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THE POLITICAL ECONOMY OF AGRICULTURAL TRANSITION

Johan F.M. SWINNEN ¹ University of Leuven, Belgium

INTRODUCTION

The paper analyzes four aspects of the political economy of agricultural transition in Central and Eastern European countries (CEECs): (1) agricultural price distortions, (2) the choice of protection instruments, (3) land reform and privatization, and (4) farm restructuring and decollectivization.

POLITICAL ECONOMY OF AGRICULTURAL PRICE DISTORTIONS

Three Phases of CEEC Agricultural Policy Development During Transition

One can distinguish three phases since the start, in 1989, of the liberalization of price and trade policies in the CEEC agro-food sector. In the first phase, prices and trade regimes were liberalized and subsidies abolished. Consumer prices soared, real incomes often declined, and domestic demand fell. Foreign market access had been reduced as the traditional agricultural export markets in the former Soviet Union dwindled because of lack of hard currency and as the Western countries remained closed for CEEC agricultural exports. Farm input prices increased strongly relative to producer prices, causing a strong decline in agricultural terms of trade and demands for government support.

In a second phase, price and trade interventions were (re-)introduced to support agricultural producers and/or consumers *on an ad hoc basis*, adding to the uncertainty induced by general economic reforms. The government and its administration was not experienced in implementing policies in the emerging market economy. Governments reacted to unanticipated policy effects by introducing more ad hoc regulations. Agricultural policy making had the characteristics of a "fire brigade" (OECD, 1993).

In a third stage, CEEC governments moved to formulating a comprehensive set of agricultural policies for long term intervention in agriculture. Some CEECs installed a policy instrumentarium that resembles the EU's Common Agricultural Policy (CAP) prior to the MacSharry reforms. Such "CAP-style" agricultural policy packages include guaranteed prices, production quotas, (variable) export subsidies and import levies.

The emergence of these policy regimes has been explained as being part of the CEECs' strategy for EU-membership: creating an agricultural policy that is consistent with the EU's CAP. In Swinnen (1993, 1996), I argued that this

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integration-strategy is not the main reason for the re-emergence of interventionist policies in the CEEC agro-food sector, but that the main cause is the domestic political economy. Government interventions and regulations of agricultural commodity markets in CEECs are to an important extent determined by the structural characteristics and economic performance of their producers and consumers.

Political Economy of Transition Price Distortions

Figure 1 shows how average price distortions (measured by real protection rates (RPRs)) in seven CEECs declined significantly in 1991 and 1992 as a result of price and trade liberalization. In 1993, the level of protection increased again as many CEECs introduced protectionist price and trade policy measures. In 1994 and 1995, the average level of protection in the region first stabilized and then aligned closer to the world market prices. The level of protection differs substantially between Central and East European countries and commodities (Bojnec and Swinnen, 1997). 1993 and 1994 RPRs are very high in Slovenia (up to 80%), between 20 and 30% in Hungary, and between - 4% and +15% in the Czech Republic, Slovakia and Poland. In Bulgaria RPRs are considerably below 0. In most CEECs there are important differences between products. For example, 1994 Hungarian RPRs are much higher for milk (70%) and for imported products (48%) than for exports (12%). Finally, exchange rate adjustments have, in general, not followed inflation rate differences between countries. It is unclear to what extent this development is policy-induced (Bojnec, Münch and Swinnen, 1997), but the resulting impact on farm incomes acts as a tax on agriculture, reflected in declining ExPRs in figure 1, similar to that observed by Krueger, Schiff and Valdes (1989) in developing countries.

Political economy theory² of agricultural protection predicts that producer protection increases when producer income falls relative to incomes in the rest of the economy and when the costs of protection imposed on the rest of society (budget expenditures, consumer expenditures or inflation) decline (Anderson, 1994; de Gorter and Tsur, 1991; Swinnen, 1994a). Swinnen (1996) shows that these predictions are consistent with available CEEC data.³ A negative correlation exists between average RPRs and the share of food in total consumer expenditures in CEECs. Slovenia and Hungary, where consumers spend less than 30% on food, have a considerably higher RPR than other CEECs where consumers spend more of their income on food. There is also a negative correlation between the share of agriculture in total employment and the RPRs, but Slovenia and Poland have considerably higher protection rates than predicted by this relationship. This, and

² The "new political economy" or "endogenous policy theory" has its roots in the public choice literature. Applications of this theory to agriculture have attempted to explain the shift in agricultural policies that occurs throughout economic development (see Swinnen and van der Zee (1993) for a survey).

³ While CEECs started from a very different political system, the new political institutions and the emergence of new and better organized opposition parties makes this analytical framework increasingly relevant and applicable to CEEC decision-making on agricultural and food policies as the transition progresses. CEEC governments increasingly have to adjust policies to accomodate the reform impacts on different groups in society. Policy changes in agricultural policies increasingly reflect changes in producers', consumers' and taxpayers' political reactions, rather than party preferences. As such, CEEC agricultural policy-making increasingly reflects patterns that underly agricultural policies in Western democracies.

other evidence on agricultural credit subsidies (Swinnen, Gow and Hartell, 1998), suggests that when small-scale private farmers dominate in agriculture (such as in Slovenia and in Poland), the political influence of farmers increases, either for political reasons (reform-minded governments may be more willing to support private agriculture than to subsidize collective agriculture⁴), or because political-institutional factors make small-scale private farms more influential (Hagedorn, 1992), or because of their low comparative advantage (relative income factor).

Future Policy Developments

Most CEECs have experienced economic growth in recent years, which is predicted to continue in the next years (OECD). As the economy grows, a number of effects occur simultaneously, some with opposite effects upon government policy incentives. Table 1 summarizes these effects. On aggregate, our theory predicts domestic factors to increase political incentives for agricultural protection in the medium-to-long run.⁵ First, there is much uncertainty about the comparative advantage of CEEC agriculture. While agriculture may be the most promising source of output growth in the short-to-medium term, in the medium-to-long run, CEEC comparative advantage should gradually move towards standard manufactures (Anderson, 1993). In the medium-to-long run, one should therefore expect that the relative income factor will stimulate an increase in agricultural protection. However, with major differences between the CEECs and various agricultural subsectors, both in terms of comparative advantage and general economic development, one should be careful to disaggregate this analysis for predictive purposes. Second, with economic growth domestic demand for more income elastic products increases in the short-to-medium run, but in the longer term, demand for food becomes increasingly less elastic, resulting in a negative pressure on agricultural incomes. Further, food expenditure shares decline, and within food products expenditures shift away from staple foods, reducing consumer resistance, partially offset by improvements in food processing and distribution. Third. economic growth increases employment opportunities in the non-farm sector for farm labour and investments in rural infrastructure and communications, increasing labour mobility and reducing the political demand for protection. Fourth, farm numbers decline with economic growth but agricultural becomes more capital This increases the 'vested interest' and the political sensitivity. intensive. In combination with reduced negative impacts of food price increases on wages and industrial profits it increases incentives for protection. Fifth, privatization increases the income sensitivity of agricultural labour and their political activity.

Therefore, structural change in the medium-to-long run in CEECs will increase domestic pressures in favour of agricultural protectionism and reduce opposition against it. *This logic need not be deterministic* because other factors affect policy-making, including the institutional framework of decision-making, the particularities of farmers' voting behavior, the abilities to form an effective interest group, etc. However, empirical evidence suggests that the factors discussed here do affect the

⁴ However, one should also take into account that by 1994 in several CEECs former Communists were back in government.

⁵ See Swinnen (1996) for an extensive discussion.

constraints on policy makers. It is therefore important to realize that the change in political incentives for governments is real. Ignoring these developments and these patterns and attributing sub-optimal policy-making to ignorance of politicians or consumers or to some exogenously assumed control of farm lobbies over governments will be counterproductive (de Gorter and Swinnen, 1994). When governments responses to incentives and policies are at least to some extent endogenous, useful policy recommendations focus on changing the incentives for politicians and governments by e.g. changing the institutional environment (Persson and Tabellini, 1990).

The most effective and most credible constraint on incentives to increase future CEEC agricultural protectionism are international agreements, such as GATT, CEFTA and the EU's integration strategy. Such agreements improve credibility and political acceptibility of trade policies which diverge from the short-run political optimum (Giavazzi and Pagano, 1988). By tying the governments' hands, such institutional arrangements reduce the government's policy choice set and alter its incentives in decision-making. The announcement of a future CEFTA and EU market based on world market prices for agricultural products could provide a credible target for CEEC policy-makers and increase the political acceptability in CEECs of shifts in consumer and producer prices to world market levels. Part of the acceptability would result from the implicit compensation scheme in EU accession.

POLITICAL ECONOMY OF POLICY INSTRUMENT CHOICE

Patterns of Agricultural Policy Instrument Choice

Table 2 summarizes the changes in agricultural price and trade policy instruments in CEECs since 1990. The stylized facts are (Hartell and Swinnen, 1998):

- After broad liberalization and subsidy cuts, the main instrument left was import tariffs.
- Gradually, a series of non-tariff interventions emerged to protect producers and agricultural protection increases following declining terms of trade.

• In the Visegrad-4 countries, non-tariff interventions evolved into a market organization system implemented to provide long run support to, and interventions in, agriculture (incl. variable import levies in combination with minimum guaranteed producer prices, mostly used in the milk, wheat, sugar and beef subsectors).

- Production controls have been installed only after price support policies were implemented, and in the milk and sugar subsector only.
- Quantitative export restraints have been used nearly permanently in Bulgaria and Romania, and intermittently elsewhere -- especially in cereals markets.
- Policy instruments became increasingly distortive and interventionist, but GATT regulation implementation has converted variable import levies into tariffs.

Two different paradigms for interpreting the sequence and choice of CEEC policy instruments as described above are offered in the literature: the 'looking across the fence' explanation, and a political economy interpretation. The first explanation includes the widely held view that presumes CEEC governments chose protection levels and policy instruments that would minimise adjustment costs at the time of EU accession. It is not surprising, in this view, that CEEC policy has developed in the direction of the EU's CAP. The political economy explanation focuses on the distribution of costs and benefits of various policy instruments and on how they affect the behaviour of agents trying to influence government decision-making. Changes in CEEC political institutions and in structural conditions of their economies induce changes in the costs and benefits of the use of various policy instruments, yielding the policy patterns as observed above as the politically optimal instrument choices in the domestic political economy game. External factors play a role through the constraints they impose on the government choice set and through their impact on the structural conditions. We first discuss the political economy explanation and afterwards discuss additional insights from the 'looking across the fence' model.

Political Economy of Policy Instrument Choice

Most political economy studies of agricultural policy have focused on explaining the *level* of price and trade policy intervention and less attention is paid to the explanation of the instruments used for intervention. This is remarkable because it is quite obvious that the distortionary effects of government interventions are equally dependent on the choice of the instrument as on the level of the intervention. Moreover, there is a remarkable conflict between policy prescripts by economists and observations on actual policies not only regarding the level of policy interventions, but also regarding the instruments used. For example, Rodrik (1986) writes that the observed use of policy instruments for trade and price interventions are almost the inverse of their ranking in terms of economic optimality.

The most important political economy explanations of instrument choice can be grouped into four categories (De Nolf and Swinnen, 1997):

1. The *imperfect information* (or "Virginia"-school) approach which focuses on how differences in information of various interest groups affects their preference for certain policies. This approach includes the "obfuscation" explanation which argues that governments use policies which obfuscate the costs of the policies to those hurt by the policies (Magee, Brock and Young, 1989). The obfuscation argument is often used to explain the persistence of agricultural price supports and tariffs in OECD countries.

2. The obfuscation argument is refuted by the *efficient redistribution* (or "Chicago"-school) approach which argues that competition among pressure groups favours efficient instruments of redistribution. 'Seemingly inefficient instruments' will turn out efficient if all costs and benefits are taken into account (Stigler, 1971; Becker, 1983; Gardner, 1983).

3. Another reason why 'seemingly inefficient policies' may be efficient is to consider them as *compensation* instruments in a larger political economy framework. This logic fits into the "Berkeley-school" argument of joint policy analysis (Rausser, 1992; de Gorter, Nielson and Rausser, 1992). Foster and Rausser (1993) show how price support may be a more efficient policy than lump-sum transfers if there is a political need to compensate a minimum blocking coalition from vetoing efficiency-enhancing government policies.

4. The *transaction costs* approach argues that standard analyses of policy instrument effects ignore costs involved in the implementation, administration and enforcement of the policies, and that this shortcoming leads to substantial biases in the implications of the literature (e.g. Coase, 1960, 1989).⁶ Interestingly, the existence of transaction costs has been used both to defend and to disapprove of the use of existing distortionary transfer policies. Coase concludes that by ignoring transaction costs most studies underestimate the costs of government policy and that existing policies are *even more inefficient* than usually argued. In contrast, Munk (1994) argues that including transaction costs in the analysis leads to the conclusion that existing farm policies are the most efficient policies effectively available (and thus should be supported).

De Nolf and Swinnen (1997) propose a two-stage political economy model in which governments choose policy instruments to maximize some personal objective function, but are constrained in their choice by (1) external institutions (international agreements, IMF conditions, etc.), (2) imperfect information on future market conditions, and (3) the need to secure sufficient political support in order to stay in power. In the first stage, governments choose a political economic optimal policy level, and in the second stage they choose the policy instrument (as in Rodrik, 1986; Cassing and Hillman, 1985, Campos, 1989). With sufficient competition between political agents this model implies that governments will select a policy which minimizes the sum of transaction costs deadweight costs of market and taxation distortions. De Nolf and Swinnen show how this model can provide an explanation for the widely observed phenomena of path-dependency in policy instrument choice and the persistence of 'inefficient' policy instruments. The model's predictions are consistent with observed long run instrument choice patterns in Western Europe.

A Political Economy Explanation of CEEC Agricultural Policy Instrument Choice

Hartell and Swinnen (1997) apply this model to the specific circumstances of CEEC transition to explain agricultural policy instrument choice during CEEC transition. Conclusions from their analysis are the following:

• Why were early interventions termed "ad hoc" or "stop gap" policy-making?

Liberalization and reforms significantly reduced the ability of governments to directly intervene in production and consumption. Governments, and the administrations they relied upon for implementing policies, were inexperienced in dealing with the emerging market environment which incorporated many unknown characteristics. Previous administrative skills and understanding of policy effects in a command economy were inadequate in the new market environment which resulted in the implementation and reversal of policies when they produced unanticipated and unwanted effects. This human capital constraint was a key factor in the "stop gap" nature of policy making when governments were "learning-by-doing" in a new economic environment.

⁶ Coase (1989) refers to economic analyses that exclude transaction and administration costs as "blackboard economics" which has relevance only in the classroom but not in the real world.

• What is the explanation for tariffs emerging as the initial means of producer support (instead of more direct means of support to agricultural producers)?

Three factors are important. First, tariff administration probably involves the least amount of immediate transaction costs compared to other instruments given the level of transfers. Secondly, deadweight allocative distortions and leakages typically become more important in the long run. Discounting of future costs versus immediate benefits may play an important role, especially in an uncertain market environment. When there is uncertainty whether the need for support is temporary or there is a need for more structural interventions, policy-makers' incentives will induce them to choose the instrument with the lowest total investment costs (i.e. sunk costs of setting up the policy implementation), because these investments are lost if there is only a temporary need for support. Third, human capital in policymaking limitations may have temporarily precluded the use of more sophisticated and unfamiliar instruments.

In conclusion, the trade-off among competing distortions in an uncertain market environment, with a government facing strong pressures for immediate results and human capital constraints in policy implementation, is in favor of a familar, low administrative cost instrument which generates immediate results: a tariff.

• Why a progression from tariffs to increasing use of quantitative restriction to trade?

The initial transition was characterized by huge price and trade instability. While the domestic reforms were an important cause of instability, external markets caused considerable instability as well -- taking over as the most important source of uncertainty and instability as transition progressed. This was due to the combination of the CMEA collapse, reforms and their trade effects in other CEECs, and non-CEEC causes of world market changes (e.g. world grain price increases in 1995). In an environment characterized by external (world market) price instability of unknown magnitude and duration, guantitative restrictions are more effective than tariffs in securing minimum incomes from an ex-ante policy decision perspective (Falvey and Lloyd, 1991). The use of tariffs cannot guarantee a certain domestic price level with world market uncertainty. Quantitative restrictions can. When either producer incomes were heavily pressured by increasing imports, or when consumers reacted strongly to domestic welfare effects of increasing world market prices, governments preferred quantitative trade restrictions. Furthermore, the additional transaction costs of quantitative trade restrictions were relatively small compared to direct subsidies as the implementation takes place through the same administration as tariffs.

• Why the near permanent nature of quantitative restrictions on exports in Bulgaria and Romania, and intermittent use elsewhere?

Bulgaria and Romania are the poorest countries of the CEECs analyzed here. Their governments faced continuous pressure from consumers for low price food. Again, with external price uncertainty, quantitative export restrictions provided most security for the government to guarantee a minimum food supply and at certain prices. Some other CEEC governments also introduced grain export restrictions in 1995 and 1996 when rising world market prices for grains induced strong grain exports and thereby threatened grain supplies for domestic consumers. With rising consumer unrest, governments found it politically too risky to rely on export taxes in the face of uncertain world market developments.

• Why were price guarantees and export subsidies introduced in many CEECs? Increases in self-sufficiency (either due to trade policy induced distortions or due to recovery of production) will depress domestic prices. Export subsidies can then be used to implicitly meet the desired level of producer support by clearing the domestic market of "surpluses". However, if there is uncertainty from one year to the next about whether the country will be a net exporter or a net importer, export subsidies will be insufficient to remove the domestic sources of price instability. Explicit price guarantees provide an *ex ante* certainty of providing the desired level of producer support.

For several commodities, the marginal increase in transaction costs associated with price guarantees is smaller than the introduction of direct subsidies, especially when production is importantly located on small(er) farms (as e.g. in Poland) and when price guarantees can be administered through a relatively small number of processing centers. The marginal reduction in deadweight distortions of policy reform to a less distorting mechanism is not great enough to offset the transaction cost change, especially when considering the negative effect of taxation distortions implied in policy reform to more direct subsidies.

• Why the emergence in some CEECs of production quotas for milk and sugar ? The argument here is essentially the same as for the preceding observation. The transaction costs of monitoring compliance with production quotas is relatively lower for milk and sugar because of the concentrated nature of commodity processing. Transaction costs associated with a farm level identification and monitoring in addition to the costs and distortions of substantially increasing tax revenues favors the use of production controls until the marginal reduction in deadweight distortions and leakages of a policy reform become large.

EU Accession and CEEC Policy Decisions

Another explanation for the re-emergence of agricultural protection and the choice of policies is that CEEC governments have copied the EU example to minimize adjustment costs at the time of accession. In my view, the "looking across the fence" explanation is not an alternative, but rather an addition to the political economy model. For example, it helps to explain why CEEC policy regimes have tended to become more pre-1992 CAP - like in their appearance rather than like US farm programmes. However, by itself, the view that CEEC governments have sought to imitate EU institutions and policies cannot explain several observations.

In particular, the *past* impact of potential EU integration on transition CEEC price and trade policy choices has been overemphasized (Swinnen, 1993, 1996). Regarding the level of protection, the limited access to the Western markets and increased competition with (partly subsidized) Western food products on Eastern markets has increased the downward pressure on agricultural incomes in CEECs. As depressed farm incomes increase demand for agricultural protectionism and subsidization, limiting the EU market access and other protectionist policies, such as export subsidies, has induced policy interventions to support the CEEC agricultural sectors. Also, as regards the choice of instruments, the alignment factor does not give a satisfactory explanation for several observations. For example, EU accession was an important issue when several CEECs were still sticking to free trade policies. Also, the 1992 MacSharry reform of the CAP has not induced major following among the CEECs. Instead, CEECs' agricultural policies resemble the pre-MacSharry CAP much more than the current CAP. Further, it cannot explain the important differences in both the level and the choice of policy instruments in CEECs.

However, as EU integration is now increasingly presented as a credible development in the medium term, one should expect that the EU-CEEC agricultural policy alignment factor will become increasingly important in future CEEC agricultural policy-making. Of course, much will depend on the EU's proposed strategy for integration. According to many studies (e.g. Buckwell et al. (1995) and Tangermann and Josling (1995)) further CAP reform will be unavoidable in the light of CEEC accession and GATT commitments. The EU Commission has also emphasized the need for reform in its Agenda 2000 proposals. However, there remains uncertainty (a) on whether the Council of Ministers will accept the Commission's view, (b) on the details of the reforms, and (c) on the timing and the implementation of the reforms. All these factors affect what the CAP will look like at the time of accession. Before this information is available, CEEC policy makers, even if they want to base their policy-strategy on minimizing adjustment costs of integration with the future CAP, can only try to hit an (albeit slowly) moving target.

THE POLITICAL ECONOMY OF LAND REFORM

Efficiency and Income Distribution in Institutional Reform

A key part of the agricultural transition is land reform, and more general privatization of property rights. Much of the literature on CEEC land reform has acknowledged its political aspects but focused primarily on the efficiency effects. My own research has emphasized the political economy issues because important institutional changes in land contracting in the past in various parts of the world have only occurred following major changes in (political) incentives for decision-makers (de Janvry, 1981; Hayami, 1991). Bardhan (1989) and North (1991) also emphasize that the question of *efficiency-improving* institutional change cannot really be separated from that of *redistributive* institutional change.⁷ Hence, efficiency improving institutional change will only be implemented if that is consistent with the underlying distributional motives and political constraints.

Our research suggests that also in CEECs the main determinants of the choice between various land reform are political, institutional and historical factors, rather

⁷ Neo-classical institutional economics (NIE) views institutions as emerging endogenously as a solution to problems of limited computational ability and to problems of cooperation in situation of transaction costs. Bardhan (1989) distinguishes between three theories of endogenous institutions: the Marxist school, the neo-classical institutional economics school (which he refers to as the Coase-Demsetz-Alchian-Williamson-North approach), and the imperfect information school. The imperfect information school has focused mostly on specific contract relations (especially in credit, land and labor contracting). Bardhan (1989, p.4-5) argues, that while these theories provide some insights on how existing institutions can be explained, all three approaches are equally murky on the mechanism through which new institutions and property rights emerge.

than economic considerations. The implications are quite important, particularly regarding policy advice on the functioning of land markets and tenure contracting.

Observations on CEEC Land Reforms and Agricultural Privatization

A comparative analysis of agricultural privatization and land reform in CEECs. indicates some general patterns (table 3):

• Restitution of farmland to former owners is the most important process of land reform (in terms of share of total agricultural land) in the CEECs. Typically, the reform laws specify that former owners are restituted the land in historical boundaries, if possible. Otherwise they receive property rights to a plot of land of comparable size and quality. With the exception of Poland and Albania, an important share of farmland is restituted to its former owners in all CEECs. And even in Albania collective farmland property rights have been restituted to former owners in some mountainous regions.

• In the FSU land is restituted to former owners in the Baltic countries only. Russia and Ukraine distribute land in two forms. The most important form is the distribution of collective and state farmland equally per capita among collective farm members or state farm employees in the form of paper shares or certificates.⁸

• There is an important difference in land reform procedures between collective farmland and state farmland in CEECs, but not in the FSU countries. In the latter, collective and state farmland are treated the same in the reforms. In CEECs, *collective farmland* is mostly restituted to former owners, while *state farmland* is mostly leased, pending sale of the land.

• Whereas land has mostly been restituted in-kind, this has not been the general rule for other assets. Non-land assets have been restituted in some countries, but in many cases were privatized using vouchers that could be turned into capital shares in the new cooperative farm or used for purchasing non-land assets for private use.

• Privatization and land reform have not always caused a full transfer of effective property rights to the new (private) owners, for three reasons: the inherent incomplete transfer under some of the privatization policies, imperfections and obstructions at the policy implementation level, and legal initiatives limiting the effective transfer of property rights. In other words, post-reform effective property rights are only partially determined by privatization and land reforms.

These observations are remarkable for several reasons, most importantly because of their conflict with economic policy advice and expectations. Few economists would have advised restituting land to former owners, or would have advised using

⁸ The distribution of land shares does not imply physical allocation of land plots corresponding to the shares. Despite the allocation of land shares to the members, the land remains in joint cultivation pending further restructuring decision by the 'shareowners'. A shareowner who wishes to establish an independent farming operation (individually or with a group of coworkers) is, in principle, entitled to receive from the collective farm a physical plot of land corresponding to the land share (Lerman, 1997).

different and sometimes conflicting procedures for non-land assets and for land. The obvious question is: why these reform choices?

Determinants of Privatization and Land Reform Procedures

Determinants of the choice of the privatization and land reform policies in CEECs are (1) the post-collectivization asset ownership status, (2) the ethnicity of the pre-collectivization asset ownership, and (3) the equality of pre-collectivization asset distribution and (4) economic efficiency (Swinnen, 1997).

• The single most important factor determining the privatization policy choice is the legal ownership status of the asset at the outset of the reforms: *all agricultural assets which were still legally owned privately in 1989 have been restituted in all CEECs.* This factor is the main reason why land is generally treated differently than non-land assets in privatization. The principle that agricultural assets that were formally still privately owned are restituted to their formal owners contributes to the explanation of differences between CEECs, (e.g. in Albania all land was state owned); of differences within CEECs (e.g. in Hungary part of the collective farm land was collectively owned); of differences between land and non-land assets.

• The most straightforward effect of the historical legacy of land ownership is the lack of *demand* for land restitution in large parts of the FSU where nearly a century of communist rule has wiped out all references to private individual property rights (Lerman, 1997).

• Ethnicity: the privatization policy choice affects the distribution of asset ownership between ethnic groups. A general observation is that agricultural assets are not restituted to foreign former owners. This factor is important in explaining the difference between the privatization of state farm land in Poland (sales and leasing) and in Slovenia (restitution), with both countries having a very similar pre-1989 agricultural structure. The choice of the privatization process also affects the distribution of (agricultural) assets between ethnic groups within the country. An example of where the privatization choice was used against ethnic minorities is privatization in the Baltics, where restitution of land was chosen to allocate assets to native citizens in the presence of large ethnic minorities.

• Precollectivization land ownership distribution determines the conflict between historical justice and social equity. In those cases where governments were not restricted by legal ownership rights, they have typically opted for equity and efficiency over historical justice. Their motivation was a combination of social, economic and political objectives.

• The stylized facts on (non-restituted) physical distribution of collective farm land versus land lease pending sale of state farm land can be explained by the fact that the costs of disruption versus the benefits of land use security were lower for collective farm members than for state farm employees.

• In CEECs where land was not restituted (Albania and Hungary), former owners were compensated (non-agricultural real estate or compensation vouchers). In case

of land restitution, farm workers were typically compensated through of a combination of non-land assets and restrictions on the transfer of property rights to former owners. The method by which limitations on the transfer of effective property rights were imposed was both through the implementation of the reforms, and through legal amendments to the reform legislation.

THE POLITICAL ECONOMY OF DECOLLECTIVIZATION

Observations on Decollectivization Policies

I define the "decollectivization policy" as the set of regulations and policies which were intended to affect the transformation of the collective and state farms. Key characteristics of the decollectivization policy are (a) the role it allocates for the management of the collective and state farms, and (b) the incentives it provides for leaving the collective farm. In general, CEEC governments have not tried to increase the disruption of the state and collective farms beyond what was already caused by the privatization policies. Most have followed a transformation policy which can be described as 'neutral', i.e. intended to privatize and impose hard budget constraints on the entreprise, but not to cause a break-up of the entreprise, emphasizing the need to minimize further disruptions. They have done so by giving the members and management an important role in the transformation of their collective farms. For example, in both Hungary and the Czech Republic, former management were the main agents in the "transformation boards" of the collective farms which had to draw up a plan for transforming the organization.

Some (often ex-Communist Party) governments tried to conserve the large scale farms and used a decollectivization policy that made it more difficult for farm workers to leave and withdraw their assets for starting up a family farm. Individuals are discouraged to leave the collectives e.g. by imposing on them a share of the debt of the former collective form and high administration costs or by complicating the contracting and use of assets if they want to leave and start up their own farm.

Only in a few cases have governments intentionally tried to break-up the collective and state farms into individual farms, and supported a "radical" decollectivization policy. For example, the 1992 UDF government in Bulgaria decided to throw out the old management of the collective farms and replaced it by special institutions to effectively liquidate the collective farms, appropriately called "Liquidation Councils" (Swinnen, 1994b). Similarly, the 1991 Sajudis government in Lithuania removed the existing management from its controlling positions and created new institutions, the Municipal Agrarian Reform Services, chaired by outsiders (Rabinowicz, 1997). Not surprisingly, in both countries the role and the composition of these institutions was changed when the ex-Communists came back to power.

The Political Economy of Decollectivization Policies

Why have some governments pursued a more radical decollectivization program? The process of privatization and decollectivization affects the distribution and use of asset endowments in society. Besides the direct income distributional effects, there is another set of political costs and benefits which affects the choice of the agrarian reform strategy. First, the asset distribution affects economic interests distribution, social classes, and future political alignments. Second, it affects the main organizational structure of the rural areas, i.e. the collective farms, which were the base for the ex-Communist Party advantages in political organization for mobilizing and influencing the rural electorate. Finally, the process also affects the ability of the former management to influence the reform implementation. Therefore, a key motivation for reformers' governments to choose a radical decollectivization policy is because (a) it damages the organizational structure from which the ex-CP has been deriving its remarkable electoral strength; (b) it creates a long term political support base for the reforms, and (c) it removes the nomenklatura from key positions to block the implementation of the reforms. The main disadvantage of this policy option is the high political costs of radical decollectivization due to the induced disruptions. The question is, then, under which circumstances the gains outweigh the costs for reformers' governments.

The political importance of the fact that (ex-) Communist parties continue to obtain much support in the rural areas depends on the overall strength of the Communist party and on that of the reformers. If the reformers are supported by a large majority or if they feel that the democratic political regime and the market economy are "relatively safe", they may feel less threathened by a continued support base for the (ex-)Communists. However, if this is not the case, and if such a support base preserves a continuing threat for a "communist revival" which could undo many of the political and economic reforms, the reformers will be more inclined towards a strategy to reduce this support base. The motivation to create a long-run anti-Communist and pro-reform political support base is therefore more likely to play an important role when democratic reforms are insecure, when Communist support remains strong, especially in the countryside, and when reformers perceive a strong link between Communist support and collective and state farm production Our empirical evidence is consistent with this hypothesis and organizations. indicates that in those CEECs where a reform-minded center has been strong and where the reforms were perceived as more "secure", more moderate decollectivization policies have been chosen.

Decollectivization and Farm Restructuring

After transformation legislation was enacted, state and collective farms have been transformed into a wide variety of farm organizations, such as "private" producer cooperatives, joint stock companies, limited liability companies and (individual) family farms. Most CEECs now have a mix of these organizations, but the mix varies stongly between CEECs. Table 4 presents a farm individualization index (FII) which measures the increase in individual farm use of agricultural land. The current farm structure ranges from virtually all individual farms (smaller than 5 hectares) in Albania to virtually all large-scale cooperatives and farming companies of more than 100 hectares in Slovakia.

Large-scale production organizations still dominate agricultural production in many CEECs. Many new land owners lease their land to the large-scale successor organizations of the collective and state farms. In 1994, they cultivated more than two-thirds of the total agricultural area in Hungary, Czech Republic and Slovakia and most FSU countries. The main exceptions are Poland and Slovenia, where

small-scale farming dominated under the Communist period, and Albania, Romania, and the Baltics.

Impact of Policies on Decollectivization and Farm Restructuring

An important question is how much effect these decollectivization policies have had on the effective decollectivization or farm restructuring in general. Mathijs and Swinnen (1998) show that decollectivization policies have had some effect on the resulting farm restructuring, but that the most important factors affecting farm restructuring are land reform policies, the pre-reform technology and productivity of the collective farm, and the economic environment during transition (incl. risk, terms of trade, and market imperfections).

Pre-reform productivity in agriculture has a negative impact on decollectivization (fig. 2). Countries with low pre-reform productivity on collective farms, such as Albania, have a significantly higher degree of decollectivization than those where collective farm productivity was higher, such as Hungary. Productivity is related with the technology and with labour intensity in production. The break-up of labour intensive farms causes less efficiency losses. Hence, the costs of leaving the large-scale farm and starting up a smaller scale family farm are less.

Declining terms of trade and risk have a negative impact on decollectivization. However, there are no consistent data to calculate this impact. Furthermore, negative terms of trade and risk have occurred in all CEECs' agriculture, and therefore cannot explain the variation in the DI.

Decollectivization is lowest in countries that have restituted land to outsiders or where property rights were ill defined, and highest where land property rights were clear and distributed to insiders. For example, Albania and Romania have used land reform policies that allocate land in physical boundaries to insiders, i.e., collective farm members or state farm employees. Albania distributed most of the land to farm workers, and Romania used a combination of restitution and distribution. In contrast, the shift to individual tenures is much less in countries such as the Czech Republic and Slovakia, where much land was restituted to former owners who were no longer active in agriculture. The lack of clearly defined property rights is especially problematic in the FSU (excluding the Baltics and Armenia) and hampers farm restructuring in these countries.

Within CEECs, farm decollectivization is especially low in Slovakia and Hungary. A key reason is that both countries implemented legislation that increased the costs for leaving the collective farm considerably more than in other CEECs. In contrast, the Baltic countries, and especially Latvia, implemented policies that stimulated the break-up of the collective farms as part of their de-communization and independence strategy.

In general, farm decollectivization is more important where (1) more of the land was distributed to farm workers, (2) the share of agriculture in employment is high, (3) labour intensity in agriculture is higher, and (4) exit costs are low. It is remarkable to see how the two countries at the extremes of the spectrum are exactly opposite in these three factors. Albania, where decollectivization is highest, distributed land,

has a high share of agriculture in employment, labour intensive farming, and low exit costs (Cungu and Swinnen, 1998). Slovakia, where decollectivization is lowest, restituted land, has a low share of agriculture in employment, a capital intensive agriculture, and high exit costs.

References

- Anderson, K. (1994). "Lobbying Incentive and the Pattern of Protection in Rich and Poor Countries", *Economic Development and Cultural Change* 41.
- Anderson, K. and Y. Hayami (eds.) (1986). *The Political Economy of Agricultural Protection: East Asia in International Perspective*, Sydney: Allen and Unwin.
- Bardhan P. (1989). "Alternative Approaches to the Theory of Institutions in Economic Development", In: Bardhan, P. (ed.) *The Theory of Agrarian Institutions*, Clarendon.
- Becker, G. (1983). "A Theory of Competition Among Pressure Groups for Political Influence", *Quarterly Journal of Economics* 98:371-400.
- Bojnec, S. and J. Swinnen (1997). "Patterns of Agricultural Price Distortions in Central Europe", *Food Policy*, 22(4):289-306.
- Bojnec, S., W. Münch and J. Swinnen (1997). "Exchange Rates and the Measurement of Price Distortions in CEECs and of CEEC-EU Accession Costs", Working Paper 1/3 of the FAIR Project "Agricultural Implications of CEEC Accession to the EU", Department of Agricultural Economics, University of Göttingen.
- Buckwell, A., Haynes, J., Davidova, S. and A. Kwiecinski (1995). *Feasibility of an* agricultural strategy to prepare the countries of central and eastern Europe for EU accession, Final Report to DG-I, Brussels: EU Commission.
- Cassing, J.H. and A.L. Hillman (1985). "Political Influence Motives and the Choice between Tariffs and Quotas". *Journal of International Economics*, 19:279-290.
- Campos, J.E.L. (1989). "Legislative Institutions, Lobbying, and the Endogenous Choice of Regulatory Instruments: A Political Economy Approach to Instrument Choice". *Journal of Law, Economics, and Organization*, 5:333-353.
- Coase, R.H. (1960). "The Problem of Social Costs", *Journal of Law and Economics*, 3:1-44.
- Coase, R.H. (1989). *The Firm, The Market and The Law*, University of Chicago Press, Chicago.
- Cungu, A. and J. Swinnen (1998). "Albania's Radical Agrarian Reform", *Economic Development and Cultural Change,* forthcoming.

- de Gorter, H., D.J. Nielson and G.C. Rausser (1992). "Productive and Predatory Public Policies: Research Expenditures and Producer Subsidies in Agriculture", *American Journal of Agricultural Economics*, 74:27-37.
- de Gorter H. and J. Swinnen (1994). "The Economic Polity of Farm Policy", *Journal* of Agricultural Economics, 45(3): 312-326.
- de Gorter, H. and Y. Tsur (1991). "Explaining Price Bias in World Agriculture: The Calculus of Support-Maximizing Politicians", *Amer. J. of Agricultural Economics*, 73: 1244-54.
- de Janvry, A. (1981), *The Agrarian Question and Reformism in Latin America*, Baltimore and London: The Johns Hopkins University Press.
- De Nolf, G. and J. Swinnen (1997). "Determinants of Instrument Choice in Agricultural Policy", Policy Research Group Working Paper, Department of Agricultural Economics, K.U.Leuven
- Falvey R.E. and P.J. Lloyd (1991). "Uncertainty and the Choice of Protective Instrument". Oxford Economic Papers, 43:463-478.
- Gardner, B.L. (1983). "Efficiency Redistribution Through Commodity Markets". *American Journal of Agricultural Economics*, 65:225-2354.
- Gardner, B.L. (1987). "Causes of U.S. Farm Commodity Programs", *Journal of Political Economy* 95:290-310.
- Giavazzi, F. and Pagano, M. (1988) "The Advantage of Tying One's Hand: EMS Discipline and Central Bank Credibility". *European Economic Review* 32: 1055-1082
- Hartell, J. and J. Swinnen (1997). "An Explanation of Price and Trade Policy Instrument Choice in Central European Agricultural and Food Markets", Working Paper of the FAIR Project "Agricultural Implications of CEEC Accession to the EU", Department of Agricultural Economics, K.U.Leuven
- Hartell, J. and J. Swinnen (1998). "Trends in Agricultural Price and Trade Policy Instruments since 1990 in Central European Countries", *The World Economy* 21(2): 261-279.
- Hayami, Y. (1991), 'Land Reform', In: G. Meier (Ed.) *Politics and Policy Making in Developing Countries. Perspectives on the New Political Economy*, San Francisco: ICS Press, pp.155-171.
- Honma M.and Y. Hayami (1986). "Structure of Agricultural Protection in Industrial Countries." *Journal of International Economics* 20: 115-129.
- Krueger, A.O., M. Schiff and A. Valdes (1988). "Agricultural Incentives in Developing Countries: Measuring the Effects of Sectoral and Economywide Policies." *World Bank Econ. Rev.* 2: 255-272.

- Lerman, Z. (1997). "Experience with Land Reform and Farm Restructuring in the Former Soviet Union" in: Swinnen J., A. Buckwell and E. Mathijs (eds.) (1997). Agricultural Privatization, Land Reform and Farm Restructuring in Central and Eastern Europe. Aldershot: Avebury Publishers, forthcoming.
- Magee, S.P., Brock, W.A. and L. Young (1989). *Black Hole Tariffs and Endogenous Policy Theory, Political Economy in General Equilibrium*, Cambridge: Cambridge University Press.
- Mathijs, E. and J. Swinnen (1998). "The Economics of Agricultural Decollectivization in East Central Europe and the Former Soviet Union", *Economic Development and Cultural Change*, forthcoming.
- Munk, K.J. (1994). "Explaining Agricultural Policy", European Economy, 4: 93-125.
- North, D. (1991). *Institutions, Institutional change and Economic Performance*, Cambridge University Press, Cambridge.
- OECD (1993-1996). Agricultural Policies, Markets and Trade in the Central and East European Countries (CEECs), The New Independent States (NIS) and China: Monitoring and Outlook. Paris.
- Persson, T. and G. Tabellini (1990). *Macroeconomic Policy, Credibility and Politics*. Chur: Harwood Academic Publishers.
- Rabinowicz, E. (1997). 'Political economy of agricultural privatization in the Baltic countries', in Swinnen, J. (ed.), *Political Economy of Agrarian Reform in Central and Eastern Europe*, Avebury: Aldershot.
- Rausser, G. C. (1992). 'Predatory versus Productive Government: The Case of U.S. Agricultural Policies', *Journal of Economic Perspectives*, 6, pp. 133-158.
- Rodrik, D. (1986). "Tariffs, Subsidies, and Welfare with Endogenous Policy". *Journal* of International Economics, 21:285-299.
- Rodrik, D. (1987). "Policy Targeting with Endogenous Distortions: Theory of Optimum Subsidy Revisited". *The Quarterly Journal of Economics,* November: 903-911.
- Stigler, G. (1971). "The Theory of Economic Regulation", *Bell Journal of Economics* and *Management Science* 2:2-21.
- Swinnen, J. (1993). The Development of Agricultural Policies in Eastern Europe: An Endogenous Policy Theory Perspective. *Food Policy*. June: 187-191.
- Swinnen, J. (1994). A Positive Theory of Agricultural Protection. *American Journal of Agricultural Economics* 76(February):1-14.

- Swinnen, J. (1994), 'Political Economy of Reform in Bulgarian Agriculture', in Schmitz, A., Moulton, K., Buckwell, A., and Davidova, S. (eds.), *Privatization of Agriculture in New Market Economies: Lessons from Bulgaria*, Dordrecht: Kluwer Academic Publishers.
- Swinnen, J. (1996). "Endogenous Price and Trade Policy Developments in Central European Agriculture". *European Review of Agricultural Economics*, 23(2):133-160.
- Swinnen J. (1997). "The Choice of Privatization and Decollectivization Policies in Central and Eastern European Agriculture", in: J. Swinnen (ed.), *Political Economy of Agrarian Reform in Central and Eastern Europe*. Aldershot: Avebury Publishers.
- Swinnen J., A. Buckwell and E. Mathijs (eds.) (1997). *Agricultural Privatization, Land Reform and Farm Restructuring in Central and Eastern Europe.* Aldershot: Avebury Publishers, forthcoming.
- Swinnen, J., Gow, H. and J. Hartell (1998). "The Political Economy of Agricultural Credit Policies in Central Europe", Working Paper of the FAIR Project "Agricultural Implications of CEEC Accession to the EU", Department of Agricultural Economics, K.U.Leuven
- Swinnen, J. and F.A. van der Zee (1993). "The Political Economy of Agricultural Policies: A Survey". *European Review of Agricultural Economics*, 20(3): 261-290.
- Tangermann, S. and T. Josling (1995). *Pre-accession policies for central Europe and the EU*, Final Report to DG-I, Brussels: EU Commission.

Table 1: Impact of structural changes on CEEC government incentives to increase agricultural protection

	Medium Run	Long Run	- <u>Mi - In- III - E</u> -
Impact of Changes in :			· · · · · · · · ·
1. Relative Income (Comparative Advantage)		+	
2. Food Consumption Pattern		+	
3. Food Expenditure Share	+	+	
4. Factor Mobility			
5. Agric. Capital Intensity		+	
6. Privatization	+	+	
Aggregate Effect	?	+	

Instrument	Commodity	Country	Date
1. Import Tariffs	All	All	1990
2. Non-Tariff Barriers	·		
Removal or substantial	Most	Poland	1990
reduction of import & export	Most	Hungary	1991
NTBs. ¹	Most	Bulgaria	1991
	Most	Romania	1991
	Most	CSFR	1991
Reintroduction of import NTBs.	Most including processed food, fruit juice, dairy products.	Poland	1992
	Most ag/food products & some inputs	Bulgaria	1992
	Temperate zone agricultural products.	CSFR	1992
	Grains, sugar.	Hungary	1992
Reintroduction of export	Important food com.	Czech R.	1993
NTBs. ²	Grains, oilseeds, poultry, bovine animals.	Poland	1992
	Grains, flour, seeds, livestock, Sunflower oil.	Bulgaria	1992
	Grains, flour, sugar, milk, animals.	Romania	1992
	Milling wheat, meat, sugar.	Hungary	1992
Appearance of Variable Import Levies. ³	Oilseeds, sugar prod., wine, live animals, beef, poultry,	CSFR	1992 ⁴
	butter, starches. Meat, milk products, cereals, eggs, etc.	Poland	1994 ⁴
3. Credit Subsidies	Current inputs, capital Investment, processing and Storage	All	See Table 4
3. Minimum and	Various commodities	Visegrad	1991
Guaranteed Prices via	See Table 4a & 4b	Bulgaria	1992
Purchases and Market Price Support		Romania	1993
4. Export Subsidies	Various commodities	Poland	1990
	See Table 5	Czech R.	1991
		Hungary	1991
-		Slovak R.	1991
5. Production Quotas	Sugar	Poland	1994
	Milk	Slovak R.	1994 ⁵
	Milk	Hungary	1996

¹ Includes various combinations of import and export licensing and fees, import quotas, global quotas, monopolized importing agencies, exchange rate manipulation, etc.

² Primarily permits and fees but also licenses, taxes, quotas and, in extreme situations, export prohibitions. ³ Variable import levice or similarly named market in the situation of the sit

³ Variable import levies or similarly named mechanisms which bridge the difference between some predetermined threshold price and the lower international price for a commodity.

⁴ Variable import levies have been abolished and tariffs increased for affected products in 1995 under these countries' Uruguay Round GATT commitments.

⁵ OECD, 1994, page 116.

Source: Hartell and Swinnen (1998)

	COLLECTIVE FARMLAND		STATE FARMLAND [®]	
	Procedure	% of TAL	Procedure	% of TAL
Albania	Distribution (physical)	76	Distribution (physical) ^b	24
Bulgaria	Restitution	72	Miscellaneous ^d	9
Czech Republic	Restitution	61	Sale (leasing ^c)	25
East Germany	Restitution	82	Sale (leasing ^c)	7
Hungary	Restitution + distribut. (phys.)	70	Sale for compensation	12
.	+ sale for compens. Bonds ^f		bonds	
Latvia	Restitution	57	+ sale (leasing ^c)	38
Lithuania	Restitution	62	Restitution	30
Poland	-	4	Restitution	19
Romania	Restitution + distribut. (phys.)	58	Sale (leasing [°])	28
Russia	Distribution in shares ^{g, h}	40	Undecided ^e + Restitution	58
Slovakia	Restitution	71	Distribution in shares ⁹	15
Slovenia	-	0	Sale (leasing [°])	17
Ukraine	Distribution in shares ^g	n.a.	Restitution	n.a.
			Distribution in shares ⁹	

Table 3: Most important land reform procedures in CEECs (*)

Special procdures for marginal amounts of land are not included in the table. (*)

Excluding research farms which are nowhere privatized.

b Farm workers received vouchers in newly established joint ventures. However, as most of these joint ventures failled, farm workers received first user rights and eventually full property rights. Land is leased to individuals or entities pending sale.

d In Bulgaria, the distinction between state and collective farms is more complicated than in other CEECs because the creation, and later abolishment, of the so-called Agro-Industrial Complexes. Part of the land classified under "state farmland" is restituted, because it was initially collective farmland and has a similar status; another part will not be privatized, and another part is the land on which large pig and poultry entreprises are built and which will be privatized separately.

The Romanian government has not decided how to privatize the state farms, including the land, on two-thirds of the state farmland.

Each of the land reform procedures applies to approximately one-third of the collective farmland.

Distribution of collective and state farmland equally per capita among collective farm members or state farm employees in the form of paper shares or certificates. Outsiders who are not entitled to land shares can receive land for private farming from a special state reserve established for this purpose (15-20% of TAL).

Private ownership is prohibited in 10 ethnic republics of the Russian Federation.

Source: Swinnen (1997)

· ·	FII		FII
Albania	94.2	Georgia	21.2
Armenia	81.8	Hungary	17.3
Latvia*	80.2	Belarus	15.2
Lithuania*	60.4	Ukraine	14.1
Romania	55.2	Uzbekistan	13.1
Bulgaria	45.4	Russia	12.1
Estonia*	37.5	Turkmenistan	7.1
Kyrgyzstan	23.2	Slovakia*	3.1
Czech Republic	22.1	Kazakhstan	0.0

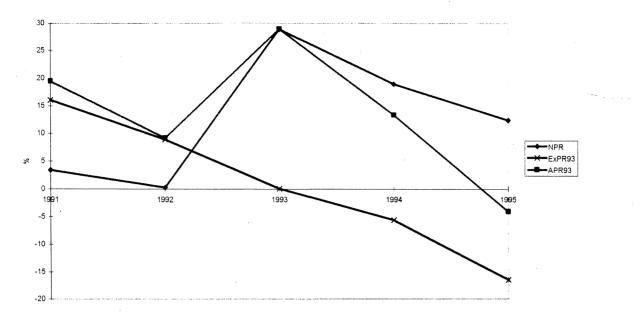
Table 4: 1995 Farm Individualization Index ⁹ (FII) °

[°] The FII is calculated by dividing the difference between the share of individual farms in total agricultural land in 1995 (IND95) and in 1989 (IND89) by 100 minus the share of individual farms in total agricultural land in 1989: FII=(IND95-IND89)/(100-IND89)×100. Data on land use are derived from a series of country studies in the EU-COST-network "Agricultural Privatisation, Land Reform and Farm Restructuring in Central and Eastern Europe", and Lerman (1997), all reported in Swinnen, Buckwell and Mathijs (1997). For all FSU countries except the Baltic countries, an initial share of individual farms equal to 1 percent is assumed. * 1994.

Source: Mathijs and Swinnen (1998)

⁹ In previous papers we have used the terms "decollectivization index" and "individual farm index" instead of "farm individualization index", while using the same (mathematical) definition. Following suggestions and comments by Zvi Lerman, Allan Buckwell and Sofia Davidova, we think that farm individualization is a more accurate term for describing the process measured by this variable. We apologize for possible confusion.

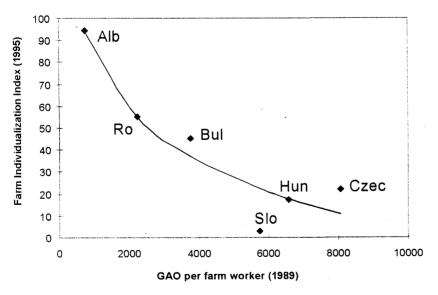
Figure 1: Average Protection Rates for CEEC Agriculture, 1991-1995 (*)



(*) Averages for seven CEECs (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia, and Slovenia) and nine commodities (wheat, barley, maize, sugarbeet, rapeseed, milk, beef and veal, pork, poultrymeat), weighted by the share of the commodity in output, but unweighted by countries. Nominal protection rates (NPR = $(P^{d}-P^{b})/P^{b}$ where P^{d} is the domestic producer price in current US\$ evaluated at the official exchange rate, and P^{b} is the border(reference) price) are measured at nominal exchange rates; RPR is the real protection rate (RPR = $(P^{d}-P^{b})/P^{b}$ where P^{d} is the domestic producer price in US\$ evaluated at the "adjusted exchange rate", assumed to equal the nominal exchange rate in 1993); ExPR (=RPR-NPR) measures the difference between RPR and NPR and reflects the impact of divergences between domestic and international inflation and exchange rate adjustments.

Source: Bojnec and Swinnen (1997).

Figure 2: Relationship between the increase in individual farming during transition and pre-reform labour productivity of collective farms (*)



(*) Pre-reform labour productivity is measured as gross agricultural output (GAO) per farm workers; GAO is 1989 production (FAO data) in US dollar weighted by 1995 prices. The increase in individual farms is measured by the farm individualization index (FII), calculated as in table 4. The curve on the graph is based on a least squares regression after a logarithmic transformation of GAO/farm worker. *Source*: Mathijs and Swinnen (1998).