TRENDS IN AGRICULTURAL PRICE AND TRADE POLICY INSTRUMENTS SINCE 1990 IN CENTRAL EUROPEAN COUNTRIES

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ABSTRACT

A survey of agricultural price and trade policy instruments of Central European countries since the beginning of economic transition indicates several similar patterns of instrument choice among the transition economies. We find that the common pattern of agricultural policy choices in Central European countries mirrors many important features of the Western European experience. In addition, we also find that free trade associations and international agreements have and will increasingly limit the set of agricultural price and trade policy instruments available to governments.

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1. Introduction

After the initial price and trade liberalization of price and trade policies in 1989, government interventions in the agricultural and food markets have gradually been re-introduced in Central European countries (CECs).[1] Initially, policy interventions were rather ad hoc, trying to address the urgent demands of both consumers and producers for protection against negative impacts of liberalization and subsidy cuts on their welfare. Gradually, governments introduced more internally consistent policy packages in the agro-food sector. Studies that quantified the effect of these interventions show the large variation between CECs and commodities during transition (OECD, 1994, 1995, 1996; Bojnec and Swinnen, 1996). Swinnen (1996) argues that this variation in agricultural protection level over time and between commodities and countries reflects a pattern which can be explained by rational choice political economy models of government decision-making.

The purpose of this paper is to increase our understanding of price and trade policy interventions in CECs since economic transition by studying the policy instruments used for intervention in agriculture and food markets. More specifically, our purpose is to assess whether the choice of agricultural policy instruments among CECs are random or if there emerges a common pattern; and, second to evaluate the uniqueness of the CEC experience relative to other countries.

The first section begins by identifying general patterns of trade policy instrument choice distinguished by two phases. The first phase--initial policy developments at the time of economic transition--is characterized by the pursuit of liberalized markets and open-trade policies followed by the gradual reintroduction of trade barriers. The second phase--the emergence of greater agricultural market organization--identifies the characteristics of deliberate and increased government intervention in agricultural markets.

The next section examines to what extent external constraints, in the form of several important international trading agreements with and between CECs, has reduced the scope of government activity in selecting trade policy instruments.

The last section of the paper analyzes the similarities between the choice of agricultural policy instruments in the CECs and among the countries of Western Europe. This analysis indicates some remarkable similarities in the choice of agricultural market intervention instruments and their sequence of use.

[1] In this paper CEC refers only to the four Visegrad countries (Czech Republic, Hungary, Poland and Slovak Republic) and two Balkan countries (Bulgaria and Romania).

Finally, many studies show that macro-economic policies, and more specifically exchange rate manipulations, may have very important income effects for producers and consumers, and should therefore be included in indicators of producer and consumer policy transfers, such as Producer Subsidy Equivalents (PSE) and Consumer Subsidy Equivalents (CSE) (Krueger, Schiff and Valdes, 1992; OECD, 1994, 1995, 1996). Clearly, in transition economies, exchange rate developments have important impacts on producer and consumer incomes. However, we do not discuss exchange rate policies in this paper and refer elsewhere for an analysis (Bojnec, Münch and Swinnen, 1997).

2. Trade and Price Policy Developments[2]

2.1 *Initial Policy Developments*

In summery, the initial policy developments of the CECs is broadly characterized by the removal of various agricultural producer support and trade barrier instruments followed by the reintroduction of measures designed to protect producers or consumers. More specifically, in early transition, most consumer price subsidies and producer subsidies were phased out and eliminated along with most non-tariff barriers to trade. Standard tariffs were the principle means of agricultural producer protection. Later, with increasing pressure for effective producer support, non-tariff barriers were reintroduced. Non-tariff export barriers also reappeared as governments sought to balance competing producer and consumer interests. We will now discuss these developments in greater detail.

- *As a component of their commitments to market liberalization, all CEC governments moved, generally between 1989 and 1991, to substantially reduce and eliminate consumer price controls of most products.*

Several items characterize the initial period of increasing agricultural market liberalization in CECs. As an important component of transition, most CECs began the process in 1990 of releasing administratively controlled consumer prices from their artificially low and subsidized levels. In addition to the price release of traditional consumer products, administratively controlled prices of most agricultural inputs were also raised or completely released to find their market clearing levels. Table 1 illustrates the timing of initial price liberalization to full or major release for each country.

Agricultural and food markets, however, were historically sensitive sectors that governments were eager to have remain stable, especially during a period of difficult macro-economic adjustment. Consequently, all governments retained the authority to administratively control prices, usually via price ceilings, of certain sensitive food and non-food consumer products. Initially, the food products whose prices were most commonly monitored included bread and rolls, wheat and rye flours, milk and dairy products, cooking oils, sugar, potatoes, fodder

[2] Much of the information that follows is primarily from five series or individual publications: OECD *Agricultural Policies Markets and Trade, Monitoring and Outlook in the Central and Eastern European Countries, the New Independent States and China*, various issues; OECD *Review of Agricultural Policies: Poland, the Czech Republic, and Hungary*; European Commission, DG VI Working Document*: Agricultural Situation and Prospects in the Central and Eastern European Countries*, various issues; Agra Europe *East Europe Agriculture and Food*, various issues; and USDA/ERS, 1993. Specific citations from these publications are included where appropriate.

grains, and some meat products. During the ensuing two years, this list was gradually pared down to include usually only bread, sugar, milk and some dairy products, or was completely eliminated.

- *Beginning concurrently with price liberalization, all CEC governments substantially reduced and/or eliminated most producer subsidies.*

The liberalization period also saw the end or reduction of government direct producer payments, production subsidies, and subsidies of producer inputs. For most of the CECs, the removal of subsidies began in 1990 and were mostly eliminated by 1991. The main exception is Romania which often replaced retail food subsidies with producer input subsidies and continued to write-off agricultural debts. Table 2 illustrates the timing of producer subsidy withdrawal for each country.

- *Despite initial differences in timing, all CEC governments had moved by the end of 1991 to substantially reduce or remove non-tariff barriers to trade leaving much of the remaining protection under standard import tariffs which were in place in all CECs by the end of 1990.*

The switch to import tariffs as a dominant form of trade protection is a significant event in countries where non-tariff barriers were the dominant form of trade regulation for many years. To abandon the familiar, and highly distorting, mechanisms of regulation indicates a strong willingness on the part of CECs to see good their commitments to an open market and free-trade environment. Nevertheless, some indication of the extent that non-tariff barriers have been eliminated is warranted to understand subsequent developments.

Two countries, Czechoslovakia and Poland, went the furthest in removing their non-tariff barriers (Messerlin, 1995). By the end of 1991, import and export licensing was mostly automatic and used for registration purposes. Quantitative restrictions on trade were removed with the exception of instances where previous bilateral agreements on export restrictions or voluntary export restrictions were previously in place. Other countries also reduced the scope of non-tariff barriers but maintained many on important agricultural products. For example, Hungary reduced but retained the use of mandatory import and export licensing, export charges and global import quotas. Romania moved from a complete export ban of all food and agricultural products in 1990 to bans and quotas for just the most important agricultural commodities. Bulgaria also maintained export prohibitions on some basic food items. Refer to Table 3 for a description of the patterns of trade and price policy and instruments.

- *Non-tariff barriers to import trade were reintroduced in many CECs for many agricultural and food products, often within one year after being abolished*.

Against the backdrop of general price and trade liberalization, however, agricultural producers began to face unfavorable terms of trade. The liberalization of consumer prices suppressed internal demand and, in conjunction with the reduction or elimination of producer subsidies, eroded producer prices relative to input costs and sharply reduced producer income. Eroding consumer income also contributed to reduced demand for agricultural and food products. The ensuing producer price-cost squeeze is well documented (Jackson and Swinnen, 1994; OECD 1994). At the same time, domestically produced commodities and processed products often did not compete well with imported goods either in price, quality or packaging. Exports to

Western economies remained insignificant while many traditional export markets were disrupted. Domestic production declined and producers' demands for government intervention and protection increased.

In response to declining incomes and production in the agricultural sector, most CEC governments reintroduced numerous non-tariff barriers only recently abolished. Import licensing, new duties, minimum import prices, quotas and compensatory import levies were established to protect a wide range of products as illustrated in Table 3. The items subject to protection included some processed food products, as in Poland, but the bulk of protection was directed toward the most important temperate zone crop commodities. Of course, the other half of the picture is that the levels of existing mechanisms of protection, tariffs and import surcharges, were also increased. The duration and extent of import barriers often varied widely and reflected, in part, domestic production outcomes resulting in numerous stopgap measures employed to ensure adequate commodity supply in the country. For example, Bulgaria initially applied numerous import barriers to grains only to later remove or relax them when it became clear that domestic production would not meet domestic needs.[3] The same pattern of reintroduction and reversal is also observed in other CEC countries as well.

- *CECs also reintroduced non-tariff export barriers shortly after general trade liberalization. Export prohibitions have taken on a semi-permanence in the two poorest countries, Bulgaria and Romania, while being used intermittently in the others.*

Even while there was general movement among CECs towards greater import protection to satisfy producer demands, governments also had reasons to restrict export trade. The level of consumer prices remained a sensitive political issue for many governments. This problem was exacerbated in those instances when domestic producer prices were lower than international prices causing an increased flow of commodities out of the country, as was the case of wheat in Bulgaria, Romania, Hungary and Czech Republic. Additionally, for several governments, restricting agricultural exports was also a measure used to help limit the need for imports and subsequent loss of short hard currency reserves. Consequently, national food security was used to justify the use of regulation to limit exports before domestic needs were met. In general, Bulgaria and Romania are relatively more preoccupied than the other CECs with issues of national food security and, in particular, maintaining artificially low consumer prices.[4] In their situation export constraints play an important role in this strategy of preserving low consumer prices.

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[3] The rapid turnover and inconsistent use of various trade policies have also been likened to a "fire brigade" (OECD, 1993) or as being *ad hoc* (Swinnen, 1996).

[4] Control of important consumer food prices in Bulgaria and Romania has been maintained also by the slow pace of up-, and especially, down-stream processing sector privatization. Consumer protection is provided by manipulation of producer prices, via official or sanctioned procurement agencies, that are generally below production costs. Processors and retailers are then subject to cost-plus margin requirements in the pricing of their products. To compensate for low producer prices, and to persuade sales to the state agencies, producers have been offered various short term credits, production bonuses, and subsidized interest rates. Consequently, border protection has been designed primarily for the needs of national food security and, in combination with control of farm-gate prices, have taxed agricultural producers. Support to producers in these countries have increasingly come in the form of preferential credit, various tax exemptions, and the provision of working capital tied to procurement contracts.

The range of commodities subject to export control among the CECs and the date of re-emergence of regulation are outlined in Table 3. Among these, grains, oilseeds, flour and sugar were the most important. Regulation through strict export licensing and permits coupled with fees, export duties, export quotas, and minimum export prices were often employed and, to a lesser extent generally, export prohibitions.

A characteristic of export prohibitions not evident from Table 3 is that they played a much smaller and intermittent role in the Visegrad than in the two Balkan countries. Bulgaria and Romania imposed extensive bans in 1993 covering most cereals, sugar, seeds, dairy products, and some animal products to prevent domestic shortages. These export prohibitions have, in fact, persisted for several crop cycles despite Romania, in recent years, replacing export bans with strongly limiting export quotas in response to higher levels of cereal production. The Czech Republic, Hungary and Poland all occasionally suspended export licensing until they were certain that domestic needs were met for products such as wheat, maize and feedstuffs.

The reflex to limit exports was amplified during a year of severe drought in 1992 which had an extremely depressing effect on agricultural output in most CECs and again in 1993 for Hungary and regions of other countries (OECD, 1994). Weather effects and high world market prices induced grain shortages in 1995 and 1996 again prompting export constraints.[5] Livestock production was burdened by increasingly scarce and expensive feed supplies.

Governments also found, contrary to their past experience and expectations, that export restrictions, particularly those lasting for several crop cycles, tended to further depress production levels as producers switched their composition of commodities to those offering higher prices. The depressing effects that export prohibitions have on production was offset to a certain extent in Romania by the compensating use of production bonuses.

2.2 *The Emergence of Agricultural Market Organization*

Several patterns of trade policy instrumentarium are best viewed from the perspective of the emerging agricultural market organization in CECs. As mentioned previously, the application of various non-tariff import and export barriers after the renewal of government intervention in agricultural markets had tended to be of a stopgap nature, responding to short term fluctuations in domestic commodity supply and demand and to increased producer pressure for income protection. Subsequently, CEC governments have all moved to consolidate and reorganize their agriculture market interventions within the framework of comprehensive agricultural policies clearly defining the role and scope of government intervention. This is not to say that stopgap policy making altogether ceased to exist but that it became secondary to other observed patterns of policy development. The following briefly describes the early important legislation moving CECs towards greater market organization beginning by mid-1992. Subsequently, we will examine patterns in the policies and affected commodities emerging during the period of market organization.

[5] Interestingly, Bulgarian export constraints had been removed for the first time in 1995, allowing large grain exports attracted by high world market prices. In turn, with the threat of domestic shortages, export restrictions were re-imposed soon afterwards.

- *Emerging comprehensive agricultural legislation has explicitly included or restated government commitments of providing continuing long-term support to, and intervention in, the agricultural sector.*

Among the first, Poland adopted "Opportunities for Rural Areas and Agriculture" legislation in September 1992 which authorized the government to support the transformation of agricultural production. Following that in November 1992, the "Medium Term Sector Adjustment Programme" was adopted which called for, among other items, "maintaining an appropriate price and trade policy environment ... and to gradually stabilize price fluctuations in agricultural commodity markets " (OECD, 1995). As part of this commitment, the Law on Minimum Prices was implemented in 1992 establishing minimum prices for bread-grains and milk.

Hungary enacted its Agricultural Market Regulation Act in early 1993 which defined directly regulated, indirectly regulated and influenced markets. Directly regulated markets are those subject to guaranteed minimum prices and procurement quotas above which guaranteed prices are limited. Commodities in this category included wheat, fodder maize, cow's milk, and were later joined by pork and beef.

The Czech and Slovak republics continued the system of food and market regulation initiated under the Federation thus reaffirming the State's role in market intervention. Prior to 1992, intervention was accomplished primarily by the use of border measures and the use of export subsidies. After 1992, the Czech State Fund for Market Regulation began to restrict its activities primarily to milk products and wheat for human consumption but also beef, pig meat, eggs, and sugar whereby direct intervention purchases, up to a certain amount, became more common. By 1994, the Fund began providing working capital to wheat producers with a 50% advance of the guaranteed price negotiated in the spring. After the division of the Federation, the Slovak government established a stronger protectionist agenda as set out in its 1993 agricultural policy goals which called for 90% food self-sufficiency in important commodities and satisfactory levels of farm income. Guaranteed purchase prices are set for milk while guaranteed minimum prices are set for cereals, beef, and pork. The desire for strong food security and authority for government intervention in agricultural markets was reiterated in the 1995 document "The Food Security of the Nation."

In Romania the main instruments for government intervention in agricultural markets are regulated by "Law 83" which provides for the support of agricultural producers and self-sufficiency in important food items. It includes provisions for numerous subsidized credits and premiums in addition to guaranteed minimum purchase prices for some commodities. Products of national importance include cereals, milk, oil crops, pulses, sugar beet, potatoes, industrial tomatoes, and, later, pork and poultry meat. However, the dual policy of maintaining stable and low domestic food prices forced guaranteed minimum prices to low levels leaving credit subsidies and premiums to play a relatively more important role in supporting producer income.

In Bulgaria, the tobacco industry became the early subject of intervention and regulation including the establishment of minimum prices, surplus purchasing, and rules affecting the quality and varieties of tobacco grown. However, it wasn't until 1995 that Bulgaria passed its Law on Protection of Agricultural Producers. Similar to the situation in Romania, food security and moderate price levels of consumer food items are important goals. As such, intervention in the markets of basic food stuffs effectively ensures that producer prices are below world prices especially in the case of wheat and some other grains. The majority of producer support is provided through an array of farm tax exemptions, investment credit subsidies, assistance to agriculture in less favored areas, and the provision of 50% of the guaranteed price for commodity contracts negotiated in advance of harvest to provide for working capital. The practice of domestic price setting in agriculture and all other sectors of the economy was restated in a 1995 Price Law.

As described, the legislation adopted by all CEC governments have committed them to increased long term and comprehensive intervention in important agricultural markets (Tangerman and Josling, 994). Beginning from this general description it is also possible to identify a common choice of policies among CECs in providing long-term support to agriculture and particular commodities.

- *Producer support in the form of minimum prices or guaranteed prices has been a feature of all CEC agricultural programs introduced after the initial liberalization and continued in subsequent agricultural legislation. In all countries, minimum prices have focused on the important food commodities of wheat, other cereals, milk, sugar, and some meats.*

The establishment of minimum and guaranteed prices has been a feature of CEC government intervention introduced after and even during initial movements toward market liberalization. In the early phases of reform, the establishment of minimum prices did not mean that governments made direct purchases at the established price but that it acted as a threshold at which governments would begin intervention purchasing in order to support producer incomes by preventing price drops below that level. Government stocks from intervention were then to be released onto the market to prevent excessive domestic price increases during times of domestic shortage. In another version, as initiated in Hungary in the early years of reform, minimum prices were of a statutory nature. Transactions made below the set minimum price were illegal. This system was easily subverted on grounds of product quality and was subsequently abandoned.

In later periods during reform, in instances of price declines, governments did intervene with purchases made under guaranteed prices but these purchases were always subject to specified quota amounts. The system of purchasing under guaranteed prices subject to quota was also used in advanced contracting by states in efforts to procure for domestic needs. Generally, however, minimum prices were set at or below the cost of production as well as below market price so that intervention purchases were infrequently needed. This was the case in Hungary, for example, where minimum prices and intervention was established for wheat, maize, cattle and pigs but was not implemented.

In most cases, however, support to producers in terms of minimum prices was achieved through the selective use of border measures designed to maintain higher domestic producer prices and thus minimizing the need for intervention purchases and budget outlays.

The incidence of minimum and guaranteed prices by commodity are presented in Table 4a and summarized in Table 4b. A common feature across all CECs is the use of minimum or guaranteed prices primarily for wheat and milk but also for beef and some cereals. For wheat, minimum prices are floor prices under which intervention purchases are made in the event that border price protection fails. Increasingly, milk receives guaranteed prices which is paid by dairies who are then able to qualify for export subsidies. There is a degree of variability within countries with Poland, Hungary, and the Slovak Republic extending minimum pricing to a larger range of commodities than Czech Republic, Romania or Bulgaria over the last five years. However, Bulgaria has recently expanded the number of commodities under some form of minimum pricing while the number in other countries has generally remained the same.

- *The use of variable import levies as a mechanism to provide solid import protection for commodities receiving minimum prices were not widely adopted and then only among the most advanced of the CECs.*

Variable import levies are often employed to prevent domestic minimum price support to producers from being undermined by exactly bridging the difference between the desired internal price and the lower international price of some commodity. As such, they completely de-couple and insulate internal producer prices from external prices and price fluctuation (Houck, 1986). Table 3 describes the use of variable import levies among the CECs.

Despite the widespread use of minimum prices, variable import levies have not played a large role in maintaining internal producer prices. Czechoslovakia first introduced variable levies in 1992 which were maintained by both Republics after the dissolution of the Federal Republic. However, their use was not explicitly referenced to minimum prices but rather applied more generally to those food commodities where “imports were under the domestic cost of production” (USDA, 1993, page 12). Poland, however, enacted variable import levies in 1994 which generally coincided with minimum price policies (USDS, 1994). The levy applied to such products as milk and cereals but also for other products such as eggs and some meats. No other countries used variable import levies.

Unlike the administration of variable import levies in Western Europe, the “variability” was not high with adjustment usually being made on a monthly or less frequent bases. In this sense they acted like an additional fixed import tariff. Since 1995 variable import tariffs in these countries have been replaced with tariffs at equivalent or higher levels of protection for the affected commodities in line with Uruguay Round GATT commitments.

- *Export subsidies have been used sparingly or not at all among CECs, except for Hungary. Export subsidies have primarily been applied to milk and milk products.*

Export subsidies seek to enhance the competitiveness of products in the international market when the domestic cost of production, and hence price, is above world levels. Table 5 describes the incidence of export subsidies among CECs. Export subsidies have not been used by cash poor Bulgaria and Romania (who in any case have tended to restrict exports of agricultural commodities instead of promoting them). Among the other four CECs, Hungary consistently provides subsidies to the greatest number of commodities followed by the Czech Republic. Across countries, milk and dairy products most often receive subsidies which also parallels the incidence of guaranteed prices for milk but not necessarily for other products. For example, the incidence of minimum prices are high in Poland and Slovak Republic. However, these two countries have only intermittently used export subsidies, involving mostly sugar and milk.

- *Supply control is the most recent policy instrument used but is limited to sugar and milk and applied in just half of the CECs.*

Market price support has the effect of increasing domestic production of the protected commodity and sometimes creating surpluses. Supply controls are often then employed to reduce production and therefore limit government outlays at guaranteed prices.

In the CECs, just two commodities have come under supply control in three countries as outlined in Table 3. In 1994, Poland instituted a new sugar support system embodied in the Law on Sugar Market Control and Ownership in Sugar Industry and this was the first CEC supply management policy since liberalization. Production quotas are allotted for both domestic consumption and for export with export subsidies. Production above quota is heavily taxed in the domestic market and excluded from export assistance. As a consequence of chronic surpluses encouraged through guaranteed prices, the Slovak Republic introduced milk production quotas in 1994 followed, most recently in 1996, by Hungary. Production quotas have not been applied elsewhere in the CECs.

- *Agricultural credit subsidies have emerged in all CECs as an important budgetary measure for supporting producers.*

One feature of the economic transition to have a significant impact on CEC agriculture was the liberalization of financial markets. In a combination with other factors including banking reform, high inflation, declining terms of trade, and uncertain property rights with land reform and enterprise restructuring, this caused a dramatic fall in the supply of credit to agriculture (Swinnen et al., 1997). Responding to the increased risk and general uncertainty surrounding the reforms, lending institutions imposed high nominal interest and refused to accept agricultural buildings and land as collateral. The resulting agricultural credit crisis in CECs induced more demands from farmers for government intervention.

Beginning early with economic reforms in some CECs, credit subsidies became an important source of budgetary expenditure in agriculture and have increased on average over time (Rembisz and Rosati, 1993, for the example of Poland). Figure 1 traces the evolution of agricultural credit subsidies in CECs as a percentage of agricultural GDP from 1989 to 1995. Subsidies are typically meant to cover part of the interest expense faced by farmers when purchasing annual inputs (working capital) and making capital investments. Credit subsidies are also often provided to up- and down-stream agro-food processors for input manufacturing and purchasing and storage of supplies. In fact, there is evidence that much of the benefits provided by credit subsidies are not captured by individual farmers but rather by input suppliers, processors, and large-scale successor organizations of the state farms (OECD, 1996).

2.3 *Summary of Instruments*

We have defined two distinguishing phases in the evolution of price and trade policy instruments in CECs since the beginning of economic transition. During the initial phase of policy developments, CEC governments sought to liberalize their markets and to remove restrictions to trade. For example, in most countries by the end of 1991, prices of consumption goods were unconstrained to seek their equilibrium with the generally short-term exception of certain "sensitive" commodities during the initial period of adjustment. Most types of producer subsidies where also greatly reduce or eliminated during this period and standard import tariffs were the principle means of agricultural producer protection. Shortly thereafter various non-tariff barriers were reintroduced under pressure by producers experiencing unfavorable terms of trade. Concurrently, consumer welfare remained important as demonstrated by the occasional, and sometimes long term, use of export barriers. In general, trade and price policy was of a stopgap nature reflecting immediate economic conditions and yearly fluctuation in domestic agricultural production outcomes.

The second phase in the evolution of CEC agricultural price and trade policy is characterized by the emergence of market organization. Beginning by mid-1992, CEC governments moved to consolidate and reorganize their agriculture market interventions by introducing more internally consistent policy packages defining the role and scope of government intervention. A main feature of the legislation is how it explicitly included commitments of providing continuing long-term support to, and intervention in, the agricultural sector. Features of market organization in terms of instruments include the increasing use of agricultural credit subsidies, the setting of minimum or guaranteed prices and corresponding intervention purchasing/selling schemes, the increasing reliance on market price support to make transfers to producers, the introduction of variable import levies to provide an extra measure of protection, the use of export subsidies especially for milk and milk products, and, most recently, the introduction of supply controls for sugar and milk in the most advanced countries.

Despite differences between countries in terms of timing of transition and pace of agricultural price and trade policy reforms, there is an extraordinary degree of similarity among the CECs in terms of the phases of policy developments, the choice of agricultural policy instruments, and subsequent direction of market regimes as demonstrated here. These patterns suggests too that the determinants driving market intervention and the choice of instruments employed may also be similar.

2.4 *Income Effects*

The income effects of government intervention into agricultural markets on producers is typically represented by the producer subsidy equivalents (PSE) which measure that percentage of agricultural production value which is transferred from consumers and taxpayers.[6] The PSE is meant to represent those transfers that are specifically a result of agricultural policy. Figure 2 reports the net aggregate percentage PSE[7] for the Czech Republic, Hungary and Poland which demonstrates a convergence toward a common positive level of producer support of around 20% in 1994.[8] For comparison, the net aggregate PSE for the EU and U.S. was 49% and 19.7% respectively in 1994 (OECD, 1996b).

The PSE is composed of a price support component and a budgetary component. Market price support ideally measures the price differential between border and internal prices as a result of agricultural policy. In reality, estimations of market price support are complicated by rapid exchange rate movements such as often experienced in transition economies, and by fluctuations in world prices. The budgetary component is in turn composed of direct

[6] Methodology and important assumptions in calculating PSEs can be found in OECD, 1995b, pp. 137-144.

[7] That is, aggregate value of producer transfers from all products categories less the feed adjustment as a percentage of total adjusted production value.

[8] In these figures, we have deliberately chosen to focus on the more recent years of transition because of the sensitivity of the support indicators, especially the price support component, to exchange rate assumptions for earlier periods (OECD, 1995a).

payments, reduction in input costs, general services, and other support. Figure 3 describes the evolution of market price support as a component of net PSE for Czech Republic, Hungary, and Poland, 1992-1994. Table 6 provides a decomposition of net aggregate PSE in 1994 for each of the PSE components plus the feed adjustment, an accounting category to adjust for the redistributive effects of price support and taxes within agriculture. The decomposition is reported in terms of shares of net PSE and shares of adjusted value of production.

The graph and decomposition table show that market price support constitutes a significant share of the total support to agriculture and the largest share of total adjusted value especially for the Czech Republic and Poland. In these two countries, by 1994, market price support contributes nearly the same percentage to the value of agricultural production. Market price support is also clearly the most important source of producer transfers. In contrast, the Hungarian market price support in total support in 1992 was just around ten percent when concurrent currency devaluation and higher world agricultural prices reduced the border-domestic price differential until recovering to around 52% of PSE or 10.5% of agricultural value in 1994. These changes in the Hungarian MPS/PSE ratio demonstrates how identifying the degree of 'policy effect' can be complicated by exchange rate effects.

Total budgetary support in Hungary has been a much more significant component in producer transfers than in the Czech Republic and Poland except in the sub-category of general services. As a share of PSE, total budgetary support is around 36% in Hungary while only 13% and 18% respectively for Czech Republic and Poland. Hungary also makes greater use of direct payments, reduction of inputs, and other support accounting for 5.8%, 21.8%, and 8.9% share of PSE versus (Czech R.) 0%, 6%, 0% and (Poland) 0%, 5.8% 0%. The order of contribution to PSE changes for sub-category general services with Poland (13.1%), Czech Republic (7.9%) and Hungary (0.1%).

3. The Impact of International Agreements as External Constraints

- *Initially, the evolution of CEC agricultural price and trade policy development toward more government regulation and intervention has been largely unconstrained by trade agreements. Recently, governments have made modest modifications to accommodate regional or bilateral trade agreements. Increasingly, international agreements will result in greater modifications and a reduction in the scope of future policy choice.*

Central European governments have been largely unconstrained by international agreements in the design and implementation of agricultural policy and able to choose, at last in principle, among the entire set of possible price and trade policy instruments available. In practice, the necessary budget outlay required for some instruments limited their use. The evolution of agricultural policy choice on the whole towards more and increasingly distortionary means of intervention was not constrained by credible outside constraints favoring the use of simple and transparent instruments. Despite this general observation, there are several occasions where governments have modified their trade regimes to accommodate regional or bilateral trade agreements.

First, probably the most well known of the trade agreements are the Association Agreements between CECs and the EU. These agreements are intended to enhance economic, social, and political cooperation leading to integration and eventually membership in the EU. Trade relations under the Agreements allow for the gradual creation of a free trade area between the CECs and the EU where the first step is the reduction of duties and preferential access to each others' products. EU agricultural concessions include the establishment of in-quota tariff rates and a gradual increase in the quota level as well as general tariff reductions. Quota treatment is based on historical export volume. CEC agricultural concessions are similar in form but offer smaller reductions of tariffs and increases in quota amounts.

In some cases, CEC exporters have failed to fully utilize the EU granted preferential quotas. Failure to exhaust quotas has been attributed to combinations of a lack of timely and complete information, marketing ability, insufficient supply, phyto-sanitary and packaging requirements, and possible miss-matching of export capacity and tariff concessions.

Second, the Central European Free Trade Agreement (CEFTA) members (Czech Republic, Hungary, Poland, Slovak Republic, 1992; Slovenia, 1996) have agreed to gradually and multilaterally eliminate duties for industrial products and some agricultural products of low competition sensitivity. A subsequent agreement was reached in 1995 for the multilateral reduction of duties for certain categories of agricultural products based on the products' sensitivity. Duties of low sensitivity products range from zero to an average reduction of thirteen percent while duty levels for sensitive products are either negotiated on a bilateral basis or excluded from consideration. As members of the WTO, all CEFTA members have also removed or tarifficated their non-tariff barriers.
The rules for CEFTA membership (membership is currently being sought by Bulgaria, Romania, and Lithuania) have important implications for a country's choice of trade policy. These rules stipulate that applicants must be members of the GATT/WTO, must have bilateral free trade agreements with all CEFTA countries, and must have an Association Agreement with the European Union. The membership requirements combined with the negotiated duty reductions will increase the necessary degree of agricultural policy coordination among members and limit the set of policy measures available.

Third, the GATT/WTO is likely the most influential institutional arrangement affecting the use as well as the level of trade policy instruments. As of 1995, commitments to the Agreement on Agriculture has bound many tariffs, modified the means of protection, and has established upper limits of both domestic support and, in particular, export subsidies. Current WTO members (Poland, Hungary, and Czech and Slovak Republics) have all abolished their various supplemental levies, variable levies, import quotas, and some licensing requirements. These forms of import protection have been largely replaced with equivalent or higher tariff rates and customs duties. Limitation on the use of export subsidies in addition to the gradual lowering of tariffs will affect the sustainability of other instruments which encourage commodity surpluses. For example, Hungary has come into violation over export subsidy use suggesting that room to maneuver may be diminishing faster than previously expected. In joining the GATT/WTO, Romania has opted for developing country status allowing it greater flexibility and a longer time horizon for the restructuring of its trade regime. Bulgaria is expected to become a member in 1997.

Finally, EU accession negotiations and the next WTO round is likely to reduce future government discretion in choosing among different methods of agricultural protection.

The previous suggests that international trade agreements are indeed effective in constraining the choice of government intervention in agricultural markets. Future negotiations on agriculture trade and the enlargement of existing trade groups will likely further promote agricultural policy coordination and impact how governments are able to respond to specific domestic demands for protection. External constraints, such as international agreements, are also highly credible in that the institutional nature of the commitments help prevent reversal by future governments.

4. Comparisons with EU Policies

There are some remarkable parallels between CEC price and trade developments described above and those that have occurred over the past century in the Western European countries (WECs)[9] albeit the time-line of policy development for the CECs is radically compressed relative to the latter. It is in this context that we are best able to consider the uniqueness of the CEC agricultural policy developments and, for that matter, that of Western Europe. Table 7 provides a summary of important agricultural policy instruments introduced in WECs categorized by country and commodity from the late-1800's to the 1990's.[10]

- *Standard import tariffs were initially the primary trade intervention instrument.*

Import tariffs were introduced in a number of WECs beginning in the late 1800's as the primary instrument of producer protection following an increase in the volume of international trade. There were several notable exceptions however. Britain, Denmark, and the Netherlands maintained free-trade positions which caused either a decline or transformation of their agricultural sectors. The destruction caused by World War One resulted in the temporary suspension of most import tariffs since prices were high and supply short. Nevertheless, production soon recovered and tariffs were gradually reintroduced. Tariff rates reached new heights as surpluses began to appear and as demand dropped during the general economic depression of the late 1920's and 1930's (Tracy, 1989).

As discussed previously, CECs also initially relied primarily on standard import tariffs as the main instrument to protect agriculture. Similarly, producer pressure on governments to adjust upward the rates followed the emergence of the agricultural cost-price squeeze.

- *Non-tariff barriers to imports emerged to provide more effective protection to agricultural producers.*

Low prices and high surpluses of many agricultural products tended to erode the effectiveness of even the highest tariffs. Several non-tariff measures were introduced in the late 1920's in many WECs to further support domestic producer income. The milling ratio, which restricted the use of imported wheat and rye by millers, was a favored instrument of protection to grain producers and enacted by Norway, France, Germany and many others. Import quotas made their first appearance in France in 1931 and were applied to a wide range of agricultural products (Tracy, 1989).

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[9] WECs refers to those countries which now compose the European Union.

[10] Several authors, notably Tracy (1989, 1996), provide thorough descriptions of the agricultural trade policy developments and market organizations of Western European countries previous to and after the formation of the EU's Common Agricultural Policy.

CECs responded to similar pressures of declining producer income in their reintroduction of non-tariff barriers beginning in 1992. Also covering a wide range of agricultural products, the non-tariff instruments included licensing, quotas, minimum import prices, and compensatory levies as described previously.

- *In the most advanced countries, domestic market organization was implemented to provide long run support to, and extensive interventions in, agriculture.*

Protection to agriculture served to increase domestic production to where many countries encountered reoccurring commodity surpluses which they found increasingly difficult to export on the international market. In addition, import restrictions failed to maintain domestic producer prices as domestic production saturated home demand. As a consequence, producer prices, and income, continued to drop. In response, many WEC governments committed themselves to both long-term and increased market intervention by organizing sectors of the domestic agricultural market beginning in the early 1930's. Market organization took on many forms incorporating many different types of price and income supporting policies and covered a majority of the important temperate climate crops and livestock as outlined in Table 7. By the end of the 1950's, more rigorous market coordination was being pursued. European Economic Community integration discussions took many elements of these initial efforts of market organization and used them as a framework for the emerging Common Agricultural Policy (CAP).

The majority of CECs too have provided for continued long-term agricultural intervention and protection through market organization beginning in 1992. Their efforts are described in various land, price, and food security laws committing governments to maintaining producer incomes through guarantees and increased market regulation as described previously. While the level of protection provided by CEC market organization is certainly less than that experienced in the WECs, they do share the objectives of maintaining producer income, ensuring regular and secure food supplies, stable markets and, consequently, long-term and more complex market intervention.

- *Producer price support systems are initially the main feature of market organization.*

The primary policy used to meet the objectives of market intervention in the WECs, both of the CAP and earlier legislation, has been the modification of the price level for many commodities (Bureau of Agricultural Economics, 1985; OECD, 1967)[11]. As previously indicated, many of the instruments used in the initial period of market organization were designed to maintain a certain level of internal commodity price. CAP price support hinged on three main instruments. The first is the use of variable levies to maintain the desired internal price against the price depressing effect of less expensive imports. Intervention purchasing (and sales) are then required to restrain price volatility and maintain price levels owing to the yearly changes in domestic production. Finally, export subsidies are required to bridge the difference between the domestic and external price for sales of surplus commodities. Price

[11] Britain is an important exception of countries predominantly using price policy. Wheat and sugar beet producers were supported using deficiency payments and production subsidies respectively during the pre-war period which were later extended to other commodities in the immediate post-war period. The CAP also applied deficiency payments to the sales of sheep meat, oilseeds and other minor crop products.

support mechanisms of this sort applied to the major commodities of cereals, dairy products, beef and veal, and sugar.[12]

Market price intervention in CECs is also the basic producer support instrument. Emphasis on maintaining minimum prices at some desired level for wheat, other cereals, milk, sugar, and some meats is similar to the Western European experience. With the exception of Poland, variable import levies were of secondary importance to other forms of import controls such as import licensing, quotas, and other duties intended to insulate domestic producer prices. Often, provisions for intervention purchases were in place but, because of budget limitations, their use was somewhat restricted. Similarities of support instruments, however, does not imply similar levels of protection. In most cases, CEC producer prices are less protected than the WECs with aggregate agricultural Producer Subsidy Equivalents approaching 20-25% in 1994 for Hungary, Poland, and the Czech Republic against 50% for the EU-12 (Josling et al., 1996).

- *Production quotas have been installed only after price support policies were implemented and then only in the milk and sugar subsectors*.

Established price support policies often lead to so-called structural surpluses arising from the movement of resources into the protected and supported industry. Methods of supply control are often then needed to limit the burden of support on state budgets and consumer prices. Both the WECs and some CECs who have provided consistent price support have sought recourse from growing support costs in supply control measures. WECs first applied production quotas on sugar as early as 1968 when, under the CAP, a common price was established. Quotas on milk production followed in 1984 replacing an earlier co-responsibility levy and slaughter program.

In the CECs, the Polish sugar quota is very similar to that administered under the CAP with set quotas for domestic and export markets but include stiff above quota penalties for above quota production. Also as outlined previously, milk is also subject to production controls in both the Slovak Republic and Hungary.

5. Summary

A survey of the agricultural price and trade policy instruments employed in the CECs since the beginning of political and economic reform reveals many parallels and a common evolution. This pattern is generally applicable to all CECs even though there is some differences in timing. In particular, Bulgaria and Romania have diverged as they attempt to fulfill a dual policy of consumer and producer protection

Each CEC had moved by the end of 1991 to abolish consumer and producer subsidies and established relatively open markets where import tariffs were the dominant form of protection. This trend was being reversed by 1992 with increases in the general level of tariff barriers and the reintroduction of other instruments of protection and commodity supply regulation. Responding to producer pressure and concerns over food security, agricultural legislation in

[12] Many other commodities also received price support but often in conjunction with supplementing policies such as storage subsidies, market supply withdrawal, minimum import prices, protection to subsectors using higher priced domestic inputs, and voluntary export restraints (Bureau of Agricultural Economics, 1985).

all CECs established or reiterated their intention of providing consistent long-term support to, and intervention in, agricultural markets.

Market price support emerges as the dominant instrument of transfers to producers and most importantly for wheat, other cereals, milk, sugar, and some meats. All CECs except cash-poor Bulgaria and Romania have used export subsidies to clear internal markets for occasional commodity surpluses, most consistently for milk and milk products Supply controls (production quotas) for milk, and also for sugar have emerged as the most recent instrument of agricultural intervention in Poland, Slovak Republic, and Hungary.

The choice of agricultural policies is increasingly restricted by a number of international trade agreements, the most important being commitments to the Uruguay Round GATT. Under these commitments, the CECs have significantly reduced their use of various non-tariff measures and have given assurances of agricultural market access.

Changes in the use of trade and price policy instruments in CEC agriculture since 1990 also have often mirrored the developments in WECs but over a radically compressed time frame. As with the CEC example, government intervention in agricultural markets was designed to help alleviate income problems experienced by producers, provide for some measure of food security, and stabilize agricultural markets. Over time, pressure to support producers has seen the employment of relatively simple measures to more and more economically distorting and complex instruments of price support, supply control, and widespread market organization.

By tracing key aspects of the development of trade and price regulation and corresponding policy instruments employed since the beginning of economic transition in CECs we find that the choice of instruments have not been random. A similar conclusion is reached by looking at the development of agricultural policy over many years in WECs. That the development of general agricultural objectives and the broad choice of regulatory instruments are so strikingly similar between the two regions reinforces the proposition that the developments in CECs are neither random nor unique.

The implication of finding non-random, non-unique paths of policy development is that it may be possible to identify determinants and model a system of agricultural policy choice that has greater than singular applicability. Similarly, lessons and experiences gained from the Western European example may provide clues to the direction of CEC agricultural policy if unfettered by credible constraints to policy choice.

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Table 1: Timing of food price liberalization in CECs

Country	1st liberalization	Full/major
Poland	Aug. 1989	Aug. 1989
CSFR	July 1990	Jan. 1991
Hungary	Jan. 1990	Aug. 1990
Romania	Mar. 1990	May 1993
Bulgaria	Feb. 1990	Feb. 1991

Table 2: Timing of producer subsidy reduction /withdrawal

Country	Partial reduction	Final withdrawal
Poland	1989	1991
CSFR	1990	1991
Hungary	1990	1991
Romania	1990	-
Bulgaria	1990	1992

Table 3: Patterns of Trade and Price Policy Among Central European Countries

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

Source: OECD, 1993-1996, 1994a, 1995 a,b.
USDA/ERS, 1993; Rodrik, D., 1992.
European Commission (DG VI)Agricultural Situation and Prospects in the Central and Eastern European Countries, various issues.

[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 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.

Table 4a: Incidence of Minimum prices and Guaranteed Prices of Major Commodities, 1991-1995

	Czech R.					Hungary					Poland					Slovak R.					Bulgaria					Romania				
	91	92	93	94	95	91	92	93	94	95	91	92	93	94	95	91	92	93	94	95	91	92	93	94	95	91	92	93	94	95
Wheat	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			X	X	X
Other Cereals						X		X			X	X	X	X	X			X	X	X					X			X		
Sugar	X													X	X				X						X			X		
Milk	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X			X	X	X
Dairy Prod.											X	X	X	X	X															
Pork			X			X			X	X			X					X	X											
Beef	X					X			X	X						X	X	X	X	X					X					
Poultry																				X										
Oilseeds																				X								X		
Potatoes			X															X		X					X			X		
Tobacco																							X	X	X					
Fodder																														
Malt									X	X																				

Source: OECD, 1993-1996, 1994a, 1995a,b; Agra Europe, various issues.

Table 4b: Patterns of Commodities with Minimum Prices

Across Countries: Milk
Wheat
Some other Cereals
Some Beef

Within Countries:

Hungary	Poland	Czech R.	Bulgaria	Slovak R.	Romania
Milk	Wheat	Wheat	Wheat	Wheat	Wheat
Wheat	Other Cereals		Tobacco	Milk	Milk
Beef	Milk			Beef	
Pork	Dairy Prod.			Other Cereals	
	Some sugar				

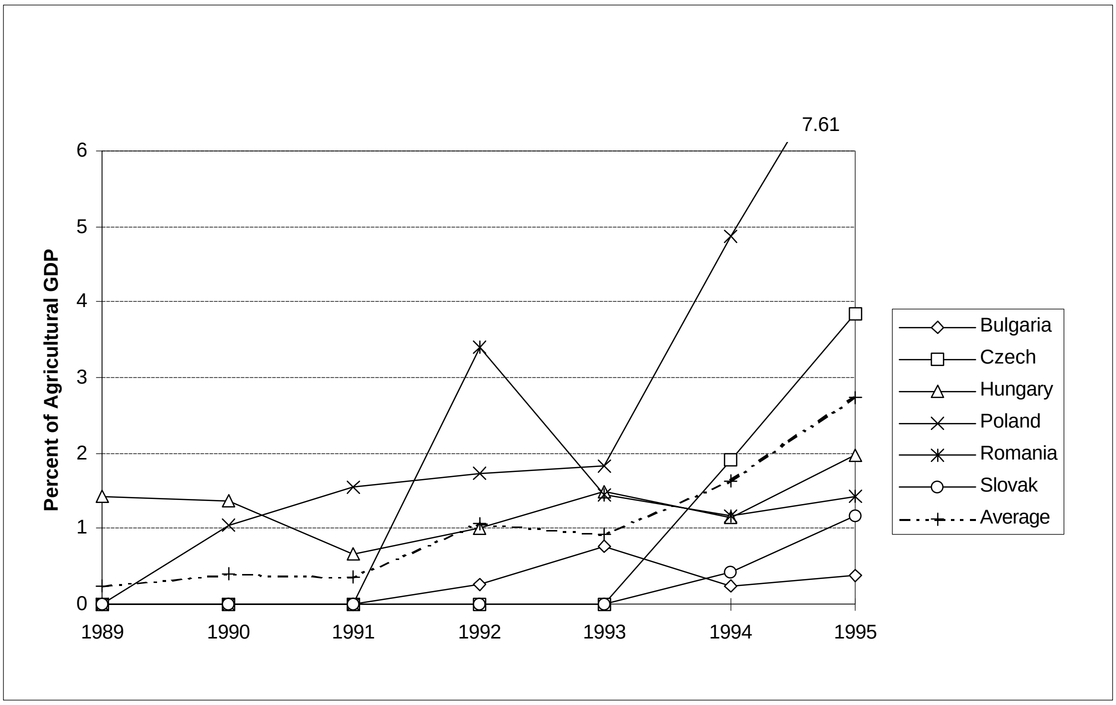
Source: OECD, 1993-1996, 1994a, 1995a,b; Agra Europe, various issues.

Table 5: Incidence of Export Subsidies of Major Commodities, 1991-1995

	Czech R.					Hungary						Poland					Slovak R.				
	91	92	93	94	95	90	91	92	93	94	95	91	92	93	94	95	91	92	93	94	95
Wheat	X								X	X	X										
Other Cereals								X		X	X	X					X		X		
Sugar		X	X									X			X	X	X	X	X		X
Milk	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X
Dairy Prod.	X	X	X	X	X	X	X	X								X				X	
Pork						X	X	X	X							X					
Beef	X	X	X	X		X	X	X	X	X	X								X		
Poultry	X					X	X	X	X										X		
Oilseeds																					
Potatoes	X		X		X							X				X					
Malt				X	X																X
Eggs						X													X		

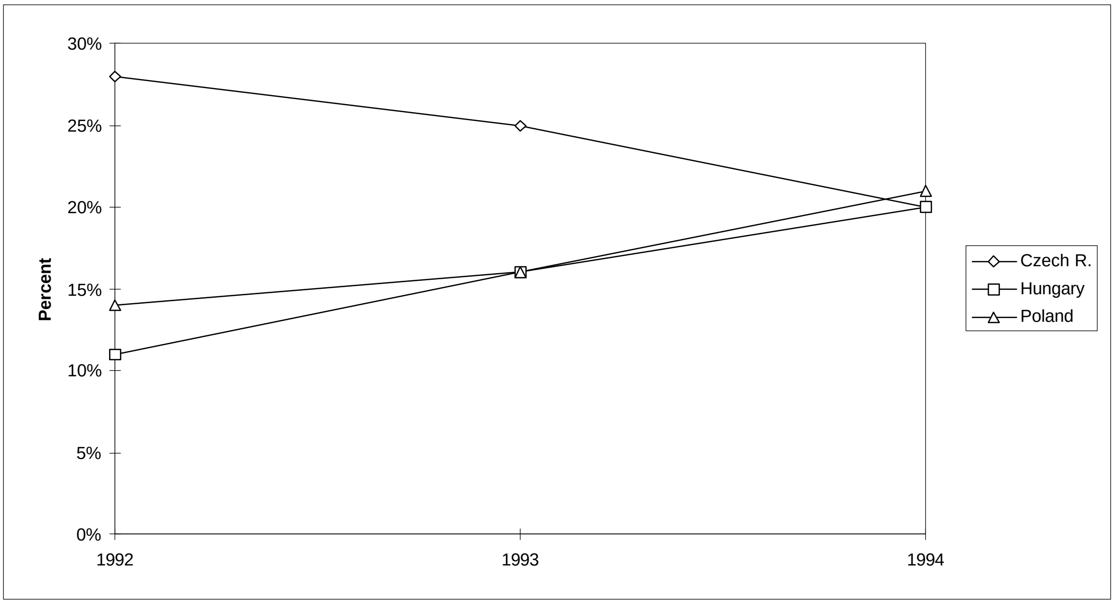
Source: OECD, 1993-1996, 1994a, 1995a,b; Agra Europe, various issues.

Figure 1: Evolution of Agricultural Credit Subsidies in CECs, 1989-95



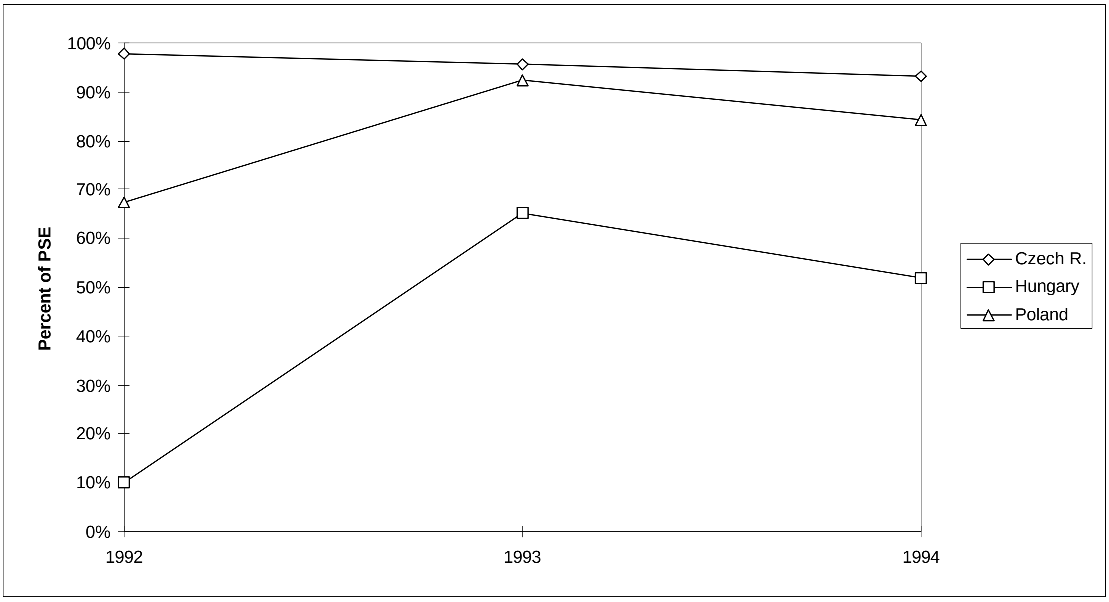
Source: Swinnen and Gow, 1997

Figure 2: Net Aggregate Percentage Producer Subsidy Equivalent, 1990-1994



Source: OECD, 1996

Figure 3: Market Price Support Share of Net Aggregate PSE, 1992-1994



Source: OECD, 1996

Table 6: Decomposition of Producer Subsidy Equivalent, 1994

	Czech R.		Hungary		Poland	
	% of PSE	% of Value	% of PSE	% of Value	% of PSE	% of Value
MPS	93.3%	18.3%	51.8%	10.5%	84.2%	17.4%
Direct Payments	0.0%	0.0%	5.8%	1.2%	0.0%	0.0%
Reduction in Input	6.0%	1.2%	21.8%	4.4%	5.8%	1.2%
General Services	7.9%	1.5%	0.1%	0.0%	13.1%	2.7%
Other	0.0%	0.0%	8.9%	1.8%	0.0%	0.0%
Feed Adjustment	-7.2%	-1.4%	11.7%	2.4%	-3.1%	-0.6%
Total	100.0%	19.6%	100.0%	20.3%	100.0%	20.6%

Source: OECD, 1996

Items included in budget categories.

1. Direct Payments: direct subsidies from taxpayers to producers such that there is no effect on consumer prices.
2. Reduction in Input Costs: measures that lower input costs of capital and/or other products such as interest concessions, subsidies for purchase of machines, fertilizers and plant protection chemicals, etc.
3. General Services: long term cost reducing measures not directly received by producers such as agricultural research and infrastructure investments by the government, e.g. water supply, irrigation and drainage.
4. Other: other indirect support such as sub-national subsidies and tax concessions.

Table 7: Introduction of Trade and Price Policy Among Western European Countries

Instrument	Commodity	Country	Date
1. Import Tariffs	Most agricultural	Italy	1878
	Most agricultural	Germany	1879
	Livestock	France	1881
	All agricultural	France	1885, 1887
	Grain	Germany	1885, 1887
	Meat, livestock (grains free)	Belgium	1887
	Meat (grains free)	Switzerland	1891
	Grains, sugar	France, Germany	1931
	Fruits, vegetables	UK	1931
2. Non-Tariff Barriers			
Milling ratio	wheat and sometimes rye	Norway	1927
		France,	1929
		Germany	1929
		Widespread	1930
Import quota	Most agricultural (except wheat)	France	1931
	All agricultural products	Belgium	1932
Voluntary Export Restraint	Meat, eggs, bacon	UK	1933
3. Market organization[1]	Grain	Norway	1926
	Meat, butter, pigs	Denmark	1930
	Cattle, dairy, hogs, veg.	Netherlands	
	Cattle, dairy	Austria	1931
	Wine, grains	France	1931, 1934
	Dairy	Sweden	1932
	All	Germany	1933
	Wheat, rye	Switzerland	
	Milk, butter and cheese	UK	1933,1934
	sugar beet		1935
	Potatoes, sugar-beet, fruits and vegetables	Netherlands	1931
	Grain	Belgium	1933
4. Minimum and Guaranteed Price Support	Wheat	France	1936
	Major foodstuff	UK	1947
6. Export Subsidies	Sugar beet	UK	1930
	Wheat, sugar	France	1936, 1950
7. Target price and Intervention with Threshold prices linked to Variable Import Levies[2] and Export Subsidies	Cereals	EC-6	1962
	Dairy, rice		1968
	Sugar		1968
	Beef and veal	EC-9	1974
8. Production Quotas	Sugar, milk	EC-6, -12	1968, 1984
9. Compensation Payments[3]	Cereals, beef & veal	EC-12	1992
	Rice	EC-15	1995

Source: Own interpretation of Tracy (1989, 1996), Bureau of Agricultural Economics, Canberra (1985) and CAP Working Notes, Special Issue (1995).

[1] Market organization here (pre-CAP) means greater and more complicated government intervention in agricultural markets using combinations of instruments such as: state trade monopolies, marketing boards, state food corporations, intervention purchases, and subsidies in addition to numerous border measures.

[2] Variable import levies and associated threshold prices have been abolished in 1995 under the Uruguay Round Agreements of GATT.

[3] Payments made to producers to compensate for reduced price support under the MacSharry and later CAP reforms.