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THE COMPETITIVENESS OF LIVESTOCK SECTOR IN SOME SELECTED EUROPEAN UNION CANDIDATE COUNTRIES

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ABSTRACT

The more liberalized trade, regional trading agreements, and the process of globalization lead countries to adjust their agricultural policies towards more competitive markets. The enlargement of EU requires the candidate countries to reform and harmonize their agricultural policies. Livestock sector on the other hand has noticeable weight in these countries. This study examines the current situation of the livestock sector in the EU candidate countries in some selected animal 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.

Bazı Avrupa Birliği Aday Ülkelerinde Hayvancılık Sektörünün Rekabet Gücü

ÖZET

Liberalleşen ticaret, bölgesel ticaret anlaşmaları ve küreselleşme süreci ülkelerin tarım politikalarında daha rekabetçi pazarlara yönelik düzenlemeler yapmalarına yol açmaktadır. AB'nin genişlemesi, aday ülkelerin tarım politikalarında reformu ve uyum çalışmalarını zorunlu kılmaktadır. Öte yandan, hayvancılık sektörü aday ülkelerde önemli bir yere sahiptir. Bu çalışma, AB aday ülkelerindeki et, süt, peynir ve yumurta gibi bazı seçilmiş hayvansal ürünlerin durumunu rekabet gücü açısından incelemektedir. İhracat Performans İndeksi metodu kullanılarak bu ilgili sektörlerdeki rekabetçi durum belirlenmiştir. Sonuçlar Litvanya'nın tereyağında, Macaristan'ın kümes hayvancılığında ve Bulgaristan'ın koyun ve keçi etinde diğer ülkelere göre rekabet gücünün yüksek olduğunu göstermektedir. AB tarım politikalarında liberasyona gittiğinden aday ülkelerin hayvancılık sektöründeki korumacılığın devamı konusunda ihtiyatlı olmaları ve rekabet güçlerini geliştirmeleri gerekmektedir.

INTRODUCTION

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 on the other hand 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 has been searched in a few studies (Yilmaz, 2003, Akgungor et al., 2001, and Alpay et al., 2001). Also, the competitiveness of some agribusiness-food sectors in the world was studied for Turkey (Saracoglu and Kose, 2000 and Tan and Erturk, 2002). However the lack of livestock competitiveness studies 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

1-MAIN MACRO INDICATORS

In this study seven of the candidate 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 minus growth rate of population. In terms of GDP, Turkey and Poland have highest GDP values while GDP growth rates are highest in Hungary, Lithuania, and Poland (around 5%). When we look at the share of EU in the candidate countries' export, it can be seen that these countries

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Table 1. Some Macro Economic Indicators for the EU Candidate Countries

	Total Population (million) 2002	Population Growth Rate (%) 1998-2015	Current GDP (billion €) 1998	GDP Growth Rate (%) 1998	The Share of EU in Their Exports (%) 1998	The Share of Candidate Countries in the EU's Trade (%) 1998
Bulgaria	7.87	-0.7	11.0	3.4	49.7	0.3
Czech Republic	10.21	-0.2	50.1	-2.3	64.2	2.2
Hungary	10.17	-0.4	42.4	5.1	72.9	2.2
Lithuania	3.48	-0.1	9.5	5.1	38.0	0.3
Poland	38.63	0.0	140.7	5.0	68.3	3.1
Romania	22.35	-0.3	33.9	-7.3	64.5	0.8
Slovak Republic	5.41	0.1	18.1	4.4	55.8	0.8
Turkey	69.63	1.2	175.8	2.8	50.0	2.5

Source: FAO, 2003. [www.apps.fao.org] and European Commission, 2002, Eurostat [http://europe.eu.int/comm].

have quite a high share ranging from 38 % (Lithuania) to 73 % (Hungary). However, the share of these countries' in the EU's trade is quite low ranging from 0.3 (Bulgaria) to 3.1 (Poland).

2. 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 total employment ranges from 5.5 % (Czech Republic) to 45.1 % (Turkey). The share of agriculture in gross value added is lowest in Czech Republic (4.5%) while it is highest in Bulgaria (21.1%).

The number of livestock in these candidate countries and trade values are presented in Table 3, Table 4, and Table 5. As can be seen in Table 3, Turkey has the highest stock of cattle, sheep, goat, and chicken followed by the Romania in cattle, sheep, and chicken and Bulgaria in goat. When we look at the world exports of these products, it can be seen that Bulgaria has the highest export in sheep meat, Hungary in

Table 2. Some Indicators of Agricultural Structure in the EU and Candidate Countries

	Rural Population Rate (%) 2000	The Share of Agriculture in Total Employment (%) 1998	Agricultural Land Area (1000 ha) 2000	The Share of Agriculture in Total Gross Value Added (%) 1998
Bulgaria	7.5	22.1	6251	21.1
Czech Republic	8.1	5.5	4279	4.5
Hungary	12.0	7.6	5854	5.9
Lithuania	14.8	20.5	3489	10.1
Poland	19.0	19.2	18413	4.8
Romania	13.9	39.0	14809	17.6
Slovak Republic	9.0	8.6	2441	4.6
Turkey	30.7	45.1	39050	16.1
Belgium	1.8	2.4	1522	1.2
Denmark	3.7	3.6	2647	3.6
Germany	2.5	2.8	17068	1.1
Greece	13.4	17.7	8529	12.0
Spain	7.3	8.0	29667	3.5
France	3.4	4.4	29706	2.3
Ireland	10.2	9.1	4403	5.1
Italy	5.3	6.6	15271	2.8
Luxemburg	2.3	2.3	-	1.0
Netherlands	3.4	3.3	1956	3.1
Austria	5.1	6.6	3390	1.4
Portugal	14.3	13.6	4142	3.9
Finland	6.0	6.5	2212	3.5
Sweden	3.5	2.6	3153	2.0
United Kingdom	1.8	1.7	16961	1.6

Sources: FAO, 2003.

Table 3. Number of Some Selected Farm Animals in the EU and Candidate Countries, 2002

	Cattle 1000 head	Sheep 1000 head	Goat 1000 head	Chicken 1000 stocks
Bulgaria	634	2418	898	18006
Czech Republic	1520	96	24	16564
Hungary	783	1136	130	34343
Lithuania	752	12	23	6576
Poland	5501	332	-	50694
Romania	2800	7251	525	71413
Slovak Republic	608	316	40	15032
Turkey	10548	26972	7022	217575
Belgium-Luxem.	3106	160	23	56000
Denmark	1923	154	-	20000
Germany	14227	2702	160	109993
Greece	585	9205	5023	28000
Spain	6411	24300	3114	128000
France	20281	9327	1230	240000
Ireland	6408	4807	-	11342
Italy	7068	10952	1327	100000
Netherlands	4050	1300	215	98000
Austria	2118	321	59	11000
Portugal	1399	5478	565	35000
Finland	1025	96	7	5766
Sweden	1637	427	-	6269
United Kingdom	10343	35832	-	155800

Source:FAO, 2003. [www.apps.fao.org]

Table 4. Export Value of Some Selected Animal Products in the EU and Candidate Countries, Thousand USD, 2002

World	Sheep and Goat Meat	Meat Poultry (Fresh)	Milk	Cheese	Butter	Eggs
Bulgaria	21703	9500	642	17500	81	4682
Czech Republic	7	18387	127499	40578	28801	7245
Hungary	5769	267655	49565	45862	1445	12590
Lithuania	1	1637	60689	86428	12245	1445
Poland	216	106381	261121	87677	25426	1827
Romania	66	2634	1914	5982	41	893
Slovak Republic	0	7834	24209	26559	2757	1664
Turkey	2322	8621	2920	13002	306	18703
EU 15	624719	3435473	8058483	8177069	1762940	967552

Source:FAO, 2003. [www.apps.fao.org]

Table 5 Candidate Countries' Export to the EU in Some Selected Animal Products, Thousand USD, 2002

EU15	Sheep and Goat Meat	Meat Poultry (Fresh)	Milk	Cheese	Butter	Eggs
Bulgaria	6495	19236	0	1730	0	76
Czech Republic	4	10216	14018	5737	8770	2835
Hungary	987	237181	6289	303	1895	1266
Lithuania	0	0	5725	2536	4513	605
Poland	125	112381	24986	11194	15627	3719
Romania	45	2907	111	5871	5	0
Slovak Republic	1582	424	6589	279	1571	450
Turkey	0	0	0	16	168	0

Source: FAO, 2003. [www.apps.fao.org]

poultry, Poland in milk, Poland and Lithuania in cheese, Czech Republic and Poland in butter, Turkey, and Hungary in eggs in candidate countries. The candidate countries' export to the EU is presented in Table 5. In terms of the export share in the EU market, Bulgaria has high shares in sheep and goat meat, Hungary in poultry meat, Poland in milk, cheese, butter, and eggs.

The competition is inevitable in the agricultural sector in the EU as it happens in other sectors. It is a matter of argument that this competition benefits or harms the member countries. However, it is clear that the composition of agricultural trade will change as the number of member countries reaches almost 30 in near future. On the other hand, EU's standards on health and sanitation limit the imports of livestock sector from other countries. For instance both Turkey and the EU have limitations on meat imports due to the sanitary conditions. These kinds of limitations cause retaliations on trade (Isin, 1999).

3. COMPARATIVE EXPORT PERFORMANCE INDEX

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

$$EPI = (X_{ii} / X_i) / (X_{iEU} / X_{EU}) * 100 \quad (1)$$

where X_{ii} is specific countries' export in commodity i to the specific market, X_i is specific countries' total export to the market, X_{iEU} is total export of commodity i by the market, and X_{EU} is total export by the market

specified.* That index compares one country's export of a specific commodity to its total export and to the total export of a specific market. If the index value is greater than 100, it means that the export share of a specific commodity for a specific country is higher than the market share of that commodity group in specified markets (world, EU etc.). After organizing for the EU, the index can be defined as

$$EPI = (X_{ii} / X_i) / (X_{iEU} / X_{EU}) * 100 \quad (2)$$

where X_{ii} is candidate countries' export in commodity i to the EU, X_i is candidate countries' total export to the EU, X_{iEU} is total export of commodity i by the EU, and X_{EU} is total export by the EU. That index compares one country's export of a specific commodity to its total export and to the total export of a specific market. The EU's trade values exclude the internal trade. The EPI 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 year 2002. The EPI calculated according to the formula is presented in Table 4. According to the EPI 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. Czech Republic, Poland, Romania, Slovak Republic have lower competitiveness values while Turkey has the lowest among all in related products. Another noticeable point is that Turkey's EPI values are zero for sheep and goat meat, poultry meat, and milk. The reason is that Turkey has no export to the EU in related products except with milk, cheese and butter in quite small amounts for the base year 2002.

Table 6. Export Performance Index (2002-Excluding Intra EU15 Trade)

	Sheep and Goat Meat	Meat Poultry (Fresh)	Milk	Cheese	Butter	Eggs
Bulgaria	27597.69	560.82	0.00	22.76	0.00	9.28
Czech Republic	0.68	39.08	15.93	9.91	82.77	45.25
Hungary	166.07	987.04	7.77	0.57	19.45	21.97
Lithuania	0.00	0.00	65.96	44.39	431.76	97.86
Poland	18.92	421.38	27.83	18.94	144.54	58.18
Romania	18.54	29.35	1.12	26.76	0.12	0.00
Slovak Republic	693.62	4.60	21.22	1.36	42.01	20.35
Turkey	0.00	0.00	0.00	0.04	1.98	0.00

Source: Calculated using European Community, Comext Database, 2003.

Table 7. Export Performance Index (2002 Including Intra EU15 Trade).

	Sheep and Goat Meat	Meat Poultry (Fresh)	Milk	Cheese	Butter	Eggs
Bulgaria	850.21	134.71	0.00	5.03	0.00	9.28
Czech Republic	0.02	9.39	5.01	2.19	15.32	45.25
Hungary	5.12	237.09	2.44	0.13	3.60	21.97
Lithuania	0.00	0.00	20.74	9.82	79.89	97.86
Poland	0.58	101.22	8.75	4.19	26.75	58.18
Romania	0.57	7.05	0.27	5.92	0.02	0.00
Slovak Republic	21.37	1.10	6.67	0.30	7.77	20.35
Turkey	0.00	0.00	0.00	0.01	0.37	0.00

Source: Calculated using European Community, Comext Database 2003.

*For a detailed information about competitiveness indexes see Yilmaz, 2003.

The EPI values including intra EU trade are also calculated (Table 7). Since, the intra EU trade has a high level of share in EU's total trade, the EPI values are less than that of EU trade that excludes intra industry trade. In that case, candidate countries have no competitiveness in milk, cheese, butter and eggs.

CONCLUSIONS

This study analyzed the competitiveness of the livestock sector in some selected EU candidate countries. Although the EU is an important potential market for candidate countries, the share of candidate countries in EU's total trade volume is not enough. Among the candidate countries, Lithuania has highest competitive power in butter, Hungary in poultry meat, and Bulgaria in sheep and goat meat compared to other candidate countries. Bulgaria has high level of competitiveness in meat and goat meat because Bulgaria's export is more than EU's total external export in that product. Compared to other candidate countries, Turkey has no competitive power in these products since Turkey has virtually no trade with the EU in related products. Also, excluding the highest competitive countries, 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 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, livestock sector will suffer much from the integration unless the necessary measures are taken towards the competitiveness of these sectors. After the integration the livestock sector will benefit from the funding and support due to the common agricultural policy (CAP) of the EU. That will increase the producer surpluses in candidate countries and increase the competitiveness in some livestock sectors. Also because of the subsidies, exporting of these products is expected to rise. 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 on 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 the marketing of animal products. To determine the weak and strong sectors of the candidate countries is quite important in the path of liberalization of policies and increasing competition environment. That way harmonization of policies will be easier. Similar studies that will be made in other sectors will help harmonization of the various policies with the EU.

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