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THE LEVELS OF PROTECTION IN SLOVENE AGRICULTURE AND POLICY IMPLICATIONS

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ABSTRACT

The objective of this paper is to measure the level of agricultural protection in Slovenia using conventional methodology. The Producer Subsidy Equivalent (PSE) and the Nominal Agricultural Assistance Coefficient for producer (NAPC) were used to determine protection levels during the initial stages of economic transition (1992-95). The results show positive protection with a level in 1995 about the same as the OECD average and a little lower than EU protection levels. Commodity-wise the highest levels of protection are for sugar beet, milk and beef, while coarse grains and poultry meat had relatively low support levels. The paper acknowledges that a current tendency towards increasing price protection in Slovenia should be curtailed and gradually replaced by an effective budget support policy.

Keywords:

SLOVENIA, AGRICULTURAL MARKETS, AGRICULTURAL PROTECTION, TRANSITION ECONOMIES

1. Introduction

There is a direct relation between the extent of agricultural protection and domestic agricultural policy measures; the latter result directly in higher/lower levels of agricultural protection. There is perhaps no single country in the world that would not use some policy protection measures in agricultural production. There are, however, substantial differences between the ways that systems of agricultural intervention and protection are being implemented in the various countries.

Various reports and studies (Agricultural Institute of Slovenia - different sources; European Commission, 1995; Erjavec *et.al.*, 1996) indicate that where Slovene agriculture is concerned, natural conditions and those of production are less favourable than they are in other Central and Eastern European countries (CEECs) and the member states of the European Union (EU). Small, part-time private farms with low productivity levels dominate the agricultural structure, and are especially widespread in marginal areas. Farm revenues earned in agriculture are generally below those incomes earned elsewhere in the economy. Private farmers still feel that they are on the edge of Slovene society and argue that they suffer economic discrimination. Nevertheless, having experienced radical political changes in the late 1980s, agricultural production has become an increasingly important socio-political factor in Slovene society. Understandably enough, this process has also induced substantially higher agricultural support levels. Agricultural producer prices approach the corresponding EU price levels and markedly exceed the existing farm product prices in the CEECs. With the new commitments made by Slovenia to its foreign partners (various bilateral and multilateral free trade agreements), there is not much space left to promote and extend the current level of agricultural market price support. In order to fully comprehend the basic mechanisms of Slovene agricultural protection, some quantification procedures are clearly necessary.

The main objective of this study is to establish the real extent of protection for the individual

agricultural commodities and to compare the results obtained with the situation that has prevailed in the OECD countries. In this way, a hypothesis concerning the huge dependence of Slovene farm policy on the magnitude of market price supports will be tested. Despite all its shortcomings (see Silvis and van der Hamsvoort, 1996), the Producer Subsidy Equivalent (PSE) method is chosen to stand for the basic measure of agricultural protection. PSE produces very reliable empirical results which can be effectively interpreted and used to establish policy relevance. PSE calculations also offer a coherent empirical basis upon which several developments of agricultural policy can be planned.

The paper is divided into three sections. The first part briefly describes the methodological background to the measurement of different levels of agricultural protection. The second section presents PSE computations for Slovene agriculture over the period between 1992 and 1995. Empirical results are compared with the available PSE indices for OECD member states (OECD, 1996b). The last part of the paper attempts to examine the empirical findings in the light of several policy implications, concerning the necessary changes in Slovene agricultural policy that must be undertaken during the EU pre-accession period.

2. Materials and Methods

Aggregate measures of agricultural support have been examined in various ways by several economists (Hertel, 1989; Josling and Tangermann, 1989; Peters, 1989; Tangermann, Josling and Pearson, 1987). The main objective of these studies was to evaluate the structure, degree and development of agricultural protection in a number of countries world-wide. A particularly important review of protection measures and their economic interpretation and policy relevance is provided by the annual reports of the OECD on 'Agricultural Markets, Policies and Trade in OECD Countries', where attention is given to the calculation of PSE and Consumer Subsidy Equivalents (CSE). Since the discussion on agricultural protection generally revolves around the PSE concept, some insight into its theoretical groundwork is necessary.

The PSE concept was originally introduced by Josling in the mid-1970s for the FAO. At the beginning of the 1980s, the concept was further developed by several other economists and OECD experts, and it has been recognised during GATT negotiations as a general measure of agricultural support. Tangermann *et.al.* (1987) define PSE as "the subsidy that would be necessary to replace the array of actual farm policies employed in a particular country in order to leave farm income unchanged". The target of an estimation of the PSE is to determine income levels resulting from different government policies. The concept of the PSE can be more easily grasped if its dual purpose is considered. On the one hand, it evaluates the distortions occurring within the income of individual economic subjects engaged in supplying various market products; on the other, it distinguishes income increases due to certain policy measures. In general, there are five categories of agricultural policy measures that are included in the OECD calculations of the PSEs. These measures range from market price support, direct payments, input subsidies, and general services which are not directly received by producers, to other indirect aids aimed at the support of domestic agricultural producers such as extension services, research and development structure (R&D) and, last but not least, the development of rural infrastructure.

The biggest advantage in using the PSE indicator is that it derives from large and very reliable sets of general economic information and that it involves the calculation of both direct and indirect transfers which may be related to the agricultural producers of a specific farm commodity group. The PSE estimates the monetary transfers to agriculture from consumers of farm produce and from taxpayers which have resulted from different policy support measures.

Following the OECD classification, which postulates the PSE as an aggregate measure of agricultural support, four different PSE interpretations are in common use:

i) Total PSE (gross and net value)

ii) Unit PSE (gross and net value)

iii) Percentage PSE (gross and net value)

iv) Producer NAC (Nominal Assistance Coefficient)

The conversion of PSE into NAC presupposes the fact that all government policies per unit of transfer contribute equally to the specific price differences that have been occurring over time. The decision to use NAC_p (Nominal Assistance Coefficients for Producer) in our study is based on the typical ease with which it offers a comparison of the relative support levels, both over time and between products and countries. NAC_p indicators are used to demonstrate the relationship between the existing effective producer prices (including all assistance) with respect to valid world prices. What makes NAC_p values especially attractive in empirical studies is their ease of understanding and interpretation. If the effective domestic producer prices were relatively equal to the world prices of these products, NAC_p would be equal to 1. On the other hand, an NAC_p value of 2 would imply that the computed domestic price (e.g. domestic market price and budget supports per unit of output) is twice as high as the corresponding world market price.

This paper presents in some detail the market price and budget support analyses carried out by the Agricultural Institute of Slovenia between 1993 and 1996. The computation of agricultural protection measures was carried out using the OECD methodological approach. The data on quantities and prices were compiled from the yearly publications of the Statistical Office of the Republic of Slovenia and from various administrative sources (information on budget support indicators made available by various Ministries). The major problem in the derivation of PSE values arises from the determination of the most appropriate (corresponding) world price levels. It was clearly shown that the selection of valid import prices could not provide an adequate solution to this problem. A multitude of several factors such as different quality levels of domestic and imported goods (Slovenia mainly imports relatively cheap raw materials), inaccurate statistical information at various levels and large disproportions between different years, prompted our decision to adopt the world price levels that are used by the OECD to make PSE calculations for the EU (OECD 1996b). This is regarded more or less as a compromise, which could however be justified if foreign trade relationships (links) between Slovenia and EU are considered. The general results are given below (Table 1), and individual results in the appendices.

3. Results

3.1. PSE estimations for Slovenia

Measurements using the PSE indicators of the OECD show that Slovenia enjoys higher levels of agricultural protection than all the other CEECs. Producer Subsidy Equivalents calculated for Slovene agriculture obtained values of 37.9% for 1992, 34.5% for 1993, 39.2% for 1994 and 41.9% for 1995 respectively (Table 1). The computed PSE indicators lag behind the average PSE values in EU countries. It is apparent that over the period observed (1992-1995), market price supports represent more than two-thirds of the total agricultural support. Considerable alterations in the PSE values are on the one hand the outcome of significant changes taking place to the structure of gross agricultural product, and on the other the effect of an unstable exchange rate of the US$ on the world financial market. Therefore, it should especially be pointed out that the PSE changes evident cannot be attributed to a higher agricultural budget, since there has only been a slight change in 1994 when compared with 1993.

Table 1 - Total agricultural support levels in Slovenia

	Monetary Values in million ECU				Index	Structure (%)			
	1992	1993	1994[e]	1995[p]	1995/94	1992	1993	1994[e]	1995[p]
Market Price Support	175.1	150.7	189.4	225.8	119.2	80.4	79.3	82.1	82.6
Budget Support	42.8	39.3	41.3	47.7	115.5	19.7	20.7	17.9	17.4
compensations - premiums	3.1	3.1	2.3	4.4	191.3	1.4	1.6	1.0	1.6
- aggravated prod.conditions	4.7	6.7	8.4	12.0	142.9	2.2	3.5	3.6	4.4
- input subsidies	19.5	10.1	8.6	8.4	97.7	9.0	5.3	3.7	3.1
- general services	11.4	14.2	15.8	14.9	94.3	5.2	7.5	6.8	5.4
- others	4.2	5.2	6.2	8.1	130.6	1.9	2.7	2.7	3.0
Gross Total PSE	217.8	190.1	230.7	273.5	118.6	100.0	100.0	100.0	100.0
Feed Adjustment	-20.4	-20.7	-22.8	-17.9	78.5				
Net Total PSE	197.4	169.4	207.9	255.6	122.9				
Gross Total PSE in %	41.8	38.8	43.5	44.9					
Net Total PSE in %	37.9	34.5	39.2	41.9					

e = estimate; p = preliminary estimate

As far as the total agricultural support is concerned, a noticeable increase of almost 23% can be observed in 1995 as compared to the previous year. This is mainly due to an enhancement of market price support (discrepancies between domestic and world prices), where ECU exchange rates did not follow the corresponding inflation rates. Budget support has also increased, most notably with compensation and premiums which, as a matter of fact, still do not constitute an important share of the structure of total agricultural support in Slovenia. The opposite (negative) growth trend can be seen for input subsidies and general services intended to promote agricultural production.

Table 2 clearly indicates that the general increase in total agricultural support primarily results from higher protection levels for livestock production.

Agricultural protection levels have been exhibiting a declining tendency in the case of grain (slow growth of domestic prices) and pork (higher world prices). The highest protection levels are those observed for sugar beet. There is actually no market organisation for coarse grain, which means that sales take place mostly within the boundaries of State-run livestock farms. The Slovene agricultural market is dominated by imported coarse grain at very low prices. Due to relatively substantial price increases and higher budget interventions that have taken place, the most significant leap in protection was recorded in the case of Slovene beef production.

Considering the global world framework, it could be said that Slovenia is one of the few countries where levels of agricultural protection have been increasing of late (Table 3). This could partly be explained by a substantial decline in agricultural support in 1993. It is generally recognised that, when the world level is taken into account, Slovenia may easily be ranked among those countries with high levels of agricultural protection. However, when a comparison is made between Slovenia, EU member states and other western European partners, it is obvious again that the existing domestic agricultural support still lags behind the level of agricultural support enjoyed by the farmers in these countries.

Table 2 - Slovene agricultural intervention indicators by individual farm product

	Net Total PSE (ECU/t)				Net PSE in %				NACp			
	1992	1993	1994[e]	1995[p]	1992	1993	1994[e]	1995[p]	1992	1993	1994[e]	1995[p]
Wheat	96	92	84	68	55.6	52.4	51.5	38.8	1.98	1.97	1.92	1.56
Coarse grain	87	94	68	33	55.7	61.2	54.5	27.4	2.16	2.41	2.09	1.35
Maize	46	43	28	17	36.4	33.5	23.0	14.3	1.54	1.46	1.28	1.16
Sugar beet	35	41	24	31	98.8	83.4	61.6	69.0	3.70	3.71	2.24	2.69
Milk	102	111	134	152	48.8	49.6	53.2	56.6	1.89	1.90	2.04	2.16
Beef	774	724	1000	1560	35.1	32.1	39.3	49.5	1.50	1.46	1.63	1.99
Pork	678	456	662	632	34.0	27.6	39.1	34.6	1.50	1.38	.65	1.52
Eggs	489	176	246	430	36.5	15.0	19.6	31.5	1.62	1.19	1.26	1.48
Poultry meat	244	107	104	228	19.2	9.3	8.9	19.0	1.25	1.11	1.10	1.24

e = estimate; p = preliminary estimate

Table 3 - Aggregate agricultural support indicators in Slovenia and the OECD countries, 1992-1995

	Net PSE in %				NAC_p			
	1992	1993	1994[e]	1995[p]	1992	1993	1994[e]	1995[p]
Australia	10	9	10	9	1.11	1.10	1.11	1.09
Austria	55	59	61	*	2.30	2.38	2.47	*
Canada	38	31	26	27	1.52	1.39	1.31	1.33
EU	47	49	49	49	1.85	1.95	1.94	1.88
Finland	67	64	69	*	3.49	3.23	3.71	*
Japan	71	72	74	77	3.02	3.05	3.25	3.39
New Zealand	3	3	3	4	1.03	1.03	1.03	1.04
Norway	77	75	74	74	4.89	4.43	4.21	3.99
Sweden	58	54	51	*	2.43	2.07	1.99	*
Switzerland	75	80	81	81	3.75	4.68	4.74	4.61
USA	21	23	20	15	1.25	1.27	1.23	1.17
OECD	41	42	42	41	1.67	1.69	1.68	1.64
Slovenia	**38**	**34**	**39**	**42**	**1.58**	**1.51**	**1.63**	**1.70**

Note * : New EU Member States as from 1st January 1995
Sources: Agricultural Policies, Markets and Trade in OECD Countries - Monitoring and Evaluation, 1996

3.2. Slovenia and the European Union

Our measurements indicate that the level of agricultural protection in Slovenia in 1994 was around 25% lower than that in EU countries, with some distinct differences among individual farm products (Table 4). While agricultural support has been slightly reduced in the EU since 1993, the protection levels in Slovene agriculture have moved upwards so that there is currently an approximate 10% difference in agricultural support levels between the two.

An increase in the levels of Slovene agricultural protection could be mainly attributed to a favourable market price policy regime (price increases), whereas the budget for agricultural support has not changed markedly. The trend is quite opposite to that in the EU countries, where agricultural prices are declining but higher budget funds are available to farmers. To illustrate this point, let us consider the structure of agricultural support in the EU and Slovenia in 1992. Market price support in both cases represented more than 80% of total agricultural support. After the first results of CAP reform have been experienced, this share is constantly decreasing in the EU, while at the same time the corresponding share of market price support in the total Slovene agricultural support is increasing. While price support in the EU is giving way to compensation payments, it still remains the key policy mechanism for protecting farmers in Slovenia.

Differences in levels of agricultural protection between Slovenia and the EU are thus clearly diminishing; however, considerable discrepancies still exist between individual agricultural products. Slovenia has significantly lower protection levels in force for coarse grain, and relatively low agricultural support for beef and wheat production (1995). However, Slovene protection levels are considerably higher than corresponding EU protection levels in the cases of eggs, pork and sugar beet.

A relative comparison of Nominal Assistance Coefficients for Producer (NAC_p) provides detailed information on farm revenues for individual agricultural products. When the index is below 100, Slovene farm revenues are less than the corresponding revenues earned by EU agricultural producers. It should especially be emphasised that NAC_p includes both price and direct budget supports. From Table 4 it can easily be seen that revenues earned in Slovenia and the EU differ significantly for the various farm products. Proportionally, much lower farm revenues appear in the case of Slovene coarse grain production and cattle fattening; lower revenues are also the case with wheat, milk and poultry production. On the other hand, higher revenues compared to those earned by EU farmers can be observed for sugar beet, sheep and goats, hog and egg production. Whereas the average level of revenues attained by Slovene farmers in 1994 lagged behind the corresponding EU revenue levels by 15%, this difference diminished to a mere 10% in 1995.

Table 4 - Agricultural protection levels in Slovenia and the European Union, 1995

	Net PSE^p in %		NACp		Index NACp EU=100
	EU	Slovenia	EU	Slovenia	
Wheat	47	39	1.81	1.56	86.2
Coarse grain	61	27	2.46	1.35	54.9
Maize	50	14	1.93	1.16	60.1
Sugar beet	59	69	2.16	2.69	124.5
Milk	63	57	2.45	2.16	88.2
Beef	65	50	2.57	1.99	77.4
Pork	9	35	1.10	1.52	138.2
Eggs	5	32	1.06	1.48	139.6
Poultry meat	26	19	1.35	1.24	91.9
TOTAL	49	42	1.88	1.70	90.4

p = preliminary estimate
Sources: Agricultural Policies, Markets and Trade in OECD Countries - Monitoring and Evaluation, 1996

On the basis of the NAC_p derived here, some comments may be made regarding the impact of full Slovene accession to the EU (with the adoption of CAP) on farm revenue levels. However, these estimates pertain first and foremost to the revenue side of the story, where no specific appraisal whatsoever can be offered concerning the extent of costs which accrue from such policy developments. Thus, prudency is called for when interpreting PSE values and attempting to generalise them, particularly in this case where no PSE computation has been made for some staple Slovene farming orientations such as fruit growing, viticulture and potato production.

4. Discussion and Conclusions

The PSE concept was used to determine existing protection levels in Slovene agriculture over the period from 1992 to 1995. The various measures of aggregate agricultural support lead to the ranking of Slovenia among the countries in which a relatively high degree of agricultural protection is implemented. The PSE computed for 1995 (42%) shows that Slovene agricultural support can be found within the average level of that of the OECD member states; the direct implication of this is that it probably has the highest agricultural protection level amongst all the CEECs. In recent years, an increasing tendency has been established in protection levels for Slovene agricultural production.

However, there are substantial differences where various farm products are concerned. The highest protection levels exist for sugar beet, milk, and beef, while coarse grain and poultry meat are characterised by relatively low support levels. There are also some obvious changes apparent in the agricultural protection levels during certain periods of time; namely (with the exception of coarse grain) the hierarchy of agricultural support is steadily following the prevailing trends in agricultural support in the countries of the EU. The main result of a comparison between the two entities clearly suggests what the possible impact of Slovene full accession to the EU will be on the performance of domestic agriculture. According to the data for 1995, this process would have shifted the protection levels in Slovene agriculture up to 10-15%.

This paper specifically emphasizes the fact that agricultural support in Slovenia is primarily the outcome of market price policy, where considerably less support is given through budget support policy. The agricultural foreign trade policy is based on the implementation of variable levies which enhance farm price levels on the domestic market. This in fact constitutes a crucial measure of agricultural policy in Slovenia. Nevertheless, substantial changes are envisaged in the not so distant future.

Slovenia has already entered into, or is in the process of signing, several bilateral agreements (with the EU, EFTA, FYR Macedonia, Baltic States, Bulgaria, Romania, Croatia) and multilateral free-trade agreements (CEFTA). With its membership of the World Trade Organisation (WTO), Slovenia has

committed itself not to make any further increase in foreign trade protection barriers. All these agreements will be fully implemented over the period between 1997 and 2000, thus radically changing the current tide of protection of domestic agricultural production through high farm prices only. The period of intensive agricultural price protection is also most likely coming to an end for Slovenia, and domestic agricultural policy will have to be applied using new and coherent policy instruments in order to effectively resolve the various structural disproportions in Slovene farming. In addition, all efforts should be made to prepare domestic agriculture for possible full Slovene membership of the EU. This process is even further vindicated in the light of future EU enlargement (through the CEECs), the new round of WTO talks, and challenges arising on the world food market (OECD, 1997). An increasing trend towards the promotion of more competitive agriculture worldwide would thus inevitably lead to more reform of Slovene farm policy.

What direction can actually be chosen for the reform of Slovene farm policy? Aggravated production conditions, huge structural discrepancies, and the role of agriculture in rural society orientated more towards the alleviation of social pressures (i.e. as a social buffer) than economic efficiency (Erjavec *et. al.* 1995) do not generally allow full relaxation of existing domestic agricultural protection barriers and impediment-free promotion of a concept of purely competitive agriculture. A complete liberalisation of farm price policy would undoubtedly cause major regional, social and ecological drawbacks. The State should therefore, to a certain extent, retain its position in Slovene agriculture; however, its role should be markedly changed. Agricultural reform should be designed primarily to illustrate the importance of budget support policy and could include the following set of policy aspects:

i) A structural adjustment programme intended to enhance the mobility of chief production factors.

ii) The introduction of limited compensation payments in those sectors where severe difficulties are expected in the adjustment of agriculture to new market challenges.

iii) Programmes designed to promote environmentally-friendly production (organic, extensive and integral production) and programmes aimed at the encouragement of farming in mountainous areas. This trend should overcome the current structural disproportions in Slovene farm structure and eventually result in the promotion of farm tourism, high quality products, introduction of supplementary activities on the farm and efforts towards the enlargement of the range of possibilities from which farm incomes could be generated.

iv) A completely new role for rural development policy. Agriculture alone cannot be perceived as a lever of integral rural development. An approach based on much closer scrutiny is thus needed, in which agriculture is only a part of a comprehensive, coherent system of agro-regional policy.

A necessary shift from market price to budget support policy can be expected soon. In view of the lack of financial assets available, a programme of new policy measures should be carefully designed. A special element in the design of a new policy framework could be the introduction of direct payments which must be directly linked to external functions of Slovene agriculture. Market price policy should primarily be assigned the role of stabilising agricultural markets and ensuring various strategic objectives of agricultural development policy in accordance with the international agreements made. Undeniably, a qualitative shift in structural policy is needed which would also be reflected in the new role of domestic regional policy. It is clear that Slovene agricultural policy makers have many challenges (hurdles) to tackle in the near future. The 'negotiating position' of Slovene agriculture may either be further worsened by stubborn introduction of new forms of price support policies, or a new policy reform framework may be designed that would be somewhat distinct from that for agriculture in the other CEECs, but fully compatible to that of the future CAP.

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Appendix 1 - PSE calculations for the year 1992 (in thousand ECU; exchange rate 1 ECU = 105.1 SIT)

	TOTAL	Wheat	Coarse grains	Maize	Sugar beet	Oil seeds	Milk	Beef	Pork	Eggs	Poultry	Sheep
Quantity produced (thousand t)		185.8	32.5	207.6	96.6	6.2	563.3	49.9	60.1	20.7	59.2	0.3
Production price (ECU/t)		165.7	156.0	126.1	35.6	342.2	199.6	2,191.0	1,992.7	1,337.3	1,271.8	4,135.6
World price (ECU/t)		97.9	75.0	85.3	13.0	164.0	115.4	1,541.3	1,356.8	786.4	969.9	1,507.6
Net value of production	513,181	30,784	5,077	26,182	3,438	2,108	112,417	109,294	119,677	27,677	75,279	1,248
Direct payments	7,781	1,372	0	0	0	0	5,703	670	0	0	0	36
Total value of production	520,963	32,157	5,077	26,182	3,438	2,108	118,120	109,963	119,677	27,677	75,279	1,284
A. MARKET PRICE SUPPORT	175,051	12,594	2,636	8,471	2,182	1,098	47,410	32,410	38,187	11,402	17,868	793
B. DIRECT PAYMENTS	7,781	1,372	0	0	0	0	5,703	670	0	0	0	36
- compensations and premiums	3,111	1,372	0	0	0	0	1,739	0	0	0	0	0
- aggravated prod.conditions	4,670	0	0	0	0	0	3,964	670	0	0	0	36
C. INPUT SUBSIDIES	19,460	2,807	4	21	1,103	32	2,401	8,038	4,979	9	27	39
- for reproduction (seeds & animals)	5,366	2,496	0	0	1,012	6	780	0	1,033	0	0	38
- interest rate subsidies	5,814	0	0	0	0	0	0	4,425	1,389	0	0	0
- investment support	3,626	25	4	21	3	2	569	539	2,427	9	27	1
- other support policies	4,654	286	0	0	88	24	1052	3,074	131	0	0	0
D. GENERAL SERVICES	11,373	739	134	751	73	52	4,285	3,490	1,234	120	301	195
- research	500	42	7	36	5	3	137	130	78	16	46	2
- different State services (breeding, etc.)	5,140	66	11	58	7	5	2,393	1,699	475	80	183	163
- education, extension service	3,353	314	49	267	35	22	1,031	976	585	16	46	13
- land operations	2,099	265	59	346	20	19	661	626	71	4	11	16
- other activities	282	52	8	44	6	4	63	59	26	5	14	1
F. OTHERS	4,155	369	54	292	38	27	1,141	1,067	640	131	382	14
- Rural development project (CRPOV)	601	50	8	43	6	3	165	156	94	19	56	2
- Social and Pension Insurance Funds	3,269	273	43	232	31	19	896	848	509	104	303	11
- others	285	45	3	17	2	5	80	63	38	8	23	1
TOTAL BUDGET SUPPORT	42,770	5,288	191	1,064	1,214	111	13,530	13,264	6,853	260	710	285
Gross total PSE	21,7821	17,882	2,827	9,534	3,396	1,208	60,940	45,674	45,041	11,662	18,578	1,078
Gross unit PSE (ECU/t)		96.2	86.9	45.9	35.2	196.2	108.2	915.6	749.9	563.5	313.9	3,572.4
Gross total PSE in %	41.8	55.6	55.7	36.4	98.8	57.3	51.6	41.5	37.6	42.1	24.7	84.0
Feed adjustment	20,403	0	0	0	0	0	3,253	7,069	4,314	1,547	4,127	94
Net total PSE	197,418	17,882	2,827	9,534	3,396	1,208	57,687	38,605	40,726	10,116	14,452	984
Net unit PSE (ECU/t)		96.2	86.9	45.9	35.2	196.2	102.4	773.9	678.1	488.8	244.1	3,260.4
Net PSE in %	37.9	55.6	55.7	36.4	98.8	57.3	48.8	35.1	34.0	36.5	19.2	76.6
NACp	1.58	1.98	2.16	1.54	3.70	2.20	1.89	1.50	1.50	1.62	1.25	3.16

Sources: OECD (1996b), Agricultural Institute of Slovenia (1996)

Appendix 2 - PSE calculations for the year 1993 (in thousand ECU; exchange rate: 1 ECU = 132.3 SIT)

	TOTAL	Wheat	Coarse grains	Maize	Sugar beet	Oil seeds	Milk	Beef	Pork	Eggs	Poultry	Sheep
Quantity produced (thousand t)		172.7	31.7	249.0	132.6	5.5	533.0	47.9	64.5	19.1	48.6	0.4
Production price (ECU/t)		175.3	154.4	129.2	48.7	362.3	209.3	2,230.1	1,650.6	1,171.4	1,152.6	4,064.2
World price (ECU/t)		94.8	67.1	93.8	15.0	216.0	123.4	1,579.4	1,196.0	922.3	981.4	2,266.6
Net value of production	480,418	30,277	4,894	32,167	6,457	2,009	111,538	106,726	106,405	22,424	5,5973	1,548
Direct payments	9,809	0	0	0	0	0	8,200	1,303	0	0	0	306
Total value of production	490,227	30,277	4,894	32,167	6,457	2,009	119,738	108,029	10,6405	22,424	5,5973	1,855
A. MARKET PRICE SUPPORT	150,747	13,908	2,767	8,813	4,472	811	45,762	31,141	29,306	4,769	8,313	685
B. DIRECT PAYMENTS	9,809	0	0	0	0	0	8,200	1,303	0	0	0	306
- compensations and premiums	3,128	0	0	0	0	0	3,128	0	0	0	0	0
- aggravated prod.conditions	6,681	0	0	0	0	0	5,072	1,303	0	0	0	306
C. INPUT SUBSIDIES	10,129	664	2	499	668	1	995	3,460	3,542	4	11	282
- for reproduction (seeds & animals)	2,647	650	0	0	665	0	661	0	643	0	0	29
- interest rate subsidies	4,455	0	0	483	0	0	0	3,173	799	0	0	0
- investment support	3,027	15	2	15	3	1	334	287	2,100	4	11	254
- other support policies	0	0	0	0	0	0	0	0	0	0	0	0
D. GENERAL SERVICES	14,202	860	155	977	152	57	5,730	4,348	1,285	122	264	252
- research	612	53	8	57	11	4	183	158	80	16	41	2
- different State services (breeding, etc.)	7,107	94	15	101	20	6	3,451	2,391	551	84	167	226
- education, extension service	3,854	367	57	390	78	24	1,258	1,081	546	12	31	11
- land operations	2,074	247	60	326	21	16	709	609	66	2	6	12
- other activities	555	98	15	104	21	7	128	110	42	8	20	1
F. OTHERS	5,167	444	69	472	95	29	1,605	1,308	661	132	339	13
- Rural development project (CRPOV)	496	43	7	46	9	3	149	128	64	13	33	1
- Social and Pension Insurance Funds	4,560	398	62	423	85	26	1,366	1,173	592	118	304	12
- others	111	3	0	3	1	0	90	7	4	1	2	0
TOTAL BUDGET SUPPORT	39,307	1,968	226	1,948	915	88	16,530	10,419	5,488	258	614	853
Gross total PSE	190,054	15,876	2,993	10,761	5,387	899	62,293	41,560	34,794	5,027	8,926	1538
Gross unit PSE (ECU/t)		91.9	94.4	43.2	40.6	162.0	116.9	868.4	539.8	262.6	183.8	4,037.4
Gross total PSE in %	38.8	52.4	61.2	33.5	83.4	44.7	52.0	38.5	32.7	22.4	15.9	82.9
Feed adjustment	20,689	0	0	0	0	0	2,902	6,900	5427	1,661	3,720	78
Net total PSE	169,365	15,876	2,993	10,761	5,387	899	59,390	34,660	29,367	3,365	5,206	1461
NetuUnit PSE (ECU/t)		91.9	94.4	43.2	40.6	162.0	111.4	724.2	455.6	175.8	107.2	3,833.9
Net PSE in %	34.5	52.4	61.2	33.5	83.4	44.7	49.6	32.1	27.6	15.0	9.3	78.8
NACp	1.51	1.97	2.41	1.46	3.71	1.75	1.90	1.46	1.38	1.19	1.11	2.69

Sources: OECD (1996b), Agricultural Institute of Slovenia (1996)

Appendix 3 - PSE calculations for the year 1994 (in thousand ECU; exchange rate: 1 ECU = 152.4 SIT)

	TOTAL	Wheat	Coarse grains	Maize	Sugar beet	Oil seeds	Milk	Beef	Pork	Eggs	Poultry	Sheep
Quantity produced (thousand t)		189.6	51.6	325.5	221.9	8.4	559.1	41.0	69.7	18.9	45.6	0.4
Production price (ECU/t)		163.8	125.2	121.8	38.3	331.0	237.8	2,479.9	1,691.2	1,256.7	1,160.2	4,154.3
World price (ECU/t)		91.5	62.8	99.3	19.0	194.4	128.9	1,581.6	1,011.9	933.5	987.6	2,167.8
Net value of production	519,009	31,063	6,460	39,629	8,490	2,791	132,960	101,555	117,956	23,691	5,859	1,554
Direct payments	10,733	0	0	0	0	0	7,999	2,617	0	0	0	117
Total value of production	529,742	31,063	6,460	39,629	8,490	2,791	140,959	104,172	117,956	23,691	52,859	1,671
A. MARKET PRICE SUPPORT	189,417	13,713	3,220	7,308	4,273	1,152	60,886	36,787	47,378	6,093	7,863	743
B. DIRECT PAYMENTS	10,733	0	0	0	0	0	7,999	2,617	0	0	0	117
- compensations and premiums	2,275	0	0	0	0	0	2,275	0	0	0	0	0
- aggravated prod.conditions	8,458	0	0	0	0	0	5,724	2,617	0	0	0	117
C. INPUT SUBSIDIES	8,571	1,191	9	418	691	31	775	2,573	2,687	12	34	151
- for reproduction (seeds & animals)	2,577	788	0	0	533	0	581	0	645	0	0	30
- interest rate subsidies	4,288	366	0	372	148	27	0	2,341	1,035	0	0	0
- investment support	1,706	36	9	46	10	3	194	232	1,008	12	34	122
- other support policies	0	0	0	0	0	0	0	0	0	0	0	0
D. GENERAL SERVICES	15,797	731	199	906	164	67	6,544	5,140	1,314	138	305	288
- research	764	46	11	59	13	4	249	237	83	16	44	2
- different State services (breeding, etc.)	8,317	117	29	149	31	11	3,945	2,802	649	107	220	257
- education, extension service	4,380	285	68	364	78	26	1,532	1,457	513	12	31	14
- land operations	1,793	217	75	249	24	21	610	527	55	2	4	9
- other activities	543	66	16	84	18	6	209	117	15	1	6	6
F. OTHERS	6,185	375	90	479	103	34	2,014	1,916	674	128	353	19
- Rural development project (CRPOV)	616	37	9	48	10	3	201	191	67	13	35	2
- Social and Pension Insurance Funds	5,569	338	81	431	92	30	1,814	1,725	607	115	318	17
- others	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL BUDGET SUPPORT	41,286	2,297	297	1,802	958	132	17,333	12,245	4,676	278	692	576
Gross total PSE	230,702	16,010	3,518	9,110	5,231	1,284	78,219	49,032	52,54	6,372	8,555	1,319
Gross unit PSE (ECU/t)		84.4	68.2	28.0	23.6	152.2	139.9	1,197.3	746.3	338.0	187.8	3,525.3
Gross total PSE in %	43.5	51.5	54.5	23.0	61.6	46.0	55.5	47.1	44.1	26.9	16.2	78.9
Feed adjustment	22,782	0	0	0	0	0	3,205	8,074	5,889	1,729	3,837	48
Net total PSE	207,920	16,010	3,518	9,110	5,231	1,284	75,015	40,958	46,165	4,642	4,718	1,270
Net unit PSE (ECU/t)		84.4	68.2	28.0	23.6	152.2	134.2	1,000.2	661.9	246.2	103.5	3,396.2
Net PSE in %	39.2	51.5	54.5	23.0	61.6	46.0	53.2	39.3	39.1	19.6	8.9	76.0
NACp	1.63	1.92	2.09	1.28	2.24	1.78	2.04	1.63	1.65	1.26	1.10	2.57

Sources: OECD (1996b), Agricultural Institute of Slovenia (1996)

Appendix 4 - PSE calculations for the year 1995 (in thousand ECU; exchange rate: 1 ECU = 153.1 SIT)

	TOTAL	Wheat	Coarse grains	Maize	Sugar beet	Oil seeds	Milk	Beef	Pork	Eggs	Poultry	Sheep
Quantity produced (thousand t)		185.8	49.0	305.3	265.1	3.1	589.9	45.2	69.3	18.5	56.1	0.4
Production price (ECU/t)		173.8	119.1	116.4	45.6	394.0	256.7	2,960.7	1,827.2	1,366.9	1,199.8	5,315.8
World price (ECU/t)		120.0	92.9	105.8	18.6	182.7	130.9	1,581.8	1,209.9	902.6	944.9	1,813.0
Net value of production	593,364	32,280	5,832	35,532	12,078	1,208	151,442	133,813	126,559	25,341	67,265	2,014
Direct payments	16,388	187	0	0	0	0	7,270	8,517	0	0	0	413
Total value of production	609,752	32,467	5,832	35,532	12,078	1,208	158,712	142,330	126,559	25,341	67,265	,427
A. MARKET PRICE SUPPORT	225,830	9,988	1,282	3,233	7,146	648	74,228	62,322	42,755	8,607	14,292	1,327
B. DIRECT PAYMENTS	16,388	187	0	0	0	0	7,270	8,517	0	0	0	413
- compensations and premiums	4,359	187	0	0	0	0	716	3,310	0	0	0	146
- aggravated prod.conditions	1,029	0	0	0	0	0	6,554	5,208	0	0	0	267
C. INPUT SUBSIDIES	8,354	1,214	15	413	836	40	891	2,664	2,062	5	15	198
- for reproduction (seeds & animals)	2,779	780	0	0	674	0	614	80	565	0	0	67
- interest rate subsidies	4,453	380	0	350	150	38	0	2,352	1,183	0	0	0
- investment support	1,081	50	14	57	11	2	263	221	313	5	15	131
- other support policies	40	5	1	6	2	0	14	11	1	0	0	0
D. GENERAL SERVICES	14,919	718	189	856	196	28	7,496	3,608	1,219	81	155	373
- research	756	46	11	56	15	2	256	220	88	15	46	2
- different State services (breeding, etc.)	7,139	58	14	79	17	2	4,755	1,313	433	53	70	343
- education, extension service	4,954	322	75	393	107	11	1,808	1,560	625	9	27	17
- land operations	1,612	225	73	245	33	11	529	428	54	1	3	9
- other activities	457	68	16	83	23	2	148	87	20	2	7	1
F. OTHERS	8,056	485	113	592	162	16	2,721	2,347	939	163	492	26
- Rural development project (CRPOV)	673	41	9	50	14	1	227	196	78	14	41	2
- Social and Pension Insurance Funds	7,318	441	102	538	147	15	2,472	2,132	853	148	447	24
- others	65	4	1	5	1	0	22	19	8	1	4	0
TOTAL BUDGET SUPPORT	47,716	2,605	317	1,861	1,194	84	18,378	17,137	4,221	249	661	1,010
Gross total PSE	273,546	12,593	1,598	5,094	8,340	732	92,607	79,459	46,975	8,856	14,954	2,337
Gross unit PSE (ECU/t)		67.8	32.6	16.7	31.5	238.8	157.0	1,758.1	678.2	477.7	266.7	6,168.3
Gross total PSE in %	44.9	38.8	27.4	14.3	69.0	60.6	58.3	55.8	37.1	34.9	22.2	96.3
Feed adjustment	17,912	0	0	0	0	0	2,708	8,957	3,171	885	2,156	34
Net total PSE	255,634	12,593	1,598	5,094	8,340	732	89,899	70,501	43,804	7,971	12,798	2,303
Net unit PSE (ECU/t)		67.8	32.6	16.7	31.5	238.8	152.4	1,559.9	632.4	430.0	228.3	6,078.0
Net PSE in %	41.9	38.8	27.4	14.3	69.0	60.6	56.6	49.5	34.6	31.5	19.0	94.9
NACp	1.70	1.56	1.35	1.16	2.69	2.31	2.16	1.99	1.52	1.48	1.24	4.35

Sources: OECD (1996b), Agricultural Institute of Slovenia (1996)