



## **Slovene livestock production under transition in view of future accession to EU**

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### **ABSTRACT**

*Objective of the paper is to estimate the economic effects of possible pre-accession agricultural policy scenarios for Slovene agriculture with special emphasis on livestock production. Agricultural Policy Analysis Simulator (APAS) and Policy Analysis Matrix (PAM) methodology has been applied to estimate likely market (supply and demand changes), trade flow (self-sufficiency and international trade) and income trends as well as competitiveness and welfare effects of five policy scenarios for period 1997 (base year) till 2003. CEFTA Agreement proved to be poor solution for Slovene agriculture, reducing agricultural output by 16% and income to one third in comparison with baseline. Proposed reform of national agricultural policy would bring producers' losses back, however, situation in comparison with baseline scenario (continuation of current policy) will be quite different, discouraging still beef, poultry and wheat sector, and lowering production in all livestock sectors. Complete adoption of reformed EU CAP according to Agenda 2000 would improve general picture of Slovene agriculture, among livestock foremost cattle production. Beef producers would benefit the most, followed by dairy farmers. EU policy with almost complete liberalised pork and poultry market proved as bad prospect for intensive industrialised farming, far from being competitive on open market.*

(Keywords: Slovenia, Agricultural policy, EU, CEFTA, Integration effects)

### **ZUSAMMENFASSUNG**

#### **Die Tierproduktion in Slowenien während der Vorbereitungsperiode zum Anschlusses an die EU**

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*Im Artikel werden die ökonomischen Effekte der Agrarpolitik in Slowenien, vor allem in der Tierproduktion, in der Vorbereitungsperiode des Anschlusses an die Europäischen Union erörtert. Zwei unterschiedliche Modelle wurden ausgesucht: Der Agricultural Policy Analysis Simulator (APAS) und die Policy Analysis Matrix (PAM), mit denen die Markttendenzen (Angebot und Nachfrage), die Außenhandelsströme (Selbstversorgung), die Einkommenssituation sowie die Konkurrenzindikatoren und die Wohlfahrtseffekte für fünf verschiedene Umstände zwischen 1997 (als Ausgangslage) und 2003 eingeschätzt*

werden. Das CEFTA Handelsabkommen könnte die wirtschaftliche Situation des slowenischen Agrarsektors deutlich verschlechtern, der Brutto-Rohertrag könnte um etwa 16% fallen und das Einkommen um zwei Drittel im Vergleich zur Basissituation (die Fortsetzung der bisherigen Politik) sinken. Der Reformvorschlag der slowenischen Agrarpolitik könnte diese Verluste im allgemeinen ausgleichen, allerdings nur dann, wenn sich die Preis- und Einkommenslage zwischen den Produkten signifikant verändern sollte. Die Rinder-, Geflügel und Weizenproduktion und im allgemeinen auch die Tierproduktion können deutlich reduziert werden. Eine Übernahme der im Rahmen der Agenda 2000 beschlossenen Gemeinsamen Agrarpolitik (GAP) der Europäischen Union könnte die wirtschaftliche Situation im Agrarsektor Sloweniens verbessern, was besonders den Rindersektor betrifft. Die Ergebnisse sind von der Zahlung der Ausgleichszahlungen abhängig. Die GAP könnte auch den Schweine- und Geflügelmarkt insoweit liberalisieren, dass sich die Lage der Produzenten in diesen zwei Sektoren, die in Slowenien noch immer relativ geschützt sind, signifikant verschlechtert.  
(Schlüsselwörter: Slowenien, Agrarpolitik, EU, CEFTA, Integrationseffekte)

## INTRODUCTION

Slovenian agriculture is dealing with two dimensions of European integration. In March 1998 Slovenia started accession negotiations with the European Union (EU). Slovenian adjustment of legislation and other aspects of EU-accession processes have started with a sincere aim to enter the EU. In addition to the EU-accession important impacts are expected from CEFTA agricultural trade liberalisation, signed by CEFTA governments in December 1997. Considering the natural and structural conditions for agriculture, and its socio-political importance, it can be expected that Slovene farmers will have to cope with additional economic problems. The integration of Slovenia into the EU and CEFTA means integration into larger agricultural markets that might exert pressure on the growth and productivity of domestic agricultural production. Even small corrections of prices can drastically change economic attractiveness of various kinds of agricultural production and farm incomes (Hill, 1996; Baldwin et al., 1997).

Slovenian agriculture and agricultural policies are rather different in comparison to the other CEFTA countries (Hungary, Czech Republic, Slovakia, Poland, Bulgaria and Romania). The economic importance (GDP, trade) of agriculture in CEFTA countries is (except in the Czech Republic) by far greater, the production and structural conditions for agriculture are relatively better, and the intensity and the export potentials (especially in Hungary) are much higher than in Slovenia. In CEFTA, the level of producer prices is close to the world market level, and (compared to Slovenia) market protection is relatively low. The budget policy differs as well, and some countries (like Hungary) are using the measures of export subsidies to increase the competitiveness of their exports (OECD, 1996 and 1997).

During pre-accession period Slovene agriculture is therefore faced with export oriented and principally more competitive other CEFTA countries agriculture. At the same time this is (for Slovenian agriculture) preparation period for accession to EU. Common agricultural policy is a moving target, but despite of liberalisation policies with reforms in 1992 and those proposed for 2000 it remains regulated with high protection (price subsidies are replaced by direct budget support). Slovene agricultural policies, therefore, have to survive between Scylla of CEFTA liberalisation and Karibda of CAP protectionism. The proposal for national agricultural policy reform tries to respond on

both: on CEFTA liberalisation during 1999-2002 and at the same time on preparation of Slovene agriculture for next stage - accession to EU. The reasoning behind the agricultural policy reform is that the existing mechanisms based mostly on market-price support do not meet the current and, moreover, the future policy requirements (*Buckwell et al.*, 1998). Slovenia has signed several trade agreements (not only CEFTA). Consequently the agricultural market was opened for some important products. The negative price trends in 1997-1999 (Eurostat, var. years; MAFF, var. years) confirmed this process. The policy makers also perceived the obvious ineffectiveness of the present policy like non-competitiveness and income unattractiveness of the branch, lagging behind in structural changes, loss of agricultural land due to forestation, decrease in population density, inflation pressure, threat to the competitiveness of the food industry.

Estimates of the possible economic effects, derived from the obligations of the CEFTA agreement, the proposal of internal reform and both together compared to the expected effects of EU accession are extremely interesting and important both for policy makers, experts and the public in general. Policy makers are concerned mainly to market trends, budget and income changes. From economists point of view also welfare and competitiveness are important issues. Therefore, the objective of this contribution is to estimate consequences of different pre-accession scenarios for Slovene agriculture. The paper is structured as followed: first, the broad CEFTA agreement and national agricultural policy reform are presented. Policy scenarios, within which Slovenia can choose during pre-accession period, with prices and resulting protection coefficients as their most significant characteristics comprise second part. Market projections and resulting trade flows start the presentation of the model results. Estimates of likely income development are shown in separate part, followed by projection of trends in Slovenian agricultural production competitiveness and short welfare analysis. The paper concludes with short policy evaluation and some recommendations for agricultural policy and future research work.

## **POLICY BACKGROUND**

### **Agriculture and agricultural policy in Slovenia**

The significance of agricultural production in the Slovenian economy is relatively small (around 4.5% of GDP and 7% of total employment after transition; SURS, var. years). These figures are likely to continue to decline with further economic development. In Slovenian agriculture the stress of transition was not as dramatic as has been the case with other CEEC countries (*European Commission, 1995*). However, during period 1990 - 1993, trend in total agricultural product (TAP) was consistently declining. The fall in the volume of production can predominantly be attributed to the loss of the Yugoslav market, severe drought problems in these years and difficulties in designing the new agricultural policy framework. The relative share of crops and livestock in agricultural output has not changed substantially, and these represent a half of TAP each.

Slovenia's agro-food trade balance has been traditionally negative and the country is almost certain to remain a net food importer. Agricultural trade represents around 4% of total exports and 8.5% of total Slovenian imports. Slovenia has important surpluses only in hops, meat products and milk. At the same time, Slovenia imports cereals, sugar, oil and red meat. The agro-food trade balance has been worsening throughout the transition period. The most important agricultural foreign trade partners have remained to be countries of the former Yugoslavia (around 55% of exports, 1995-1997 data) and

the European Union (around 45% of imports). Due to high import indices CEFTA countries have also become important.

The most salient features in the composition of Slovenian lands are: the importance of forestry (around 60% of all land is forested), harsh relief (70% of all agricultural land is in less favoured areas) and a considerable share of meadows and pastures in total agricultural land (i.e., the share which ranks Slovenia the third in Europe). These relatively unfavourable production conditions diminish the competitiveness of Slovenian agriculture and limit the range of possible production orientations.

In Slovenia, 93% of all agricultural land (UAA) is privately owned or leased. Privately owned land is mostly divided between 112,000 small family farms (*1991 data, Eurostat definition*) with an average farm size of 4 ha UAA. The development of private farming during the entire post-war period was hindered by an agricultural policy that favoured state agricultural enterprises. The Law on a Public Agricultural Land Pool, enacted in 1953, fixed the maximum holding size to 10 hectares of agricultural land.

The majority of family farms are oriented to labour intensive production. This is especially true for the predominant form of farming - combined milk and beef cattle production. A considerable share of production is used for home consumption or for direct sale from home. The production potential of traditional family farms is limited and average yields lag far behind those of the European Union countries. Part-time farms prevail (only around 20% of private farms in Slovenia earn their income exclusively from an agricultural occupation).

Agricultural enterprises have evolved from the formerly "social" agricultural estates. In 1990 public farm sector operated on merely 7% of agricultural land, but contributed 30% to TAP. This farm structure predominates in pig and poultry production but is less important in beef, dairy and arable sectors. The levels of land and labour productivity achieved by these farms come close to comparable figures in West European agriculture. Their "long-run" economic performance is, however, uncertain. This uncertainty arises from the Law on Denationalisation, under which all previously nationalised farmland shall again belong to original owners. It is estimated that agricultural enterprises will have to return some 40% of their farmland.

Before gaining independence in 1991, Slovenia did not have its own agricultural policy. Agricultural market and price policies had entirely been within the domain of the federal government. Local governments (republics) had some competencies only in the field of structural policy. The most important step towards an independent agricultural policy was the launch of The Development Strategy for Slovenian Agriculture (*MAFF, 1993*) that defined the key objectives of agricultural policy (the objectives are basically not in dispute with those of the CAP as defined in the Treaty of Rome).

The set of objectives should be achieved with different instruments of agricultural policy. Like the CAP in the pre-MacSharry period, the Slovenian policy is mainly based on the market-price support. The policy of administrative pricing for some key products (wheat, sugar, milk) and foreign trade protectionism have been the two main levers used to keep Slovenian agricultural prices significantly above world market level. The prices of some products are relatively high even if compared to the EU prices (wheat, sugar beet, pork, eggs), while others still remain lower than in any member state (milk, apples, pears, peaches and, in certain years, potatoes). For wheat and sugar, the Government also has complete monopoly over the market (being the only buyer and seller of wheat). As other former socialist countries, Slovenia applies numerous forms of budget support measures to reduce production costs (input subsidies). However, the influence of

budgetary support on agricultural development in Slovenia is relatively low (not least because indirect forms of support prevail in the budget structure).

### **CEFTA agreement**

Slovenia is a member of CEFTA agreement since 1996. As there are substantial price differences between Slovenia and other CEFTA countries for certain agricultural products, Slovenia has tried to exempt agriculture from the generally accepted liberalisation of CEFTA trade. A compromise was reached in September 1997, on CEFTA Summit, where Prime Ministers agreed on further steps towards liberalisation. Hence, Slovenia has signed Protocol 6 of the CEFTA Agreement which covers all the main trade regulations and which will bring about important changes for some key agricultural products. The Protocol came into force from the 1<sup>st</sup> April 1998 and its implementation is divided in two stages: 1998-2000 and post 2000. For some products (including beef and sheep) import quotas will remain in force until the year 2000.

### **The CEFTA trade regimes for stable agro-food products in Slovenia**

<b>The status of trade (1)</b>	<b>Commodities(2)</b>	<b>Tariffs applied(3)</b>
<b>A list</b> Duty Free and Quota free commodities since 1 <sup>st</sup> April 1998	Breeding animals Horses Durum wheat Oil seeds	0% 0% 0% 0%
<b>A1 list</b> Duty Free and Quota free commodities since 1 <sup>st</sup> January 2000 - previous preferential quota	Sheep & goats (live animals and meat)	Very limited quota 0% (year 2000)
<b>B list</b> Common preferential tariffs - since 1 <sup>st</sup> April 1998	Wheat Barley Flour Pastry Poultry meat Some vegetables and fruits	15% 18% 15% 20% 28% 5-10%
<b>B1 list</b> Common preferential tariffs since 1 <sup>st</sup> April 1998 very limited quotas until 1 <sup>st</sup> January 2000	Live animals (cattle, pigs, poultry) Carcass beef and pork Beef and pork meat All canned meat Hops	10-15% 15% 20% 15-18% 5%
<b>C list</b> Bilateral preferences to Slovenia	Potato, cheese, eggs, apples, oils, different meat products, soft drinks wine, beer	Limited quotas, or partial liberalisation
<b>D list</b> Bilateral preferences from Slovenia	The same products as on list C Some preferences for maize	Limited quotas, or partial liberalisation 5% for Czech and Slovak Republics. 50000 t for Hungary

Source: Protocol 6 to the CEFTA Agreement

*List A* contains agro-food products for which the customs duty has been abolished upon the entry into force of the Agreement, i.e. on April 1<sup>st</sup> 1998. The States signatories to the CEFTA Agreement have liberalised the trade for only less sensitive products. These are mainly products that are not produced by producers of continental Europe. Only sheep and goats (live animals and meat) shall be mentioned here as products having an important production and market share in Slovenian agriculture. Special import quotas shall be applied for this group of products up to the year 2000, and hence no particular effects of the Agreement are expected on this market till 2000.

*List B* contains agro-food products for which the customs duty shall be reduced upon the entry into force of the Agreement, i.e. on April 1<sup>st</sup> 1998. Sub-list B1, as a part of List B, contains the products with quantitative limitations until the year 2000, and tariffs being gradually reduced as provided for in List B. Some key products of Slovenian agro-food sector can be found in List B (wheat is particularly important; see results below). The quotas for the products included in List B are limited at such a low level that, until the year 2000, there will be no noticeable change in visible trade. The tariffs, as a rule, are rather low except maybe for the slaughtering industry.

*Lists C* are lists of agricultural and food products for which other CEFTA countries have to reduce import tariffs for products originating from Slovenia to the level determined in lists C, without any quantitative limitation or within the quotas provided for in Annex C, which is operative as from April 1<sup>st</sup> 1998. The products listed in individual lists C are particularly products from the food-processing industry. By contrast, *Lists D* are lists of agricultural and food products for which Slovenia has to reduce import tariffs to the level determined in list D, without any quantitative limitation or within the quotas provided for in Annex D which is operative as from April 1<sup>st</sup> 1998. Both List C and List D constitute a bilateral agreement between signatories to the CEFTA Agreement, and hence Lists D differ with regard to individual countries. Thus, Slovenia effectively opens the market for non-processed oils and in addition, to a great extent, the maize market.

Due to existing protection and price differences, the most important impacts of Protocol 6 for Slovenian agriculture are believed to be the opening up of the wheat and some coarse grain markets in 1998 and the opening of the beef and sheep market in the year 2000. It is interesting that the trade with dairy products and sugar shall remain protected and that the CEFTA countries have attached greater importance to trade with raw materials than to trade with processed products, which mostly continue to be protected.

### **Reform of agricultural policy**

Proposal for national agricultural policy arose in 1998, foremost under the frame of Slovenian harmonisation for future accession to EU, but also as direct response to first effects of Protocol 6 to the CEFTA agreement. According to the reform document, the general objectives of the domestic agricultural policy will not change. The main goal of the reform is to change the mechanisms and instruments of policy. The reform is oriented to the shift from market-price support to the structural (budget) policy. In the document, the policy-makers recognised that agriculture can no longer be assisted only by high prices. Slovenia has opened its market to foreign trade flows and will continue to be even more open in the future. It is shown that the budget measures could be more transparent, better controlled and directed, and also easier to adapt to the EU requirements, since the CAP is likewise undergoing a process of reforming its operating

policy mechanisms in agriculture (*Europäische Kommission, 1995; European Commission, 1999*). The reform is particularly oriented towards environment and rural development issues, without neglecting the economic goals of productivity and competition. The reformed agricultural policy will be much more target-oriented and therefore essentially more efficient. In addition to the provision of environmental goods, agriculture will also have an important macroeconomic impact. The price reduction will bring about lower prices of food, lower prices of raw materials for the food-processing industry, and hence better competitiveness in domestic and foreign markets.

Reform of agricultural policy has a pragmatic approach, advocating a gradual reform of the agricultural market policy towards the full liberalisation, speaking about strategically conducted income policy. This means that - as laid down in the first important strategic document (Development Strategy of Agriculture in Slovenia of 1993) - the farm income "has to be retained and its parity level pursued". The final goal of the reform is the adjustment of the possible agricultural income level by the probable accession year (2003) to that achieved in the EU. The document points out that the reform should provide a "soft landing" on the common market, allowing for the attainment of agricultural policy goals at a higher level and guarantee much greater benevolence of the rural areas towards European integration. The document also recognises that approaching the EU prices and income levels is a kind of a price that Slovenia has to pay for accession to the EU. The reform should lay down Slovenia's negotiation platform. To a great extent, the proposed policy is a policy that Slovenia desires to bring along into the EU or, better to say, which Slovenia wants to impose on accession.

The concept of the reform is structured by several programmes that cover the policies and administration of the Ministry for Agriculture, Forestry and Food. The main changes are included in the Programme of Agricultural and Food Industry Reform. This programme is based on the following foundations ('pillars'):

- *Market and price policy* (pillar I) should bring about a gradually decrease of foreign trade protection, along with retaining (and adjusting) parity income levels (together with the second pillar). In the reform paper the following measures are put forward: break-up of the state monopoly in the bread wheat market; establishment of the EU conform intervention mechanisms in the internal market; gradual (and only partial) liberalisation of the milk and dairy products market; decreasing importance of foreign trade protection, co-ordinated with income policy.
- *SPELAA* (Pillar II: Slovene Programme for Environmental and Landscape Assistance for Agriculture). Programme comprises an introduction of de-coupled direct payments per ha (eco 0, eco 1, eco 2, eco 3) with different functions and purposes. Eco 0 are general direct payments per ha of different amounts depending on the use of land (grassland, arable land, permanent crops) according to minimum environmental protection criteria. Eco 1 will provide supports for agriculture in the less-favoured areas (harmonised with the EU policy). Eco 2 should bring special programmes for the maintenance and preservation of the cultural landscape. Local authorities prepare special support programmes for individual parts of their territory with typical landscape patterns. Eco 3 are direct payments for environment friendlier farming. The farmers who opt for organic farming, endangered breeds (or other programmes) can obtain special support per ha. Eco 2 and 3 should be harmonised with EU agricultural environmental and structural programmes.

- *Agro-food modernisation programme* (pillar III). With this programme, the government tries to prepare Slovenian agriculture and food industry for accession under conditions of increased competitiveness in EU. The agricultural production and related food processing should be restructured; the efficiency and competitiveness increased; additional income activities on farms supported with different programmes (which should be mainly in line with the EU policies): the programme of farm restructuring (investment support, young farmers, reconstruction, additional income activities); land reform (consolidation of arable land, regulation of pastures, rounding-off, reclamation arable land, irrigation); the programme for modernisation and adjustment of the food-processing industry.
- *Rural development programme* (pillar IV). From the present projects of integrated rural development and village renovation (CRPOV), an EU-comparable approach and projects of integrated rural development will be developed. The programme will be included in the general concept of regional policy and harmonised with the policy of EU structural funds.

With the reform proposal, MAFF has proposed a significant increase in the funds earmarked for agriculture (they should be tripled compared to 1998 funds). Although the government adopted and welcomed the reform it turned down the proposal for increased budget funds. Although the 1999 proposed budget for agriculture is 18% higher in nominal terms (12% in real terms taking into account inflation), this is not in line with the proposal of the reform. The government has also commissioned the MAFF to prepare the implementing plan of the reform by 30 June 1999, whereby it will elaborate the programmes in greater detail. The process of adoption of the agreed pre-accession assistance for the period 2000-2002 is under way.

## METHODOLOGY AND SCENARIOS

### Methodology

Agricultural Policy Analysis Simulator (APAS) and Policy Analysis Matrix (PAM) models have been used for the purpose of this study. Both models have been developed in the framework of ACE Phare project. Food balances for Slovenia and model calculations for different activities (*AIS, 1998*) served as main data sources, together with some publications of European Commission (*EC, 1998*), previous studies estimating effects of European integration (EU and CEFTA) on Slovenian agriculture (*Erjavec et al., 1997; 1998*), as well as several expert estimations.

APAS model gives the possibility to simulate in easy and understandable way market effects of different policies as well as time trends. With elasticities incorporated in the modelling exercise one can simulate demand and supply side for different activities. Spreadsheet based simulation give the opportunity to calculate simultaneously also many derivatives of these calculations (international trade and self-sufficiency, value of production, number of animals and acreage sown, different types of cultivated land etc.)

On the other hand PAM analysis, linked to APAS model, offer possibility to study many policy oriented indicators, as well as for management (producers) interesting issues, not only in one time period but with much more important time prospective (PAM is no more completely static model). Main output of PAM analysis in this case are revenues, costs and profits, valued both at market and social prices, income, protection coefficients (NPC and EPC) and indicator of competitiveness (DRC).



Combining both APAS and PAM it was possible to estimate welfare effects in a simple and straightforward way (*Tsakok, 1990*).

For pre-accession period, projected to last until year 2003, two versions of calculations were conducted. First set of results relates to pure price effects of different agricultural policy scenarios, assuming no change on supply and demand side as consequence of technical progress in production or trends in consumption (tp 0) but only as implication of price and income changes, reflected through effects of own and cross price as well as income elasticities. Since this is an option with more political than practical value, parallel set of results relates to more realistic situation, taking into account also technical progress (tp 1), namely current and/or estimated trends in yields level, number of animals an acreage sown (linked not only to price changes) as well as changes in consumer behaviour (demand side).

For purpose of this contribution pre-accession period is period from 2000 till year 2002 (inclusive). Year 2002 is assumed to be the last year of national agricultural policy, since January 2003 is officially stated date of Slovenian accession to EU as proposed by national government strategy and all pre-accession tasks have to be finished till that date. Therefore, emphasis in this chapter is given to comparison of many interesting indicators, expected in the case of continuation of current national agricultural policy till assumed final pre-accession year, and the figures projected under several policy scenarios.

The policy scenarios are based mainly on expert opinion about most likely determined price level, considering also market volume and development as well as consumer preferences about product quality. Policy measures are taken over the mechanism of incentive prices, where direct payments and structural measures are taken into account (their price effects) with the help of multipliers (between 0,2 and 0,7) according to the literature and expert opinion. This is the most speculative part of the research where the authors give full attention how to present the real situation and trends.

### **Scenarios**

CEFTA Agreement on agriculture as obligatory policy option and Reformed national agricultural policy as response to it and an attempt for better preparation on later accession are in focus of interest in this paper. These are two realistic options for studying, while additional two scenarios chosen in the work – accession to the full Agenda 2000 CAP and complete price liberalisation - serve mainly for comparison purpose. These four scenarios are presented in comparison with the unrealistic option of the prolongation of current national agricultural policy (baseline scenario). Scenarios under investigation in this paper are, therefore:

- *CEFTA scenario - CEFTA*. Implications of fully implementation of CEFTA Agreement on Slovenian agriculture, with switch to the prices, which could be realised in year 2000 without reaction in policy structure (expert opinion on border prices plus agreement allowed tariffs, *Erjavec et al., 1998*).
- *Reform of domestic agricultural policy scenario - REF*. Agricultural policy with introduction of de-coupled acreage payments and bigger investment programs to partially offset negative effects of lower CEFTA prices on farmers' incomes (CEFTA price level plus new policy measures). Reformed Slovenian agricultural policy is still to great extent only proposal and is, therefore, a not likely to happen scenario in pre-accession period, at least not completely.

- *Baseline scenario - BS.* Continuation of agricultural policy from 1997/1998 (prolongation of the price level), which does not seem to be realistic option and is included for comparison purposes.
- *Adoption of full Agenda 2000 scenario - EU+.* Reformed CAP of EU according to Agenda 2000 as fictive option for having possibility to compare how much virtual REF Slovenian policy is harmonised with reformed CAP, looking from effective (output) point of view (the scenario is made by EU accession price level (expert opinion) plus direct payments plus structural payments).
- *Price Liberalisation scenario - PL.* Complete liberalisation in international trade in forthcoming years with one stage switch from BS to world prices in year 2000 - simulation of bottom line prices' effects on Slovenian agriculture.

### Incentive price levels and protectionism level

Different price levels are the most significant characteristics of five policy scenarios and therefore have high influence on all indicators presented in the paper. Incentive prices in *Table 1* are calculated as market prices, increased by expected effect of support policy (Hertel, 1989) on production (management) decisions applying multiplier approach. Therefore demand prices are in most cases lower than incentive prices for producers.

**Table 1**

#### Incentive prices for different scenarios in 2002

	<b>BS</b>	<b>CEFTA</b>	<b>REF</b>	<b>EU+</b>	<b>PL</b>
	<i>EUR/t</i>	BS = 100			
Milk(1)	285	90	99	103	53
Beef(2)	2658	78	96	111	60
Pork(3)	1695	96	100	88	76
Poultry(4)	1156	98	98	86	68
Wheat(5)	167	68	92	93	68
Maize(6)	90	99	127	162	114
Potatoes(7)	107	91	97	105	84
Sugar beet(8)	45	96	103	93	42

Source (*Quelle*): European Commission, 1999; OECD, 1996; Erjavec et al., 1997 and 1998; Bojnec et al. 1997; AIS, 1998

1. Tabelle: Motivierende Preise für verschiedene Lösungsmöglichkeiten für 2002

Milch(1), Rindfleisch(2), Schweinefleisch(3), Geflügelfleisch(4), Weizen(5), Mais(6), Kartoffeln(7), Zuckerrüben(8)

From *Table 1* one can see the negative price effects of CEFTA agreement on Slovene agriculture, exemption could be only industrialised animal production (pork and poultry - agreement did not touch these sectors importantly) as well as coarse grains sector, which is already open for imports. However, the CEFTA agreement will not bring the full price liberalisation as assumed with PL scenario. The only exception being coarse grains sector where the export price level in CEFTA countries is lower than the world market price level. Anyhow, coarse grains sector is a special story in Slovenia due to its

interrelation with livestock production. Increase of maize price is not expected to reflect in much higher domestic market supply (what is projected with our model). This should be born in mind in results interpretation.

Proposal of reform of agricultural policy (REF scenario) would in most cases outweigh negative effects of lower CEFTA prices. It would therefore have positive effect on supply side, exemption could be foremost wheat production (now highly protected) and beef sector. Maize (stable prices and additional acreage payments) producers would be main beneficiaries of REF policy on output (revenues) side.

The EU accession with complete compensation payments (EU+) would significantly increase the combined revenues effect in Slovenian agriculture. However, there are different effects by the products. Exemption would be currently highly protected sectors (intensive livestock production, wheat and sugar sector). Under the actual policy less protected products like beef and maize could benefit more than any other sectors.

Nominal protection coefficients (NPCs) as simple price ratio of national market price to social price (better: market revenue to social revenue) are presented in *Table 2*. Since in our case on supply side we operate with incentive prices rather than market prices, NPC is close to familiar OECD  $NAC_p$  indicator.

**Table 2**

**Nominal and effective protection coefficients in 2003 for different scenarios**

	<i>BS</i>	<i>CEFTA</i>	<i>REF</i>	<i>EU+</i>	<i>PL</i>
Milk(1)	1,54	1,44	1,52	1,59	1,03
Beef(2)	1,64	1,28	1,57	1,81	1,01
Pork(3)	1,36	1,31	1,35	1,19	1,03
Poultry(4)	1,23	1,20	1,20	1,06	0,84
Wheat(5)	1,57	1,12	1,46	1,47	1,12
Maize(6)	0,95	0,95	1,20	1,54	1,08
Potatoes(7)	1,38	1,27	1,35	1,44	1,18
Sugar beet(8)	1,67	1,60	1,72	1,57	0,75

*2. Tabelle: Geplante Subventionen im Jahre 2003 für die verschiedenen Lösungsmöglichkeiten*

*Milch(1), Rindfleisch(2), Schweinefleisch(3), Geflügelfleisch(4), Weizen(5), Mais(6), Kartoffeln(7), Zuckerrüben(8)*

With mostly lower CEFTA prices than current, NPCs under CEFTA scenario will be reduced, extent of reduction depends on distortion of both Slovenian and CEFTA markets. Interpretation of coefficients is similar for other scenarios under consideration - trends are the same as for price changes. High subsidies could be observed in most sectors. Exception is only coarse grains sector (relatively low prices in comparison with high domestic input costs) as well as poultry production with very low protection. Under CEFTA scenario the most important changes will happen in beef and wheat sectors, while all other will not be influenced to a distortive extent. Proposal of reform policy (REF) would in most cases offset negative impact of price reduction under CEFTA

scenario. Currently highly subsidised sectors would be protected at nearly the same degree while other sectors would be better off than with no changes (BS). REF policy in Slovenian most important sectors still means less protection than EU Accession scenario, exceptions being pork and poultry sectors.

Under PL scenario social and market prices would be close to equal. Therefore, divergence mostly depends on net trade of products and/or transportation and marketing costs. Due to generally higher input costs (mainly due to unfavoured production structure) than admitted on competitive market, protection coefficients would be higher than 1. However, as it will be seen later, in several sectors revenues would not cover even tradable costs, implying very negative income.

## RESULTS

### Market Trends

Mainly due to significant price changes, assumed by policy scenarios, variations on supply as well as demand side can be predicted even in short time period. It is difficult to estimate, how the policy makers will react on CEFTA changes and what will be the final result of the reform. Probably there will be mixture of several scenarios, i.e. different scenarios will likely to become reality for various products. Comparison of all five or above all scenarios BS, CEFTA and REF give us range of results, within which one can expect real situation in near future (*Table 3*).

**Table 3**

### Projected supply and demand under various policy scenarios in 2002

	BS		CEFTA		REF		EU+		PL		
	S	D	S	D	S	D	S	D	S	D	
	<i>(000 t)</i>		BS = 100								
Milk(1)	588	490	97	102	97	102	100	100	80	115	
Beef(2)	58	54	92	110	96	110	104	97	80	115	
Pork(3)	53	82	101	99	97	99	92	103	92	103	
Poultry(4)	62	53	99	99	95	99	91	103	80	107	
Wheat(5)	142	308	87	110	94	105	91	106	89	106	
Maize(6)	352	561	103	97	111	97	122	95	107	89	
Potatoes(7)	181	218	96	97	99	99	103	97	100	100	
Sugar beet(8)	286	512	100	98	101	99	95	99	74	112	

*3. Tabelle: Geplantes Angebot und geplante Nachfrage unter verschiedenen politischen Umständen im Jahre 2002*

*(Zeichenerklärung in Tabelle 2.)*

In accordance with expectation supply vary faster than demand. Supply is more sensible on price changes and price changes on supply side are in most cases higher than on demand side. Wheat and beef production will face the highest effect of price reduction on supply under CEFTA scenario. Potato and milk production will also be reduced. Due to cross effects maize production is expected to increase in comparison with BS

scenario. On demand side beef consumption is expected to increase the most due to price reduction, followed by wheat demand, which will be at lower prices (for poor quality) competitive also as feed components.

Under reform policy (REF scenario) maize production will increase even more, but wheat production will not decrease so much as under CEFTA scenario due to the high acreage payments. Pork and poultry production will be reduced to higher degree, while beef production will be better off than in the case of CEFTA which is again the result of the new payments introduced by reform. Consumption will be almost untouched in comparison with BS, exceptions are beef and wheat (increase till 2002 due to low prices).

Lower protection of pork and poultry sector and lower prices of wheat and sugar beet would result in lower production of these sectors under the Agenda 2000 accession conditions. Due to the high arable payments which favour more productive producers maize should increase at the highest level of all products. One can notice that both more protectionist scenarios (REF and EU+) keep the production on the level close to baseline, which means that due to the CEFTA partial price liberalisation would come to the significant reduction in production potential, and that also with significantly higher agricultural budget it is not possible to bring the production to the much higher level that exists at the moment. However, changes in policies bring some important shifts between the products.

#### **Trade flows**

Policy makers in Slovenia are strongly concerned about the level of self-sufficiency (food security objective of the domestic agricultural policy). Since this is in direct relation with demand and supply, one can predict changes and trends from these two parameters. The same is true for quantity of internationally traded commodities. But since they are even more important for politicians than the first two, they are presented ones more in *Tables 4 and 5*.

**Table 4**

#### **Expected levels of self-sufficiency in 2002 under various policy scenarios**

	<i>BS</i>	<i>CEFTA</i>	<i>REF</i>	<i>EU+</i>	<i>PL</i>
Milk(1)	120	114	114	121	84
Beef(2)	107	90	94	115	74
Pork(3)	65	66	63	58	58
Poultry(4)	118	117	112	103	88
Wheat(5)	46	37	41	40	39
Maize(6)	63	66	71	80	75
Potatoes(7)	83	82	83	88	83
Sugar beet(8)	56	57	56	54	37

*4. Tabelle: Zu erwartendes Niveau der Selbstversorgung im Jahre 2002 unter verschiedenen politischen Umständen*

*(Zeichenerklärung in Tabelle 2.)*

**Table 5****Projected quantities of net international trade (000 t)**

	<b>BS</b>	<b>CEFTA</b>	<b>REF</b>	<b>EU+</b>	<b>PL</b>
Milk(1)	9	9	6	2	-7
Beef(2)	4	-6	-4	8	-16
Pork(3)	-28	-27	-30	-35	-35
Poultry(4)	9	9	6	2	-7
Wheat(5)	-165	-214	-190	-196	-198
Maize(6)	-209	-186	-157	-107	-125
Potatoes(7)	-38	-37	-37	-26	-37
Sugar beet(8)	-226	-218	-222	-235	-361

5. Tabelle: Geplante Nettomenge im internationalen Handels (1000 t)

(Zeichenerklärung in Tabelle 2.)

In general, no important changes in international trade flows and levels of self-sufficiency will occur in short term, covered by pre-accession period. Complete application of CEFTA Agreement (without changes in national policy) would bring to important decrease in self-sufficiency of wheat and beef, which could not be covered by the higher budget support of proposed reform. Wheat production is less attractive than under baseline even with the most optimistic EU accession scenario. Different pattern is significant for beef sector, where possibility of whole premium package of CAP offers at least little chance to become net exporter again. Growing level of self-sufficiency in sugar sector from nineties is stopped. Estimates for industrialised livestock production (pork and poultry) are very speculative, depending on world market conditions and due to liberalised regimes in EU also on its competitiveness. Level of self-sufficiency is expected to decline in these sectors. As already mentioned several times, EU policy would benefit foremost maize production.

### **Agricultural Income**

Value of production (gross production) is product of quantity produced and product (incentive) price. When summed for all products this procedure give us crude estimate of total value of production for agricultural sector. Our study does not cover the whole Slovenian agricultural production. However, products under consideration account for more than 75% of total value of production and these are also products which will face the most significant changes in next years. Therefore changes and trends in value of production for whole agricultural sector are close to shifts for products under investigation. Values of production, calculated with APAS, are presented in *Table 6*.

Value of production (valued at incentive prices) would fall for more than 15% under CEFTA scenario in comparison with BS, with beef and wheat sector in very serious crisis. Milk and potato production would also face very significant reduction. Proposal of reform (REF) policy at aggregate level leave production value in comparison with baseline almost untouched. Here we can see that policy makers with the reform try to compensate for negative effects of price liberalisation created by CEFTA agreement. However, high differences exist between sectors, which were already explained by other indicators.

**Table 6****Trends in value of production under various scenarios (nominal values)**

	<i>BS</i>	<i>CEFTA</i>		<i>REF</i>		<i>EU+</i>		<i>PL</i>	
	<i>mio EUR</i>	<i>BS=100</i>							
Milk(1)	167	88		96		104		43	
Beef(2)	154	71		92		115		48	
Pork(3)	90	97		96		81		69	
Poultry(4)	72	97		93		78		55	
Wheat(5)	24	59		86		85		61	
Maize(6)	32	102		140		198		122	
Potatoes(7)	19	88		96		108		84	
Sugar beet(8)	13	96		104		89		31	
Agric. total* (9)	571	84		99		106		59	

\* Including apple and grape production. (*Einschließlich Apfel- und Weintraubenproduktion.*)

6. Tabelle: Tendenzen für Produktionswerte unter den verschiedenen Umständen

(*Zeichenerklärung in Tabelle 2.*)

Agenda 2000 (EU+) policy could be in terms of farmers' revenues a better solution for Slovenian agriculture when policy applied completely. The picture between sectors is almost opposite in comparison with CEFTA scenario. In the case of fully price liberalisation (PL), value of production would be almost halved, mostly due to lower prices. When looking to income expectable by producers (*Table 7*), even figures in *Table 6* seem to be too optimistic.

**Table 7****Likely agricultural income situation in 2003 (in EUR/hd or ha)**

	<i>BS</i>		<i>CEFTA</i>			<i>REF</i>		<i>EU+</i>		<i>PL</i>	
	<i>EUR</i>	<i>EUR</i>	$\Delta$ <i>BS</i>	<i>EUR</i>	$\Delta$ <i>BS</i>	<i>EUR</i>	$\Delta$ <i>BS</i>	<i>EUR</i>	$\Delta$ <i>BS</i>	<i>EUR</i>	$\Delta$ <i>BS</i>
Milk(1)	491	332	-159	454	-37	554	63	-13	-504		
Beef(2)	51	-108	-159	21	-30	119	68	-243	-294		
Pork(3)	9	6	-3	10	1	-17	-26	-31	-40		
Poultry(4)*	8	2	-6	2	-6	-402	-410	-728	-736		
Wheat(5)	124	-102	-226	68	-56	75	-49	-99	-223		
Maize(6)	-231	-235	-4	-55	176	187	418	-140	91		
Potatoes(7)	465	287	-178	412	-53	569	104	139	-326		
Sugar beet(8)	584	493	-91	644	60	448	-136	-564	-1148		
Agric. total*** (9)	130,2	42,7	-87,5	132,4	2,2	156,7	26,5	-120,9	-251,1		

\* Per 1000 heads. (*Pro 1000 Personen.*), \*\* Mio EUR, including apples and grapes. (*Mill. EUR, einschließlich Äpfel und Weintrauben.*)

7. Tabelle: Wahrscheinliches Einkommen der Landwirtschaft im Jahre 2003 (in EUR pro Kopf oder ha)

(*Zeichenerklärung in Tabelle 2.*)

Effects of different scenarios, discussed so far, are even more significant when looking expected income position. The most interesting projections are presented in *Table 7*. CEFTA scenario reduces total income in comparison with baseline on only one third! Reform would leave total income almost untouched, while the most optimistic EU accession scenario bring an important improvement of total agricultural income. Uncompetitiveness of Slovene agriculture can be noticed easily from PL scenario, where only potato production would conditionally remain income attractive.

Differences between commodities are significant. CEFTA does not have important impact on pork and poultry sector (along with price reduction also inputs will be cheaper), and also not on maize and sugar beet. All drastic effects are, however, even intensified in wheat and beef and to a lesser extent at potato. In milk sector reduction of income is mostly result of lower beef prices as by-product of milk production, but with important income effect.

Reform scenario does not compensate equally for all CEFTA effects. Due to its decoupled nature product hierarchy is re-established on basis different from current policy with a potential biased protection. Income loss in beef is nearly compensated (with implications also in dairy sector) as result of exposed landscape function of agriculture. In wheat sector compensation is not complete to offset loss of income. In maize, effect is very positive, but still not big enough to bring to positive income, leaving this crop further mainly as important source of nutrients for livestock on own farms, and still not to become important on markets. Nevertheless, trends are more important than absolute values, showing some opportunities of Slovene agriculture.

EU accession scenario bring a little different picture that is expected in comparison with REF scenario. Two different groups of effects can be observed. The first one is market opening with negative effects foremost on pork and poultry (currently higher price level than EU) and another one different nature of budget support with beef even more privileged in EU. Important discrepancies exist between reform proposal and nature of CAP direct payments. Proposed reform, due to its production independence, supports also products like potato and sugar beet, which are not eligible for any support in CAP. For this reason reform is probably necessary to be evaluated again.

Under free market condition positive income is possible to achieve only in potato production, already operating in similar situation.

### **Competitiveness**

Domestic resource cost ratios (DRC) for all products under investigation are presented in *Table 8*. They support the statement about the uncompetitive position of Slovenian agriculture. However, variations are high and allow politicians to draw some important conclusions.

Maize, poultry and potatoes production seems to be most competitive production orientations of investigated commodities. These (un)competitive structure seems to be pretty stable for all scenarios, the only exception being poultry production with higher DRC ratio in EU+ and PL (product and input prices relations are discouraged). Beef, pork and sugar beet production is far from being competitive regardless of scenario under consideration. Milk production in somewhere between, with lowest result under EU+ scenario due to increased yields as result of favourable price and additional headage payment.



**Table 8****DRC ratios for most important products in Slovenia - projection for 2003**

	<b>BS</b>	<b>CEFTA</b>	<b>REF</b>	<b>EU+</b>	<b>PL</b>
Milk(1)	1,58	1,84	1,65	1,49	2,19
Beef(2)	3,61	3,53	3,56	3,92	3,82
Pork(3)	1,90	1,77	1,77	2,99	2,97
Poultry(4)	1,32	1,24	1,24	2,02	2,02
Wheat(5)	1,81	2,05	1,86	1,85	2,05
Maize(6)	1,44	1,44	1,41	1,41	1,42
Potatoes(7)	1,45	1,51	1,46	1,42	1,56
Sugar beet(8)	2,09	2,11	2,08	2,13	2,76

8. Tabelle: Einheimische materielle Quellen für die wichtigsten Produkte in Slowenien – Plan für das Jahr 2003

(Zeichenerklärung in Tabelle 2.)

**Welfare**

Welfare analysis has been conducted after APAS and PAM calculations have been finished. Main differences between scenarios in welfare terms are summarised in table 10. CEFTA scenario halves market price support. Reform of agricultural policy could bring this loss for producers over the doubling of existing agricultural budget back. EU accession could increase the level of support in comparison with baseline scenario and reform proposal. However, consumer prices are not going down so much as in CEFTA case. The welfare analysis gives the picture about the shift from consumers to the taxpayers support as it can be seen in reform proposal and, to lesser extent, EU accession. It has to be pointed out that budget cost is not approximation of the whole amount of agricultural budget costs, since it covers only production side and only direct measures on ten sectors.

From results obtained it is also clear that current policy is very expensive from consumer point of view. CEFTA could reduce taxation of consumers significantly. The same is true also for reform scenario, where it can be observed one of the most important positive effects of this reform. With the accession we can expect also some positive price effect in terms of consumers. However, this price effect is not so dramatic as in both other scenarios.

The changes in producer surpluses were discussed above in the presentation of the income results. It can be seen that reform covers the negative price effect from the CEFTA partial trade liberalisation. EU accession brings in general additional surplus to producers. Anyway, it is not much higher than under BS and REF scenario.

From this general welfare analysis it is interesting to see also the net efficiency of different scenarios. Here, only the CEFTA scenario reduces the net effect of baseline scenario, which is understandable, according to the increase in budget support by REF and EU+ scenarios. The reform proposal is more efficient in bringing the support to producers in comparison with the accession scenario.

**Table 9**

**Main welfare indicators in year 2000 (nominal values in mio EUR and BS=100)**

	<i>BS</i>	<i>CEFTA</i>	<i>REF</i>		<i>EU+</i>		
Market Price Support(1)	47,0	26,3	56	25,5	54	43,1	92
Budget Cost(2)	47,0	26,3	56	103,4	220	84,6	180
Consumer Surplus(3)	-225,2	-142,1	63	-142,2	63	-204,5	91
Prod. Surplus (4)	193,5	121,9	63	195,0	101	220,4	114
Efficiency Losses:(5)							
- Production(6)	25,4	10,7	42	21,4	84	39,7	156
- Consumption(7)	-20,7	-7,7	37	-16,1	78	-30,4	147
Net Effect(8)	4,7	2,9	62	5,3	113	9,3	198

9. Tabelle: Die hauptsächlichsten Lebensniveau-Kennziffern für das Jahr 2000 (Nennwert in Mill. EUR und BS = 100)

*Preissubventionen(1), Staatshaushalt(2), Verbraucherüberschuss(3), Produktionsüberschuss(4), Rentabilitätsverluste(5), in der Produktion(6), im Verbrauch(7), Nettoergebnis(8)*

**CONCLUSION REMARKS**

The results show that the CEFTA agreement will have significant impact on Slovene agriculture. Prices will drop, production will slightly decrease, self-sufficiency will decline in some sectors, income will decrease to the quarter of baseline scenario, competitiveness will not improve significantly. Changes will happen predominantly in wheat and beef sector. However, CEFTA opening of the Slovene agricultural markets does not have the same scope of effects like full price liberalisation under PL scenario.

Due to the expected fall in income on some particularly important agricultural markets and because of strategic consequences of changed internal agricultural price relations, the CEFTA Agreement urges the change of Slovenian agricultural policy towards a radical reform of support programmes. The era of intensive agricultural price protection is drawing to a close in Slovenia and domestic agricultural policy will have to integrate new and coherent policy instruments in order to effectively resolve various structural discrepancies in Slovenian farming. In addition, all efforts should be focused on preparing domestic agriculture for the possible full Slovenian membership in the EU. To overcome distortions caused by market price support and later by the introduction of the Common Agricultural Policy, Slovenia will have to commence the adjustment of its agricultural policy. A shift in the importance from the market and price policy to structural (budget) policy should be particularly emphasised. The most significant alteration in the functioning of the Slovenian agricultural policy is probably the introduction of various (if possible de-coupling) income payments. Structural policy should be more target-oriented. Measures to increase competitiveness in the food industry are also required. Furthermore, particular attention should be paid to the introduction of supplementary activities on the farm, promotion of environmentally-friendly production, farm tourism and generally to rural development issues.

How can the reform of agricultural policy be assessed? Could the reform reach the above mentioned directions? The qualitative and quantitative evaluation of the reform bring us to the conclusion that there is no doubt that proposed agricultural policy reform means an important shift on the conceptual or substantive level of agricultural policy. The reform does not change the goals of agricultural policy but it evaluates them differently. The reform does, for example, not mention explicitly the goal about food safety, although it is partly covered in the emphasis it places on the multi-functionality of agriculture. The later places major importance on the environmental and social goals of agriculture through which the reform tries to ensure greater acceptance, thereby higher funds for agriculture support, and thereby also development of rural areas.

A decision to change agricultural policy mechanisms means the most radical switch of the reform. The agricultural policy has been abolishing (be it by force or not) the concept of price support as the only policy mechanism, replacing it with the budgetary support policy. It pursues its goals, first, by the introduction of de-coupled direct payments which the reform relates to the payment of environmental services, and second, by substantial supports to the restructuring of agriculture and food industry and wider vertical regional programmes (inclusion of multi-sector policies). Some of these programmes are modelled in accordance with corresponding EU programmes of support whilst others try to avoid difficulties encountered during the pre-accession period. This holds particularly for some contestable EU measures, such as compensation payments.

The reform can be assessed as a step in the right direction, although many issues remain unclear and the reform itself is held back by insufficient budgetary funds. The final assessment of the reform will not be possible before its implementation plan is prepared and the final decision about the funds available is made. No greater difficulties are expected in the field of investment assistance (the greatest difficulty being the total value of the earmarked funds), what cannot be said about the realisation of the SPELAA programme and the programme of regional assistance, which are administratively demanding, require multi-year financial planning, and, on top of this, call for substantial funds. Although the concept changed markedly the way of thinking of agricultural policy makers, it does not yet guarantee that its realisation will not be over-simplified and eventually return to increasingly unsuitable market-price measures.

The empirical results show that one of the main objective of the reform of agricultural policy is to cover the negative income effects due to the CEFTA agreement. However, reform is less production coupled and could bring significant shift between the products. Cereals with higher yields could get more than now administrative protected wheat production. Reform is also much more radical in bringing the support on the budget side than EU Agenda 2000 decision. The main problem of the reform is its cost for taxpayers. It is unlikely that the government will double the budget for agriculture. This is mainly political decision which could be supported with the argument that the reform is much more efficient way to support agriculture than existed price subsidies. However, for producers the best solution among the scenarios presented is full accession to the CAP funds. Farm incomes could increase significantly. On the other side there are still negative effects for consumers with much higher food prices than in the case of CEFTA or reform scenarios.

The comparison between EU accession and reform scenario results open the question if - due to important differences in economic effects of both scenarios - some new evaluation of the reform is necessary. There is a problem if better economic solution like reform de-coupled payments will not mean worsening the negotiation

position of Slovene agriculture. The introduction of the CAP similar compensatory payments is possible alternative to the reform concept in the second pillar. The alternative has to be discussed not only in economic but also in political terms of "national optimisation of the EU subvention". Further research is necessary.

Slovene agriculture is uncompetitive and due to unfavourable production structure, implying high input costs, competitiveness is not likely to improve significantly in no one scenario under consideration. In view of expected policy changes this will (together with profitability results) threaten implications for some sectors, foremost pork and poultry. Situation in beef sector is not better, however, this sector is likely to be subsidised enough to survive. The most promising situation is likely to be achieved by best dairy farmers. All competitiveness results have to be taken with special caution due to many uncertainties behind calculations. They also relate to average productive producers like all other indicators, leaving possibility for much better results achievable by most successful farmers. The models and discussion bring us to the final remarks that the main task in the pre-accession period is to increase competitiveness of Slovene agriculture.

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