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Differentiation as a Precondition for Efficient EU Enlargement the Case of Slovenia

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Differentiation as a Precondition for Efficient EU Enlargement

The Case of Slovenia

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Abstract

This paper's aim is an assessment of economic effects of Slovenia's accession to the EU in the field of agriculture and a discussion about some key dilemmas about the introduction of CAP in the new member states. For the purpose of assessing economic effects, a new sectoral model of Slovenian agriculture APAS-PAM has been compiled which allows assessment of market and income effects for ten key agricultural products with regard to various accession scenarios. The accession under the scenario of equal treatment of new member states would bring significant improvements in the aggregate income levels. On the other hand, discrimination of the candidate countries in the field of direct payments ("phasing in" process) would result in a fall of aggregate income level by an eighth. Moreover, non-competitive production structures in the food-processing sector would deteriorate the economic situation of agricultural production by up to further 40 %. The positive effects of different accession scenarios are expected in the sugar beet and - under assumption of eligibility for direct payments - also in coarse grains, beef and sheep meat production. The economic situation in milk production is not expected to change significantly. The negative accession effects can be expected in pigmeat, cereal, egg and, potentially, poultry production. The results reveal a great significance of the equal treatment and differentiation approach to negotiation process for the preservation of the economic situation of Slovenian agriculture after accession. This holds especially for cereal, beef and sheep meat production.

Keywords: CAP, EU enlargement, sectoral partial equilibrium models, accession effects

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This paper's aim is an assessment of economic effects of Slovenia's accession to the EU in the field of agriculture and a discussion about some key dilemmas about the introduction of CAP in the new member states. For the purpose of assessing economic effects, a new sectoral model of Slovenian agriculture APAS-PAM has been compiled which allows assessment of market and income effects for ten key agricultural products with regard to various accession scenarios. The accession under the scenario of equal treatment of new member states would bring significant improvements in the aggregate income levels. On the other hand, discrimination of the candidate countries in the field of direct payments ("phasing in" process) would result in a fall of aggregate income level by an eighth. Moreover, non-competitive production structures in the food-processing sector would deteriorate the economic situation of agricultural production by up to further 40 %. The positive effects of different accession scenarios are expected in the sugar beet and - under assumption of eligibility for direct payments - also in coarse grains, beef and sheep meat production. The economic situation in milk production is not expected to change significantly. The negative accession effects can be expected in pigmeat, cereal, egg and, potentially, poultry production. The results reveal a great significance of the equal treatment and differentiation approach to negotiation process for the preservation of the economic situation of Slovenian agriculture after accession. This holds especially for cereal, beef and sheep meat production.

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1. Introduction

The June 2001 Göteborg European Council reaffirmed the time framework of the enlargement, according to which negotiations with the best prepared candidate countries should be completed by the end of 2002. This would enable enlargement to take place in 2004. The completion of negotiations with candidate countries is thus within sight and, like in previous enlargements, agriculture and the adoption of the CAP will have a crucial role in the final stage of negotiations. The conclusions of the Berlin Summit in March 1999 clearly defined the financial framework of EU enlargement in the area of agricultural policy. The figures reveal that the new-coming Member States will not be fully participating in the CAP mechanisms. Moreover, it can be expected that the candidate countries will have to agree with the transitional periods, particularly as regards direct payments. We can foresee the "phasing in" process for direct payments, which is to start at a relatively low level of payments (maybe 20 % of current member states) and last at least for a few years. The reason for this is lower current price levels as well as negative social and macroeconomic effects in the candidate countries. Higher prices are also expected to be a stimulus to growth of agricultural production in the new members, and this could consequently contribute to serious additional budget pressures on CAP. The reservations concerning implementation ineptitude could also affect the EU decisions. Regardless of how justified these reservations are, the issue of equal treatment puts to the test the basic principles of equality and equal competitive opportunities. Taking all this into account, the main arguments for excluding the candidate countries from direct payments are in fact political ones. It is thus clear that the issues concerning direct payments and equal treatment will be on the top of the political agenda in the negotiating process of the next EU enlargement.

In the negotiations on agriculture, the European Union uses a horizontal approach for all the candidate countries, which can, at least for some, pose an additional problem and further

aggravate their accession to CAP. This is particularly the case for Slovenia, which has already made considerable progress in adapting its agriculture and agricultural policy to that in the EU and horizontal approach could, therefore, hinder its prospects and further development in agriculture. In contrast to other applicant countries, producer prices in Slovenia are almost at the EU level, and due to its natural and structural conditions, Slovenia is a net importer of food items, with a smaller potential for production growth (OECD, 2001). In addition, the Slovenian agricultural policy framework (objectives and measures) is rather close to that of the CAP. Furthermore, direct payments and intervention mechanisms (but not quotas) introduced by the 2000-2002 agricultural policy reform aim at harmonising domestic policy to such a degree that accession would not entail dramatic modifications for producers. The level of support to agriculture in Slovenia is moderate. PSE estimates¹ by OECD (2001) show that Slovenian producers were subsidised for the whole period of 1992-2000. It is apparent that market price support represents more than 80 % of total agricultural support. In 1995-1999, the average percentage PSE in Slovenia (41 %) was above the OECD level (35 %) and nearly the same as that in the EU (42 %). The level of support in Slovenia exceeded significantly that of any other Central and Eastern European country. The high PSE levels in Slovenia reflect substantial domestic price support and border protection for the most important agricultural commodities (milk products, beef, and pig meat), as well as steadily growing budgetary transfers to producers. In 2000 budgetary transfers in Slovenia already reached 70 % of the level of budgetary transfers provided for in the CAP.

The objective of this paper is, therefore, to contribute to the discussion on EU enlargement by an estimation of the accession effects (market trends, agricultural income and competitiveness) on the agricultural sector in Slovenia, by using relevant empirical tools. One of the main objectives of the paper is determining the policy dimension of the “equal treatment issue”. For this purpose, we tested the degree of dependence of Slovenian agricultural sector on the level of EU direct aids after accession, and the importance of the differentiation approach for the “smooth landing” of the Slovenian agriculture to the single market.

The paper is structured as follows: first, the empirical framework and three policy scenarios within which Slovenia could evolve after accession are described; second, market projections and resulting trade flows start the presentation of the model results; and third, comparisons of different scenarios of accession concerning competitiveness and agricultural income are presented. The paper concludes with policy evaluation and some policy recommendations.

2. Methodology and Scenarios

Methodology

The upgraded version of Agricultural Policy Analysis Simulator (APAS) combined with the Policy Analysis Matrix (PAM) models have been used for estimation of the accession effects. The data and methodology are described extensively in Stoforos *et al.*, 2000 (some additional explanation can be found also in Mergos *et al.*, 1999). The APAS is designed as a static, partial equilibrium, multi-commodity, national sector model, taking into account the specific features of Slovenian agro-industry and recent policy changes (Kavcic 2000). On the other hand, PAM has been used for analysing income, protection and competitive issues for the same policy scenarios. The newest version of APAS-PAM model provides the possibility for calculation both DRC and RBC (domestic resource cost ratio and rate of bilateral competitiveness) indicators of competitiveness. The later one refers to the ability of producers to be profitable when faced with policy scenario of assumed EU market and tradable input

¹ The PSE measures the money value of transfers from consumers and taxpayers to agricultural producers arising from government policies. The percentage PSE gives an indication of the proportion of total farm gross receipts originating from support, whether that includes, among others, subsidies paid directly on outputs and inputs, and per head and per hectare payments.

prices, with the costs of the factors of production measured in terms of their opportunity costs (for more detailed explanation see Gorton and Davidova, 2000).

The APAS model provides the possibility to simulate market effects of different policies, as well as time trends, in an easy and understandable way. A simplified approach was used, expanded mostly in the analysis by models of partial equilibrium based on the principle of Marshallian surplus (Scandizzo 1989). The changes were calculated by a simultaneous system of equations, with prices acting as exogenous variables. Elasticities, generally obtained by previous empirical research (Erjavec and Turk 1997, Erjavec *et al.* 1998, Turk *et al.* 1999, other sources, e.g. Gardiner *et al.* 1989), were adjusted during the process of model calibration.

The model is now amalgamated to include all commodities together - contrary to previous division into three sub-models. Currently, it includes all most important agricultural “PSE commodities” (arable crops: wheat and maize, barley and sugar beet as well as livestock products: milk, beef, pork and poultry, eggs and sheep meat). Together these commodities account for approx. 80 % of Slovenian gross agricultural output.

For each product four equations were constructed: total area or livestock number, production per hectare or per head, production/domestic supply as a product of the latter two, and demand. Any disequilibrium between supply and demand is brought back into balance through foreign trade. Special attention should be given to maize and barley as the main fodder components in the equations for livestock production; conversely, livestock production is taken into account as the main factor in the demand for fodder.

Results of APAS simulations are directly incorporated in PAM calculations both at individual producer as well as aggregate level, relaxing the static nature of the original PAM.

The model is designed to analyse the economic implications of policy changes that can have an important impact. A policy is usually represented in the model by a fixed price wedge: a wedge between the traded price and the domestic incentive price. The policy price wedge data are based on calculations of producer and consumer subsidy equivalents where a wide range of support policies was translated into a common measure. Policies can also be implicitly introduced into the model through price transmission parameters that regulate the transmission of world price changes to the domestic economy, and by shifting supply equations to capture production control policies. Along with market prices and budgetary payments, deviations in input costs (material costs and depreciation) have been used as correction factors for determination of policy scenarios’ incentive prices. For this reason matrix of price elasticities in the earlier version of the model have been replaced by “quasi-income” elasticity matrix. Authors believe that this, although uncommon modelling procedure, leads to more reliable market projection results.

The relevant data for the analysis were provided by the Agricultural Institute of Slovenia (Volk 2001a and 2001b, Golez 2001) and various published or recalculated sources of the Statistical Office of the Republic of Slovenia (SORS).

Scenarios

The simulation was run using three policy scenarios:

- **Baseline scenario (BS).** It assumes continuation of agricultural policy from 1999/2000 and predominantly serves as a comparison tool.
- **“Equal treatment” scenario of Slovenia's EU accession (EU+++).** The scenario of full adoption of CAP and equal status as enjoyed by current Member States. This scenario assumes equal position of Slovenian producers with regard to drawing direct payments and eligibility for the whole package of structural and environmental payments from

Agenda 2000. It also assumes no negative effects of (potentially) non-competitive food processing industry on producer prices.

- **Expected EU negotiating position scenario of Slovenia's EU accession (EU+-o).** The accession scenario for candidates (i.e. Slovenia). It assumes relatively high level of producer prices (probably questionable, at least in some markets), direct payments amounting to 15 % of the current Member States' level, and two third the package of structural and environmental payments (comparable with EU+++).
- **“Non-competitive agro-food sector” scenario of Slovenia's EU accession (EU--o).** Reduced EU producer prices are the most significant characteristic of this scenario. This EU--o scenario assumes no EU or domestic direct payments and reduced structural and environmental payments (the same amount as in EU+-o). In fact, this scenario assesses the effects of non-competitive domestic food-processing industry. It differs from the EU+-o scenario in terms of the level of producer prices (differences for individual products are shown in Table 2.1) and direct payments.

Table 2.1: Scenario assumptions - producer prices in Slovenia and in “comparable” EU markets, 2000 (EUR/t)

Scenario and year	Wheat	Maize	Barley	Sugar beet	Milk	Beef	Pork	Poultry	Eggs	Sheep meat
EU 2000	107	120	100	46	283	2546	1271	923	808	3341
SLO 2000	138	114	117	40	290	2507	1491	1048	1207	4045
Index SLO/EU	129	95	117	88	102	98	117	113	149	121
EU--.. deviation from EU+.. [%]	-15	-5	-5	-5	-15	-10	-10	-20	-35	-15

Sources: Statistical Office of the Republic of Slovenia, Agricultural Institute of Slovenia, Eurostat, model assumptions

Assumed as accession is the period from 2004 onwards, with the full absorption capacity for the CAP measures starting in the same year. 2004 is also the period observed in the model.

3. Results

Agricultural markets

Mainly due to price and budgetary revenue disparities, assumed by analysed accession scenarios, some significant changes on the supply (and less on the demand) side can be predicted even in the short-run (Figure 3.1). Wheat, pork and eggs production would be affected most by the price reduction on the supply side under EU+++ scenario. Milk and poultry production would also be reduced. Due to price and cross price effects, maize production is expected to increase in comparison with baseline. Beef and sugar beet production is also expected to increase or, under least favourable conditions, only slightly decrease. On the contrary, wheat and eggs production could be reduced by as much as a quarter.

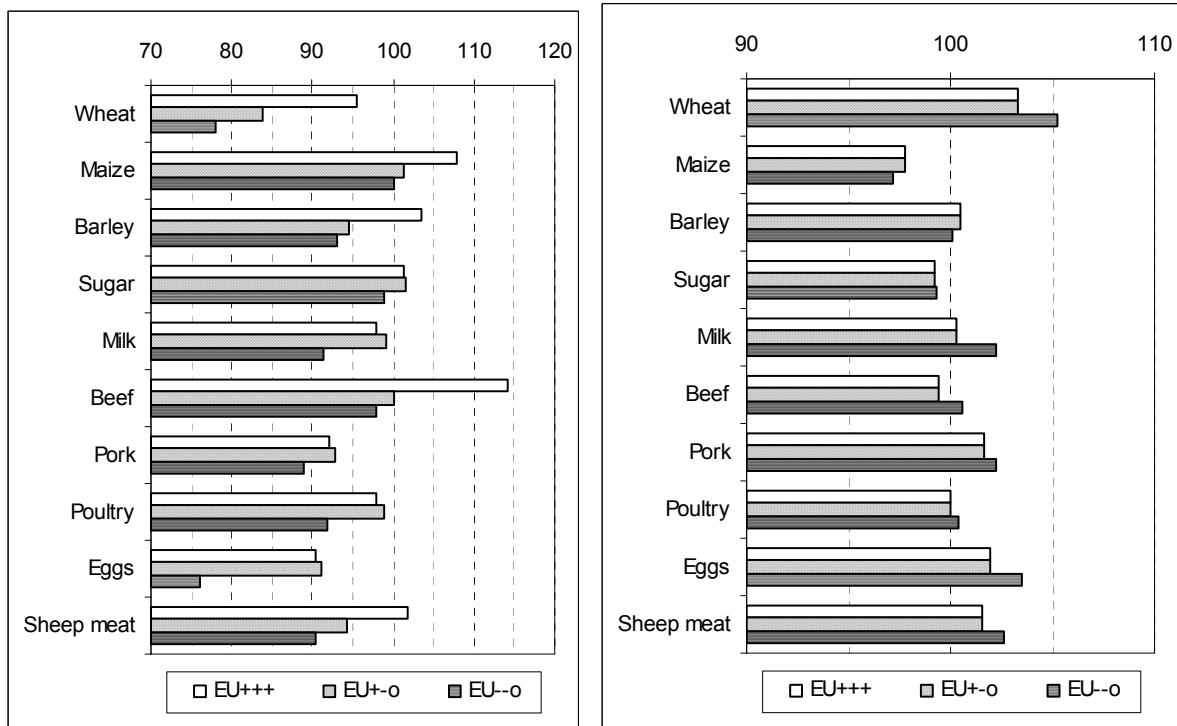


Figure 3.1: Projected supply and demand under various policy scenarios (BS = 100)

Lower protection of pork and poultry and lower prices of milk, sheep meat and barley would also result in a much lower production under the pessimistic accession scenario (EU --o). Production of cereals, beef and sheep meat will be most sensitive to direct payments. Wheat production, if lower prices are not compensated for at least to the level provided for in the common market organisation, could decrease by almost 25 %. On the contrary, maize production is expected to increase. The extent of increase depends strongly on compensation eligibility. The importance of accession conditions is also observed in beef production. On the demand side, wheat is expected to increase the most, predominantly due to price reduction effect, resulting in its increasing competitiveness as a feed component. On the other hand, demand for maize will be reduced mainly due to higher prices and reduced livestock production (pork, eggs, but also milk and poultry).

In the sectors under investigation, Slovenia will not switch from a net importer to a net exporter or vice versa (the only probable exception is beef, Figure 3.2). However, important deviations caused by the EU accession will occur predominantly in wheat and pork (higher imports) and coarse grain (possibly lower imports) sectors. Due to long-term trends of (producer) price reduction, it is expected that Slovenia will become a net importer of poultry before the EU accession regardless of the scenario under consideration (also BS). Also milk and dairy products surpluses should decrease.

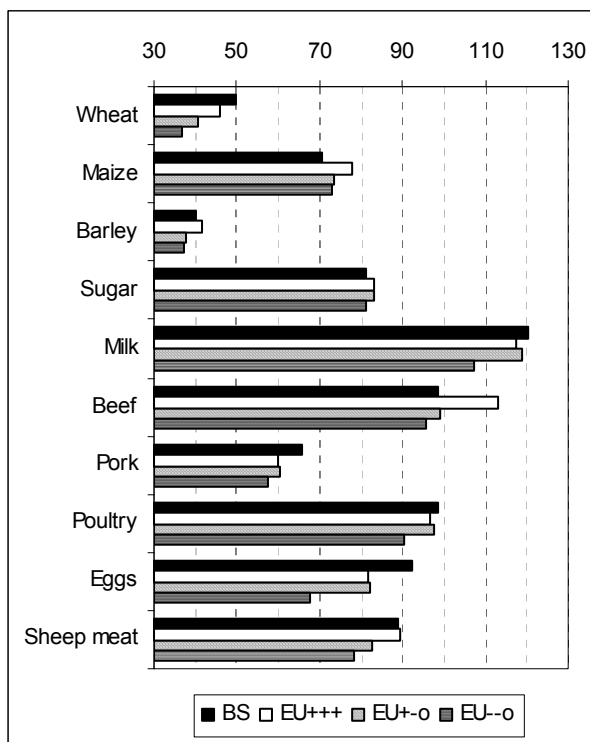


Figure 3.2: Expected levels of self-sufficiency (%)

The results could confirm the hypothesis that inevitable changes will take place in trade flows due to the changes of economic conditions at the time of accession. Variations can be found in the field of price levels and budget support. A part of changes will also occur as a result of different food-processing industry' competitiveness. Authors expect that in the case of Slovenia, changes affected by low competitiveness could be even greater than presented in the analysis. It is important also to state that due to relatively low supply response assumed in the present model (see Stoforos *et al.* 2000), market effects are smaller in comparison with some previous estimates for Slovenian agriculture (e. g. Münch 2000).

Competitiveness

The rate of bilateral competitiveness (RBC) indicator was estimated for all products under consideration. Results obtained are presented in Figure 3.3. They show relatively favourable competitive position of Slovenian agriculture in the event of non-discriminative EU agricultural policy environment (EU+++), conditioned upon (competitive) domestic food industry. However, differences between various commodities are obvious. Arable and cattle (dairy and beef) production seems to be more competitive than pork, eggs and sheep meat production. The reason for this are mainly high direct payments and/or highly protected markets, resulting in high revenues in proportion to domestic opportunity costs. Cereal production with very small or no direct payments (EU +-o and EU --o) will not be competitive at all (with possible exemption of maize). The same holds also for beef production. Pork and eggs production is far from being competitive regardless of the scenario under consideration. It is important to stress that EU accession - even under most optimistic scenario - will not significantly improve the competitiveness of great majority of investigated commodities. In cases where RBC ratio increases under EU+-o in comparison with baseline, it is a consequence of still high discrepancy between domestic agricultural policy and the current CAP. Under the pessimistic scenario, only commodities with production quotas (milk and sugar beet) seem to remain/become competitive (within single EU market).

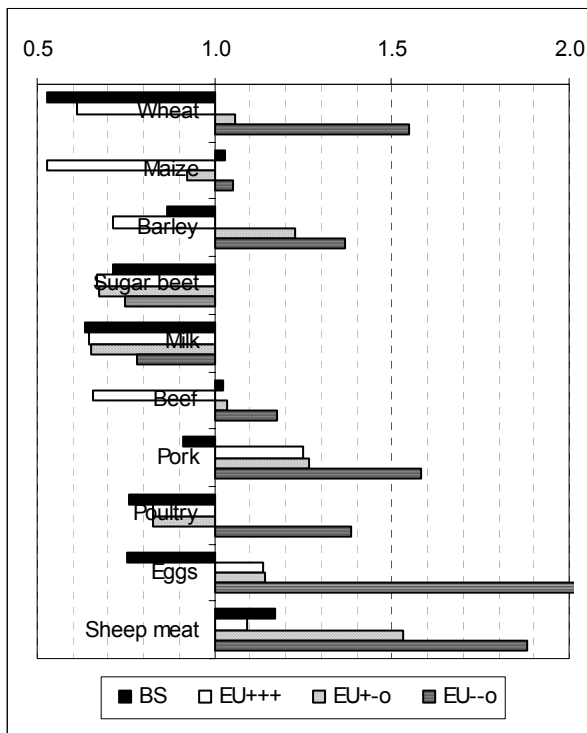


Figure 3.3: RBC ratios for products under investigation

Agricultural Income

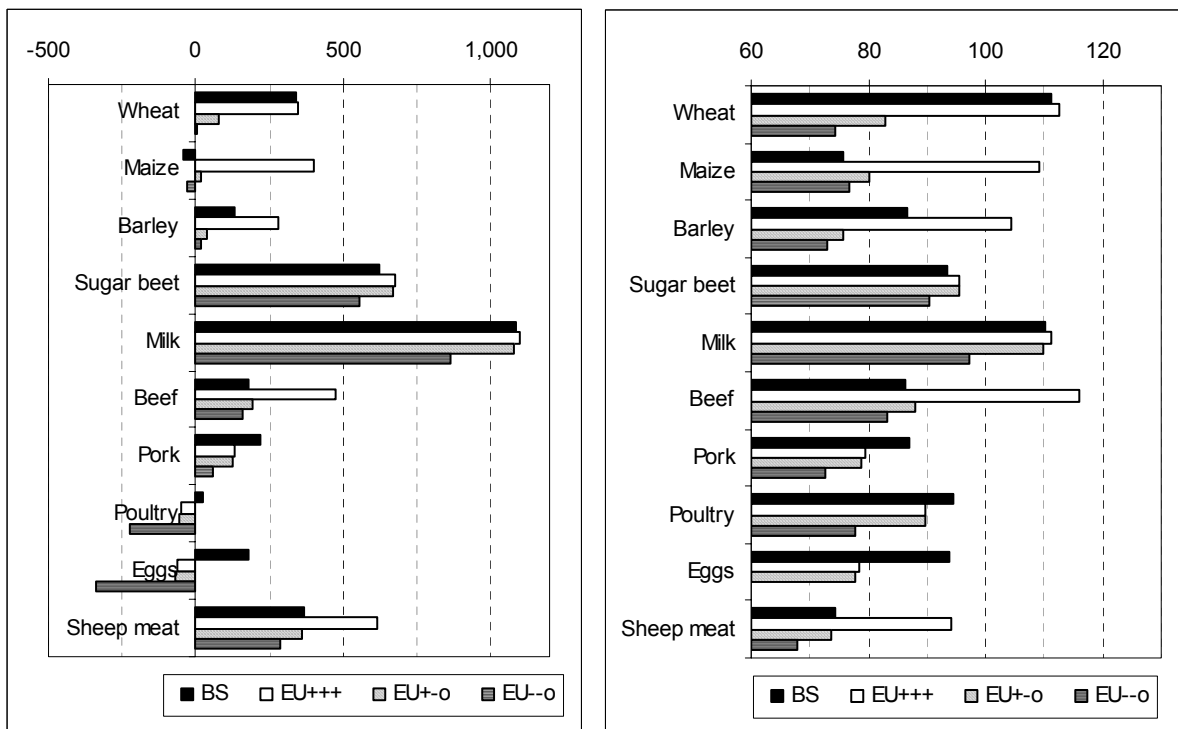


Figure 3.4: Likely agricultural income situation (in EUR/ha or hd²) and percentage rate of production rentability

The results of the policies under the optimistic scenario point to a slight improvement in the income situation of dairy farmers and sugar beet producers (Figure 3.4). A significant improvement, but conditioned upon direct payments, is expected only in currently

² 10 pigs or sheep, 10,000 chickens or 100 layers.

discriminated coarse grains and beef production. Situation is expected to be the worst in poultry and eggs sectors. In the case of low (EU+-o) or no direct payments (EU--o), a rapid stagnation of cereal production is expected. Income situation of pork production will be also deteriorated.

Unless Slovenia enjoys an equal treatment as the current member states, profitability of cereal and beef production will be deep below break even. Milk production is expected to remain most firmly attractive unless the CAP in milk market changes. On the other hand, production of many commodities will become/remain unprofitable, with revenues covering less than 80 % or even 70 % of (total) production costs. It must be mentioned that the results for both sugar and milk sectors are not constrained with quota regime, which is accounted for, but will not have effect on profitability when investigated in terms of per unit of production. For individual producer it means a threat of not allowing expansion of potentially attractive production and thus the necessary structural changes.

At the aggregate level, farmers' income will slightly increase in comparison with the baseline scenario if direct payments are granted (optimistic scenario), but it will decline dramatically without them and without a significant increase (to the EU average level) of competitiveness of the domestic food industry (pessimistic scenario) - Fig. 3.5. The difference between the mean policy accession scenario (EU+-o) and the baseline scenario is approximately 12%, and the difference between optimistic and pessimistic one is as much as 76 %. These results show the sensitivity of accession conditions. Accession, without direct and reduced structural payments and considering low competitiveness of the food industry, is far from being attractive for Slovenian producers. The general picture is even the opposite to the one that can be expected taking into account several general conclusions about EU enlargement effects. In the case of no eligibility for the whole amount (equal treatment as current member states) of direct payments, accession means a reduction of total agricultural income with enormous changes within some sectors (industrial livestock production and cereals).

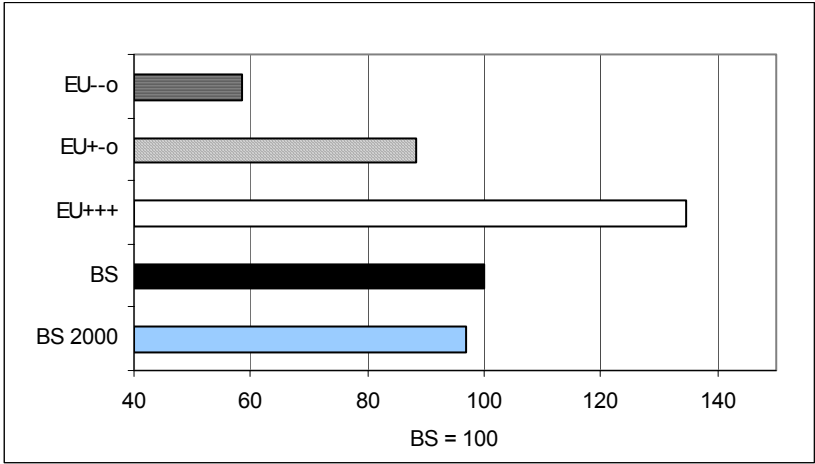


Figure 3.5: Aggregate level of agricultural income (BS = 100)

4. Discussion and conclusions

The results obtained by this model reconfirmed the importance of equal treatment of new member states and differentiation approach to negotiations in the field of agriculture in the next EU enlargement. They clearly demonstrate that accession under the presented scenarios (which represent the full range of possible accession effects) will not significantly increase agricultural production in Slovenia. This is true for milk and sugar beet sectors, both with quota regime in the EU. Extensive reduction is expected in pork, poultry and egg sectors. Changes in the economic environment will affect also the pattern of trade flows. Differences will occur due to changes in (relative) prices and budget support. A part of changes can be apportioned also to different degrees of food processing industry's competitiveness.

Compared with the baseline scenario the income situation of some sectors and at the aggregate level will improve only under the less realistic conditions of equal-treatment accession scenario. Regardless scenario under investigation income situation could improve in the maize and beef sectors, but this improvement should not bring any enthusiasm concerning the perspectives of these sectors, as competitiveness and actual income situation in these sectors is low. A better and more satisfactory situation under this unrealistic accession scenario can be expected only on a small number of well-organised and managed milk farms with already high milk production (quota will, therefore, not impose real production restriction). On the other hand, any marked deviation from the equal-treatment accession scenario means for majority of commodities as well as on the aggregate level a considerable deterioration of economic situation of Slovenian agriculture. Moreover, the whole dimension of negative economic changes will largely depend on the competitiveness of Slovenian food industry, whose potential deficits will also be felt in the agricultural sector in the form of the pressures for reducing the producer prices.

The model results also reveal the weaknesses of the use of horizontal approach for all the candidate countries. Without a serious differentiation among the candidates, enlargement cannot be economically and socially just. However, every enlargement negotiations are a political process and negotiating partners are often not in equal positions (which is undoubtedly the case of this enlargement), and talking politics and the predominance of partial interests are an unavoidable fact. To be able to solve the problem of equal, or better phrased, "quasi-realistic" treatment of Slovenian agriculture, original solutions should be sought within the framework of the *acquis* in force. Full direct payments are unlikely to be the final result of negotiations. However, a reasonable level of payments, for example the same as received in the pre-accession period, could be achieved by covering the missing funds from the state budget or in combination with the funds from CAP in the form of transitional payments. These additional payments would be - after the approved EU payments increase - gradually decreasing. The transitional payments proved to be an efficient measure for achieving the required price levels in the enlargement with Austria and Finland. To place too strong emphasis on the existing direct payments under CAP is - in view of the foreseen reforms - also a less rational solution. Various forms of lump-sum or flat-rate payments, like the ones used in the small-farmers scheme, are also worth consideration, as they could - especially in the case of predominantly small-farm structure in Slovenia, prove the most appropriate. Moreover, various forms of support provided for in the second pillar of CAP should also be examined. Different rural development measures, in particular agricultural environmental measures, are gaining importance as the negotiations proceed. They are becoming also more targeted, production de-coupled and in line with quite justified and still increasing expectations of consumers and taxpayers concerning the future role of agriculture and agricultural policy. Perhaps it could be by these measures that the principle of differentiation is most efficiently applied and Slovenian agriculture can most efficiently prepare for the single market after accession. However, agricultural support from the EU-funding is not important for Slovenia only as an argument of protection of domestic

agriculture, but also from the viewpoint of a balanced budget account with the EU common purse.

Regardless of all the endeavours for equal treatment and the adherence to the principle of differentiation, Slovenian as well as other candidates' agricultural policy should not neglect the needs for restructuring of agriculture. In the long run, the increase in competitiveness is the key issue for Slovenian agriculture and the down-stream industry. This can be achieved efficiently also by measures such as faster trade liberalisation, support for factor mobility, more targeted budgetary policy in terms of externalities and, in the first place, a clear description of the actual and projected situation for domestic producers.

Slovenian agricultural policy is in the pre-accession period faced with very demanding tasks. Most importantly, negotiations have to be concluded as successfully as possible, although the model results as well as the reality of political process indicate that the positive results - i.e. preservation of agricultural incomes at the pre-accession levels - will be rather difficult to achieve. At the same time, Slovenia should step up the processes of restructuring of agriculture and increase the number of competitive farms, able to cope with the pressures and to further develop in the open and demanding EU single market.

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