

# Political Economy of Agricultural Distortions: The Literature to Date

Johan F.M. Swinnen

LICOS Centre for Institutions and Economic Performance

University of Leuven (KUL)

[Jo.Swinnen@econ.kuleuven.be](mailto:Jo.Swinnen@econ.kuleuven.be)

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### **Abstract**

The 1980s and first half of the 1990s were a very active period in the field of political economy of agricultural protection. While the past decade has witnessed a slowdown in this area, there have been very important developments on political economy in other parts of the economics profession. This paper reviews key new insights and developments in the general political economy literature and draws implications for the study of the political economy of distortions to agricultural incentives.

Keywords: Political economy, agricultural distortions, high-income countries, developing countries

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Contact author details:

Johan Swinnen  
Department of Economics  
Katholieke Universiteit Leuven  
Naamsestraat 69, Room 02.164  
3000 Leuven, Belgium  
Phone + 32 16 32 6598  
[jo.swinnen@econ.kuleuven.be](mailto:jo.swinnen@econ.kuleuven.be)

# **Political Economy of Agricultural Distortions: The Literature to Date**

Johan F.M. Swinnen

The 1980s and first half of the 1990s were a very active period in the field of political economy of agricultural protection and distortions. The research was triggered by a combination of factors. First and foremost there was the puzzling question: why was agriculture supported in rich countries and taxed in poor countries? Second, emerging general theories of “new political economy” were coming out from the University of Chicago with the important contributions of Stigler (1971), Peltzman (1976) and Becker (1983), from the public choice school by Buchanan and Tullock (1962), and from the influential work by Downs (1957) and Olson (1965). A third factor was the arrival of new data, in particular the developing country dataset assembled as part of the World Bank study organized by Krueger, Schiff and Valdés (1988, 1991) and the high-income dataset compiled by Anderson, Hayami and Others (1986). The combination of an intriguing question, a rich set of new general theories to apply, and fascinating data induced a rich and vast literature on the political economy of agricultural distortions in the 1980s and the first part of the 1990s, with important contributions by, among others, Kym Anderson, Robert Bates, Harry de Gorter, Bruce Gardner, Yujiro Hayami, and Gordon Rausser. In our Chapter for the Handbook of Agricultural Economics, Harry de Gorter and I reviewed most of this empirical and theoretical literature on the political economy of agricultural economics (de Gorter and Swinnen 2002).

Research interest in the political economy of agricultural policies was waning in the second part of the 1990s and has been less intensive in the past decade – although some important contributions have been made, as explained below.

However, some of the conditions that sparked an intense interest in the political economy of agricultural policies in the 1980s is present again at this moment. First, there are new and innovative datasets available, the most important being the global dataset compiled by the World Bank’s agricultural distortions project (Anderson and Valenzuela 2008). This new data set provides a much wider and longer series of data on agricultural distortions than has ever been available. However, in addition, there are also much better series of data available on some (potential) explanatory variables from a variety of sources. This holds in particular for institutional and political variables, where data

series have been created or improved, especially by the Database of Political Institutions (DPI) project under the auspices of the World Bank (see Beck et al. (2001), since updated).

Second, there have been important new developments on political economy in other parts of the economics profession. This includes extensions of the Grossman and Helpman (1994, 1995, 2001, 2002) model in the field of the political economy of trade policies, by Acemoglu, Johnson and Robinson (2001) and colleagues on the interactions between institutions and policy-making, by Baron (1994) and colleagues on decision-making rules and the role of agenda-setting; by North, Wallis and Weingast (2009) and colleagues on limited access orders, by Roland (2000) and colleagues on the political economy of transition, by Shleifer (1997) and colleagues on the role of bureaucracies and corruption in policy-making, and by Persson and Tabellini (2000, 2003) on the “political economics” of fiscal policy and macro-economic policy and on the role of constitutions. There are a number of books and survey papers that provide good overviews of these recent developments. They include Roland (2000), Grossman and Helpman (2001, 2002), Persson and Tabellini (2000, 2003), Gawande and Krishna (2003), Acemoglu and Robinson (2006), Weingast and Wittman (2006), Dewan and Shepsle (2008a,b) and Rausser, Swinnen and Zusman (2010). See also the next chapter in this volume (Rausser and Roland 2010). While the present chapter cannot review this entire literature, it focuses on a selection of these developments, theoretical and empirical, which appear particularly relevant for the study of the political economy of agricultural distortions.

The third reason for the return to analyzing reasons for agricultural distortions is that there are new questions to be addressed. One is: how have important institutional and political reforms in the 1980s and the 1990s affected agricultural distortions? In particular, how have they been affected by changes in international organizations and international trade agreements, including the Uruguay Round Agreement on Agriculture, the establishment of the WTO, EU enlargement, and preferential trading agreements such as NAFTA?

This chapter begins with a brief summary of insights from the earlier literature, and then reviews new insights of the general political economy literature, focusing particularly on those parts that are most relevant for understanding the determinants of (changes in) agricultural distortions.<sup>1</sup> The last section of the chapter draws specific implications for empirical analyses of the political economy of agricultural distortions.

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<sup>1</sup> Important new contributions on the issue of instrument choice in agricultural policy are not reviewed here, but can be found in de Gorter (2008).

## **A brief summary of the literature to the mid-1990s<sup>2</sup>**

Empirical evidence on agricultural protection/taxation that emerged from numerous studies in the 1980s and the 1990s can be summarized by three patterns: the ‘development pattern’, the ‘anti-trade pattern’, and the ‘anti-comparative advantage pattern’ [or ‘relative income pattern’].<sup>3</sup>

The ‘development pattern’ refers both to observations on the positive correlation between agricultural protection and average country incomes across countries and on the historically observed shift from taxation to protection of agricultural producers that countries make as they develop economically.

The ‘anti-trade pattern’ refers to the observation that import-competing sectors (products) tend to be more assisted (or taxed less) than sectors producing exportable products.

The ‘anti-comparative advantage pattern’ [or ‘relative income pattern’] refers to the observation that protection is lower (or taxation higher) for products with a comparative advantage and that protection increases when farm incomes (or incomes in particular farm industries) fall relative to those in the rest of the economy. The latter may occur for any of several reasons such as the world market terms of trade shifting against the commodity, or exchange rate fluctuations, or because of technological innovations, which reduce incomes from producing a specific commodity.<sup>4</sup>

### ***Political economy explanations***

These global patterns of agricultural distortions cannot be explained by economic arguments, but are consistent with predictions from political economy theories. While a large variety of arguments and variables have been included in the models, and with the risk of over-simplifying the insights from the literature, the political economy explanations forwarded in the 1980s and the 1990s focused importantly on (economic) structural factors. In particular several studies have explained how

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<sup>2</sup> See de Gorter and Swinnen (2002) for a more extensive summary and review of that literature

<sup>3</sup> See Anderson, Hayami and Others (1986), Honma and Hayami (1986) and Lindert (1991) for countries of North America and East Asia; Bates (1989) and Krueger, Schiff and Valdés (1988, 1991) for developing countries; Tracy (1989) and Swinnen, Banerjee and de Gorter (2001) for the specific evolution of farm protection in Western European countries; and Gardner (1987) for a perspective on the United States.

<sup>4</sup> Technological innovation effects can come both from within agriculture or from outside. For example, several studies have shown that innovations in agricultural research in the presence of inelastic demand for food may lead to a sufficient decline in farm prices as to the make farmers worse off.

changes in structural conditions in an economy have an impact on the costs of distribution and distortions associated with protection, the intensity of political activities, and the ability to organize politically and influence the government.<sup>5</sup>

As average incomes increase in an economy, changes in the structure of the economy affect the distribution and the size of political costs and benefits of agricultural protection and thus the governments' political incentives in decision making. For example, the share of food in consumer expenditures falls as a share of total expenditure, reducing the opposition to agricultural protection of not only consumers but also capital owners in other sectors who oppose the (wage) inflation pressures that come from increased food costs with agricultural protection.

Another factor that coincides with economic growth is a declining share of agriculture in employment. With a declining number of farmers (in relative terms), the per unit costs of increasing farm incomes through protection decrease for the rest of society.

Further, typically incomes in the rest of the economy grow faster than in agriculture in the course of a country's economic development. This creates political incentives (both on the demand side (farmers) and on the supply side (politicians) to exchange government transfer in exchange for political support. When incomes from farming decline relative to opportunities in other sectors, farmers look for non-market sources of income such as government support, either because returns to investment in lobbying activities are larger than in market activities, or because willingness to vote for/support politicians is strong. For similar reasons governments are more likely to support sectors with a comparative disadvantage than sectors with a comparative advantage.<sup>6</sup> These explanations are consistent with observations of agricultural protection being countercyclical to market conditions.

Political economy theories predict that exports will be subsidized less (or taxed more) than imports because of differences in demand and supply elasticities. The distortions (deadweight costs) and transfer costs of policy intervention typically increase with the commodity's trade balance, i.e., when its net exports increase. Another factor is the differential effect on government border tax revenues. Therefore protection of the sector in many countries is found to increase with decreases in their agricultural trade surplus.

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<sup>5</sup> See e.g. Anderson (1995), Bates and Rogerson (1980) and Swinnen (1994) for theoretical analyses of the impact of these structural variables on agricultural policy.

<sup>6</sup> The relative income hypothesis in agricultural policy is developed formally in de Gorter and Tsur (1991) and Swinnen and de Gorter (1993). Related, more general, theories are provided by Hillman (1982, 1989) and Krueger (1974). An earlier approach, although differently formulated, is Corden's (1974) conservative social welfare function.

With a declining share of agriculture in employment, studies drawing on Olson's (1965) logic of collection action argument have hypothesized that this makes political organization of farmers less costly and therefore is likely to increase effective lobbying of farmers.

### *Empirical studies*

The vast majority of empirical studies on agricultural protection were cross-sectional studies or those using panel with relatively short time periods. While they yielded important insights, the observed trend relationships mask strong occasional fluctuations in protection levels, generally coinciding with periods of general macroeconomic depression and severe food shortages. Such fluctuations demonstrate how sensitive and responsive agricultural protection (income transfers) can be to the external changes. Fluctuations in support to agriculture are clearly visible in the few historical studies using time series data and econometric analyses, such as Gardner (1987). However, these historical studies focus on a single country, making it difficult to generalize.

### *Implications*

An important, and obvious, contribution of the new World Bank dataset by Anderson and Valenzuela (2008) is to provide a much larger dataset of pooled time-series and cross-section data for testing the relative importance of these various theories. Another potential advantage/contribution is that the more extensive dataset will contribute better insights by distinguishing between the "observational equivalence" of competing explanations. This was constrained in previous studies by data limitations. For example, the negative relationship between the share of farmers in the economy and agricultural protection is explained both by the increased effectiveness of political organization argument and by the reduced cost of redistribution argument.

### **Recent developments in the literature**

Interest in the field of political economy of agricultural distortions was waning in the second part of the 1990s, once the above arguments became more established and the puzzling question of why agriculture was subsidized in rich countries and taxed in poor countries apparently received an answer. However, since then important developments have occurred in the general political

economy literature, including important new insights on the political economy of agricultural policies. The most pertinent of those new developments and insights are reviewed in what follows. The discussion is organized under several headings and in each I start with some general developments and end with a discussion of implications for studies on agricultural policies.

### ***Trade theory: growth of the Grossman-Helpman Model***

The widespread presence of trade distortions – despite centuries of economists’ advice in favor of free trade – have puzzled economists for a long time, and have contributed to a vast literature on the political economy of trade (see Rodrik (1995) for an extensive survey). This literature is closely related to studies on the political economy of agricultural policies, and has served as a source of inspiration since many distortions in agricultural markets are trade distortions.

The literature on the political economy of trade policy was transformed by the “Protection for Sale” paper of Grossman and Helpman (1994). The fact that the Grossman-Helpman (GH) model has become the standard model in this field is remarkable, given the fact that the predictions of the original model were inconsistent with some of the basic empirically observed relationships on trade distortions, including with basic patterns of agricultural distortions as summarized above. For example, the GH model does not predict that protection is countercyclical to market incomes. Neither does it predict that sectors in (relative) economic decline will be protected.

Surveys of the political economy of trade literature indicate two useful characteristics of the GH model. According to Rodrik (1995), the main attraction of the GH model is that it provides clear-cut micro foundations for lobbying and its effects in a tractable and fairly general setting. According to Gawande and Krishna (2003), another major advantage of the GH model is for empirical applications: it allows one to go beyond structural econometric models and to relate empirical specifications more closely with theoretical models. The rest of this section focuses on the theoretical developments and the empirical issues are discussed in the next section.

Instead of dismissing the model because of its obvious inconsistencies with the real world, various authors have used the basic structure of the GH model and have modified it to make its theoretical predictions more consistent with reality.

For example, Baldwin and Robert-Nicoud (2007) have expanded the GH model to explain the support that goes to declining industries. They do this by incorporating an asymmetry in the ability of interest groups to appropriate the benefits of lobbying. In an expanding industry, policy-created rents attract new entry that erodes those rents, whereas in declining industries this is not the case. Since sunk market-entry costs create quasi-rents, profits in declining industries can be raised



without attracting entry (as long as the level of quasi-rents is not raised above a normal rate of return on the sunk capital). The result is that losers lobby harder and government policy reflects this.

Cadot, de Melo and Olarreaga (2004) adjust the GH model to make it more consistent with empirical observations by introducing factor-market rivalry and input-output linkages. These extensions of the model give rise to counter lobbying, which yields results that protection escalates with the degree of processing and that rich countries protect agriculture more than industry whereas poor countries do the reverse.

The importance of downstream linkages is also emphasized by Francois, Nelson and Pelkmans-Balaoing (2008). They use a computable general equilibrium (CGE) analysis which partly draws on the GH model to show the importance of the strength of downstream linkages for political weights and its effect on redistributive policy.

### *Implications*

These results are more in line with empirical observations, and provide interesting hypotheses for further testing. In particular, the relationship between farms and agribusiness and food companies (or between raw materials and processed farm products) is sometimes mentioned but seldom tested in studies. The World Bank's agricultural distortions database (Anderson and Valenzuela 2008), and in particular its incorporation into the GTAP data sets (Valenzuela and Anderson 2008), provides an important opportunity to test this relationship, because in the past it was often not possible to separate primary and processed farm products. There is a complex interaction between them. For example, while farmers may be many and dispersed, often food processing and agribusiness companies are few and concentrated, and hence it is easier for them than for farmers to organize. They are also typically more capital intensive than farms, and their shares of employment and GDP decline much slower with economic development than those of primary agriculture (figure 1). This implies that their predicted structural relationships would differ.

### ***Empirical analyses: testing the Grossman-Helpman Model***

The empirical literature on the political economy of trade policy has focused strongly on testing the implications of the factor-endowments and sector-specific models (Mayda and Rodrik 2005). The early empirical work, at least until the late 1980s, mostly involved the estimation of correlations between trade policies and various political economy factors that had been conjectured to be relevant in determining trade policy (Gawande and Krishna 2003). More recently, developments in the theoretical literature were accompanied by new empirical studies, for two reasons. First, the growth

in importance of the GH model in the theoretical literature induced a response by empirical analysts trying to test its predictions. Second, as mentioned already, one of the major advantages of the GH model in empirical work is that it allows one to go beyond the structural econometric models which characterized much empirical work in the 1980s and to relate the empirical specifications more closely to the theoretical models.

However, there are several problems with empirical analyses based on the GH model. First, the estimated importance of lobbying is very small. For example, studies by Goldberg and Maggi (1999) and Gawande and Bandyopadhyay (2000) estimate that the weight associated with lobbying is very low and that for national welfare in the politicians' objective function is much higher than expected. This surprising empirical result has induced several researchers to search for adjustments of the empirical specifications to reduce the estimates of the domestic welfare weight in the political objective function. For example, alternative assumptions have been made by Lopez and Matschke (2006) and Lopez (2008) on the import demand functions, by Mitra, Thomakos and Ulubasoglu (2006) on the political organization schemes, by Gawande and Li (2004) on the effectiveness of lobby contributions, and by Facchini, Van Biesebrouck and Willmann (2006) on rent capturing; and by Francois, Nelson and Pelkmans-Balaoing (2008) who use a CGE approach to assess the weights indirectly.

Second, to estimate the GH model empirically requires data on lobbying. This makes estimating the model interesting for the US where data on lobbying through political action committees (PAC) are available (Bombardini 2005). However, this is typically not the case in other countries, which makes such estimations more problematic. There are a few studies which have tried to estimate the GH model for other countries. They include Gawande, Singuinetti and Bohara (2001) on Mercosur, Mitra, Thomakos and Ulubasoglu (2006) on Turkey, and Belloc and Guerrieri (2008) on the EU. However, where data on actual lobbying are not available, lobby activities are proxied by other indicators in these studies. Typically these proxies are quite ad hoc. For example, the Gawande, Singuinetti and Bohara (2001) study on Mercosur takes industries whose imports surpass the sample mean as actively lobbying for protection. Mitra (1999) makes lobby formation endogenous in the GH framework but as a discrete (0-1) process hence not accounting for heterogeneity within a sector. Bombardini (2005) extends this and shows (theoretically and empirically) how US firms of different sizes have different incentives to participate in lobbying.

### *Implications*

While there appears considerable enthusiasm in this literature as to the benefits of the GH model for more careful econometric work, these benefits appear limited for broad application to agricultural

policy. Actual data on lobbying are typically not available outside the US. Not surprisingly, the only GH applications in agriculture, as far as I know, are to US agricultural policies by Gawande and Hoekman (2006) and to protection of US food industries by Lopez (2008). In other countries, the need to use proxies means that the studies have to rely on indicators used already in earlier structural models – or worse! In fact, the two general applications of the GH model to the EU, by Belloc and Guerrieri (2008) and Francois, Nelson and Pelkmans-Balaoing (2008), both assume *ex ante* that agriculture enjoys a “privileged position for historical reasons” and give agriculture an *ad hoc* dummy with a high value for lobbying – hence not reflecting careful analysis or progress on this issue.

### ***The role of ideology and political institutions***

While the importance of political systems for policy (and thus agricultural policy distortions) has long been emphasized, for example in the seminal work by Buchanan and Tullock (1962), the past decade and a half has witnessed a growing set of studies analyzing the roles of political regimes and ideology on policy making.

Persson and Tabellini (2000, 2003) have made important recent contributions, both theoretically and empirically, in analyzing the relationship between electoral systems and economic policy. To relate some of these insights to agricultural policy making, consider the political regime (or the ‘constitutional choice’ in the framework of, e.g. Aghion, Alesinin and Trebbi 2004) as providing the degree of “insulation” of policy-makers. As such the political regime determines to what extent the government, once appointed, can rule without *ex post* control, what type of majorities it needs to ensure to pass legislation, whether groups have veto power, etc. A crucial factor is (information on) the nature of the politicians who will form the government (that is, the ruler’s preferences): will they implement policies which are good or bad for social welfare if given authority to rule without control? Another factor is how different mechanisms translate voter preferences into controls on government, majority formations, and, hence, policies. These issues not only relate to the differential effects of democracy and autocratic regimes (Acemoglu and Robinson 2006, North, Wallis and Weingast 2009), but also between different electoral systems such as proportional versus majoritarian systems (Rogowski and Kayser 2002, Roelfsema 2004), and the autonomy given to bureaucrats and implementing institutions (Prendergast 2007).

To illustrate the importance of these issues for agricultural policy, I draw on a recent application of these issues to decision-making on agricultural policy in the European Union. Pokrivcak, Crombez and Swinnen (2006) show how agricultural policy reforms there are determined

by a complex interaction of majority voting rules, changes in the external environment, and the preferences of the European Commission (the agenda setting bureaucracy in Brussels). The authors show that reforms are not possible unless external changes are sufficiently large and the influence of the bureaucracy depends on voting rules (an example of the more general principle on insulation discussed above).

In terms of empirical predictions, it is intuitive that a greater insulation of decision-makers implies that they can follow their private preferences to a greater extent. However, this in itself has little predictive power, since there is no direct relationship to be expected between the preferences of rulers and the nature of the political regime on issues such as protectionism (O'Rourke and Taylor 2007). Intuitively one would expect that there may be more variation in policy choices under dictatorial regimes than under democracy, *ceteris paribus*, if dictatorial leaders are less constrained in setting policies. This is consistent with Olper (2007) finding that his regression model works better in democracies than in dictatorships as the government response to pressure from interest groups is stronger in democracies. This may also be the reason why early studies with simple relations between agricultural policy and political regimes in cross-section studies find limited impact (Beghin and Kherallah 1994).

An interesting approach to deal with some of these issues is by Dutt and Mitra (2005), who focus on the impact of ideology but interact the ideology variable with an indicator of the structure of the economy (meaning its relative resource endowment) and an indicator for political liberties, to measure the conditional impact of ideology. Interestingly, they find that a more left-wing government (that is, one that attaches higher weight on the welfare of workers/labor) is more protectionist in the case of capital-abundant countries, but less protectionist in the case of capital scarce countries. They find nuanced evidence of the impact of political institutions. They interpret their results as follows: dictators who have consolidated their power may not face any electoral threats and may have fewer incentives to formulate trade policies according to their ideological affinities. However, if they do decide to favor their core constituent groups, they face less constraints in implementing redistributive trade policies.

An application of this model to agricultural policy is not straightforward, as increasing food costs through agricultural protection hurts both workers and industrial capital. Hence rulers who support "labor" and "capital" would both oppose agricultural protection – as they did in reality (see chapter 6 in this volume by Swinnen (2009) on the history of agricultural protection in Europe). In this sense, distinguishing between right-wing versus left-wing rulers may not yield robust or useful results. For example, right-wing dictators may be more inclined to support agriculture if agriculture is dominated by large-scale farms and estates, typical supporters of right-wing rules; and not if

agriculture is dominated by small farms and peasants, a potential revolutionary group. Left-wing regimes may do the opposite.

The first studies (and the only one so far) which has tried to econometrically estimate these effects on agricultural policies, while taking into account some of these interaction effects with political regimes and structural conditions, are by Olper (2001, 2007). He finds indeed that, on average, right wing governments are more protectionist than left-wing governments in agriculture; but that left wing governments may support agriculture in more unequal societies. This is consistent with studies by Bates (1983), who argues that socialist governments in Africa tend to impose lower commodity prices on farmers, and by Swinnen (2009) who finds that right wing governments in Europe (such as those dominated by Catholic parties and conservative parties, including the Nazi party in Germany) tend to support farm interests and increase protection.

### *Implications*

Integrating measures of political regimes and ideology into econometric models is essential, in particular since indicator data on these variables are now available for a wide group of countries. Hence, in combination with the new World Bank agricultural distortions database (Anderson and Valenzuela 2008), this presents an excellent opportunity for further tests of the ideology and political regime effects. In addition, the combination of cross-section and time series data should allow a more careful estimate of the effect of political regime changes. However, it appears important to test sufficiently complex interactions between ideology, economic structure, and protection to understand better how this web of interactions affects agricultural distortions. In this respect, further improvements can be made.

First, interaction effects as used the studies listed above may require further refinement. Consider, for example, agricultural policies of extreme left-wing regimes. Communist dictators such as Stalin in Russia, Mao in China and Hoxha in Albania heavily taxed agriculture; yet farmers were subsidized under Brezhnev in the Soviet Union and in most East European Communist countries in the 1970s and 1980s.

Second, the political institution variables used can be improved. Thies and Porsche (2007) provide an interesting extension with a much larger set of political variables than that used in other studies.

Third, cross-section studies have their limitations. Long-run time series studies allow us to measure the impact of shifts from one system to the next and to measure changes in political institutions more carefully. For example, Swinnen, Banerjee and de Gorter (2001) find that some of the changes in voting rules in Belgium had effects on agricultural protection, while others had no

effect. In particular those changes in electoral rules which disproportionately benefited people involved in agriculture (e.g. by extending voting rights to small farmers and tenants in the early 20<sup>th</sup> century) induced an increase in agricultural protection, while electoral changes (such as extending voting rights to women) did not affect agricultural protection as they increased voting rights both of those in favor and of those against protection.

### *The role of inequality*

A series of recent studies have emphasized the importance of inequality, both on political institutions (Acemoglu and Robinson 2006), and on government policies, including trade policy (Dutt and Mitra 2002) and agricultural policy (Olper 2007). Moreover, Dutt and Mitra (2002) find that a rise in asset inequality is likely to have different effects in a labor abundant than in a capital abundant economy – and these findings appear robust in both cross-section and time series regressions. Olper (2007) finds that agricultural protection is negatively related to inequality. This is counter to the traditional Olson-type arguments that large farmers are better at overcoming collective action problems. In contrast, La Ferrara (2002) argues the opposite, that is, that inequality may cause collective action problems which could explain why protection is negatively correlated with inequality. There is also historical evidence on this in Europe: strong inequality in England, Germany and France weakened the pro-tariff demands of large grain farmers at the end of the 19<sup>th</sup> Century as they were opposed by small farmers who were often livestock producers. In France, large and small farms were even organized in different unions and associated with different political parties. However, Olper (2007) finds that the inequality effect is conditional on the ideology of the ruling government. Left-wing governments, while on average supporting agriculture less, tend to support farmers more in unequal societies.

A longer time perspective on the impact of inequality is offered in papers by Acemoglu and Robinson (2000, 2001, 2006). They theoretically and empirically demonstrate the dynamic interactions of initial structural conditions of a country, its constitutional design, the nature of the government, and the redistributive policies implemented by the government. In societies with highly unequal distributions of assets (such as land), societies tend to be politically unstable, moving back and forward between (left-wing) revolutionary efforts of the poor trying to redistribute wealth through revolutions and land reforms and (right-wing) dictatorships trying to protect the concentrated resources of the rich. In more equal societies, redistribution can occur within a more stable democratic setting. Hence, these studies indicate that inequality not only affects redistribution

directly, but also indirectly via the political system. As far as I know, nobody has tested these complex interactions of institution and redistribution on agricultural policy.

### *Implications*

These new insights are important for the studies on agricultural policies for several reasons. First, many earlier studies on the political economy of agriculture have not included inequality, or change in inequality, as an explanatory variable, or not focused on it as a major variable. Second, the studies confirm that impacts of variables may well be conditional on the structure of the economy, a finding consistent with that of other studies such as by Swinnen et al. (2000) who show that the impact of economic development on some agricultural policies is conditional on the level of development. Third, when studying agricultural distortions in the global framework provided by the Anderson and Valenzuela (2008) dataset where poor countries are included, it appears to be important to look at inequality in various assets, including land. This is done by both O'Rourke and Taylor (2007) and Olper (2007).

### *International agreements*

An interesting issue that has received considerable attention over the past decade is the impact of international organizations and international trade agreements on trade distortions. Examples of these developments over the past decade include the effects of the Uruguay Round Agreement on Agriculture (URAA), the establishment of the WTO, NAFTA, and EU enlargement. Bagwell and Staiger (2002) have derived predictions on the impact of international agreements. Dutt and Mitra (2007) derive the empirical hypothesis from these models that countries with a comparative advantage in agriculture who join the GATT/WTO will exhibit a larger fall in agricultural protection levels.

While there is an extensive discussion on the impact of the URAA on agricultural protection, there is little econometric work on this issue. Most experts seem to agree that while the URAA may have constrained the growth of agricultural protection it has done little to reduce it, at least in the countries that were GATT members during the negotiations (see various chapters in Anania et al. 2004).

However, there are at least four problems with identifying the impact of the GATT/WTO on agricultural policy in econometric analyses. Examples from Europe illustrate their empirical relevance. First, the impact of the GATT/WTO on agricultural distortions should not be expected to be identical across countries, because they start from different positions. For example, among the

transition countries the impact of the GATT/WTO on their agricultural policies differs strongly depending on whether they were part of the GATT before 1995 or not (Anderson and Swinnen 2008). Second, the GATT/WTO impact may have been more important for the instruments than for the level of support. For example, GATT/WTO accession triggered an important change in the instrument choice in the EU over the past decades, but much less on the level of protection. Third, the impact may be strong but indirect; or due to an interaction with other changes. For example, while the URAA per se did not require (much) policy reform in the EU, the interaction of GATT/WTO constraints and (the anticipation of) EU enlargement triggered important agricultural policy changes at the end of the 1990s (under the Agenda 2000 reforms). Fourth, the impact may be anticipated and thus occur prior to the agreement. For example, it is generally agreed that the 2003 CAP Reform was influenced by the anticipation of Doha round agreements and the ongoing WTO discussions.

### ***External changes, crises and discontinuous policy change***

A review of the most dramatic changes in agricultural policy distortions that have occurred in the past decades reveals that these have been triggered by “external changes”. For example, it is well known that budgetary problems played an important role in stimulating agricultural policy liberalization in Sweden and New Zealand in the 1980s. Similarly, regime changes in China, in Eastern Europe and in the former Soviet Union triggered important changes in agricultural policies.

Furthermore, in many cases external change by itself was not enough, but it took a “crisis” to trigger (major) policy reforms. Crises may be needed to overcome the inherent status quo in the political-institutional equilibrium that exists in a society, to break the power of interest groups that are entrenched in the institutions as they exist in a society (Rausser, Swinnen and Zusman 2010).

Moreover, there is increasing evidence that dramatic policy reversals require the combination of a change in political regimes and a crisis. This was the case in China in the mid-1970s where the combination of widespread hunger in the countryside and the death of Mao allowed major reforms to occur (Swinnen and Rozelle 2006). It was also the case in Europe at the end of the 19<sup>th</sup> and the early 20<sup>th</sup> century when the combination of enhanced political rights and a dramatic rural crisis caused major changes in agricultural policies, including land reforms (Swinnen 2002).

### ***Implications***

The periods and policies captured by the World Bank distortion database are subject to such crises. Political, institutional, and economic crises occurred in recent decades in China (following the



hunger in the 1960s and the death of Mao in the 1970s), Sub-Saharan Africa (with their structural adjustment programs in the 1980s), Latin-America (debt crises in the 1980s), and Asia and Russia (debt crises in the 1990s).

A first implication is the importance of the choice of which “crisis” and which “external change” to include as explanatory variables. Authors pursuing single country or regional econometrics may be well aware of key external factors that need to be incorporated. However, it is much harder to select such variables for studies using the entire (global) dataset, although the analytical narratives in the volumes of case studies from the World Bank’s project make that much easier than in the past.<sup>7</sup>

Second, the crises may cause “large” and discontinuous changes in policy, which may have important implications for econometric specifications. From a dynamic perspective one could think of the pre- and post-crisis periods. During the pre-crisis period there may be “undershooting” of policy adjustments since institutional constraints prevent adjustment of policies to pressures for change. Conversely, during the post-crisis period there may be “overshooting” of policy adjustments.

However, notice that such discontinuous policy effects can also occur without institutional changes and be triggered by just external changes, such as market developments, with a fixed institutional framework. These effects are shown by Pokrivcak, Crombez and Swinnen (2007) for EU decision-making. External changes will only trigger changes in agricultural policy if they are beyond a certain threshold level. This threshold is itself depending on the decision-making rules (voting majority in the EU framework). This implies that changes in the external environment may not lead to policy adjustments for a certain period (when the changes are below the threshold level) and, when they do occur, they may induce large shifts in policy. Hence these effects are not linear.

Third, what if (some) agricultural policies are elements in broader reform packages and are used to get other (more important?) reforms approved? For example, what if agricultural protection is part of a “social contract” to invest strongly in innovation and R&D throughout the economy, stimulating productivity growth and restructuring? In such a setting agricultural protection is used to cushion the blows for the least mobile, as has been suggested by Rausser (1982) and de Gorter, Nielson and Rausser (1992) and for which there is empirical evidence (e.g., Swinnen, Banerjee and de Gorter 2001). The compensation package may even be within the agricultural sector: what if

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<sup>7</sup> See the global overview by Anderson (2009) but also the more-detailed country case studies of European transition economies in Anderson and Swinnen (2008), of Latin America in Anderson and Valdés (2008), of Asia in Anderson and Martin (2009) and of Africa in Anderson and Masters (2009).

subsidies in some sectors are part of a broader set of reforms, such as so-called package deals in CAP decision-making in the EU?

Notice also that the sign of the effects will differ between the first group of changes and the second. Agricultural policy reform as part of a broader reform package could work in favor of a reduction of distortions (e.g., a “change in paradigm” such as in Eastern Europe or China) or counter to a reduction of distortions (if part of a (compensation) package deal). There is even a broader problem here. Not including the right estimation framework is not just causing bias in the estimation model (allocating explanatory power to variables which are not influential in reality, or vice versa) but also in one of normative interpretations of the results.

### *Agents in the models*

Which are the crucial “agents” to include in the models? Many (agricultural) political econometric models effectively focus on producers (farmers), consumers and taxpayers. Some recent models have tried to include preferences of politicians by including an “ideology” variable. However, this may need to be improved in order to correctly measure influences.

The food industry and agribusiness are seldom included.<sup>8</sup> However it is clear that all over the world these companies play an important role in agricultural policy negotiations and debates and that their interest or often aligned with those of the farmers, but not always. In other cases there is very little relationship with farmers (think of the banana regime in the EU). Moreover, these organizations differ strongly from the farms when considering their capital/labor ratio and the votes they can muster and their ability to organize. In addition, as figure 1 illustrates, there is a very different relationship with economic development of the food industry and agribusiness. The data in the Anderson and Valenzuela (2008) dataset allow one to account for tariff escalation and to measure differences between farms and food processing industry and thus to measure the role of vertical differentiation within the commodity chain (see also Cadot, de Melo and Olarreaga (2004) for theoretical arguments). However, to capture this it is important to include the right explanatory variables in the econometric specification.

The role of other organizations (such as the bureaucracy, as with the EU Commission) is mostly not captured, although they may play an important role (Prendergast 2007). For example, many involved in the reforms of the EU’s Common Agricultural Policy in the past decade point at

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<sup>8</sup> Exceptions are studies such as Lopez (2008) who focuses explicitly on the US food industry.

the very important role that (then) Commissioner Franz Fischler played in pushing through the 2003 CAP reforms. It has been argued that the reforms would have never occurred without his leadership.

An important issue which has received little attention in the literature is the role of political or bureaucratic entrepreneurship. While there is a growing literature in economics and econometrics on the role of entrepreneurship, this is not the case in formal political economic studies. The role of individuals may be acknowledged and emphasized by political scientists in analytical narratives of policy reforms, but this is typically not the case for more quantitative approaches. There is some relationship to the preferences of politicians in models which capture ideology, but this measures preferences and not entrepreneurship.

However political entrepreneurs may also play a role in organizing interest groups and making their preferences more influential. For example, politicians played a key role in organizing farmers in rural Europe in the late 19<sup>th</sup> and early 20<sup>th</sup> century, as they tried to set up farm organizations which were closely associated with certain parties. Examples are the Catholic Party in Belgium, the Nazi Party in Germany in the 1930s, and two different (opposing) parties in France: small farmers lined up with the Republican Party, and larger farmers with the Catholic Church and conservative politicians. More recently, some (politically savvy) African leaders have been using (rural) interests to ensure their political survival, such as in Ethiopia and Zimbabwe.

## **Conclusions**

This chapter summarizes important recent developments in the literature and identifies key implications for study of the political economy of agricultural distortions using the new agricultural distortions database. This review also identifies some remaining challenges. These challenges suggest that “narrative interpretations” and detailed knowledge of the countries and the policies remain important, first in combination with econometric models to get a complementary set of insights, second as preconditions for the specifications of the models, and third for the correct interpretations of the results.

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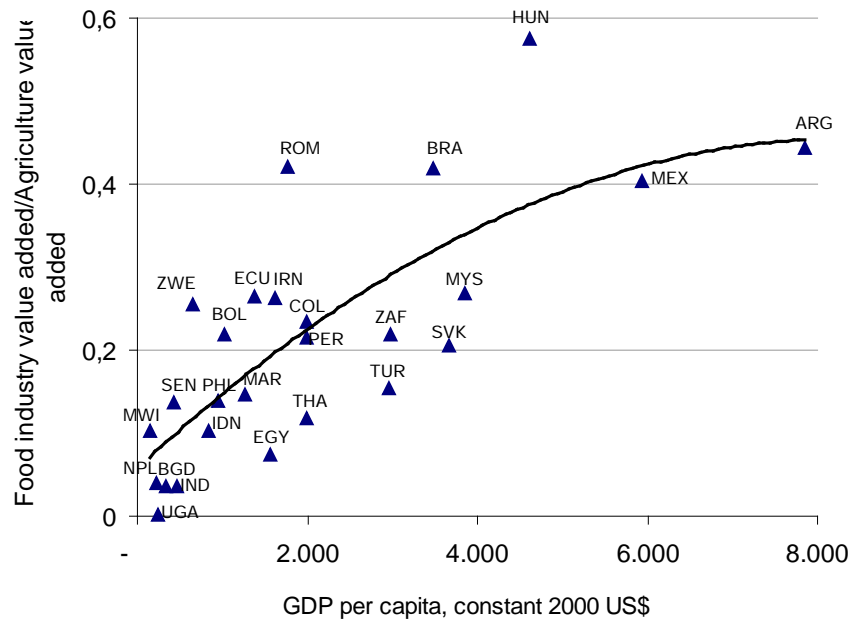
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**Figure 1: Relative importance of food industry and agriculture with development**



Source: World Bank (2008).