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Agricultural Reforms in Slovakia

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1. Introduction

After 1989 changes in the agricultural sector in Slovakia were driven by both purely domestic considerations and accession into the European Union's (EU) Common Agricultural Policy (CAP).

In the early years of transition the agricultural sector was adjusting to major institutional reforms (transition from dictatorship to democracy and from central planning to market economy). These reforms significantly influenced the production structure as farms started to adjust to market signals. Agriculture, however, remained one of the most regulated sectors in the Slovak economy with a lot of influence from the state on production decisions and the income of farmers.

Accession into the EU became the most significant factor influencing agricultural policy in the second half of the nineties. EU accession involves both changes in the policy instruments used for regulation as well as the level of protection afforded to the sector.

Concurrently along with the reforms in Slovakia the EU have been reforming its CAP. In the CAP we observe transition from the highly distorted price support to economically more efficient direct income support of farmers. The accession of Central and East European Countries into the EU was one of the reasons for the CAP reforms. Budget consideration and WTO negotiations are other reasons for the CAP reforms.

In general it is observed that the transformation of agriculture in Slovakia, as well as other countries of Central and Eastern Europe in the EU is mainly driven by political economy factors, while the effort to create an economically efficient sector remains a secondary goal. The goal of this paper is to analyse the reasons behind these reforms and to evaluate the effects of various policy instruments used to regulate the agricultural sector in production, consumption and incomes of various interest groups.

We use a politician voter interaction model to shed light on the process of forming agricultural policies. The model is based on Downs' (1957) original formulation as adjusted to analysing agricultural policies by Swinnen and de Gorter (1993). Furthermore, partial equilibrium and static partial equilibrium models with imperfections in the land and credit markets are used

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to estimate the impact of various policy regulations on production, consumption and welfare.

The second part of the paper evaluates the development of the Slovak agricultural sector during the transition period and the concurrent development of the CAP. Part 3 of the paper analyses the impact of EU accession on the agricultural sector in Slovakia and makes predictions for the future. The last section summarises the results and draws conclusions.

2. Agricultural Policies in Slovakia and European Union

2.1 The Development of Slovak Agriculture: From Socialism to European Union

Swinnen (1996) as well as OECD (2001) divide the development of agricultural policy in Central and East European Countries into three periods. This is also applicable for Slovakia. The division is based on the policies that were pursued by politicians in different stages of development of the economy and agricultural sector. In their effort to maximise political support, politicians choose agricultural policies – level of transfer of income to agricultural sector.

To evaluate the political economy of agricultural policy making in Slovakia, we consider a political market of rational self-interested politicians and fully informed rational citizens. Politicians maximise their votes while voters' support is a function of change in utility resulting from the government's policy. Politicians have redistributive policies (taxes and subsidies) at their disposal. Politicians undertake a redistributive policy in order to increase their votes. Citizens provide support if the policy helps them and reduce their support if the policy is against them. Different marginal utility of incomes among different income groups allows politicians to increase their votes through redistribution of income. Optimal redistribution occurs when the marginal decrease of support from the taxed group (consumers and taxpayers) equals a marginal increase of support from the subsidised sector (farmers). According to the politician voter interaction model, the level of transfers to the agricultural sector depends crucially on three factors: the income disparity between the rural and urban population, the share of agricultural population in the total population, and dead-weight costs associated with income transfer. The larger income disparity as a result of the comparative disadvantages of agricultural production, the greater is the politically optimal income transfer to the agricultural sector. Similarly, the small size of the rural population is conducive to large income transfers to the agricultural sector. The reason is straightforward, to subsidise a small number of farmers requires low taxation of the rest of the population while per capita transfers to farmers are high. Large dead-weight costs of income transfers reduce politically optimal transfer levels.

The first stage of agricultural policy after 1989 was conducted within the Czechoslovak Federation according to the Scenario of Economic Reform. The objectives were to establish new legal subjects based on the private ownership of land, to improve the market orientation of agricultural production with the goal of creating stable market conditions, and to enhance

TABLE 1 Average Nominal Monthly Wages and Relative Wages in Agriculture

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Agriculture	3.410	3.645	3.886	4.047	4.481	5.127	5.766	6.502	7.261	7.826	8.390	9.076
Ag. wage as % of wage in economy	110,4	113,3	103,7	91,8	85,1	83,2	80,7	79,1	77,6	76,6	76,7	76,5

Sources: *Štatistická ročenka SR*, 1991, 1992, 1993, 1994 (ed. by Statistical Office of the Slovak Republic)
Pracovníci a priemerné mesačné mzdy 1993, 1994, 1995, 1996 a 1. polrok 1997. (ed. by Statistical Office of the Slovak Republic)
Vybrané ekonomické ukazovatele a zamestnanci v poľnohospodárstve za SR za rok 1997. (ed. by Statistical Office of the Slovak Republic)

the productivity and competitiveness of farmers and processors of food and to improve regional distribution of production according to natural and market conditions.

The first stage of agricultural policy development can be named liberal.[1] It was characterised by price and trade liberalisation. At the same time the conditions for a real transfer of ownership rights to private hands were created. As the agricultural sector was highly subsidised during socialism, liberal reforms led to the reduction of agricultural terms of trade and the decrease of the relative income of farmers. *Table 1* shows the negative development of relative agricultural wages which is a proxy for measurement of income disparity.

Decline of relative agricultural wages created:
– pressure on decreasing production and departure of a large number of agricultural employees from agriculture into other sectors of the economy – economic pressure,
– pressure on increasing the redistribution of income into agriculture, and, therefore, on a change of agricultural policy from relatively liberal to protectionist – political pressure.

The function of the political market was reflected in the change of agricultural policy towards protectionism. Politicians realised that there was a potential to increase political support through redistribution to the agricultural sector where initial liberal policies decreased incomes. An increased rural-urban income gap prompted the launch of protectionist policies by self-interested politicians. This occurred in the second stage of the development of the agricultural policy in the Slovak Republic after 1989.

The second stage of agricultural policy development could have been realised after Slovakia's independance in 1993. During this stage agricultural policy focused on the stabilisation of agricultural incomes and halting the reduction of agricultural production. Protective measures were used to achieve self-sufficiency in basic products and to develop agricultural production in non-competitive, mainly mountain regions. Political focus was on the support of this part of the population (farming population) that suffered income loss due to economic developments. Protective measures were adopted in

[1] Agricultural policy in the first stage was liberal relative to previous agricultural policy that enormously subsidised agricultural sector. It was not, however, liberal when compared to policies of free market.

an ad hoc fashion. Stress was on political rather than economic objectives of efficiency enhancement. At this stage agricultural policy was on the horns of dilemma, as it wanted to achieve two quite different goals: to protect producers and at the same time to support consumers, especially the low income groups. Price support obviously could not achieve these two objectives, as high prices are good for producers while making consumers worse off. The state budget, rather than consumers, therefore provided agricultural support.

The third stage of the development of the agricultural sector had the task of preparing Slovakia's agricultural sector for European Union (EU) membership. Its beginnings can be traced back to the second half of the nineties and in particular, to the formation of the new government after the 1998 elections when it became clear that Slovakia would become an EU member. Independent Slovak agricultural policy was replaced with a process of harmonisation with the EU CAP. The Slovak government was constrained in its choice of policy instruments. By the time of accession, Slovakia had to adopt the instruments of the CAP. On the other hand the Slovak government was still free to choose the politically most appropriate protection level for the agricultural sector based on its own political considerations (choosing such protection level that loss of support from taxed consumers and taxpayers equals the gain of support from subsidised farmers). However, CAP had a strong influence on the choice of the protection level, as farming organisations were using the fact that the EU support levels of farmers are much higher, to exert pressure on the government to increase domestic support.

In the negotiation towards the adoption of CAP the Slovak government was trying to improve as much as possible its net income position relative to other EU members by bargaining for higher production quotas and higher reference yields.

Here we can conclude that during the whole transition period agricultural reforms were significantly constrained by political markets, i.e. by the interaction of politicians and voters in the political arena. That is, adopted policies reflected the interaction of individuals (citizens, politicians, bureaucrats, lobbyists) in an institutional context of decisions. Rational individuals maximised their individual welfare subject to their budget constraints and voting power. Citizens maximised their utility, politicians attempted to maximise voting preferences, bureaucrats tried to strengthen their positions in administration, and pressure groups wanted favourable tax or subsidy treatments.

In particular the development of agricultural policies depended crucially on the income disparity between the rural agricultural population and the urban non-agricultural population. As this disparity was growing, support maximising politicians provided more protectionist policies to the agricultural sector rather than letting economic forces solve the problem by a painful transformation. Similarly, the declining agricultural population made the per capita income transfers less costly for the non-agricultural population as subsidising small numbers of farmers requires the low taxation of the rest of the population while per capita transfers to farmers are high. Large dead-weight costs that are always associated with redistribu-

tive policies were constraining politicians and reducing incentives to subsidise the agricultural sector. On the other hand this was an impetus for policy reform. These conclusions are in accordance with the Down's economic theory of democracy and the Swinnen and de Gorter's model.

A negative impact of the European Union's Common Agricultural Policy on the Slovak reforms is also observed. High support of EU agriculture makes Slovak farmers less competitive on the world markets and also gives farmers strong reasons to ask for higher domestic protection.

2.2 Development of the Common Agricultural Policy: From Coupled Support to Decoupling

The Common Agricultural Policy of the EU is an economic framework of agricultural production and marketing which is constantly developing and changing. The beginnings of the common agricultural policies date back to the period of the formation of the European Economic Community (EEC, 1957). The Treaty of Rome, that established the EEC, focused specifically on agriculture. According to the treaty, member states of the EEC removed the quantitative trade and tariff barriers of agricultural products. Trading with the rest of the world was subject to common external tariffs. Similar liberalisation of intra-EU trade was also achieved in other sectors of the economy. However, since agriculture was highly supported in all member states prior to the creation of the EEC with the view to remaining protected in the future, there was a need to harmonise agricultural support policies in order to sustain agricultural free trade within EC borders. This was achieved by the formation of the common market organisation for cereals in 1962, which was later adopted to other commodities. Common market organisations were based on commodity price supports with import barriers and export subsidies (along with output controls). High domestic price and high border protection against foreign competition were guaranteed to farmers. The domestic price was usually set above the world price while high tariffs (initially levies) were imposed on imports in order to avoid the import of cheap products to the common market from abroad. In commodities in which the EC/EU produced more than the domestic consumption level, export subsidies were used to eliminate the surplus.

The EU's price support mechanism implies a transfer of income from consumers and taxpayers to farmers. Consumers pay higher prices than they otherwise would pay without import tariffs, export subsidies, and sometimes alternative forms of production controls, such as production quotas[2] or eliminating some land from production (set aside). Taxpayers finance production and export subsidies and other policy instruments dealing with excess production.

As a result of price support the EU was confronted with overproduction, growing budgetary expenditures, and pressure from the WTO negotiations.

[2] The process of controlling output started in 1984 with the introduction of milk quotas. To control output for other products involved high transaction costs and therefore could not be successfully implemented, for example for cereals.

These problems were seriously dealt with for the first time by the MacSharry reforms of 1992. In order to reduce market imbalances, the price support was reduced and compensatory payments to farmers were paid instead. They were paid in the form of direct (budgetary) payments. The calculation of these direct payments was based on historical production not current production. Increasing current production does not increase direct payments. However, farmers in order to be eligible for payments were obliged to produce certain agricultural commodities but the payment did not depend on the current level of production. This was an important move for the CAP because a large part of subsidies were partly decoupled (not linked) from the production. This in turn, less distorted the agricultural markets that suffered from overproduction.

In theory, fully decoupled direct payments have no impact on production, consumption, and trade. They do not create distortions in production or consumption. Direct payments cause, however, distortions in taxation that are proportional to government expenditures on direct payments. Partially decoupled direct payments are conditioned on producing at least some commodities and they are more distortive than fully decoupled direct payments but less distortive than fully coupled payments.

In practice fully decoupled direct payments have some production effects. First, they are still linked to maintaining land in good condition. Second, the risk averse producers increase production because of the wealth effect of direct payments. Thirdly, direct payments may allow financing investment activities when there are imperfect credit markets. Fourth, there is a policy risk that the base for computing direct payments will be changed in the future.

Agenda 2000, as agreed by the European Council in Berlin in 1999, went further in the direction of replacing market price support with direct payments. Additional price cuts were brought forward and more support to farmers was given in the form of direct payments.

Another important factor that pushed the reformation of the CAP was the future enlargement of the EU by Central and Eastern European Countries (CEECs). As the agriculture absorbs around half of the EU budget, there were concerns that the integration of the large CEECs agricultural sector may cause significant changes in the budgetary expenditures. Also, there were two other important factors that had to be taken into consideration: (a) lower agricultural prices in CEECs and (b) lower level of agricultural support in CEECs. Upon accession the adjustment of the support and prices to the EU level was expected to cause a large increase in production. On the other hand the food demand was expected to decline because of an increase in food prices. The effect then, would be an accumulation of a huge excess supply, which was feared, to flood markets in Western European countries – see for instance (Tangermann – Josling, 1994), (Hertel et al., 1997), (Frohberg et al., 1998), (Munch, 2000).

The MacSharry and Agenda 2000 reforms involved the reduction of the domestic price which improved the market balance. As a consequence there was less excess production in the domestic market that had to be sold in the world market. This in turn had a beneficial effect on EU consumers and also on world producers as the world price went up. However the budgetary

pressure was not removed. The EU budget still has to finance a major part of the CAP costs, as the direct payments became one of the most important instrument within the CAP. Thus, overall there was a shift from the financing of agricultural support from consumers to taxpayers.

The trend of replacing price support with direct income support continues. In 2003 Commissioner Fischler proposed further decoupling within Mid Term Review of the CAP, known also as Fischler's reform or the Luxembourg Agreement. A single farm payment independent from production was introduced, substituting most of the commodity specific coupled payments while the market price support was further reduced. Single farm payment is linked to the respect of environmental, food safety, animal and plant health and animal welfare standards, as well as the requirement to keep all farmland in good agricultural and environmental condition ("cross-compliance"). There are, therefore, two excuses for the direct farm payments. First, direct payments are used to increase farm incomes. Second, direct payments are viewed as payment for producing positive externalities such as preserving the environment.

The decoupling of subsidies from production is expected to restore market balance by forcing farmers to react to market signals and to adapt the production structure in order to reflect consumers' preferences. The decoupling of subsidies will give freedom to farmers to produce or to be involved in any agricultural activity, because they will be granted direct payments irrespective of whether they produce or not. As a result their decision will be based on the profitability of productive activities rather than on government decisions to subsidise certain commodities. It is expected that some of the agricultural land will not be used and will be abandoned, especially in mountainous regions with low soil quality, were agricultural production is not profitable. For the impact of decoupling on agricultural markets see, for instance (European Commission, 2003).

In conclusion, the EU's CAP is being transformed from a highly distortive price support system to a less distortive income support system. There is a reform involving a change in policy instruments used to support farmers. On the other hand the CAP still affords a high level of protection to the agricultural sector through direct income support which causes budgetary problems.

3. Impacts of EU Accession on the Slovak Agriculture

Slovakia loses its independent national agricultural policy in the EU. This means that further reforms of the Slovak agriculture can occur only when the whole CAP is reformed. The Slovakian government will have less flexibility to make independent adjustments in the agricultural sector because the level of support, as well as policy instruments, will be fixed at the EU level. Adjustments of policies to local conditions will, therefore, be minimal.[3] Because current EU members prefer higher protection of agriculture than Slovakia it is expected that no reforms will take place in Slovakia that would decrease budgetary expenditures on agriculture.[4] However, there are still negotiations concerning the net contribution position of member states to

TABLE 2 EU Budget Expenditure on Agriculture

	EC 9		EC 10	EC 12		EU 15		EU 25
	1973	1980	1985	1986	1992	1996	2002	2004
Expenditures (in bill. EUR)	3.6	11.3	19.7	22.1	31.2	40.8	47.2	49.3
Share of total EU budget (in %)	77	68	68	62	52	48	49	43

Source: European Commission: *The community budget: the facts in figures,* 2000; *Press releases on EU budget:* various dates.

the common EU budget. Some countries are net contributors to the common EU budget while others are net beneficiaries of common policies. Slovakia is expected to be a net beneficiary of the agricultural policies. That is, Slovakia is compensated for agreeing to support farmers more than its political optimal support level.

Budgetary expenditures (*Table 2*) are high in the EU because of the dominant position of direct payments in agricultural support policies. The level of direct payments for accessioning states was the most controversial issue in the negotiation. In the EU, direct payments were initially granted to farmers to compensate them for price cuts introduced by the MacSharry reforms and Agenda 2000 and to pay farmers for the provision of positive externalities. On the other hand, agricultural prices in Slovakia and other accessioning states were not expected to decrease. Therefore, there was no rationale for compensation. Moreover, high direct payments might slow down the restructuring process of the agricultural sector in the CEECs because large lump-sum transfers will inhibit the motivation of farmers to restructure their farms. Current member states were also opposed to large direct payments, because their net contribution position relative to the EU budget would deteriorate.

On the other hand, direct payments have some impact on the competitiveness of farms and if farmers in CEECs receive less direct payments than their counterparts in current member states their competitiveness will be lower than that of current EU member state farmers, ceteris paribus. This impact, however, is limited as direct payments are decoupled from production. Using these arguments, the European Commission succeeded to push

[3] There is some flexibility in the overall CAP framework. For example, EU 15 countries can opt either for full decoupling or partial decoupling for some commodities. That is full decoupling is a general principle while Member States can decide to maintain proportion of direct payments coupled. For cereals, oilseed and protein crops 25 % of direct payments might be linked to production or alternatively 40 % of supplementary durum wheat aid can be coupled. Another option of coupling direct payments to production includes 50 % of the sheep and goat premia, 100 % of suckling cow premium and 40 % of slaughter premium or 100% of slaughter premium with up to 75% of the special male premium. In the dairy sector member states can opt for decoupling either in 2005 or at latest in 2007. Furthermore, in Aegean Islands drying aid, seeds and direct payments need not be integrated in the single farm payment.

[4] National top-ups of direct payments (*Table 3*), on the other hand, provide some flexibility to adjustments of level of support of farmers in the transition period until 2013 as only upper limits to top-ups are fixed.

TABLE 3 Phasing-in Schedule for Direct Payments after Accession (in % of EU level)

	From EU budget	From national budget ("top-up")	TOTAL
2004	25	30	55
2005	30	30	60
2006	35	30	65
2007	40	30	70
2008	50	30	80
2009	60	30	90
2010	70	30	100
2011	80	20	100
2012	90	10	100
2013	100	0	100

Source: European Commission: *Accession Treaty,* 2003.

forward its proposal to partially introduce direct payments. The direct payments will start at 25 % of the EU level in 2004 and then continuously increase such that in 2013 they will reach the full level. However, national budgetary resources can be used to increase them by an additional 30 % (*Table 3*).

Relative to the situation before accession, direct payment will increase. The group that is expected to benefit the most from direct payments are landowners (Ciaian – Swinnen, 2003). Direct payments are distributed to the agricultural sector on a per hectare basis. The more land a farmer cultivates the higher direct payments he or she obtains. This increases the value of land. Competition for land among farmers will lead to an increase of land rent or land prices benefiting landowners.

The study of Ciaian, Swinnen and Munch (2002) estimated the impact of accession on Slovakia into the EU on the incomes of different owners of agricultural factors. They used a static partial equilibrium model with imperfections on the land and credit markets. The model was calibrated with data from 1999. Their model considers the following market participants: one domestic consumer, foreign consumers, one representative farm, agricultural input suppliers (agricultural factor input owners) and government, all assumed to behave competitively, except for market imperfections in land and credit markets, and government, which exogenously imposes its policies. There is assumed one product in the market, which is the monetary value of farm production (crop and livestock production). Credit rationing is assumed in the credit market and the concept of transaction costs is used to address the issue of land market imperfection. Market imperfection in the land market is mostly related to the presence of large co-operative and corporate farms and the large fragmentation of ownership rights. Imperfections in the labour market were not dealt with.

The total agricultural income and farmers' income are expected to increase, by 56 % and by 47 % respectively (*Table 4*). Landowners income will rise between 47 % and 773 % depending whether the farmer owns the land or non-farmers own the land. The study further shows that other agents that are involved in agriculture will also profit from enlargement throug capitalization of support in prices of their inputs supplied to the sector.

TABLE 4 Estimation of Income Change in Slovakia after Accession (base year = 100)

	Base year 1999	Accession
Farmers' income	100	147
of which:		
Labour income	*100*	*151*
Income from owned land	*100*	*873*
Variable capital income	*100*	*132*
Investment capital income	*100*	*145*
Hired labour income	100	176
Landowners' rental income	100	147
Variable capital suppliers' income	100	156
Total agricultural income	**100**	**156**

Source: (Ciaian – Swinnen – Munch, 2002)

The income of labour hired in the sector will increase by 76 % and the income of capital owners will rise by 56 %. The European Commission (2002) reports a higher increase in the total agricultural income after accession. According to its estimates the income will increase between 148 % and 164 % for the case of farmers being granted full level of direct payments, and by 45 % in the case of not getting the full level of direct payments.

Concerning production developments after accession, the European Commission (2002) estimates a 36% increase of crop production and a 12–13% increase of livestock production, again for full level of direct payments. Without direct payments production would increase by around the same amount, by 30 % for crop production and by 12 % for livestock production.

Pokrivcak, Bartova and Ciaian (2004) using a dynamic econometric model, estimated the impact of Slovakia's accession into EU on the agricultural sector. They used a partial equilibrium model developed as part of the AGMEMOD project. The model includes major agricultural commodities (wheat, maize, cattle…) inter-linked through cross price elasticities and cross elasticities for land, reflecting competition of different sectors for land resources. There are also links between the crop and livestock sectors. Each sector is represented by supply and demand relationships that take into consideration the specific processes within each sector. These relationships are estimated or elasticities from economic literature. Most CAP policies are incorporated in the model.[5]

The following three simulation scenarios are considered: a Non-accession scenario, a Non-Decoupling scenario and a Decoupling scenario.

– the *"Non-accession"* scenario assumes no EU accession and unchanged agricultural policies in Slovakia. This scenario was included for the sake of comparison.

[5] All projections of the model, however, must be taken with care. First, relatively short time series were used to estimate elasticities or elasticities were adopted from literature. Second, there will be substantial institutional changes related to EU accession. Third, the model is not based on micro foundations. Fourth, the model does not take into consideration the future development of the retail market. Given these weaknesses, the model is however appropriate for providing sound general projections as well as the impact of desired policy scenarios on the direction of change of the agricultural markets.

FIGURE 1 Wheat Production (1990 = 100 %)

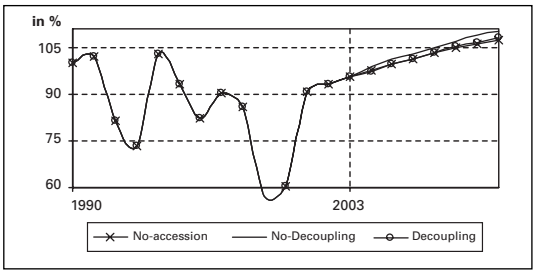


FIGURE 2 Maize Production (1990 = 100 %)

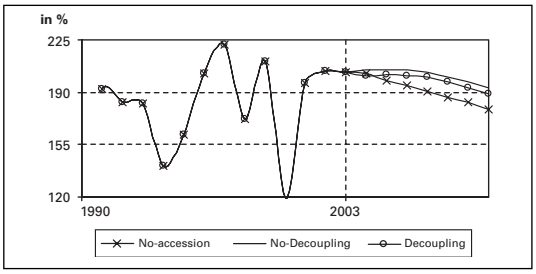


FIGURE 3 Beef Meat Production (1990 = 100 %)

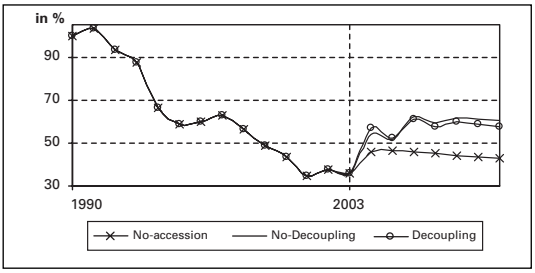
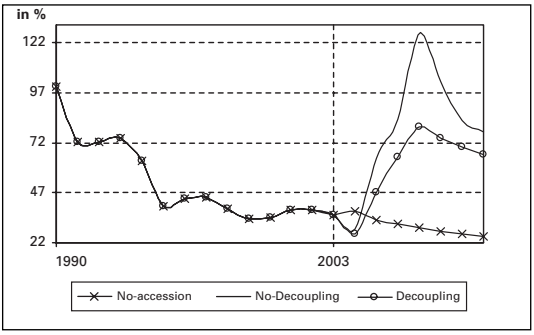


FIGURE 4 Sheep Meat Production (1990 = 100 %)



– the *"Non-Decoupling"* scenario assumes the implementation of the CAP with coupled direct payments introduced at 25 % of the EU level plus 30 % top-ups in 2004 and then being gradually increased in the following years as in the accession agreement. Prices are assumed to converge to EU levels one year after accession. Up to 2004, the policies are the same as in the Non-accession scenario. After 2004 policies are the same as per Agenda 2000. That is farmers receive payments in respect of certain crops and animals (arable crops, beef and veal animals, sheep and goats). The level of direct payments depends on species and on historical reference yield.
– the *"Decoupling"* scenario assumes the implementation of the CAP but with decoupled direct payments. However a slight impact of direct payments on production was considered due to the earlier mentioned reasons. Compared to the Non-Decoupling scenario, a decrease of the EU intervention prices by 5 % is assumed. The assumptions on the remaining variables are the same as in the Non-Decoupling scenario.

For all three scenarios the projections are made until 2010.

As for the development of macro variables after 2001 the following projections are used:

– For inflation rate and GDP growth rate, Eurostat forecasts are used: an average of 5.2% inflation rate and a moderate GDP growth (3 % on average).
– For population development, the UN forecast is used which predicts a very small population growth.
– For the Slovak currency exchange rate against the Euro and dollar, SAV (Ústav svetovej ekonomiky – World Economics Institute) forecasts are used: appreciation of the Slovak currency against both the Euro and dollar.

Figures 1, 2, 3 and *4* show the impact of accession on the production of wheat, maize, beef and lamb, respectively. The decoupling scenario results in a lower production level than the no-decoupling scenario. This is mainly due to the de-linking of subsidies from production. Non-accession would make the producers worse off. They would attain lower production levels in almost ever year after 2003 as compared to accession.

Decoupled direct payments and the common EU market may lead to specialisation on a European level as well as in Slovakia. Decisions on production will be driven less by political factors, and more by market signals and available endowments of production factors. More capital intensive farming systems are expected to emerge in Western Europe especially in capital abundant countries, while extensive farming systems are expected to emerge in Central and Eastern Europe. Within Slovakia, crop production is expected to dominate southern agricultural areas with fertile land while a shift to livestock production accompanied by the conversion of arable land to grassland is predicted in the northern less fertile regions.

Compared to the current situation agricultural prices will increase. *Figure 5* shows the past and projected Slovak prices as a percentage of the EU intervention prices. For most years agricultural prices were below 90 % of the EU intervention prices. The most notable difference is for animal products. For instance, in the period 1993–2002 beef prices in Slovakia was

FIGURE 5 Slovak Prices as Percentage of the EU Intervention Price (intervention price = 100 %)

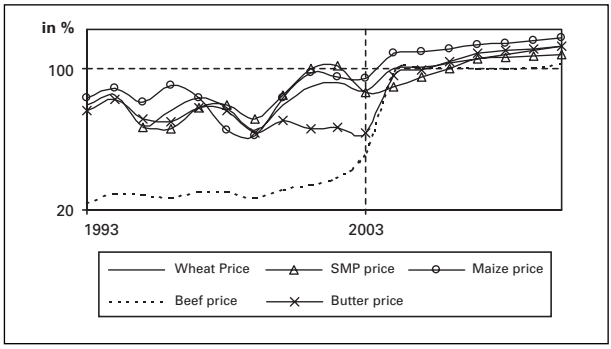


FIGURE 6 Wheat per capita Consumption (1990 = 100 %)

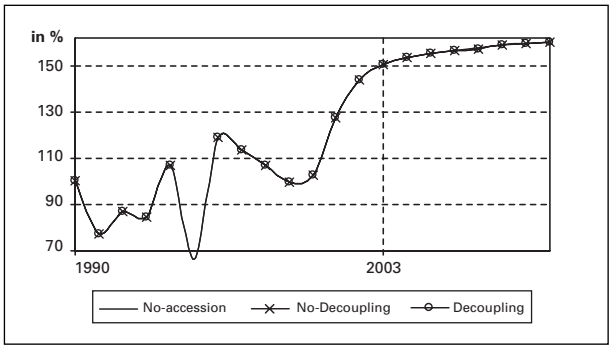
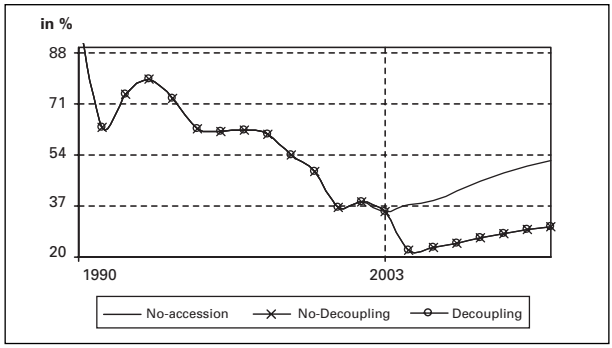


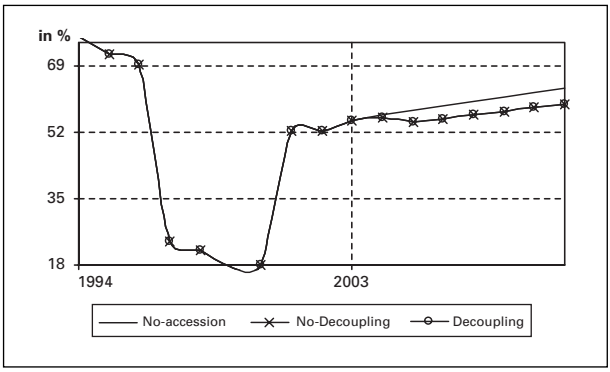
FIGURE 7 Beef Meat per capita Consumption (1990 = 100 %)



less than 38 % of the EU price. Prices after accession are expected to increase as Figure 5 further shows for the non-decoupling scenario again following the study of Pokrivcak, Bartova and Ciaian (2004).

Due to this developments, per capita consumption declines after accession. As *Figures 6, 7* and *8* show, the consumption of wheat, beef and milk,

FIGURE 8 Milk per capita Consumption (1990 = 100 %)



respectively, in accession scenarios (Decoupling and Non-Decoupling) is much lower than in the Non-accession scenario (Pokrivcak – Bartova – Ciaian, 2004). The highest difference is for beef followed by milk, while there is only slight difference for wheat. This is mainly due to the higher price increase of beef and milk after accession as compared to wheat prices.

Food prices will also increase due to the application of stricter hygiene and quality requirements. Health standards, animal welfare, and environmental standards pertaining to the classification of agricultural and food production will increase. This will also have an impact on prices and the competitiveness of the food processing industry. Božik (2002) estimates that the costs in the meat processing industry will increase by 1,3–1,5 %, in the milk processing industry by 1,2–1,4 %, and the chicken processing industry by 0,9–1,1 %. Farmers will feel indirect effects, as part of the cost increase will be transferred back to them.

The increase of market prices will have a positive impact on the production and profits of Slovak producers. The welfare of domestic agricultural producers will increase due to higher prices. On the other hand, higher prices will cause welfare losses to consumers.

4. Summary and Conclusions

Agricultural policy formation was driven mostly by political considerations in Slovakia with relatively low emphasis on economic efficiency. The development of the political market was critical for the development of the agricultural policy. The power of farmers and their lobbyist groups is stronger than that of other sectors.

The development of the common agricultural policy of the European Union had a strong influence on Slovak agricultural policy. Slovakia had to adopt CAP by the time of accession. This fact was used by farming organisations for pressurising the government to increase the protection rate long before accession.

Further reforms of the Slovak agricultural sector will be possible only within the overall reform of the CAP. However, since the protection of farmers is higher in the EU than in accessioning states, significant reforms to Slovak agriculture are not expected in the near future.

In the European Union CAP reform has been taking place since the early nineties. While protection rates remained stable, policy instruments supported changes from price support to direct income support.

Direct income support is less distortive than equivalent price support. Income support enables market price signals to determine production structure, rather than the government. The reform of the policy instruments is important. A transfer to a more efficient instrument used to support the agricultural sector has a potential to make every group better off.

The decoupling of subsidies from production, results in lower production levels, than linking subsidies to prices. Additionally, decoupling leads to the specialisation of production within the EU as well as within individual member states based on comparative advantages.

Agricultural prices are expected to increase when Slovakia joins the EU. Higher agricultural prices will be reflected in higher food prices. Food prices are expected also to increase due to the application of stricter hygiene and quality requirements.

The income of owners of agricultural factors of production is expected to increase after EU accession. The welfare of consumers is expected to decrease, ceteris paribus, with the adoption of the Common Agricultural Policy.

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SUMMARY

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Agricultural Reform in Slovakia

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This paper analysis the development of Slovak agriculture during the country's economic transition and during the parallel reforms of the common agricultural policy (CAP) of the European Union from a political-economy perspective. Agricultural-policy formation in Slovakia and the EU has been driven largely by political considerations, with relatively low emphasis on economic efficiency. CAP will have a profound effect on agricultural prices and on production and consumption levels in Slovakia. Agricultural producers' income is expected to increase, while consumer welfare is expected to decline due to the CAP.