Effect of the domestic sectoral policies harmonisation in CECs with the EU Common Agricultural Policy

Důsledky harmonizace zásad zemědělské politiky zemí střední Evropy se Společnou zemědělskou politikou

V. VOJTĚCH

OECD, Paris, France

Abstract: This paper discusses the potential effects of the EU Common Agricultural Policy (CAP) on the various branches of the agricultural sector in the four OECD member Central European Countries (CECs), i.e. the Czech Republic, Hungary, Poland and the Slovak Republic. The estimation of the effect of the domestic sectoral policies harmonisation with the Common Agricultural Policy (CAP) and its impact on the farming sector, consumers of agricultural commodities and taxpayers, is based on the data from the OECD quantitative analysis of support to agriculture.

Key words: support to agriculture, CAP, Central European countries, quantitative analysis

Abstrakt: Příspěvek se zabývá možnými důsledky Společné zemědělské politiky (SZP) EU pro vybraná zemědělská odvětví čtyř zemí střední Evropy (ZSE), členů OECD, tj. České republiky, Maďarska, Polska a Slovenské republiky. Názor na dopad sjednocení vnitřních zemědělských politik se SZP a její dopad na zemědělské výrobce, spotřebitele a na daňové poplatníky se opírá o údaje z kvantitativní analýzy podpor zemědělství provedené OECD.

Klíčová slova: podpory zemědělství, SZP, země střední a východní Evropy, kvantitativní analýzy

Box I. Measurement and definitions of the OECD indicators of support

In 1998, the OECD method of measuring support to agriculture was revised. There are now four indicators of support: the Producer Support Estimate (PSE), the Consumer Support Estimate (CSE), the General Services Support Estimate (GSSE) and the Total Support Estimate (TSE). In addition, producer and consumer Nominal Assistance Coefficients (NAC) and Nominal Protection Coefficients (NPC) are calculated from the PSE and CSE.

Producer Support Estimate (PSE): an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on farm production or income. The PSE measures support to farmers from consumers through higher commodity prices and from taxpayers through budgetary transfers. The overall monetary value of this support is, of course, dependent on the size and structure of a country's agricultural sector, as well as on the monetary unit used. Support (PSE) expressed in relation to the number of farmers or area of farmland is influenced by differences among countries in factor endowment and the number, type, and size of farm holdings. By contrast, support expressed as a percentage of gross farm receipts (% PSE) shows the amount of support to farmers, irrespective of the sectoral structure of a given country. For this reason, the % PSE is the most appropriate indicator for comparisons of support across countries, commodities, and time.

Consumer Support Estimate (CSE): an indicator of the annual monetary value of gross transfers to (from) consumers of agricultural commodities, measured at the farm-gate level, arising from policy instruments that support agriculture, regardless of their nature, objectives or impacts on consumption of farm products. If negative, the CSE measures the implicit burden placed on consumers by agricultural policies, from higher prices and consumer charges or subsidies that lower prices to consumers. The % CSE measures the implicit tax (or subsidy, if CSE is positive) on consumers due to agricultural policy as a share of the total food expenditure.

General Services Support Estimate (GSSE): an indicator of the annual monetary value of gross transfers to general services provided to agriculture collectively, arising from policy measures which support agriculture regardless of their nature, objectives and impacts on farm production, income, or consumption of farm products. Examples of GSSE-measures include public expenditure on research, marketing and promotion, and infrastructure used by agriculture.

The paper was prepared for the international scientific seminar on the occasion of the 90th anniversary of founding of the Research Institute of Agricultural Economics (RIAE) on the topic "Pre-accession strategy of Czech Agriculture on the way to the EU", September 27–28, 2002, Průhonice near Prague, Czech Republic.

Total Support Estimate (TSE): an indicator of the annual monetary value of all gross transfers from taxpayers and consumers arising from policy measures that support agriculture, net of the associated budgetary receipts, regardless of their objectives and impacts on farm production and income, or consumption of farm products. When expressed as a percentage of GDP (the % TSE), it gives an indication of the burden this overall support represents for the economy.

The analysis of the paper is based on current levels of support reflecting the policies in place in the EU and the CECs and makes no judgements on their evolutions i.e. on the future evolution of the CAP and the terms of accession negotiated by the CECs.

OVERALL SUPPORT TO AGRICULTURE WITHIN THE MACROECONOMIC FRAMEWORK

As measured by the percentage PSE, the overall support provided to farmers in the EU remains much higher than in the CECs. The most recent data indicate that the gap in support which was closing up to 1998 has widened in 1999–2001 (Figure 1). However, the level of support by commodities shows that for some products, the level of support in CECs is close or even higher than in the EU (as will be discussed later) while for some other products, the support in the EU remains substantially higher.

To asses the impact of the introduction of the CAP to the overall economy, the macroeconomic environment and potential of the economy (GDP per capita) has to be taken into account. In the comparison with the total economic potential of the CECs, already the current level of support to agriculture (in percentage PSE much lower than in the EU) involves a higher or similar burden for the economy than in the EU (Figure 2).

The most important element of support in the EU is the Market Price Support (MPS) which is financed to a large extent by transfers from consumers (the MPS of the exported products is financed by taxpayers through export subsidies). However, the possibilities to increase the burden on consumers in CECs is rather limited by the relatively high shares of household expenditures for food (Figure 3). Due to higher overall incomes, the shares of household expenditures on food in the EU are lower even with higher level of MPS provided within the CAP. Moreover, in the next years in most of the transition economies, the deregulation of housing and energy prices will be increasing these categories of household expenditures and their relative shares in household expenditures.

With the exception of Slovenia (not analysed in this paper), all the CECs still maintain a substantial gap in GDP per capita expressed in US$ or Euro when expressed in nominal exchange rates and exchange rates reflecting the PPP. This fact signals, among others, a persisting distortion of price mechanisms for non- tradable goods. Specifically in agriculture, these distortions concern the price of land and implicitly (as for all other sectors) they contribute to maintain lower labour costs.

During the economic transition in the 90s, all the CECs went through a period of reform implementing price and trade liberalisation. Many analyses invoke a deterioration in the terms of trade of agriculture during the reforms periods, and often such developments and resulting changes in production and consumption levels were characterised as the "crisis of agriculture". The interpretation of these developments should be less dramatic as the worsening of terms of trade for agriculture in the ear-

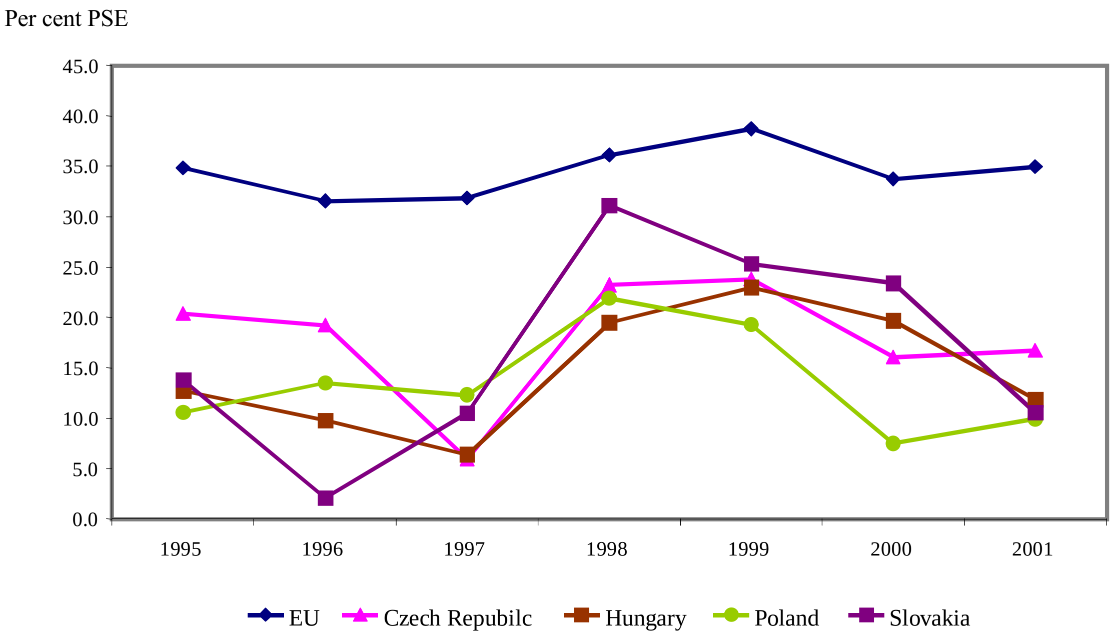

Figure 1. Support to agriculture in EU and CECs

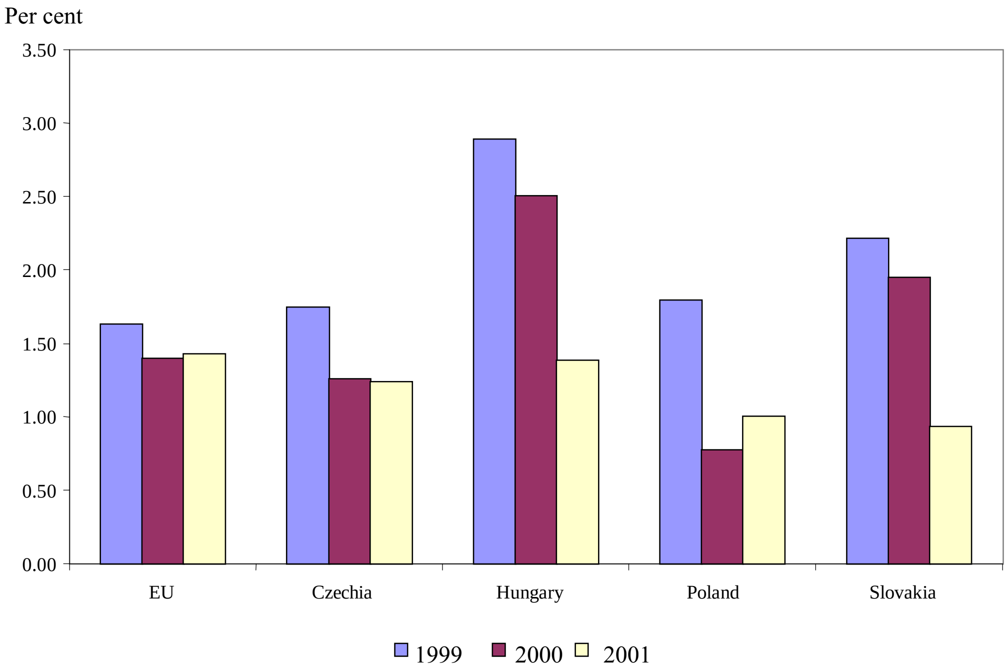

Figure 2. Total suport estimate as a share of GDP

Source: OECD

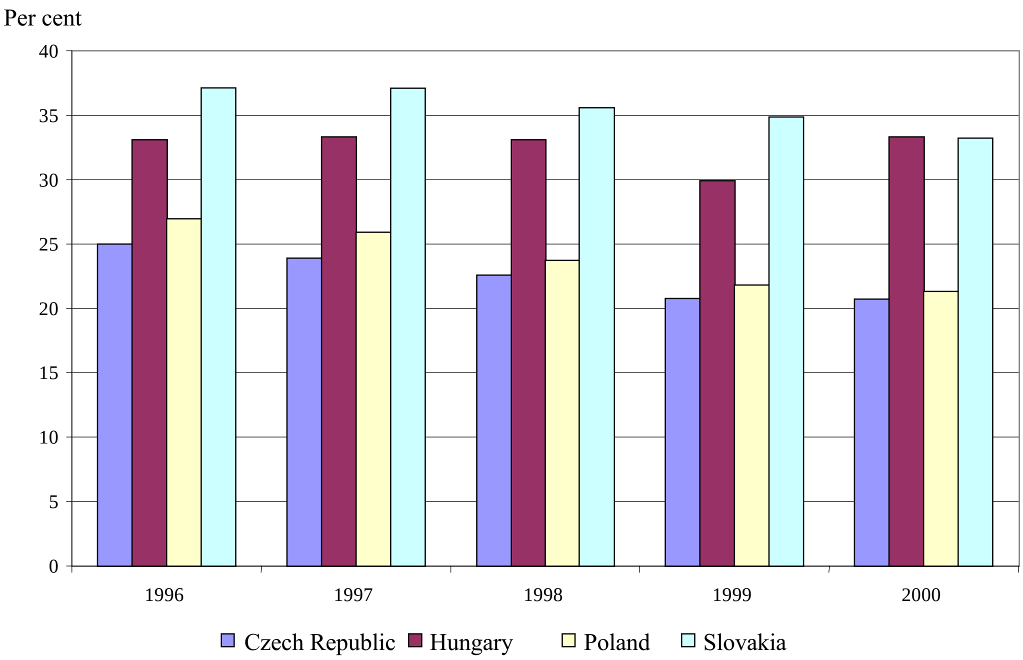

Figure 3. Average share of household income spent on food

Source: OECD

ly years of the reforms was an inevitable move from distorted prices in the pre-reform periods to input/output price ratios more responding to market economy. The input/ output ratios in the CECs and the EU are coming closer for industrial and energy inputs, while the prices of some other factors of production as land, labour, or feeds are still lower in the CECs. Also the large drop in domestic demand for some food items (meat, milk) is the result of the elimination of consumer subsidies and the reflection of real costs of agricultural and food production, and these products are not supposed to reach the consumption levels from the pre-reform periods.

ANALYSE OF SUPPORT BY PRODUCTS

As the major part of support in the EU provided through the CAP is product specific (market price support, direct payments), it is important to have a product specific view when comparing support in the EU and CECs. The analysis focuses on key commodities such as common wheat, oilseeds, sugar/sugarbeet, milk, beef, pigmeat, poultry and eggs. The analysed period focuses on 1997–2001, but in the case of farm gate prices, production and consumption, longer series (1991–2001) were considered.

Grains and oilseeds

The farmgate prices in CECs are coming closer to the EU level. Expressed in EUR, the common wheat prices in Poland are around the EU level while prices in the other three CECs are around 85 per cent of the EU price (a similar pattern is observed also for maize prices). The main oilseeds cultivated in CECs are rapeseed (CR, Poland, Slovakia) and sunflower (Hungary, Slovakia). From 1995, the rapeseed and sunflower prices were even closer to the EU level (around 80 to 90 per cent) than for grains. As for grains, the rapeseed prices in Poland were higher than in the EU. The much higher levels of percentage and unit PSE for grains and oilseeds in the EU are due principally to the direct payments provided under the CAP.

A potential surplus production of grains may result as a combination of increased offer driven by higher prices under the CAP price support measures, and lower demand for feed grains as a result of weak competition position of the pigmeat and poultry industry in the EU market. Also the oilseed sector in the CECs is producing large surpluses which are exported. This situation will require the application of set-aside schemes and related payments to limit production. However, the effectiveness of the set-aside schemes to limit the increase of grains and oilseeds production might be limited (mainly for grains) by a large potential to increase yields on the remaining area (see the large yield difference between the EU average and CECs). This potential may be especially exploited by the large-scale farms structures in Hungary, the Czech Republic and Slovakia, which are equipped with the technology and the only additional input necessary to increase production is an increased use of fertilisers and pesticides (which is also lower than in the EU).

Sugar/sugar beet

Sugar beet farmgate prices remain much lower (around a half) in the CECs than in the EU, as well as the production (at factory) price of white sugar when compared with the EU intervention price (around 60 per cent). This important price gap would normally induce a substantial increase in sugar beet and sugar production motivated by higher market price support under the CAP (supported by the fact that sugar beet areas were much larger in the early nineties, and that, despite some reduction, the sugar processing capacities are higher than the current levels of production). However, the existence of a production quota system in the EU will set a limit to such increase and the future production of sugar is rather linked with the outcome of the negotiation of the level of the production quota (A and B). The main effect of the adoption of the CAP regime is expected on the consumption side (households consumption and processing industries using sugar) reacting to a relatively important increase in prices. Lower demand may increase the surplus production compared with current levels when the CECs are bringing their production closer to consumption.

Milk

The gap between the EU and CECs milk farmgate prices and prices remains important. The current milk prices in CECs are at around two-thirds (CR, Poland, Slovakia) of the EU price, while the prices in Hungry are slightly bellow. As in the case of sugar, this price gap would normally induce an increase in milk production motivated by higher MPS. Despite the dramatic reduction of dairy cows herds during the nineties, a capacity to increase production through increasing milk yields remains substantial. Indeed, after a continuous decline in milk production and consumption, the trend seems to be reversed and since 1996, both production and consumption have been increasing moderately and stabilised in 2000 and 2001. However, the future milk production is linked with the outcome of the negotiation of the level of the milk production quota. The main effect of the adoption of the CAP regime is expected on the consumption side in response to the relatively important increase in consumption prices of dairy products. However, this effect will be limited as the current levels of consumption of milk and dairy products are relatively low.

Beef and veal

In CECs, the dominance of dual-purpose breeds makes the beef production closely linked to milk production. The price gap between the EU and CECs (around 80% of the EU price in the CR, Hungary and Slovakia and around a half in Poland) should be analysed with extreme caution as to the lower quality of beef meat from dual-purpose breeds in CECs. The trends in production and consumption (both halved during 1990–2001) are not likely to be reversed and are expected to stabilise around the current levels. The production of high quality beef (from meat type breeds) may be stimulated by the introduction of the CAP payments, but the increase in domestic demand for more expensive high-quality beef will be rather limited (lower average incomes of population, prevailing consumption of pork and poultry).

Pork and poultry

For pork and poultry, the prices in CECs went close to (pork) or above (poultry and eggs) the EU levels in the more recent years. This tendency indicates a weak competitive position on the EU market after enlargement. The lack of competitiveness may be enhanced by the potential increase of feed grain prices under the CAP and the future investments of the industry to comply with the stricter EU environmental and animal welfare regulations, as most of the CECs commercial production of pork, poultry and eggs is concentrated in large-scale units with high concentrations of animals. Thus the EU enlargement to CECs is expected to limit production and stimulate consumption in CECs.

CHANGES OF SUPPORT AFTER THE INTRODUCTION OF THE FULL CAP

The concept

This part estimates a potential impact of the current CAP on the changes in support to main agricultural products as measured by the PSE methodology. The estimation is based on the support provided in the period from 1997 to 2001. The estimation is based on the PSE per unit indicator (PSEu = total product PSE divided by the volume of production) and expresses the difference between the EU PSEu and the PSEu in the CECs multiplied by the volume of the specific product. To evaluate the potential impact of the changes in support to consumers and taxpayers (in this case mostly the EU budget), the estimation of change in support is broken down to the change in Market Price Support (> MPS) and the change in Direct Payments (> DP). Formally, the calculation of the change in support may be written as follows:

$$\Delta MPS_{ij} = (MPSu_{ij} - MPSu_{EUj}) \times Q_{ij}$$

$$\Delta DP_{ij} = (DPu_{ij} - DPu_{EUj}) \times Q_{ij}$$

where:

ΔMPS_{ij} = the total value of change in the market price support in EUR for country i and product j;
$MPSu_{ij}$ = the value of the Market Price Support per unit in EUR for country i and product j;
$MPSu_{Euj}$ = the value of the EU Market Price Support per unit in EUR for product j;
ΔDP_{ij} = the total value of change in the direct payments in EUR for country i and product j;
DPu_{ij} = the value of Direct Payments per unit in EUR for country i and product j;
DPu_{Euj} = the value of the EU Direct payment per unit in EUR for product j;
Q_{ij} = the volume of production of product j in country i

As it is based on the estimations of the Producer Support Estimate per unit, the comparison reflects the level of support and production in the EU and the respective CECs in the period 1997–2001, which implies the following assumptions:

– It reflects the level of support resulting from policies (the CAP and the EU member-countries policies and specific policies in CECs) and world market situation (reflected by reference prices) in 1997–2001;
– It assumes that all the measures applied under the CAP will be introduced in new member-countries, and that the support from domestic policies will be equal to the average level of support from domestic policies in the EU member-countries;
– The volumes of production in the CECs will be at the 1997–2001 average;
– The ratios of exchange rates of CECs currencies and the Euro are at the 1997–2001 average.

Table 1. Market price support and direct payments per unit in EU and CECs

	Euro per tonne (average 1997–2001)									
	wheat	maize	other grains	oilseeds	sugar	milk	beef	pork	poultry	eggs
MPSu										
EU	13	26	20	0	151	140	1 612	207	288	41
CR	–11	n.c.	–17	–35	19	51	436	99	342	328
Hungary	–10	–22	–5	–32	12	99	182	–11	294	640
Poland	20	–21	15	31	86	15	–310	39	228	540
Slovakia	18	–19	–5	–44	101	35	–44	131	274	165
DPu										
EU	62	42	93	141	15	15	1 122	59	34	28
CR	8	n.c.	7	16	15	16	192	60	43	42
Hungary	9	7	8	17	16	26	122	114	106	88
Poland	11	4	4	9	8	4	32	25	26	30
Slovakia	18	17	16	37	64	46	218	181	128	102

Source: OECD

Table 2. Differences in MPS and direct payments in the CAP level of support and the current level of support in CECs

	Million Euro (average 1997–2001)								
	grains total	oilseeds	sugar	milk	beef	pork	poultry	eggs	total
MPS									
CR	–175	–28	–61	–242	–146	–48	11	53	–636
Hungary	–443	–20	–55	–86	–132	3	107	–716	
Poland	–22	30	–123	–1 474	–827	–330	–25	203	–2 567
Slovakia	–45	–13	–5	–116	–88	–13	–1	9	–272
CECs	–684	–31	–245	–1 918	–1 149	–524	–13	372	–4 191
DP									
CR	–290	–100	0	2	–115	0	2	2	–500
Hungary	–481	–80	0	22	–62	33	30	11	–526
Poland	–527	–129	–13	–128	–469	–67	–3	1	–1 337
Slovakia	–108	–31	5	35	–48	21	8	5	–112
CECs	–1 407	–340	–8	–70	–694	–13	36	19	–2 475

Source: OECD

Note: Negative figures in the table indicate the level by which the current support in CECs is lower compared with that provided in EU, positive figures indicate the areas where the current level of support in CECs is already higher

Results

As far as the Market Price Support per unit (MPSu) is concerned, a limited potential to increase exist in the CECs for grains and oilseed. For Poland, the recent MPSu is already higher (except maize), which is also the case for wheat in Slovakia. For sugar, the MPSu in the CECs is already relatively high (mainly for Poland and Slovakia) but still lower than the MPSu in the EU (one half to two-thirds), while in the Czech Republic and Hungary, the MPSu is around 10% of the support in the EU. For milk, the highest MPSu is in Hungary (around two-thirds of support in the EU), while the level of MPSu is substantially lower in other countries. The wide differences in the MPSu are probably reflecting mostly the lower quality of the beef meat generally produced in CECs. For pork, the MPSu are around a half of the EU level in the CR and Slovakia, and substantially lower in Poland and Hungary. For poultry and eggs, the MPSu is at the EU level or higher (mainly for eggs) (Table 1).

The Direct Payments per unit (DPu) are much higher in the EU in the case of grains, oilseeds and beef, which are the sectors receiving important direct (compensation) payments within the CAP. The differences are less pronounced for sugar and milk where the EU payments are less important. For sugar, the DPu in Hungary and the Czech Republic are close to the EU level, in Poland around a half and only Slovakia provides substantially higher payments. For milk, the DPu is the lowest in Poland (one-quarter of the EU payments), close to the EU level in the CR and higher in Hungary and Slovakia. For pork, poultry and eggs, the DPu in the EU are much lower than in CECs, with the exemption of Poland where the payments are close or bellow the EU level (Table 1).

For grains, the MPS element of support (i.e. the burden on consumers) is estimated to increase by EUR 0.7 billion, while the increase in support through direct payments is much higher, at EUR 1.4 billion, and is the most important from all analysed crops. For oilseed, the MPS element of support remains almost unchanged (increase by EUR 31 million) and the increase in direct payments is estimated at EUR 340 million. In total, the net increase in direct payments to grains and oilseeds represents 70% of the total estimated net increase in direct payments to CECs (the remaining are mostly beef payments – 28%) (Table 2). In the case of sugar, the MPS element is the most important component in the estimated change of support, which implies that most of the increase in support to sugar will be financed by consumers.

An important increase of the MPS by EUR 1.9 billion (which represents around 50 per cent of the estimated total increase in the MPS) is estimated for the CECs milk sector, (the major part of the increase is for Poland EUR 1.5 billion), while the changes in Direct Payments are negligible (net loss in DP for the CR, Hungary and Slovakia). The estimations in the beef sector indicate an increase of MPS by EUR 1.1 billion (this is probably an overestimation due to the quality differences) and an increase of DP by EUR 0.7 billion. The latter figure may be also an overestimation as the CAP beef payments are limited to 90 units per farm, and on the large-scale farms (dominating in the CR, Hungary and Slovakia), large parts of herds will be excluded from these payments. For the pigmeat production, an increase of MPS of EUR 524 million is estimated, while the changes in Direct Payments are less substantial and mitigated. The poultry and eggs production are the main sectors where the net effect of adopting the CAP is expected to be negative as both the MPS and the DP will be reduced (except for poultry in Poland) (Table 2).

Overall, the MPS increase is estimated at EUR 4.2 billion (mainly milk, beef, grains and pigmeat), and the net increase in direct payments is estimated at EUR 2.5 billion (mainly for grains, oilseeds and beef).

CONCLUSIONS

The overall PSE analysis indicates that the total support to agriculture will increase provided the CECs join the EU and adopt the CAP in its current form. However, a more detailed analysis of support by the main PSE products (grains and oilseeds, sugar, milk, beef, pork, poultry and eggs) and their two main components (market price support and direct payments) indicates that this expected increase of support is distributed rather disproportionally.

Important increase in support for grains and oilseed is due mainly to the increase in direct payments, while the increase in market price support plays a less important role. On the contrary, market price support is the main component of the increase of support to sugar and milk, indicating an increased burden to consumers of these products while the effect on the supply side will be contained by a production quota. The potential increase in support to beef is a combination of rise in market price support and direct payments, while the support in the pigmeat sector rises only due to the changes in the MPS. On the other side, the support to poultry and eggs (less supported commodities under the CAP) is estimated to decline both in terms of market price support (benefiting to consumers) and direct payments.

Views expressed are solely the author's and do not necessarily reflect those of OECD or its member countries.

REFERENCES

OECD (2002a): Agricultural Policies in OECD Countries, Monitoring and Evaluation 2002. Paris.

OECD (2002b): OECD Agricultural Outlook 2002. Paris.

OECD (1997): Review of Agricultural Policies: Slovak Republic. Paris.

OECD (1995): Review of Agricultural Policies: Czech Republic. Paris.

OECD (1994a): Review of Agricultural Policies: Poland. Paris.

OECD (1994b): Review of Agricultural Policies: Hungary. Paris.

Arrived on 9th December 2002

Contact address:

Ing. Václav Vojtěch, CSc., Analyst, OECD, 2 Rue André Pascal, 75 016 Paris, France
e-mail: vaclav.vojtech@oecd.org