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Competitiveness of Domestic Production of Poultry Meat on the EU Market and on the World Market

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Anotace

Zpracovaný článek poskytuje základní přehled o vývoji produkce a obchodu v případě drůbežího masa v ČR. Cílem vlastní analýzy je identifikace hlavních vývojových trendů a tendencí formujících vývoj české produkce a obchodu v případě drůbežího masa. Z výsledků analýzy lze vypozorovat v čase rostoucí růst domácí poptávky po drůbežím mase (zejména mase kuřecím), a dále pak i určitou míru stagnace v oblasti tuzemské produkce, jejíž tempo růstu je výrazně nižší v porovnání s tempem růstu vlastní spotřeby. Tuzemský trh se v průběhu let stává více závislým na importech drůbežího masa zejména ze zemí EU. Záporné saldo obchodní bilance České republiky ve vztahu k partnerským zemím výrazně vzrostlo. Co se týká komparativních výhod českého obchodu s drůbežím masem, ty se v čase postupně více a více vytrácejí – respektive se prohlubuje komparativní nevýhoda a to jak ve vztahu k zemím EU, tak i ve vztahu ke třetím zemím. Komparativní výhody jsou schopné si udržet pouze některé sub-agregace, které jsou navíc charakteristické nízkým stupněm zpracování.

Klíčová slova

Drůbeží maso, produkce, obchod, trh EU, trh světový, komparativní výhoda.

Abstract

The article provides a basic overview of the development of production and trade in the case of poultry meat in the Czech Republic. The goal of the actual analysis is to identify the main developmental trends and tendencies forming the development of Czech production and trade in the case of poultry meat. From the results of the analysis, we can observe the increasing growth in time of domestic demand for poultry meat (primarily chicken meat), and further, also a certain level of stagnation in the area of domestic production, whose rate of growth is significantly lower as compared to the rate of growth of actual consumption. In the course of the years, the domestic market is becoming more dependent on imports of poultry meat primarily from EU countries. The negative trade balance of the Czech Republic in relation to partner countries increased significantly within the analyzed period. As far as the comparative advantages of Czech poultry meat trade are concerned, those are gradually fading away more and more in time – or rather, the comparative disadvantage is deepening, both in relation to the countries of the EU, as well as in regard to third countries. Only some sub-aggregations are capable of maintaining comparative advantages, which are additionally characterized by a low level of processing. This paper was supported by the institutional research intentions MSM 6046070906.

Key words

Poultry meat, production, trade, EU market, world market, comparative advantage.

Introduction

Within recent years, the global market in agricultural and food products has been undergoing very dynamic development. The demand for agricultural products is continuously growing. The source of the actual growth in demand is not only the growth in population (Jeníček, 2010), but also the continual growth of the purchasing power of a significant part of the population (Jeníček, 2011; Svatoš, 2009). The very dynamic development of the world economy together with the processes of globalization, internationalization and liberalization of the world economy are significantly changing the shape of individual markets – the agricultural market not being an exception (Hambálková, 2008;

Svatoš, 2008). These changes are not caused only by the growing demand for individual agricultural and food products, but are also affected by changes in the area of the development of culture and consumption habits of consumers not only on a regional level, but also on a global level (Horská et al., 2011). The volume of global agriculture production within the last several decades grew very significantly. Just in the years 1960 – 2010, the volume of plant production continually grew, on average by more than 100 mil. tons per year, and in the case of animal production the growth in the volume of actual production reached, on average, approximately 12 mil. tons per year. If we focus on the development in the area of the production of meat, we find that the global production in the years 1961 – 2010 increased from approximately 71 mil. tons to nearly 300 mil. tons. The most dynamic segment of the global meat market within the analyzed period was poultry meat, whose volume of production within the analyzed period increased on average by 5% per year. The actual volume of global production of poultry meat increased from just under 8 mil. tons in 1961 to more than 98 mil. tons in 2010. In the course of the analyzed period, the proportion of poultry meat in global production increased from just under 13% to more than 33%. In this regard, it is then appropriate to state that not all segments of poultry meat grew on the global market with the same dynamics. The greatest dynamic of growth and also the highest proportion in the current production was seen for chicken meat, the production of which within the analyzed period grew by 5% on average. Currently, chicken meat has a proportion in the total production of poultry meat of approximately 88%. The very significant development in the area of production and trade in poultry meat have affected all regions of the world – Europe included. The present article addresses the issue of the development of the production and trade in poultry meat in the Czech Republic, whose agricultural sector has been very significantly affected in recent years by global and regional processes affecting its structure and the volume of production. Just as in the case of the other regions of the world, in the case of the Czech Republic as well, the agricultural sector is very significantly formed by the development on the global food market. Besides the fact that the Czech market is formed by the development of the global market, it is additionally and to a much greater extent also formed through the effects of the market of the EU countries, which the Czech Republic is a part of. The very significant dynamic in the area of the formation of the current state of the agricultural sector has also impacted the sector of the production and trade in poultry meat.

Methodology

The present article provides a basic overview of the development of production of poultry meat in the Czech Republic, as well as in regard to the development of Czech foreign trade in poultry meat in relation to partners from EU countries as well as in relation to third countries. The goal of the actual analysis is to identify the main developmental trends and tendencies forming the development of Czech production and trade in the case of poultry meat. Besides the analysis of the effect of selected variables on the development of production and trade in the case of poultry meat, processed by way of a regressive function, the sensitivity of production and trade to changes of selected parameters of the external and internal environment is also analyzed, in order to identify the effect of selected variables on production and trade. In addition to the above, the article also aims to assess the competitiveness of Czech trade in poultry meat and to identify how the comparative advantages or disadvantages are distributed.

The present article analyzes the position of Czech production of poultry meat in terms of the domestic market as well as also in terms of the production of poultry meat on the world market and on the market of the EU countries. Primarily the effect of domestic consumption, price on the market of the Czech Republic and on the market of the EU countries, production on the market of the EU countries and production on the world market on Czech production of poultry meat are analyzed. The second part of the actual analysis then consists of an analysis of Czech foreign trade in poultry meat. Here, the development in the area of the value and volume of export and import is primarily monitored. The kilogram prices of both export as well as import are monitored. Attention is also paid to the territorial structure of Czech poultry meat trade. The development of individual characteristics associated with the development of Czech export and import of poultry meat is subsequently analyzed by way of a processed trend function.

In terms of methodology, the article analyzes the development of Czech production and trade in relation to the countries of the EU27 and in relation to third countries (the world without the EU). The main sources of data for the actual analysis are the databases of the UN FAO and of UN COMTRADE. The monitored data are production (Czech

Republic, EU, the world without the EU), prices of agricultural producers (Czech Republic, EU, the world), consumption of poultry meat in the Czech Republic, the value of export and import (Czech Republic, EU, the world, individual countries of the EU in relation to the Czech Republic) and the volume of export and import (Czech Republic, EU, the world, individual countries of the EU in relation to the Czech Republic). The data on Czech production and trade are collected on two levels - volume (tons) and value (USD or CZK). For the purposes of the analysis of the mutual relationship between individual variables having an effect on the volume and value of Czech production and trade, the following tools are used: correlation analysis, analysis of sensitivity (elasticity), a power function and a linear function.

The quantification of the effect of the main determinants is conducted with the utilization of regression analysis (Dougherty, 2002; Gujarati, 1988; Lind, Marchal, Wathen, 2005).

In individual periods, the "regular least squares method" is used to estimate regression functions in a power form describing the effect of selected factors on the selected explained variable. The regression function is thus estimated in the form of: $y = a \cdot x_1^b \cdot x_2^c \cdot x_3^d \cdot \ldots \cdot x_n^k$, where y is the explained variable, $x_1,...,x_n$ are explanatory variables, $a,...,k$ are estimated parameters. Parameters $b,...,k$ represent coefficients of flexibility, which express the percentage change of the explained variable upon a one percent change of the relevant explanatory variable. The actual analysis is based primarily on establishing the significance of the estimated parameters, i.e. the significant effect of the analyzed determinants of the poultry meat market. Besides the power function, a linear function is also used (Hušek 1999; Hindls et al., 2007). This function is used for the purposes of the estimate of the development trend in the case of selected characteristics of Czech poultry meat trade.

Besides the above tools pertaining to the analysis of Czech production and trade in the area of poultry meat, the article also uses the so-called Lafay index (LFI). By way of such index, we ascertain the existence of comparative advantages of Czech poultry meat trade in relation to the market of the EU countries, the market of third countries and primarily also in relation to the most significant trading partners of the Czech Republic on the market of the EU. The analysis of comparative advantages is processed on two levels. The comparative advantages of Czech poultry export are analyzed as a whole, and then, the comparative advantage of individual sub-aggregations representing the poultry meat trade is analyzed.

For the purposes of the analysis of foreign trade, the HS nomenclature is used. According to this nomenclature, Czech agricultural trade is divided up into 24 commodity aggregations and poultry meat trade is then divided up into 14 sub-aggregations:

H1-0207	Meat, edible offal of domestic poultry
H1-020711	Fowls, domestic, not cut, fresh
H1-020712	Fowls, domestic, not cut, frozen
H1-020713	Fowls, cuts & offal, fresh
H1-020714	Fowls, cuts & offal, frozen
H1-020724	Turkeys, not cut, fresh
H1-020725	Turkeys, not cut, frozen
H1-020726	Turkey cuts & offal fresh
H1-020727	Turkey cuts & offal frozen
H1-020732	Ducks, geese, not cut fresh
H1-020733	Ducks, geese, not cut frozen
H1-020734	Fatty livers of geese or ducks
H1-020735	Poultry cuts&offal, fresh
H1-020736	Poultry cuts&offal, frozen

The bilateral comparative advantage of total poultry meat trade and individual items representing poultry meat trade with respect to selected countries and group of countries is analysed by means of the Lafay index. Apart from export flows, the Lafay index (hereinafter only the LFI index) also takes into account import flows. As opposed to the standard RCA index, its advantage is its ability to take into account the intersectoral trade and also re-export. In this respect, its information value is stronger as compared to the traditional index of the obvious comparative advantage (Balassa, 1965). It is suitable to utilize this index in the cases when a relationship between two business partners is analysed. The advantage of the LFI index as compared to the RCA index is also its ability to include any distortions caused by macroeconomic fluctuations (Fidrmuc et al., 1999). The LFI index enables to analyse the position of every specific product within the foreign trade structure of every specific analysed country or a group of countries (Zaghini, 2003). The LFI index for the given "i" country and for every "j" analysed product or group of products is defined in the following formula:

$$LFI^i_j = 100 * [((x^i_j - m^i_j) / (x^i_j + m^i_j)) - (\sum^N_{j=1}(x^i_j - m^i_j)) / (\sum^N_{j=1}(x^i_j + m^i_j))] * ((x^i_j + m^i_j) / (\sum^N_{j=1}(x^i_j + m^i_j))$$

x^i_j and m^i_j represent exports and imports of "j" product realized by "i" country or a group of countries with respect to the rest of the world or with respect to a selected business partner (partner country). "N" is the number of analysed items (Lafay, 1992). The positive value of the LFI index indicates existence of a comparative advantage within the analysed traded aggregation or a group of aggregations in question. The higher is the resulting value of the index, the higher is the level of specialization of the country in question as regards trade with the given item or a group of items representing agrarian and food trade in this case. And vice versa, the negative value of the LFI index signals that specialization and hence comparative advantages are lacking (Zaghini, 2005).

Analysis and Discussion

Development of the Production of Poultry Meat in the Czech Republic on the Backdrop of the Production of Poultry Meat in the World and in the EU

The production of poultry meat in the Czech Republic in the years 1993 – 2010 increased from 133 thousand tons to nearly 200 thousand tons (i.e. in the course of the analyzed period, the volume of actual production increased by more than 45%). However, in relation to the development of the production of poultry meat, it is necessary to state that actual production has a tendency to significantly fluctuate in time. Production reached its peak in 2005 (more than 240 thousand tons of meat), and then in the subsequent years, a decline in the volume of production followed – primarily because of a loss of competitiveness of Czech poultry meat in relation to the biggest trade rivals. In this regard, a high level of competition is also seen in regard to other types of meat. In this regard, poultry meat is sailing through the storm that is raging on the Czech food market much more elegantly as compared to the other types of meat. While in the years 1993 – 2010 the rate of growth of production of poultry meat on the market of the Czech Republic grew on average by 2.5% per year, the volume of production of pork meat declined on average by 4.4%, and, in the case of beef meat, the volume of production of meat declined on average by more than 6% annually (see Table 1).

It is thus evident from the above that the proportion of poultry meat in the overall production of meat in the Czech Republic must grow in the long-term. While in the year 1993, the proportion of poultry in the production of meat ranged at a level of approximately 13%, in the year 2010 it was more than 32%. Chicken meat has a long-term dominant proportion in the production of poultry meat. The proportion of chicken meat in the production of poultry significantly strengthened within the analyzed period from approximately 87% to nearly 95%. The proportion of other types of meat in production is decreasing long-term – an exception in this regard is duck meat. The proportion of the production of other types of poultry is decreasing long-term in the Czech Republic, primarily because of poor economy of production, and also because of the high degree of competition. The following Table 2 provides a brief overview of the development of the structure of poultry meat on the market of the Czech Republic.

If we focus on the comparison of the structure and volume of production of poultry meat in the Czech Republic to development on the global market (Table 4) and primarily on the market of the EU countries (Table 3), we may state that the Czech Republic maintains a greater dynamic of the rate of growth of actual production of poultry meat as compared to the market of the EU countries. On average, the dynamics of production are higher primarily in the case of chicken meat and duck meat. On the other hand, in the case of goose meat

Production (tonnes)	item	1993	1997	2001	2005	2010	Basic index 2010/1993	GEOMEAN-Chain index 1993 - 2010
Czech Republic	Bovine Meat	216241	155706	109475	81031	77026	0.356204	0.937521
Czech Republic	Eggs	155018	166115	192168	89465	97600	0.629604	0.971498
Czech Republic	Pigmeat	614933	463556	414643	380290	300136	0.488079	0.95616
Czech Republic	Poultry Meat	133940	176700	240831	241256	184947	1.503636	1.025821
Czech Republic	Animal Fats +	284777	222656	200607	221867	186581	0.655183	0.973919
Czech Republic	Meat +	1006684	835768	807705	746111	620504	0.616384	0.97021
Czech Republic	Milk – Exc. Butter +	3474022	2805001	2796954	2828497	2791913	0.803654	0.986431
Czech Republic	Offals +	53439	44361	29486	28960	24673	0.461704	0.952846

Source: FAO, 2012

Table 1: Czech animal production development in 1993 - 2010.

		1993	1997	2005	2010	GEOMEAN-Chain index 1993 - 2010	Basic index 2010/1993
Chicken meat	Production (tonnes)	117140	158400	213481	184947	1.027	1.579
Duck meat	Production (tonnes)	2500	2800	8333	6942	1.062	2.777
Goose and guinea fowl meat	Production (tonnes)	4500	4700	3119	1500	0.937	0.333
Turkey meat	Production (tonnes)	9800	10800	16323	1864	0.907	0.19
Meat. Total + (Total)	Production (tonnes)	1006684	835768	744611	602699	0.97	0.599
Poultry meat (Total)	Production (tonnes)	133,940	176700	241256	195253	1.025	1.458
Share of poultry meat in total meat production		13.31%	21.14%	32.40%	32.40%		
Chicken meat	Share in poultry meat production	87.46%	89.64%	88.49%	94.72%		
Duck meat	Share in poultry meat production	1.87%	1.58%	3.45%	3.56%		
Goose and guinea fowl meat	Share in poultry meat production	3.36%	2.66%	1.29%	0.77%		
Turkey meat	Share in poultry meat production	7.32%	6.11%	6.77%	0.95%		

Source: FAO, 2012

Table 2: Development of Czech poultry meat production in 1993 - 2010.

item		1993	1997	2005	2010	GEOMEAN-Chain index 1993 - 2010	Basic index 2010/1993
Bird meat, nes	Production (tonnes)	3560	3760	4068	4310	1.011	1.211
Chicken meat	Production (tonnes)	6844371	7853240	8522342	9765171	1.021	1.427
Duck meat	Production (tonnes)	250905	344863	437964	487995	1.040	1.945
Goose and guinea fowl	Production (tonnes)	53066	66094	83534	62540	1.010	1.179
Turkey meat	Production (tonnes)	1461861	1844148	1829597	1739950	1.010	1.190
Meat, Total + (Total)	Production (tonnes)	41711132	42117469	42558463	44770683	1.004	1.073
Poultry meat	Production (tonnes)	8613763	10112105	10877505	12059966	1.020	1.400
Share of poultry meat in total meat production		20.65%	24.01%	25.56%	26.94%		
Bird meat, nes	Share in poultry meat production	0.04%	0.04%	0.04%	0.04%		
Chicken meat	Share in poultry meat production	79.46%	77.66%	78.35%	80.97%		
Duck meat	Share in poultry meat production	2.91%	3.41%	4.03%	4.05%		
Goose and guinea fowl	Share in poultry meat production	0.62%	0.65%	0.77%	0.52%		
Turkey meat	Share in poultry meat production	16.97%	18.24%	16.82%	14.43%		

Source: FAO, 2012

Table 3: Development of EU poultry meat production in 1993 - 2010.

and turkey meat, the rate of growth of production in the Czech Republic is far below the average of the EU countries, or rather, it is actually negative. In relation to the world market, the growth of the volume of production of poultry meat in the Czech Republic is far below average. While in the years 1993 – 2010 the volume of production of poultry meat in the world increased by more than 4%/year, the growth in the volume of production in the Czech Republic was approximately half of that. In this regard, it is interesting to compare the proportion of the production of poultry to the overall production of meat. While in relation to the EU, the proportion of poultry in the total production of meat in the Czech Republic is highly above-average, in relation to the world market the proportion is nearly comparable. This fact then attests to the fact that the Czech consumer has not yet reached primarily the income opportunities of the EU15 countries. Poultry meat, which is among the cheaper meats, as compared to pork meat and beef, plays a very significant role for consumers. In this regard, we can see certain identical features not only in relation to the situation on the global market (where the majority of consumers live in developing countries), but also in relation to all new EU member countries EU, which are significantly "poorer" when compared to the old EU members. Further, an interesting characteristic of the Czech poultry meat market is the extremely high proportion of the production of chicken meat – which comprises almost 95% of total poultry production, which is significantly more than in the case of both the EU market as well as the world market.

item		1993	2005	2010	GEO-MEAN chain index 1993 - 2010	Basic index 2010/1993
Bird meat, nes	Production (tonnes)	17 958	57 519	70 864	1.084	3.946
Chicken meat	Production (tonnes)	41 313 332	70 127 365	86 544 760	1.044	2.095
Duck meat	Production (tonnes)	1 721 592	3 336 503	4 031 481	1.051	2.342
Goose and guinea fowl	Production (tonnes)	959 619	2 075 847	2 521 416	1.058	2.628
Turkey meat	Production (tonnes)	4 094 100	5 178 676	5 348 861	1.016	1.306
Meat, Total + (Total)	Production (tonnes)	192 908 848	260 981 576	295 462 319	1.025	1.532
Poultry meat (Total)	Production (tonnes)	48 106 601	80 775 910	98 517 382	1.043	2.048
Share of poultry meat in total meat production		24.94%	30.95%	33.34%		
Bird meat, nes	Share in poultry meat production	0.04%	0.07%	0.07%		
Chicken meat	Share in poultry meat production	85.88%	86.82%	87.85%		
Duck meat	Share in poultry meat production	3.58%	4.13%	4.09%		
Goose and guinea fowl	Share in poultry meat production	1.99%	2.57%	2.56%		
Turkey meat	Share in poultry meat production	8.51%	6.41%	5.43%		

Source: FAO, 2012

Table 4: Development of world poultry meat production in 1993 - 2010.

Domestic supply quantity (tonnes)	**item**	**1993**	**1997**	**2001**	**2005**	**2010**	Basic index 2010/1961	GEOMEAN-Chain index 1993 -2010
Czech Republic	Poultry Meat	125438	190544	247166	269943	262162	2.0899	1.0471

Source: FAO, 2012

Table 5: Czech poultry meat domestic consumption development 1993 - 2010.

Self sufficiency	**item**	**1993**	**1997**	**2001**	**2005**	2010
Czech Republic	Poultry Meat	106.78%	92.73%	97.44%	89.37%	76.82%

Source: FAO, 2012

Table 6: Czech poultry meat market self sufficiency development in 1993 - 2010.

Therefore, if we summarize the development of the production of poultry meat in the Czech Republic, we can say that despite the high level of fluctuation of actual production, the average year-on-year rate of growth of production in the years 1993 – 2010 was positive (approximately 2.5%/ year). Nevertheless, the production was not able to compensate the large increase in demand for poultry meat and its products. In the years 1993 – 2010, the consumption of poultry meat on the market of the Czech Republic grew on average by 4.7% per year – meaning that within the monitored period, the volume of consumption increased from approximately 125 thousand tons to more than 260 thousand tons of meat (Table 5). Therefore, as a result of the above development, despite the growth in the volume of actual production, the gradual decrease in self-sufficiency of the Czech market in the area of the supply of poultry meat of domestic origin occurred within the analyzed period (Table 6).

A specific phenomenon affecting the development of the Czech poultry meat market is the price development. Despite the continual growth of input prices, inflation and other phenomena, the price of one ton of poultry meat has been continually declining since the years 1997 respectively 1998. In 2010, the prices of poultry meat reached approximately 85 – 90% of the value of poultry meat in the year 1993 (for details, see Table 7).

The alarming development in the area of the worsening profitability in the area of the raising and sale of poultry meat is very significantly affecting the position of poultry producers on the Czech market. The Czech poultry meat market is under very significant pressure not only from the global market, but also from the market of the EU countries. Primarily Poland represents a very significant competitor of Czech production of poultry meat.

If we analyze the development of Czech production of poultry meat, we can see a high rate of correlation of the volume of production to the volume of production in EU countries (in relation to the

market of third countries, the rate of correlation is relatively low and insignificant, see Table 8).

On the basis of the conducted regression analyzing the relationship of the Czech poultry meat market and the market of the EU countries or the world market, we can state that Czech production reacts very elastically to changes in production primarily on the market of the countries of the EU (if production in EU countries changes by 1%, production in the Czech Republic changes on average by approximately 1.9%). On the other hand, in relation to the market of third countries, the sensitivity of Czech production is very low (on average, a percentage change on the world market leads to a change in production in the Czech Republic of approximately 0.12%). As an exogenous parameter, the development of production on the world market in relation to the production of the Czech Republic (endogenous variable) is seen as insignificant. The subsequent power regression models the relationship of Czech production of poultry meat and the production of poultry meat in the countries of the EU (Table 9).

Czech production of poultry meat reacts very insensitively to price development. The price on the domestic market is seen long-term as an insignificant parameter (mutual correlation between the volume of production and the price on the market is also very low, i.e. minus 0.31) in relation to the development of domestic production of meat. The mutual relationship is best explained by power regression, the results of which show that if the price of one ton of production changes by a percent, production will change by minus 0.58%. In relation to the development of prices on the market of the EU countries, the situation is much more problematic yet. Within the years 1993 – 2010, the prices of poultry meat on the market of the EU countries are once again seen as an insignificant parameter in relation to the volume of Czech production. The mutual correlation is once again very low (see Table 10) and if we factor in the results calculated by way of the regressive function (which is seen as the most acceptable), we can state that the sensitivity of production to a change in price on the EU market EU by a percent is only minus 0.7% (according to linear regression only, the result is even worse, approximately 0.12%).

From the results of correlation analysis, the goal of which was to assess the effect of prices on domestic production of poultry meat, at least one interesting finding arose. That finding is that there does exist a correlation between the development of the price of poultry meat on the market of the Czech

item	**1993**	**1997**	**2001**	**2005**	**2009**	**2010**	GEOMEAN – chain index 1993 - 2010	Basic index 2010/1993
Chicken meat	30 504	35 736	34 429	28 245	26 151	25 791	0.990	0.845
Duck meat	39 901	46 443	42 764	37 777	38 885	36 347	0.995	0.911
Turkey meat	39 454	46 649	44 415	37 500	38 460	35 653	0.994	0.904

Source: FAO, 2012

Table 7: Czech Republic – Producer Price (Local Currency/tonne) (LCU).

Variable	Correlation N=18 Significant correlations are highlighted at the significance level. p < .05				
	Average	Stand. deviation	Poultry meat production in ČR	Poultry meat production in EU	Poultry meat production in World (without EU)
Poultry meat production in ČR	198623	36995	1	0.756583	0.452573

Source: FAO, own processing 2012

Table 8: Czech poultry meat production development in relation to EU market and global market (without EU) – mutual correlation.

N=18	Results of regression with dependant variable: Production in ČR R= .80293083; R2= .64469792; Corrected R2= .62249154 F(1,16)=29.032 p<,00006 Stand. Error of Estimation: .12697; D-W 1.65, alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b	t(16)	p-value.
Abs. item			-18,6263	5.717564	-3.25773	0.00494
Production in EU	0.802931	0.149018	1.9052	0.353588	5.38814	0.00006

Source: FAO, own processing 2012

Table 9: The results of power regression analyzing the mutual relationship between Czech poultry meat production and EU poultry meat production.

Variable	Correlation N=18 Significant correlations are highlighted at the significance level. p < .05				
	Average	Stand. deviation	Poultry production in ČR	Poultry meat price in ČR	Poultry meat price in EU
Poultry production in ČR	179412.9	34194.97	1.000000	-0.024752	-0.066665
Poultry meat price in ČR	1130.7	216.43	-0.024752	1.000000	0.970354
Poultry meat price in EU	1481.9	267.32	-0.066665	0.970354	1.000000

Source: FAO, own processing 2012

Table 10: Mutual correlation between Czech poultry meat production and Czech and EU poultry meat market price.

N=18	Results of regression with dependant variable: Price in Czech market (USD/tonne) R= .96845942 R2= .93791365 Corrected R2= .93403326 F(1.16)=241.71 p<.00000 Stand. Deviation of estimation : .04845; D-W: 2.1, alfa = 0.05					
	b*	Stand. Error In relation to b*	b	Stand. Error In relation to b	t(16)	p-value
Abs. item			-0.589788	0.489204	-1.20561	0.245496
Price in EU market (USD/tonne)	0.968459	0.062293	1.043525	0.067121	15.54688	0.0000

Source: FAO, own processing 2012

Table 11: The results of power regression analyzing the mutual relationship between Czech poultry meat unit price and EU poultry meat unit price development.

Republic and on the market of the EU countries (average price of poultry meat on the market of the EU countries) (Table 10). The subsequent power regression (Table 11) provides information on the mutual sensitivity of the price of poultry meat on the market of the Czech Republic in relation to the prices on the market of the EU countries (a percentage change in the price on the market of the EU countries means a change in the price on the market of the Czech Republic of 1.04%). At least in this regard, it appears that there is existing a certain dependency of the market of the Czech Republic on the market of the EU.

Analysis of Competitiveness of Czech Poultry Meat on the Market of the EU Countries and on the Market of Third Countries

In the overall volume of agricultural foreign trade of the Czech Republic, foreign trade in poultry meat represents only a minor, supplementary item. In the years 1996 – 2011, the proportion of poultry meat in Czech agricultural export oscillated between 2 – 5%, whereby at the end of the analyzed period, it achieved approximately 2.3%. On the other hand, in the case of agricultural import, the proportion of poultry is continuously increasing. While at the beginning of the analyzed period, the proportion ranged at a level of approximately 2.3%, at the end it was up to 5.9%. The value of trade in poultry meat is continuously increasing. At the same time, the rate of growth of the value of exports is significantly lower when compared to the rate of growth of the value of imports. Within the analyzed period, the value of exports increased from USD 46 mil. to more than USD 154 mil.; within the same period, the value of imports increased from just under USD 48 mil. to approximately USD 525 mil. A specific feature of Czech foreign trade in poultry meat are higher, on average, kilogram prices of export as compared to kilogram prices of imports (caused primarily by the low import prices of Polish poultry meat). Nevertheless, even here, the rate of growth of unit prices of imports is higher when compared to the rate of growth of unit prices of export. As a result of the high dynamic of growth of the value and volume of imports (19% or 15%, respectively, on average per year) as compared to the growth in the value and volume of exports (9%, or 8% respectively, on average per year), a significant worsening of the negative trade balance occurred within the analyzed period. That increased within the monitored time period from just under 2 mil. to more than USD 370 mil. As imports increased, a worsening of the coverage of imports by exports also gradually occurred in time. While at the beginning of the period, the level of coverage was at just under 97%, at the end of the period it was just under 30%. In terms of the territorial structure of Czech poultry meat trade, it is further appropriate to state that the Czech Republic trades poultry meat primarily within the territory of the EU countries. Currently, these countries represent approximately 98% of exports or 76% of imports, respectively (details on the development of trade in poultry meat can be found in the following Table 12). Worsening indicators in the area of poultry meat trade can be seen not only in relation to the territory of the EU countries, but also in relation to third countries. The proportion of third countries in Czech poultry meat trade significantly weakened in time (the effect of

		Mil. USD; kg	1996	2002	2004	2008	2010	2011	GEO-MEAN chain index 1996 - 2010	Basic index 2010/1996
Export	EU27	Trade Value	41.7	36.7	107.9	117.4	123.8	151.1	1.1	3.6
Export	EU27	NetWeight (kg)	16.8	23.1	47.7	42.9	50.4	51.5	1.08	3.1
Import	EU27	Trade Value	29.5	38.4	99	259.7	289	396.1	1.2	13.4
Import	EU27	NetWeight (kg)	14.1	25.8	64.4	102.8	132.2	164.5	1.19	11.7
Export	EU27	unit price	2.49	1.59	2.26	2.74	2.46	2.94	1.01	1.2
Import	EU27	unit price	2.1	1.49	1.54	2.53	2.19	2.41	1.01	1.1
	EU27	Coverage ration import/export	141.20%	95.50%	108.90%	45.20%	42.80%	38.20%		
	EU27	Balance	12.1	-1.7	8.9	-142.3	-165.2	-245		
Export	EU27	share	90.60%	95.30%	98.70%	98.60%	97.80%	97.90%		
Import	EU27	share	62.00%	57.50%	54.90%	76.80%	80.00%	75.50%		
Export	World	Trade Value	46	38.5	109.3	119	126.6	154.4	1.09	3.4
Export	World	NetWeight (kg)	18.3	24	48.4	43.2	52.2	53.3	1.08	2.9
Import	World	Trade Value	47.6	66.8	180.5	338.3	361.5	525	1.19	11
Import	World	NetWeight (kg)	27.5	39.9	106.1	127.8	157.2	198.6	1.15	7.2
Export	World	unit price	2.52	1.61	2.26	2.75	2.43	2.9	1.01	1.2
Import	World	unit price	1.73	1.67	1.7	2.65	2.3	2.64	1.03	1.5
	World	Coverage ration import/export	96.50%	57.60%	60.60%	35.20%	35.00%	29.40%		
	World	Balance	-1.7	-28.3	-71.2	-219.2	-234.9	-370.6		
Export	World without EU	Trade Value	4.3	1.8	1.4	1.7	2.8	3.2	0.98	0.8
Export	World without EU	NetWeight (kg)	1.5	0.9	0.7	0.3	1.8	1.8	1.01	1.2
Import	World without EU	Trade Value	18.1	28.4	81.4	78.5	72.5	128.9	1.15	7.1
Import	World without EU	NetWeight (kg)	13.4	14.2	41.7	25	24.9	34.1	1.07	2.5
Export	World without EU	unit price	2.87	2.1	2.02	4.88	1.51	1.77	0.97	0.6
Import	World without EU	unit price	1.35	2	1.95	3.14	2.91	3.78	1.08	2.8
Export	World without EU	share	9.37%	4.66%	1.29%	1.40%	2.18%	2.10%		
Import	World without EU	share	38.03%	42.50%	45.13%	23.22%	20.04%	24.55%		
	World without EU	Coverage ration import/export	23.80%	6.30%	1.70%	2.10%	3.80%	2.50%		
	World without EU	Balance	-13.8	-26.6	-80	-76.9	-69.7	-125.6		

Source: UN Comtrade, own processing 2012

Table 12: Czech poultry meat foreign trade basic characteristic.

the entry of the Czech Republic into the EU), but, nevertheless, the decline affected primarily Czech export. The level of coverage of the mutual trade exchange is worsening significantly faster than in the case of the EU countries, and further, the negative balance of mutual trade is also growing very dynamically. In relation to third countries, it is also additionally true that, unlike the market of the EU countries, where Czech unit prices of export exceed the price of imports, unit prices of imports are currently almost doubly higher as compared to the kilogram prices of exports.

If we analyze the competitiveness of Czech agricultural trade in poultry meat, we can state that such competitiveness is gradually disappearing or worsening in time. While at the beginning of the analyzed period, the Czech Republic achieved comparative advantages in trade at least in relation to the territory of the EU27 countries, currently we can see a trend of growth of comparative disadvantages. The value of the LFI index is decreasing both in relation to EU countries, as well as in relation to third countries (for details, see Table 13).

If we focus on the structure of poultry meat trade, we can state that it currently has the following structure (for details, see Table 14). Chicken meat trade has the dominant position within overall trade. Further more significant types of meat are turkey meat and duck meat. The table set out below contains the basic information on the development of trade within the individual sub-aggregations. The Czech Republic is capable of achieving a positive trade balance in relation to the EU in the case of

LFI	1996	1998	2000	2002	2004	2005	2006	2007	2008	2009	2010	2011
EU	1.2	0.86	0.56	0.25	0.87	-0.39	-0.98	-0.79	-0.98	-1.3	-1.13	-1.43
World (without EU)	-0.69	-0.91	-2.01	-2.06	-4.49	-3.13	-2	-1.71	-2.48	-2.58	-2.55	-3.73

Source: UN Comtrade, own processing 2012

Table 13: Competitiveness development of Czech poultry meat export in relation to EU and World market (third countries).

	mil.	EU27	EU27		Share	Kg price	World without EU	World without EU		Share	Kg price
Trade Flow	Commodity Description	Trade Value	Weight (kg)	Balance			Trade Value	Weight (kg)	Balance		
Import	Meat, edible offal of poultry	198.04	82.25	-122.48	50.00%	2.41	64.43	17.04	-62.81	50.00%	3.78
Import	Fowls, domestic, not cut, fresh	24.25	12.45	-17.64	6.12%	1.95	0	0	0	0.00%	X
Import	Fowls, domestic, not cut, frozen	3.29	1.82	0.03	0.83%	1.81	0.05	0.03	-0.05	0.04%	1.66
Import	Fowls, cuts & offal, fresh	49.68	17.72	-30.79	12.54%	2.8	0.01	0.01	0.16	0.01%	1.06
Import	Fowls, cuts & offal, frozen	55.28	31.29	-12.41	13.96%	1.77	61.65	16.32	-60.83	47.84%	3.78
Import	Turkeys, not cut, fresh	2.96	1.03	-2.94	0.75%	2.87	0.01	0	0	0.00%	3.47
Import	Turkeys, not cut, frozen	1.37	0.43	-1.35	0.35%	3.17	0.22	0.06	-0.22	0.17%	3.57
Import	Turkey cuts & offal fresh	24.69	6.22	-24.2	6.23%	3.97	0.27	0.04	0.34	0.21%	5.98
Import	Turkey cuts & offal frozen	3.8	0.94	-2.87	0.96%	4.02	2.24	0.57	-2.24	1.74%	3.94
Import	Ducks, geese, not cut fresh	1.23	0.22	-0.59	0.31%	5.54	0	0	0	0.00%	X
Import	Ducks, geese, not cut frozen	22.82	8.07	-22.12	5.76%	2.83	0	0	0	0.00%	X
Import	Fatty livers of geese or ducks	0.27	0.02	-0.24	0.07%	11.46	0	0	0	0.00%	X
Import	Poultry cuts&offal, fresh	1.25	0.16	-1.05	0.32%	7.93	0	0	0	0.00%	X
Import	Poultry cuts&offal, frozen	7.15	1.88	-6.31	1.81%	3.8	0	0	0.03	0.00%	X
	Total	396.09	164.49	-244.97	100.00%	2.41	128.87	0	-125.62	100.00%	X
Export	Meat, edible offal of poultry	75.56	25.73		50.00%	2.94	1.62	0.92		50.00%	1.77
Export	Fowls, domestic, not cut, fresh	6.61	2.75		4.37%	2.4	0	0		0.00%	X
Export	Fowls, domestic, not cut, frozen	3.31	1.57		2.19%	2.1	0	0		0.00%	X
Export	Fowls, cuts & offal, fresh	18.89	6.52		12.50%	2.9	0.17	0.03		5.21%	6.48
Export	Fowls, cuts & offal, frozen	42.86	13.81		28.36%	3.1	0.81	0.8		25.04%	1.02
Export	Turkeys, not cut, fresh	0.03	0.01		0.02%	3.88	0.01	0		0.16%	4.06
Export	Turkeys, not cut, frozen	0.02	0.01		0.01%	3.26	0	0		0.00%	X
Export	Turkey cuts & offal fresh	0.49	0.15		0.33%	3.29	0.6	0.09		18.56%	7.01
Export	Turkey cuts & offal frozen	0.93	0.19		0.61%	4.98	0	0		0.00%	X
Export	Ducks, geese, not cut fresh	0.64	0.17		0.42%	3.69	0	0		0.00%	X
Export	Ducks, geese, not cut frozen	0.7	0.24		0.47%	2.9	0	0		0.00%	X
Export	Fatty livers of geese or ducks	0.04	0		0.03%	18.13	0	0		0.00%	X
Export	Poultry cuts&offal, fresh	0.2	0.04		0.13%	5.36	0	0		0.00%	X
Export	Poultry cuts&offal, frozen	0.85	0.27		0.56%	3.16	0.03	0		1.02%	12.73
	Total	151.12	51.46		100.00%	2.94	3.25	1.83		100.00%	1.77

Source: UN Comtrade, own processing 2012

Table 14: Czech poultry meat trade structure in relation to EU and World market (2011).

only a single aggregation (frozen unjointed meat), while in relation to third countries, the Czech Republic achieves a positive trade balance only in the case of chilled jointed chicken meat and in the case of chilled jointed turkey meat. The above data clearly show the very bad situation of Czech export in relation to foreign partners.

If we focus on the competitiveness of individual sub-aggregations representing Czech poultry export carried out in relation to EU countries and in relation to third countries, we can state a worsening comparative advantages on all levels. In relation to EU countries, the Czech Republic achieves comparative advantages only in the case of frozen unjointed and jointed chicken meat, as well as in the case of chilled unjointed duck meat. In relation to third countries, the Czech Republic achieves comparative advantages only in relation to

chilled jointed chicken meat and chilled jointed and unjointed turkey meat. Details on the current state of comparative advantages in the case of individual export sub-aggregations carried out in relation to EU countries and in relation to third countries can be found in the following Table 15.

As has already been stated above, the most significant export partner of the Czech Republic are the countries of the European Union (for details, see Table 16). In 2011, the Czech Republic exported and imported poultry meat to 20 EU countries, or, respectively, from 19 EU countries.

LFI 2011	EU	World without EU
Meat, edible offal of domestic poultry	0	0
Fowls, domestic, not cut, fresh	-0.7	X
Fowls, domestic, not cut, frozen	0.54	0
Fowls, cuts & offal, fresh	-0.02	0.25
Fowls, cuts & offal, frozen	5.76	-1.09
Turkeys, not cut, fresh	-0.29	0.01
Turkeys, not cut, frozen	-0.13	-0.01
Turkey cuts & offal fresh	-2.36	0.88
Turkey cuts & offal frozen	-0.14	-0.08
Ducks, geese, not cut fresh	0.04	X
Ducks, geese, not cut frozen	-2.12	X
Fatty livers of geese or ducks	-0.02	X
Poultry cuts&offal, fresh	-0.07	X
Poultry cuts&offal, frozen	-0.5	0.05

Source: UN Comtrade, own processing 2012

Table 15: Competitiveness of individual categories representing Czech poultry meat export in EU and World market.

2011	LFI	Import	Export	Balance	Share in Import	Share in Export	Export kg price	Import kg price
Austria	0.05	3,201,052	3,298,704	97,652	0.81%	2.18%	2.12	2.45
Belgium	-0.69	6,845,044	830,602	-6,014,442	1.73%	0.55%	1.7	0.8
Bulgaria	-1.08	1,169,230	750,296	-418,934	0.30%	0.50%	1.04	4.52
Cyprus	1.91	0	94,190	94,190	0.00%	0.06%	1.18	X
Denmark	-1.6	5,228,620	641,398	-4,587,222	1.32%	0.42%	1.88	1.56
Estonia	-1.31	142,196	0	-142,196	0.04%	0.00%	X	0.82
Finland	-0.12	40,318	0	-40,318	0.01%	0.00%	X	0.44
France	-2.19	17,655,462	191,820	-17,463,642	4.46%	0.13%	1.48	1.73
Germany	-0.48	36,257,954	11,496,326	-24,761,628	9.15%	7.61%	2.26	2.15
Greece	0.24	0	129,330	129,330	0.00%	0.09%	1.06	X
Hungary	-5.62	46,018,720	3,989,326	-42,029,394	11.62%	2.64%	1.5	3.14
Ireland	-0.01	35,846	106	-35,740	0.01%	0.00%	1.89	1.6
Italy	0.02	1,591,624	1,752,846	161,222	0.40%	1.16%	2.07	2.92
Lithuania	0	0	1,968	1,968	0.00%	0.00%	17.26	X
Malta	6.29	0	340,752	340,752	0.00%	0.23%	2.54	X
Netherlands	4.41	15,908,586	22,104,058	6,195,472	4.02%	14.63%	2.53	1.59
Poland	-6.99	202,329,880	797,868	-201,532,012	51.08%	0.53%	2.37	2.59
Romania	-3.93	4,954,678	1,452,786	-3,501,892	1.25%	0.96%	1.08	4.29
Slovakia	-0.79	50,491,752	103,208,876	52,717,124	12.75%	68.29%	3.58	2.83
Slovenia	-1.03	355,360	11,030	-344,330	0.09%	0.01%	4.57	1.94
Spain	-0.05	1,216,014	190	-1,215,824	0.31%	0.00%	5.59	3.07
Sweden	-1.67	1,381,738	0	-1,381,738	0.35%	0.00%	X	2.32
United Kingdom	-0.51	1,265,418	30,096	-1,235,322	0.32%	0.02%	0.56	3.54
Total		396,089,492	151,122,568	-244,966,924	1	1	2.94	2.41

Source: UN Comtrade, own processing 2012

Table 16: Competitiveness of Czech poultry meat trade in relation to EU partners.

The most significant trading partners in terms of exports were Slovakia, the Netherlands, Germany, Hungary and Austria (approximately 95%). On the other hand, the most significant import partners were Poland, Slovakia, Hungary, Germany, France and the Netherlands (over 93%). The Czech Republic achieves the most significant positive balance in relation to Slovakia and the Netherlands (approximately USD 60 mil.). On the other hand, it shows the worst results in relation to Poland, Hungary, Germany and France (the cumulative value of the negative balance is at a level of approximately USD 285 mil.).

An analysis of the current state of the distribution of the comparative advantages of Czech poultry meat export into individual EU countries shows that the Czech Republic achieves comparative advantages in relation to Austria, Cyprus, Greece, Italy, Malta and the Netherlands. On the other hand, Czech export has a very significant comparative disadvantage primarily in relation to Poland, Hungary, Romania and France. A comparative disadvantage can also be identified in relation to Belgium, Bulgaria, Denmark, Estonia, Finland, Germany, Ireland, Slovakia, Slovenia, Spain, Sweden and Great Britain.

Summarization of the Developmental Trends on the Poultry Meat Market

If we summarize the findings set out above, we can state that the competitiveness of Czech agricultural trade, both in relation to the EU countries as well as in relation to third countries, is decreasing long-term. The rate of growth of the negative value of the LFI index ranges year-on-year at a level of -0.19 in relation to the EU countries, and -0.13 in relation to third countries (results of a processed regressive function). The negative value of the agricultural trade balance is deepening long-term, and its growth can be expected. Currently, the trend of growth of the value of the negative trade balance ranges at a level of approximately USD 23 mil. per year. In regard to such dismal result of Czech agricultural trade in poultry meat, a definite role is played by the significantly greater dynamic of the rate of growth of the value of imports (the trend is approximately USD 32 mil./year) as compared to the growth of the value of exports (a trend f approximately USD 8.2 mil./year). In the future, we can expect the gradual worsening of the coverage of import by export (the trend for the monitored period was approximately 4% per year). In the future, we can further expect a growing proportion of EU countries both in Czech exports (a trend of approximately 0.3% per year), as well as primarily in Czech imports (a trend of approximately 2% per year). As far as the development of production of Czech poultry meat and its consumption is concerned, we can expect, on the basis of knowledge of the current developmental trends, a growth in production (approximately 4700 tons per year), which will, however, be significantly lower as compared to the rate of growth of the volume of consumption (approximately 8500 tons per year). The result of this development will then be the above-mentioned growth in the value of imports, which will not grow only by way of growth in the volume of imported meat, but also by way of growth in the average kilogram prices of imports. A more detailed overview of selected trends of the Czech poultry meat market is summarized in the following Table 17.

Conclusions

The processed analysis provides a basic overview of the development of poultry meat production, as well as in regard to the development of Czech foreign trade in poultry meat. On the basis of the acquired findings, the main development trends and tendencies are identified, both in the area of the development of production, consumption, as well as in the area of the development of foreign trade in poultry meat. The results of the analysis are the following. Domestic demand for poultry meat (primarily chicken meat) has been continuously increasing. Domestic production is characterized by a certain level of stagnation. The rate of growth of production is significantly lower in comparison with the rate of growth of actual consumption. In the course of the years, the domestic market is becoming more dependent on imports of poultry meat, primarily from EU countries. The value and volume of imports in the years 1996 – 2011 increased much more significantly compared to the growth in the value and volume of Czech agricultural export. The negative trade balance of the Czech Republic in relation to partner countries increased within the analyzed period from approximately 2 mil. to more than 370 mil. USD, whereby approximately two thirds of this result are in regard to EU countries. The price on the Czech poultry meat market has been stagnating in time. The rate of dynamics of the value growth of import kilogram prices is significantly higher compared to the rate of growth of export kilogram prices. Such fact is primarily affected by the lesser quality of Czech export, as well as the fact that a large portion of imports is, unlike in the case of exports, represented by raw products, or by already processed products with a significantly greater level of added value. The

N=15	Results of regression with dependant variable: EU share in export R= .58861192 R2= .34646399 Corrected R2= .29619199 . F(1.13)=6.8918 p<.02098 Stand. Error of Estimation: .02246. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			0.942482	0.012204	77.22673	0
Time	0.588612	0.224214	0.003524	0.001342	2.62522	0.020977
N=15	Results of regression with dependant variable: EU share in import R= .68315665 R2= .46670301 Corrected R2= .42568017. F(1.13)=11.377 p<.00500 Stand. Error of Estimation: .09965. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			0.505829	0.054144	9.342264	0
Time	0.683157	0.202541	0.020086	0.005955	3.372931	0.004996
N=15	Results of regression with dependant variable: ExportTrade Value R= .88866763 R2= .78973016 Corrected R2= .77355556. F(1.13)=48.825 p<.00001 Stand. Error of Estimation: 19.629. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			12.16806	10.6654	1.140892	0.274497
Time	0.888668	0.127179	8.19661	1.17304	6.987512	0.00001
N=15	Results of regression with dependant variable: ImportTrade Value R= .94250930 R2= .88832379 Corrected R2= .87973331. F(1.13)=103.41 p<.00000 Stand. Error of Estimation: 52.211. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			-64.3167	28.36933	-2.26712	0.041087
Time	0.942509	0.092685	31.7293	3.12021	10.16897	0
N=15	Results of regression with dependant variable: Export unit price R= .07022138 R2= .00493104 Corrected R2= -----. F(1.13)=.06442 p<.80361 Stand. Error of Estimation: .45072. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			2.21037	0.244903	9.025497	0.000001
Time	0.070221	0.276665	0.006837	0.026936	0.253813	0.80361
N=15	Results of regression with dependant variable: Import Unit price R= .71815819 R2= .51575119 Corrected R2= .47850128. F(1.13)=13.846 p<.00257 Stand. Error of Estimation: .29266. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			1.437152	0.15902	9.037565	0.000001
Time	0.718158	0.193002	0.065079	0.01749	3.720982	0.002565
N=15	Results of regression with dependant variable: Kryti R= .92742228 R2= .86011209 Corrected R2= .84935148. F(1.13)=79.932 p<.00000 Stand. Error of Estimation: .08112. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			0.883798	0.044079	20.05022	0
Time	-0.927422	0.103733	-0.043344	0.004848	-8.94044	0.000001
N=15	Results of regression with dependant variable: Bilance R= .93634496 R2= .87674189 Corrected R2= .86726049. F(1.13)=92.470 p<.00000 Stand. Error of Estimation: 40.950. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			76.4848	22.25039	3.43746	0.004413
Time	-0.936345	0.097372	-23.5327	2.44722	-9.61612	0
N=15	Results of regression with dependant variable: LFI EU R= .92009444 R2= .84657378 Corrected R2= .83477176. F(1.13)=71.731 p<.00000 Stand. Error of Estimation: .37377. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			1.410963	0.203093	6.94737	0.00001
Time	-0.920094	0.108637	-0.189184	0.022337	-8.46943	0.000001
N=15	Results of regression with dependant variable: LFI (World – third countries) R= .54661826 R2= .29879153 Corrected R2= .24485241. F(1.13)=5.5394 p<.03499 Stand. Error of Estimation: .91817. alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			-1.33976	0.498894	-2.68546	0.018705
Time	-0.546618	0.232248	-0.12914	0.054871	-2.3536	0.034991
N=18	Results of regression with dependant variable: Consumption R= .91022208 R2= .82850424 Corrected R2= .81778576. F(1.16)=77.297 p<.00000 Stand. Error of Estimation: 21227. . alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			139325.8	10438.61	13.34716	0
Time	0.910222	0.10353	8478.5	964.36	8.79186	0
N=18	Results of regression with dependant variable: Production R= .74682718 R2= .55775084 Corrected R2= .53011027. F(1.16)=20.179 p<.00037 Stand. Error of Estimation: 23440. . alfa = 0.05					
	b*	Stand. Error of b*	b	Stand. Error of b*	t(13)	p-value
Abs. item			133968.2	11526.98	11.62215	0
Time	0.746827	0.166255	4783.7	1064.91	4.49207	0.00037

Source: UN Comtrade, FAO, own processing 2012

Table 17: The analysis of selected trend characterizing Czech poultry meat market development.

comparative advantages of Czech poultry meat trade gradually disappear in time – or rather, the comparative disadvantage deepens, both in relation to EU countries, as well as in relation to third countries. Only certain aggregations are capable of maintaining the comparative advantages, which are additionally characterized by a low level of processing (generally, these are frozen or chilled unprocessed meat). The market of the EU countries represents the most significant destination of Czech export of poultry meat. Just in the year 2011, approximately 98% of the value of exports was carried out on that market. Nevertheless, the Czech Republic achieved comparative advantages only in relation to Austria, Cyprus, Greece, Italy, Malta and the Netherlands. In relation to the other countries, we can clearly see a deepening of comparative disadvantages. The most significant comparative disadvantage is seen in relation to Poland, Hungary, Romania and France. The cumulative value of the negative balance in relation to these countries actually represents USD 264 mil. The most significant worsening of the balance and competitiveness is evident primarily in relation to Poland. Polish imports represent approximately half of the value of all imports from EU countries, and in relation to volume, these imports represent approximately 48% of all imports from EU countries. A large portion of domestic production of poultry meat carried out in Czech meat processing plants is in fact represented by Polish imports of live poultry, or unprocessed chilled, or frozen poultry meat. In relation to the outlook into the future, we can expect the gradual worsening of the position of Czech production of poultry meat both in relation to the domestic market, as well as in relation to the external market represented by the EU countries and third countries.

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