP)	0.3

Source: Sociedad Rural Argentina

Experience from the recent past indicates that government subsidies to some agro-industrial products have been too concentrated at the industrial segments of the agro-industrial chains to bring about any noticeable impact on farm incomes or consumer prices. As for export taxes, any impact that these subsidies could have had on consumer prices are regressive in the sense that most of them are

[33] Additional data can be found in http://www.ruralarg.org.ar/web/uploads/temporarios/res_compensaciones_14_de_enero_2008.pdf. Subsidies also increase the risk of countervailing measures by importing countries. Nevertheless, the only completed case has been chicken meat imports by Chile on the argument that maize subsidies to poultry processors represented an unfair advantage. Nevertheless, the final determination recently published was negative.

appropriated by the richest segments of the population.[34] In our view, these programs should be dismantled and the funds thereby released and invested in targeted subsidies to the poor.

IX.8 Measurement errors, poverty, and policies

It is of interest to note that measurement errors in the cost structure of the basic food basket distort the measurement of the incidence of poverty, and in the case of Argentina, this exacerbates discriminatory policies against beef producers. The structure of this basket is based on an expenditure and consumption survey of the late Eighties. Table 14 shows that since then per capita annual beef consumption dropped from 85 to around 65 kilos, while poultry meat consumption increased from 10 in 1980 to around 30 kilos today.

Table 14: Per capita annual meat consumption (kilos)

Country	Bovine	Pork	Chicken	Total
Argentina	64.5	5.7	30	94.6
Brazil	36.6	17	26	79.6
Uruguay	40.2	8.5	14	62.7

Source: Argentina: SAGPyA; Brazil: www.agrocarnes.com.br; Uruguay: Ministerio de Agricultura.

According to the BFB cost structure of the 1980s, the ratio of bovine to poultry meat consumption is 8.5, while the "true" ratio has recently declined to around 2.2. Therefore, when beef prices rise, the official measure of the incidence of poverty increases more than it really does, creating unnecessarily high pressures for intervention against this product. As mentioned in Section VI, Argentina's long-run stagnation in beef production should be primarily attributed to these recurrently discriminatory policies. The policy suggestion here is that although poverty can be measured (and is measured) in different ways by different countries, the underlying data used in any methodology should be as precise and current as possible.

IX.9 Trade rules and trade negotiations

The absence of multilateral and regional trade rules on export restrictions is worrisome and facilitates the proliferation of export taxation on food and other products by several countries. The example of Argentina illustrates how a country can hurt its agro-industrial sector by severely restricting its exports. For efficient producers, the lack of trade rules and obligations on export barriers opens the door to discretionary policies. In the case of Argentina, implementation of trade taxes in 2002 was justified by the need to reduce the social costs of adjustments to a serious crisis that led to a poverty rate greater than 50 percent. Seven years have elapsed since then, and in the meantime, the economy has grown rapidly. Yet today, discrimination against agro-industrial exports is higher than during the midst of the crisis.[35]

Discriminatory policies are facilitated not only by an absence of multilateral and regional trade rules, but also by a political system that lacks representation of agro-industries and a rural movement that until recently has not been able to unite cohesively.[36] Trade negotiations need to incorporate trade taxes as an important agenda item.[37]

[34] As stressed above, the government has distributed subsidies to the industrial segment of agricultural chains while simultaneously fixing the sales price of these enterprises at the price level prevailing in big supermarket chains. In turn, this concentrated segment has used price controls as the main argument to negotiate the prices paid to thousands of producers. In this way, the elimination of foreign competition has redistributed the income of several AIC in favor of the concentrated industrial segment to the detriment of primary producers.

[35] As mentioned, the costs to Argentina of its own trade restrictions are higher than the costs it suffers from multilateral agricultural protectionism (Nogués and Porto 2007).

[36] Only a couple of Congressmen are known to advocate these interests. It is also illustrative to remember that since the 1950s, Argentina lacks a Ministry of Agriculture.

[37] To be sure, there are some exceptions. According to Piemartini (2004), the following agreements include some restrictions on export barriers: European Union, NAFTA, and Canada-Chile.

X Concluding Remarks

The world is experiencing a period of high food prices. Export taxes and quantitative restrictions on major food exports imposed by net food exporting countries are exacerbating the price increases. Although such measures are motivated by a desire to mitigate the impact on domestic prices, these barriers reduce international supply and intensify the pressures on international food prices.

To what extent do these policies mitigate food prices and poverty within the countries imposing them? By using data from Argentina, a country that heavily taxes its food exports, this paper has shown that such policies can actually worsen the economic and social performance of the country.

Elimination of these barriers could increase GDP anywhere between 2 and 4 percent and employment by around 300,000 jobs. Although in the long run poverty could decline by as much as half a million persons, in the short run the price adjustment could increase the incidence. Estimates suggest that a targeted social program aimed at subsidizing around 5 million poor people would cost around 0.5 to 1 percent of GDP. Such a program would ensure that poverty never increases beyond base levels. In the case of Argentina this can be financed by eliminating the subsidies given essentially to food processors (0.3 percent of GDP), reducing inefficient expenditures, and implementing a land tax.

While no two countries are exactly alike, this research demonstrates that other food exporting countries can eliminate their export barriers with significant benefits to their economies and simultaneously create greater stability in international food markets. There are not that many major net food exporting countries, and most of them have refrained from implementing extensive export barriers. The experience of Argentina suggests that sustaining export openness is the correct policy to follow. Here the international financial and trade institutions have an important role to play.

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