Development of the Slovak agriculture and agricultural policies during the transition period

Vývoj slovenského poľnohospodárstva a poľnohospodárskych politík počas prechodného obdobia

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Abstract: The economic importance of agricultural sector in Slovakia declined during transition period. There are several reasons for this: declining terms of agricultural trade, extreme weather, transformation of agricultural sector, unclear property rights in transition period, short-run privatization distortions, transformation of up and downstream sectors, world market fluctuation, decline of real wages, low stability of agricultural policy and other. The development in economic market was paralleled by activity in political market. After initial liberalization, agricultural protection subsequently increased. The EU accession influences both levels of protection as well as instruments of agricultural policy.

Key words: agriculture, Slovakia, EU, political economy, transition

Abstrakt: Počas prechodného obdobia sa znížil ekonomický význam slovenského poľnohospodárstva. Dôvodov je viac: klesajúce výmenné relácie, extrémy počasia, transformácia poľnohospodárstva, nejasné vlastnícke práva, krátkodobé privatizačné deformácie, transformácia dodávateľských a odberateľských sektorov, fluktuácia na svetových trhoch, pokles reálnych miezd, nízka stabilita poľnohospodárskej politiky. Vývoj na ekonomickom trhu je sprevádzaný vývojom na politických trhoch. Po prvotnej liberalizácií sa následne zvýšila poľnohospodárska ochrana. Vstup do EÚ má vplyv na úroveň podpory ako aj na nástroje poľnohospodárskej politiky.

Kľúčové slová: poľnohospodárstvo, Slovensko, EÚ, politická ekonómia, prechod

INTRODUCTION

After 1989, Slovak Agricultural Policy reflected transition from centrally planned economy to market system. The process was accompanied by a major transformation of institutional structure of the economy and society, property rights transfers, and by changes of production structure of agricultural firms. Imminent accession into the European Union (EU) became the most significant factor influencing agricultural policy in the second half of the nineties. Before accession, Slovakia has to adopt all instruments of the Common Agricultural Policy (CAP) of the EU. It is a challenge because the CAP is complex and costly. The independent national agricultural policy will end by the time Slovakia joins the EU's CAP. It will be replaced by collective decision-making within the Council of Agricultural Ministers of the EU in which Slovakia will have its representative, however. The level of agricultural protection is a permanent contention point of the Slovak agricultural policy. Protection of agriculture is controversial because it involves redistribution of income in the economy. EU accession will cause a structural change in Slovakia's trend of protection of agriculture. The EU agricultural protection rate is significantly higher than current Slovak subsidies.

In general, it is observed that transformation of agriculture in Slovakia, other countries of Central and Eastern Europe as well as in developed countries is mainly influenced by political economy factors while the effort to create an economically efficient sector remains a secondary goal.

The second part of this paper is devoted to theories of agricultural protection. Part 3 analyzes the development of Slovak agriculture since socialism until now. The final section summarizes results and draws some conclusions.

THEORIES OF AGRICULTURAL POLICY MAKING

Agricultural policy has a redistributive character. Developed countries subsidize agriculture while developing countries tax it. Many empirical studies that use both time-series and cross-section data confirm this fact (Bale and Lutz 1981). At a given period, relatively richer countries subsidize agriculture more than poorer countries and as the country develops, the level of agricultural protection increases.

Apart from transferring income from taxpayers and consumers to producers, agricultural policy conducts a

series of productive activities. Productive activity is a government policy that decreases transaction costs in the economy. This type of policy rids of market failure. Improvement of rural infrastructure is for example considered a productive policy.

Productive and redistributive policies cannot be separated in many instances. Productive policy can by motivated by redistributive effort. On the other hand, redistribution of income can either increase or decrease productive capacity of the economy. Agricultural policy contains both elements: productivity enhancement and redistribution.

In Slovakia, fundamental goals of agricultural policy are explicitly laid out in the government document entitled "The Concept of Agricultural and Food Policy until 2005" (Koncepcia agrárnej a potravinovej politiky do roku 2005) that was passed by the Slovak government in October 13, 2000. This document follows The Concept and Principles of the Agrarian Policy of the Ministry of Agriculture of the Slovak Republic from July 1993.

The Concept of Agricultural and Food Policy until 2005 defines the interest of the state of the Slovak Republic, which is to maintain productive agriculture that efficiently utilizes cultivation of land on the whole territory. Towards this end, agricultural and food policy is needed that mitigates disadvantages of agricultural production. Slovak agricultural production has disadvantages (relative to other sectors) due to its nature and (relative to other countries) due to its less favorable natural conditions.

The reasons for government intervention in agriculture as are laid out by The Concept of Agricultural and Food Policy until 2005 and The Concept and Principles of the Agrarian Policy can by summarized as follows:

- 1. Food security.
- 2. Multifunctionality of agricultural production.
- 3. Short-term variability of prices and incomes.
- 4. Long-term decreasing of income.

Traditional neoclassical approach that views government as a benevolent, omniscient dictator maximizing social welfare cannot explain the level and instruments of the Slovak agricultural policy. In Slovak agricultural policy, interests of producers prevail while taxpayers and consumers are discriminated against, despite the declared protection of consumers. Public Choice or New Political Economy has a different view on politics and agricultural policy. Public Choice is defined as the economic study of non-market decision-making, or simply the application of economics to political science (Mueller 1989).

According to public choice, policies result as an outcome of the interaction of individuals (citizens, politicians, bureaucrats, lobbyists) in an institutional context of decisions. Public Choice assumes rational individuals maximizing their individual welfare subject to their budget constraints and voting power. Citizens maximize their utility, politicians attempt to maximize voting preferences, bureaucrats try to strengthen their positions in administration, and pressure groups want favorable tax or subsidy treatments. Political markets are analyzed with

the same behavior theory and group of actors as economic markets and political process is viewed as market exchange. Politicians provide supply of policies. Demand side of the political market consists of citizens maximizing expected utility. Citizens may organize into common economic pressure (interest) groups. There is a difference between political and economic markets because the government has monopoly on taxation and can support or tax special groups.

Essentially, there are two predominant approaches to study of politics in general and agricultural policies in particular that are based on public choice: pressure group theory and politician-voter interaction model. These theories have a lot in common and in some cases give exactly the same results. There is, however, a distinction between politician-voter interaction and pressure group models in formulation of agents behavior and the political mechanism, and in many instances in results and predictions they provide.

Mancur Olson (1965) stresses the importance of pressure groups (interest groups) in policy decisions. Pressure groups further the interests of their members, i.e. farm unions are expected to strive for favorable legislation for farmers. Pressure groups emerge because of the existence of public goods. Favorable legislation for farmers is a public good, i.e. high agricultural prices are good for all farmers (non-rivalry) and no farmer can be excluded from enjoying high prices (non-excludability). Olson (1965) considers the size of the group, homogeneity, and costs of communication among their potential members as crucial factors determining whether a pressure group (or broadly collective action) is formed. Small groups tend to be privileged if costs of providing public good are lower than benefits accruing to a single person or a compact coalition. Large (latent) groups can provide public goods only by enforcing members to act in a group-oriented way by selective private or social incentives. Interests of farmers are homogeneous. They all want high prices and subsidies. Communication costs are low and there is a series of selective instruments how to 'force' farmers to contribute to creating pressure on politicians. Provision of market information or legislation documents to members of the farmers union or agricultural chamber are some of the instruments. With economic development, organizing costs for farmers decline while increase for consumers and taxpayers.

Interaction between various pressure groups leads to a political equilibrium. The best-organized pressure group gets most advantages. Because farmers are well organized while taxpayers and consumers are not organized at all, agricultural policy furthers interests of farmers.

Downs (1957) in his theory of democracy focuses on the interaction of rational politicians and fully-informed voters in a political arena. Politicians maximize votes in elections and, therefore, "formulate policies in order to win elections, rather than win elections in order to formulate policies". Support of voters is a function of the change in utility resulting from the government policy.

Table 1. Agricultural sector in Slovak economy

	1989	1991	1993	1995	1997	1999	2000
Share of agriculture DP (%)	9.3	5.7	66.5	55.6	44.41	44.29	44.34
Share of agriculture employment in total employment (%)	12.1	12.6	9.7	8.0	5.38	4.3	55.5
Share of agriculture investment in total investment (%)	n	n	4.3	4.2	3.31	2.47	2.63
Food expenditures of total households' expenditures (%)	35.3	36.5	35.6	37.5	37.1	34.9	33.2

Source: Ministry of Agriculture of Slovakia, Green Report (various years)

Downs introduces into economic literature the notion of rational ignorance. Voters are not motivated to learn platforms of politicians and/or political parties. The reason is high transaction costs for collecting information while expected benefits from a single ballot are low because of high number of voters.

Downs explains protection of agriculture through rational ignorance. Consumers are not informed about agricultural policy and are not organized because the costs of such activity would be higher than benefits. The richer consumers are and the lower proportion of their income is spent on food, the less they are interested in agricultural policy. On the other hand, higher incomes generated by for example higher institutional prices of agricultural commodities are distributed among smaller number of farmers. Small individual losses of consumers and taxpayers do not decrease support for politicians and policies as much as higher agricultural incomes increase support for policies and politicians by farmers.

Downs' economic theory of democracy was specifically adopted to agricultural policy formation by Swinnen and de Gorter (1993). Their analysis points out that the level of transfers to agricultural sector depends crucially on three factors: income disparity between rural and urban population, the share of agricultural population in total

Table 2. Gross agricultural product (1990 = 100%)

	Gross agricultural product	Plant production production	Animal production
1990	100.00	100.00	100.00
1991	91.00	107.07	78.28
1992	66.18	76.17	67.34
1993	64.73	62.41	67.92
1994	68.66	67.05	69.93
1995	70.23	67.65	72.28
1996	71.63	72.16	71.22
1997	70.89	66.81	74.12
1998	66.68	66.52	66.80
1999	65.03	66.95	61.23
2000	57.00	50.93	61.80
2001 est.	61.44	59.91	62.65

est. = estimate

Source: Ministry of Agriculture of the Slovak Republic, Green Report (various years)

population, and deadweight costs associated with income transfer. The bigger income disparity as a result of comparative disadvantages of agricultural production, the bigger is politically optimal income transfer to agricultural sector. Similarly, small size of agricultural population is conducive to large income transfers to agricultural sector. The reason is straightforward, to subsidize small number of farmers requires low taxation of the rest of the population while per capita transfers to farmers are high. Large deadweight costs of income transfers reduce politically optimal transfer level. (Politically optimal transfer level maximizes overall support to incumbent politicians).

RECENT DEVELOPMENT OF THE SLOVAK AGRICULTURE

The share of agriculture in total production or employment decreases as economy develops. In Slovakia, agricultural sector employed 33.7% of working population in 1960 while this number declined to 14.5% for the year 1980. Table 1 shows recent development of selected agricultural indicators.

Decline of relative importance of agriculture in investment, employment, or production is a natural phenomenon and it occurs in other countries too. It is caused by saturation of demand for food. After certain level of consumption is reached, consumers start to spend additional income on nonfood goods and on higher quality of food rather than increasing the quantity of food consumption. While demand for agricultural products rises slowly if at all, economic development increases productivity of factors employed in agricultural production and the output per agricultural worker significantly. With demand increases not keeping pace with technological progress, the relative importance of agriculture declines steadily.

In addition to gradual changes, economic reforms deepened the decline of relative importance of agriculture in the Slovak economy. After 1989, there was a rapid growth of services and faster recovery of non-agricultural sector while agricultural sector was declining in absolute terms (Table 2).

Between 1990 and 1999, agricultural production declined by 35%, of this plant production by 30% while animal production by 40%.

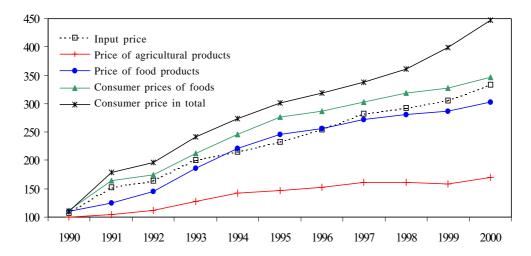


Figure 1. Price indices (1989 = 100)

There are several reasons for such a significant decrease of agricultural production in the Slovak Republic: declining terms of agricultural trade, extreme weather, transformation of agricultural sector, unclear property rights in transition period, short-run privatization distortions, transformation of up and downstream sectors, world market fluctuation, decline of real wages, low stability of agricultural policy and other.

Macours and Swinnen (2000) estimate that 45% of decline of agricultural production in transition period in the Central and East European Countries (CEECs) was caused by worsening terms of trade. Figure 1 shows graphically how agricultural terms of trade developed in the Slovak Republic. Price and trade liberalization is the main factor negatively influencing agricultural terms of trade.

Transformation uncertainty explains 10 per cent of agricultural production decline while the additional 10 per cent can be explained by weather changes. The rest is due to other above mentioned reasons.

Table 3. Labor productivity (1990 = 100%)

Year	Revenues per employee	Value added by employe					
1990	100.00	100.00					
1991	86.41	87.72					
1992	86.89	71.93					
1993	127.67	117.54					
1994	154.85	164.91					
1995	173.79	170.18					
1996	200.49	185.96					
1997	241.75	207.02					
1998	270.87	219.30					
1999	287.38	224.56					
2000	342.23	196.49					

Source: Ministry of Agriculture of the Slovak Republic, Green Report (various years)

There are two impacts of privatization of state farms and transformation of cooperatives. First, transformation and privatization introduced hard budget constraints. Transformed cooperatives and private farms cannot rely on selective assistance from the government. They have to adjust to market fluctuations by themselves. These harder conditions led to a better organization and management of farms that resulted in productivity increases (Table 3).

Second, hard budget constraints and declining terms of trade caused reduction of inputs like labor, capital, and fertilizers. It was a natural and rational reaction of producers to negative development of input and output markets.

Additionally, uncertainty accompanying institutional changes occurring during transformation and non-existence or inefficiency of market institutions explain some part of decline of agricultural production. Transfers of land ownership rights are the most significant cause of uncertainty. Distribution of land is skewed towards many small owners. For example, in 1993 there were 9.6 million plots of land registered in Slovakia with an average size of 0.45 ha owned by 12 to 15 people (OECD 1997). This distribution of land still remains and inhibits land market because it increases transaction costs for purchase and sale of land and slows long-term investment into physical infrastructure.

Inefficient financial markets are the cause of agricultural production decline too. Financial markets affect all sectors of the economy. Agricultural production is, however, specific because it relies on natural processes, which influences risk, return on investment and cash flow. There is enhanced production risk in agriculture as one of the main inputs — weather cannot be controlled. Agriculture also suffers from high price risk (see above). Paradoxically, agricultural policy inserts additional element of risk due to its unpredictable changes that are politically motivated.

Dependence of agricultural production on natural processes makes uneven cash flow. Revenues are usually

Table 4. Agricultural investment (1990 = 100%)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Agricultural investment	100.00	49.26	46.52	41.37	52.11	54.08	71.08	83.46	72.07	48.95	62.97
% of total investment in economy	11.32	7.81	5.10	3.87	4.53	3.92	3.46	3.50	2.89	2.47	2.63

Source: Statistical Office, Statistical Yearbook (various years), Ministry of Agriculture of the Slovak Republic, Green Report (various years)

Table 5. Agricultural employment (1990 = 100%)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Agricultural employment	100.00	80.39	64.77	54.74	47.66	44.05	40.80	36.11	32.69	27.80	24.25
% of agricultural employment on total employment	13.28	12.20	9.73	8.44	7.43	6.70	6.01	5.73	4.9	4.3	5.5

Source: Statistical Office, Statistical Yearbook (various years), Ministry of Agriculture of the Slovak Republic, Green Report (various years)

Table 6. Average use of fertilizers (kg/ha of agricultural land)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
NPK	231.2	239.7	123.1	63.9	41.6	43.5	45	48.9	57	51.18	38.20

Source: ÚKSÚP Bratislava, Ministry of Agriculture of the Slovak Republic, Green Report (various years)

obtained only once a year after harvest is sold and production cycle is longer than in most industrial sectors.

On the other hand, risk management in agriculture is impaired because of high proportion of immobile inputland. Land market is thin even in developed countries and therefore its liquidity is low. This means that farmers are stuck with inefficient mix of inputs when market conditions change (cannot buy easily additional land when output prices rise or sell land when output prices decline). Situation in Slovakia is even worse because land market suffers from the atomized land ownership and expectations on land prices increases after Slovakia joins the EU.

Contracting problems also contributed to decline of agricultural production and investment in transition agriculture (Gow and Swinnen 2001 and Pokrivčák and Bielik 2001). Contracts are always incomplete. Incompleteness of contracts stems from the impossibility to foresee all contingencies and the non-observability of outcomes. Incomplete contracts produce two types of problems: moral hazard and hold-up problem.

Hold-up problem and moral hazard decrease when long-term relationship is expected. Opportunistic behavior is eliminated by the expected loss from breaking the relationship, Reputation constraints opportunistic behavior if higher frequency of transactions and long-term cooperation is expected.

Legal system provides and additional way how to cope with contracting problems. That is, third party enforces contracts. Slow and inexperienced legal system makes a third party contract enforcement non-viable in the transition agriculture of Slovakia.

Low re-structuring of food processing industry (mainly in the first years of transformation), that was manifested by almost monopsonic power of processors created good conditions for moral hazard and hold-up problem. Underdeveloped legal infrastructure as well as societal atmosphere benign to people who do not grant contracts and not underlining good reputation in business highlights these problems. Agricultural problems are bigger because of the dominance of specific assets that exacerbate moral hazard and hold-up problems.

RESULTS AND DISCUSSION

Before 1989, Slovak agriculture was developing within centrally planned economy. Agricultural firms (state farms and cooperatives) were an integral part of a single centrally managed enterprise (national economy) without any independence in a relevant area of decision-making. Socialist economy was transaction costly and therefore less efficient in long-term compared to other forms of organizing production or distribution like market economy.

Agriculture was transaction costly too. Production was concentrated in large, often unmanageable, enterprises (OECD 1997). Land ownership was not formally concentrated but the adopted principle of absolute priority of

cultivation of land over land ownership concentrated land de facto.

Main objectives of the socialist agricultural police were the following:

- self-sufficiency in production of products of the temperate zone,
- low prices of agricultural products for consumers,
- income parity between agricultural sector and the rest of the economy.

Swinnen (1996) as well as OECD (2001) divide development of agricultural policy in the Central and East European Countries into three periods. This is also applicable for Slovakia.

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 private ownership of land,
- to improve market orientation of agricultural production with the goal to create stable market conditions,
- to enhance 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. It was characterized by price and trade liberalization. At the same time, conditions for a real transfer of ownership rights to private hands were created. Liberal reforms led to decrease of relative incomes of farmers. There were large agricultural capacities built during socialist area when self-sufficiency and cheap food were preferred. When liberal reforms eliminated consumption subsidies and reduced in short-run real incomes, these quantities of agricultural commodities could not be sold on the market. Pressure for reduction of prices ensued.

Negative development of agricultural terms of trade was at the end reflected in declining relative agricultural incomes (Table 7).

Decline of relative agricultural income created:

- Pressure to cut production and to move farmers out of agricultural sector into other sectors of the economy – economic pressure.
- 2. Pressure to increase transfers into agricultural sector; that is, to change agricultural policy from liberal to protectionist political pressure.

Activity on both political and economic markets halted or at least slowed the trend of increasing income difference between agricultural sector and the rest of economy. Movement of agricultural employees out of agricultural sector reduced competition on agricultural labor market and led to gradual stabilization of agricultural incomes. At the same time decrease of agricultural production and change of structure of production partially eliminated surpluses of agricultural products on the output market and mitigated pressure for real agricultural price declines with subsequent positive impact on real agricultural incomes. Obviously, foreign competition exerted pressure in the opposite direction.

Activity of farmers and politicians on the political market was openly manifested by the change of agricultural policy from liberal to protectionist in the second stage of development of the Slovak agriculture in post 1989 year.

Conditions for the change of agricultural policy were created by creation of an independent state in 1993. Agricultural policy refocused on stabilization of agricultural incomes and ending the period of declining agricultural production.

Fundamental goals of Agricultural Policy of Slovakia were passed by the Slovak Parliament in July 1993:

- to contribute to healthy nutrition of population, to food security and self-sufficiency in production of basic agricultural commodities (90% of domestic consumption of milk, meat and cereals),
- to guarantee economic stability, income parity and harmonic regional development;
- to improve and protect agricultural land and natural environment,
- to support agriculture in uncompetitive, mainly mountainous regions as a basic prerequisite for development of the country and maintenance of settlement and environmental protection.

Basic goals of agricultural policy were formulated with an objective to stop decline of agriculture or to support agricultural production. Political focus was on segments of population, which were negatively affected by economic development. However, in the long-run there is a danger that measures to support agriculture especially in the area of food self-sufficiency would lead to inefficient allocation of resources and to overproduction or there will be a need to introduce non-market mechanisms to control production in order to comply with the WTO obligations.

A plethora of ad hoc instruments was used in this stage of development of agricultural policy. A dilemma of agricultural policy-makers stemmed from the fact that

Table 7. Average nominal monthly income and relative income in agriculture compared to the rest of economy

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Agricultural nominal monthly income	3 410	3 645	3 886	4 047	4 481	5 127	5 766	6 502	7 261	7 826	8 390	9 076
Agricultural income as % of average income	110.4	113.3	103.7	91.8	85.1	83.2	80.7	79.1	77.6	76.6	76.7	76.5

Source: Statistical Office of the Slovak Republic

they wanted to achieve two different goals: to support producers of primary agricultural products and also to support consumers. These goals are mutually excludable if price policy is used. High prices are good for primary producers (farmers) while they have negative impact on households' budget expenditures on food. Budget expenditures of households on food out of total expenditures are relatively high in the Slovak Republic compared to developed economies like the EU or USA. Support of agriculture came, therefore, mostly from state budget rather than from consumers.

In the third stage of development of agricultural policy in post-1989 period, the goal was to prepare the sector for the future EU membership. This is realized within the framework of Concept of Agricultural and Food Policy until 2005. In Common Agricultural Policy of the European Union price support is dominant. If no relevant changes occur, Slovak policy will have to harmonize the rise of prices of agricultural products with relatively high share of food expenditures of Slovak households out of total expenditures (Bielik and Pokrivčák 2001). The WTO obligations form an additional constraint. The growth of price support can jeopardize fulfillment of these obligations.

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