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KONKURENČNÁ SCHOPNOSŤ ODVETVIA ŽIVOČÍŠNEJ VÝROBY VO VYBRANÝCH KANDIDÁTSKYCH KRAJINÁCH PRED VSTUPOM DO EÚ

COMPETITIVENESS OF LIVESTOCK SECTOR IN SELECTED EU CANDIDATE COUNTRIES

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The more liberalized trade, regional trading agreements, and the process of globalization lead countries to adjust their agricultural policies towards more competitive markets. The EU enlargement requires the candidate countries to reform and harmonize their agricultural policies. Livestock sector has noticeable weight in these countries. This study examines the current situation of the livestock sector in the EU candidate countries in some selected products such as meat, milk, cheese, and egg concentrating on the competition power. The export performance index is used to determine the competitiveness of these selected products. Results show that Lithuania has competitiveness in butter, Hungary in poultry, and Bulgaria in sheep and goat meat compared to other candidate countries. Since the EU liberalizes its policies, candidate countries should be cautious about the further support of the livestock sector and should make necessary adjustments towards competitiveness.

Key words: EU enlargement, livestock sector, competitiveness, comparative export index

Currently there are 13 candidate countries for the EU membership. These are: Bulgaria, Cyprus, Estonia, Czech Republic, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovak Republic, Slovenia, and Turkey. The accession negotiations were concluded between the EU and Cyprus, Estonia, Czech Republic, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia by the Treaty of Accession to the EU in Athens. This treaty shall enter into force on 1 May 2004 provided that all the instruments of ratification have been deposited before that date.

Livestock sector has noticeable weight in these countries. Since the EU liberalizes its agricultural sector and meanwhile the livestock sector, it is essential to know the competitiveness of livestock sector in the candidate countries. Competitiveness of candidate countries including Turkey and Slovakia has already been searched in a few studies (Yilmaz, 2003; Ubreziova and Horská, 2003). Also the competitiveness of some agribusiness-food sectors in the world has been studied for Turkey in the paper of Tan and Erturk (2002). Szovics and Hacherova (2002) have discussed the financial aspects of livestock production and its impact on the accounting profit. A lack of competitiveness studies, however, requires further analysis in this area. This study measures the competitiveness of livestock sector in the EU candidate countries using the export performance index. That way, the competitiveness of livestock sector can be determined in terms of country of origin and product, and necessary measures can be taken before and after the integration.

Overview of some macro indicators and livestock sector in the candidate countries

Main macro indicators

In this study seven of the accession countries have been selected in terms of data availability. Some macro indicators

about these countries are presented in Table 1. As can be seen, the highest population is in Turkey followed by Poland and Romania. Although Turkey has the highest population growth rate, most of the other countries have a minus growth rate of population. In terms of GDP, Turkey and Poland have the highest GDP values while GDP growth rates are greatest in Hungary, Lithuania, and Poland (about 5%). When we look at the share of EU in candidate countries' export, it can be seen that these countries have quite a high share ranging from 38 % (Lithuania) to 73 % (Hungary). But the share of these countries in the EU's trade is quite low being in a range between 0.3 (Bulgaria) and 3.1 (Poland).

Agriculture and livestock sector

The agricultural structure of the candidate countries is presented in Table 2. According to the data, Turkey has the highest rural population (30.7 %) while Bulgaria has the lowest (7.5 %). All other countries have quite low rural population ratios. Also, the share of agriculture in the total employment ranges from 5.5 % (Czech Republic) to 45.1 % (Turkey). The share of agriculture in gross value added is the lowest in the Czech Republic (4.5%) and the greatest in Bulgaria (21.1%).

The number of livestock in these candidate countries is given in Table 3. As seen in the table, Turkey has the highest stock of cattle, sheep, goat, and chicken followed by Romania in cattle, sheep, and chicken and Bulgaria in goat.

The competition is inevitable in the agricultural sector in the EU as it happens in other sectors. It is a matter of argument that his competition benefits or harms the member countries. However, it is clear that the composition of agricultural trade will change as a number of member countries will reach almost 30 in near future.

Table 1 Some macroeconomic indicators for the Candidate Countries

| | Total population (million) (1) 2000 | Population growth rate (%) (2) 1998–2015 | Current GDP (billion €) (3) 1998 | GDP growth rate (%) (4) 1998 | Share of EU in their exports (%) (5) 1998 | Share of Candidate Countries in EU's trade (%) (6) 1998 |
|----------------------|----------------------------------------|------------------------------------------------|-------------------------------------|---------------------------------|-------------------------------------------------|---------------------------------------------------------------|
| Bulgaria (7) | 7.94 | -0.7 | 11.0 | 3.4 | 49.7 | 0.3 |
| Czech Republic (8) | 10.27 | -0.2 | 50.1 | -2.3 | 64.2 | 2.2 |
| Hungary (9) | 9.96 | -0.4 | 42.4 | 5.1 | 72.9 | 2.2 |
| Lithuania (10) | 3.70 | -0.1 | 9.5 | 5.1 | 38.0 | 0.3 |
| Poland (11) | 38.60 | 0.0 | 140.7 | 5.0 | 68.3 | 3.1 |
| Romania (12) | 22.43 | -0.3 | 33.9 | -7.3 | 64.5 | 0.8 |
| Slovak Republic (13) | 5.39 | 0.1 | 18.1 | 4.4 | 55.8 | 0.8 |
| Turkey (14) | 66.66 | 1.2 | 175.8 | 2.8 | 50.0 | 2.5 |

Source: FAO, 2003, European Commission, 2002

Prameň: FAO, 2003, Európska komisia, 2002

Tabuľka 1 Niektoré makroekonomické ukazovatele pre kandidátske krajiny

(1) celková populácia v mil., (2) miera rastu populácie v %, (3) HDP v mld. €, (4) miera rastu HDP v %, (5) podiel exportu do EÚ v %, (6) podiel obchodu kandidátskych krajín s EÚ v %, (7) Bulharsko, (8) Česká republika, (9) Maďarsko, (10) Lotyšsko, (11) Poľsko, (12) Rumunsko, (13) Slovenská republika, (14) Turecko

Table 2 Some indicators of agricultural structure in the EU and Candidate Countries

| | Rural population rate (%) (1) 2000 | Share of agriculture in total employment (%) (2) 1998 | Agricultural land area (1000 ha) (3) 2000 | Share of agriculture in total gross value added (%) (4) 1998 |
|----------------------|---------------------------------------|----------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------|
| Bulgaria (5) | 7.5 | 22.1 | 6 251 | 21.1 |
| Czech Republic (6) | 8.1 | 5.5 | 4 279 | 4.5 |
| Hungary (7) | 12.0 | 7.6 | 5 854 | 5.9 |
| Lithuania (8) | 14.8 | 20.5 | 3 489 | 10.1 |
| Poland (9) | 19.0 | 19.2 | 18 413 | 4.8 |
| Romania (10) | 13.9 | 39.0 | 14 809 | 17.6 |
| Slovak Republic (11) | 9.0 | 8.6 | 2 441 | 4.6 |
| Turkey (12) | 30.7 | 45.1 | 39 050 | 16.1 |
| Belgium (13) | 1.8 | 2.4 | 1 522 | 1.2 |
| Denmark (14) | 3.7 | 3.6 | 2 647 | 3.6 |
| Germany (15) | 2.5 | 2.8 | 17 068 | 1.1 |
| Greece (16) | 13.4 | 17.7 | 8 529 | 12.0 |
| Spain (17) | 7.3 | 8.0 | 29 667 | 3.5 |
| France (18) | 3.4 | 4.4 | 29 706 | 2.3 |
| Ireland (19) | 10.2 | 9.1 | 4 403 | 5.1 |
| Italy (20) | 5.3 | 6.6 | 15 271 | 2.8 |
| Luxemburg (21) | 2.3 | 2.3 | – | 1.0 |
| Netherlands (22) | 3.4 | 3.3 | 1 956 | 3.1 |
| Austria (23) | 5.1 | 6.6 | 3 390 | 1.4 |
| Portugal (24) | 14.3 | 13.6 | 4 142 | 3.9 |
| Finland (25) | 6.0 | 6.5 | 2 212 | 3.5 |
| Sweden (26) | 3.5 | 2.6 | 3 153 | 2.0 |
| United Kingdom (27) | 1.8 | 1.7 | 16 961 | 1.6 |

Source: FAO, 2003

Prameň: FAO, 2003

Tabuľka 2 Vybrané ukazovatele štruktúry poľnohospodárstva v EÚ a kandidátskych krajinách

(1) podiel vidieckeho obyvateľstva v %, (2) podiel poľnohospodárstva na celkovej zamestnanosti, (3) výmera poľnohospodárskej pôdy, (4) podiel poľnohospodárstva na celkovej pridanej hodnote, (5) Bulharsko, (6) Česká republika, (7) Maďarsko, (8) Lotyšsko, (9) Poľsko, (10) Rumunsko, (11) Slovenská republika, (12) Turecko, (13) Belgicko, (14) Dánsko, (15) Nemecko, (16) Grécko, (17) Španielsko, (18) Francúzsko, (19) Írsko, (20) Taliansko, (21) Luxembursko, (22) Holandsko, (23) Rakúsko, (24) Portugalsko, (25) Fínsko, (26) Švédsko, (27) Veľká Británia

Table 3 Number of livestock in the EU and Candidate Countries, 2002

| | Cattle (,000 head) (1) | Sheep (,000 head) (2) | Goat (,000 head) (3) | Chickens (,000 stocks) (4) |
|----------------------|------------------------|-----------------------|----------------------|----------------------------|
| Bulgaria (5) | 634 | 2 418 | 898 | 18 006 |
| Czech Republic (6) | 1 520 | 96 | 24 | 16 564 |
| Hungary (7) | 783 | 1 136 | 130 | 34 343 |
| Lithuania (8) | 752 | 12 | 23 | 6 576 |
| Poland (9) | 5 501 | 332 | – | 50 694 |
| Romania (10) | 2 800 | 7 251 | 525 | 71 413 |
| Slovak Republic (11) | 608 | 316 | 40 | 15 032 |
| Turkey (12) | 10 548 | 26 972 | 7 022 | 217 575 |
| Belgium (13) | 3 106 | 160 | 23 | 56 000 |
| Denmark (14) | 1 923 | 154 | – | 20 000 |
| Germany (15) | 14 227 | 2 702 | 160 | 109 993 |
| Greece (16) | 585 | 9 205 | 5 023 | 28 000 |
| Spain (17) | 6 411 | 24 300 | 3 114 | 128 000 |
| France (18) | 20 281 | 9 327 | 1 230 | 240 000 |
| Ireland (19) | 6 408 | 4 807 | – | 11 342 |
| Italy (20) | 7 068 | 10 952 | 1 327 | 100 000 |
| Netherlands (21) | 4 050 | 1 300 | 215 | 98 000 |
| Austria (22) | 2 118 | 321 | 59 | 11 000 |
| Portugal (23) | 1 399 | 5 478 | 565 | 35 000 |
| Finland (24) | 1 025 | 96 | 7 | 5 766 |
| Sweden (25) | 1 637 | 427 | – | 6 269 |
| United Kingdom (26) | 10 343 | 35 832 | – | 155 800 |

Source: FAO, 2003

Prameň: FAO, 2003

Tabuľka 3 Stavby dobytku v EÚ a kandidátskych krajinách

(1) hovädzí dobytok v tis., (2) ovce v tis., (3) kozy v tis., (4) kurčatá v tis., (5) Bulharsko, (6) Česká republika, (7) Maďarsko, (8) Lotyšsko, (9) Poľsko, (10) Rumunsko, (11) Slovenská republika, (12) Turecko, (13) Belgicko a Luxembursko, (14) Dánsko, (15) Nemecko, (16) Grécko, (17) Španielsko, (18) Francúzsko, (19) Írsko, (20) Taliansko, (21) Holandsko, (22) Rakúsko, (23) Portugalsko, (24) Fínsko, (25) Švédsko, (26) Veľká Británia

Table 4 Export performance index, 2002

| | Sheep and goat meat (1) | Meat poultry fresh (2) | Milk (3) | Cheese (4) | Butter (5) | Eggs (6) |
|----------------------|-------------------------|------------------------|----------|------------|------------|----------|
| Bulgaria (7) | 27 597.69 | 560.82 | 0.00 | 22.76 | 0.00 | 9.28 |
| Czech Republic (8) | 0.68 | 39.08 | 15.93 | 9.91 | 82.77 | 45.25 |
| Hungary (9) | 166.07 | 987.04 | 7.77 | 0.57 | 19.45 | 21.97 |
| Lithuania (10) | 0.00 | 0.00 | 65.96 | 44.39 | 431.76 | 97.86 |
| Poland (11) | 18.92 | 421.38 | 27.83 | 18.94 | 144.54 | 58.18 |
| Romania (12) | 18.54 | 29.35 | 1.12 | 26.76 | 0.12 | 0.00 |
| Slovak Republic (13) | 693.62 | 4.60 | 21.22 | 1.36 | 42.01 | 20.35 |
| Turkey (14) | 0.00 | 0.00 | 0.00 | 0.04 | 1.98 | 0.00 |

Tabuľka 4 Ukazovateľ komparatívnych výhod

(1) ovčie a kozie mäso, (2) čerstvé hydinové mäso, (3) mlieko, (4) syr, (5) maslo, (6) vajčka, (7) Bulharsko, (8) Česká republika, (9) Maďarsko, (10) Lotyšsko, (11) Poľsko, (12) Rumunsko, (13) Slovenská republika, (14) Turecko

Material and methods

Comparative export performance index

In order to determine the competitiveness of the candidate countries in some selected products, a comparative export performance index is used. The index can be defined as:

$$EPI = (X_{it} / X_t) / (X_{IEU} / X_{EU}) \cdot 100 \quad (1)$$

where:

X_{it} – the candidate countries' export in commodity i ,

X_t – the candidate countries' total export to the EU,

X_{IEU} – the total export of commodity i by the EU,

X_{EU} – the total export by the EU.

The EU's trade values exclude the internal trade. The EIP is calculated for sheep and goat meat, poultry meat, milk, cheese, butter, and eggs in the countries of Bulgaria, Czech Republic, Hungary, Lithuania, Poland, Romania, Slovak Republic, and Turkey for the year 2002.

Results and discussion

The EIP calculated according to the formula (1) is presented in Table 4. According to the EIP values, Bulgaria has high level of competitiveness in sheep and goat meat (3207.04), and Hungary in poultry meat (317.25), Lithuania in milk, cheese, butter, and eggs. The Czech Republic, Poland, Romania, the Slovak Republic have lower competitiveness values while Turkey has the lowest among all in related products. Another noticeable point is that Turkey's EIP values are zero for sheep and goat meat, poultry meat, and milk.

This study analyzed the competitiveness of the livestock sector in selected EU candidate countries. Although the EU is an important market for candidate countries, the share of candidate countries in the EU's total trade volume is not enough. Among the candidate countries, Lithuania has the greatest competitive power in butter, Hungary in poultry meat, and Bulgaria in sheep and goat meat, as compared to other candidate countries. Bulgaria has high level of competitiveness in meat and goat meat because Bulgaria's export is more than the EU's total external export in that product. In comparison with other candidate countries Turkey has not competitive power in these products since Turkey has virtually no trade with the EU in related products. Also, excluding the highest competitive countries, the Slovak Republic has competitiveness in sheep and goat meat, Bulgaria and Romania in poultry meat, and Poland in butter compared to other countries. The implication of the results is that after the integration, Lithuania, Hungary, and Bulgaria might gain a market share in related products in the EU. However, none of the candidate countries have any competitiveness in milk, cheese and eggs. In the rest of the candidate countries, the livestock sector will suffer much unless the necessary measures are taken towards the competitiveness of these sectors.

Conclusion

After the integration the livestock sector will benefit from funding and support due to the common agricultural policy CAP of the EU. This will increase the producer surpluses in the candidate countries and increase competitiveness in some livestock sectors. Also, exporting of these products is expected to rise because of subsidies. However, since the EU also liberalizes its agricultural

policies such as limitation on animal stock, lower intervention prices (see European Commission, 2001), the candidate countries expectation for the livestock sector should be evaluated with caution. On the other hand, because of the EU's higher standards on sanitation, the candidate countries must take necessary measures to meet these standards from production to marketing of livestock products. Determination of the weak and strong sectors of the candidate countries is important because both the candidate countries and the EU might make necessary adjustments in their policies. That way harmonization of policies will be easier. Similar studies which will be made in other sectors will help harmonization of various policies with the EU.

Súhrn

Liberalizovanejší obchod, regionálne obchodné dohody a proces globalizácie usmerňuje krajiny, aby si prispôbili svoje poľnohospodárske politiky ku konkurenčným trhom. Rozšírenie EÚ vyžaduje od kandidátskych krajín, aby upravili a harmonizovali poľnohospodárske politiky. Odvetvie živočíšnej výroby zastupuje významnú úlohu v týchto krajinách. Príspevok hodnotí súčasný stav sektora živočíšnej výroby v kandidátskych krajinách EÚ vo vybraných výrobkoch ako sú mäso, mlieko, syry a vajčka s dôrazom na konkurencieschopnosť. Ukazovateľ komparatívnych výhod (EIP) bol aplikovaný s cieľom určenia konkurenčnej schopnosti vybraných výrobkov. Výsledky dokazujú, že Lotyšsko má komparatívnu výhodu v masle, Maďarsko v hydine a Bulharsko v chove oviec a kôz v porovnaní s ostatnými krajinami. EU liberalizuje spoločnú poľnohospodársku politiku, a preto je potrebné aby prístupujúce krajiny boli obozretné v oblasti ďalšej podpory živočíšnej výroby a mali by vykonať nevyhnutné zmeny na zvýšenie konkurenčnej schopnosti tohto odvetvia.

Kľúčové slová: rozšírenie EÚ, živočíšna výroba, konkurenčná schopnosť, ukazovateľ komparatívnych výhod

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