Support for Farmers' Cooperatives

Country Report
The Czech Republic

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Preface and acknowledgements

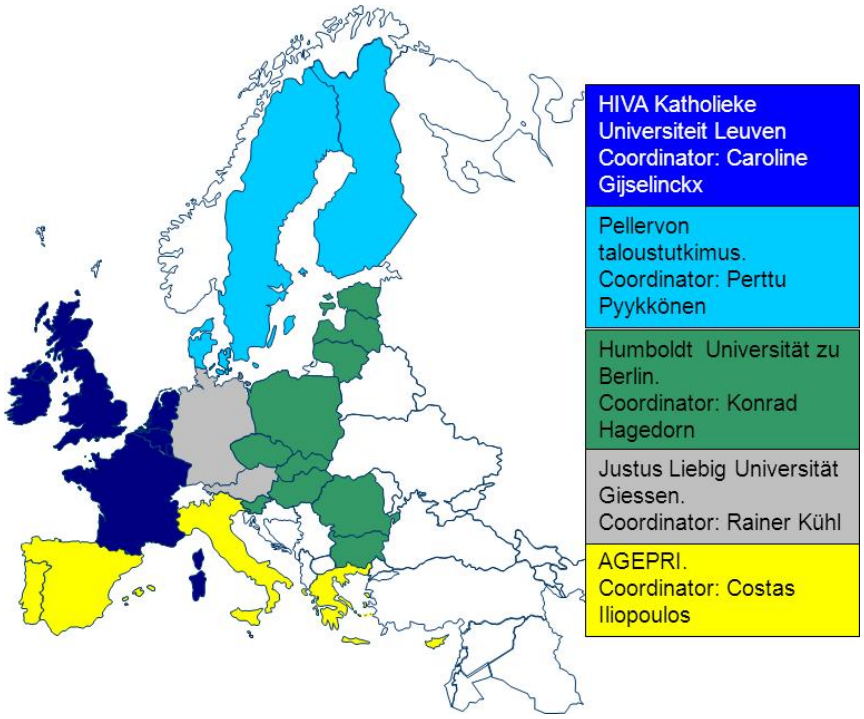
In order to foster the competitiveness of the food supply chain, the European Commission is committed to promote and facilitate the restructuring and consolidation of the agricultural sector by encouraging the creation of voluntary agricultural producer organisations. To support the policy making process DG Agriculture and Rural Development has launched a large study, "Support for Farmers' Cooperatives", that will provide insights on successful cooperatives and producer organisations as well as on effective support measures for these organisations. These insights can be used by farmers themselves, in setting up and strengthening their collective organisation, and by the European Commission in its effort to encourage the creation of agricultural producer organisations in the EU.

Within the framework of the "Support for Farmers' Cooperatives" project this country report on the evolution of agricultural cooperatives in The Czech Republic has been written.

Data collection for this report has been done in the summer of 2011.

In addition to this report, the project has delivered 26 other country reports, 8 sector reports, 33 case studies, 6 EU systhesis reports, a report on cluster analysis, a study on the development of agricultural cooperatives in other OECD countries, and a final report.

The Country Report The Czech Republic is one of the country reports that have been coordinated by Konrad Hagedorn and Renate Judis, Humboldt Universität zu Berlin. The following figure shows the five regional coordinators of the "Support for Farmers' Cooperatives" project.



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1 Introduction

1.1 Objective of the study

The imbalances in bargaining power between the contracting parties in the food supply chain have drawn much attention, also from policy makers. The European Commission is committed to facilitate the restructuring of the sector by encouraging the creation of voluntary agricultural producer organisations. DG Agriculture and Rural Development has launched a large study, "Support for Farmers' Cooperatives", that will provide the background knowledge that will help farmers organise themselves in cooperatives as a tool to consolidate their market orientation and so generate a solid market income. In the framework of this study, this report provides the relevant knowledge from <your country>.

In this context, the specific objectives of the project, and this country report, are the following:

First, to provide a comprehensive description of the current level of development of cooperatives and other forms of producer organisations in <your country>. The description presented in this report will pay special attention to the following drivers and constraints for the development of cooperatives:

- Economic and fiscal incentives or disincentives and other public support measures at regional and national;
- Legal aspects, including those related to competition law and tax law;
- Historical, cultural and sociologically relevant aspects;
- The relationship between cooperatives/POs and the actors of the food chain;
- Internal governance of the cooperatives/POs.

Second, identify laws and regulations that enable or constrain cooperative development and third, to identify specific support measures and initiatives which have proved to be effective and efficient for promoting cooperatives and other forms of producer organisations in the agricultural sector in <your country>.

1.2 Analytical framework

There are at least three main factors that determine the success of cooperatives in current food chains. These factors relate to (a) position in the food supply chain, (b) internal governance, and (c) the institutional environment. The position of the cooperative in the food supply chain refers to the competitiveness of the cooperative vis-à-vis its customers, such as processors, wholesalers and retailers. The internal governance refers to its decision-making processes, the role of the different governing bodies, and the allocation of control rights to the management (and the agency problems that goes with delegation of decision rights). The institutional environment refers to the social, cultural, political and legal context in which the cooperative is operating, and which may have a supporting or constraining effect on the performance of the cooperative. Those three factors constitute the three building blocks of the analytical framework applied in this study (Figure 1).

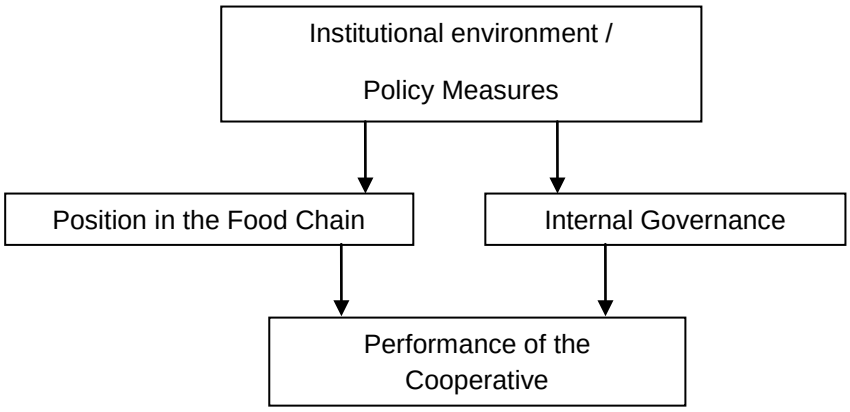


Figure 1. The core concepts of the study and their interrelatedness

1.3 Definition of the cooperative

In this study on cooperatives and policy measures we have used the following definition of cooperatives and Producer Organisations (POs). A cooperative/PO is an enterprise characterized by user-ownership, user-control and user-benefit:

- It is user-owned because the users of the services of the cooperative/PO also own the cooperative organisation; ownership means that the users are the main providers of the equity capital in the organisation;
- It is user-controlled because the users of the services of the cooperative/PO are also the ones that decide on the strategies and policies of the organisation;
- It is for user-benefit, because all the benefits of the cooperative are distributed to its users on the basis of their use; thus, individual benefit is in proportion to individual use.

This definition of cooperatives and POs (from now on shortened in the text as cooperatives) includes cooperatives of cooperatives and associations of producer organisation (often called federated or secondary cooperatives).

1.4 Method of data collection

Multiple sources of information have been used, such as databases, interviews, corporate documents, academic and trade journal articles. The databases used are Amadeus, FADN, Eurostat and a database from DG Agri on the producer organisations in the fruit and vegetable sector. Also data provided by Copa-Cogeca has been used. In addition, information on individual cooperatives has been collected by studying annual reports, other corporate publications and websites. Interviews have been conducted with representatives of national associations of cooperatives, managers and board members of individual cooperatives, and academic or professional experts on cooperatives.

1.5 Period under study

This report covers the period from 2000 to 2010 and presents the most up-to-date information. This refers to both the factual data that has been collected and the literature that has been reviewed.

2 Statistics on cooperatives and their performance

2.1 Share of agriculture in the economy

A study of farmers' cooperatives can best start at the farmers' side, in agriculture. Over last 15 years the share of agriculture in GDP declined dramatically, dropping to 1.7% of GDP (Figure 2) in 2009. While the output and Gross Value Added(GVA) in constant prices[1] stayed more or less at the same level over the investigated period, the ratio of output and input prices deteriorated (annually on average by 7%[2]).

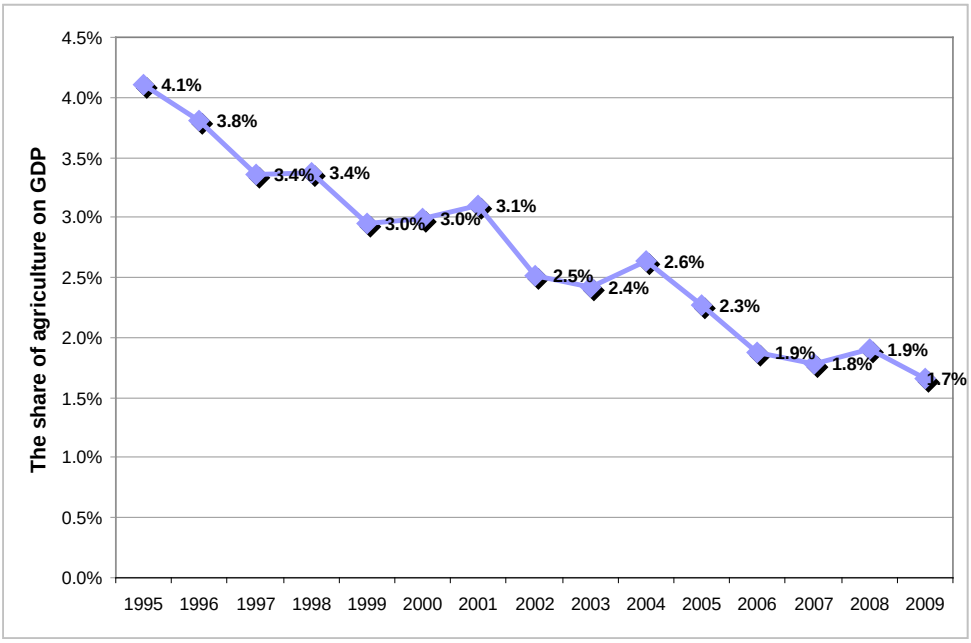


Figure 2 Share of agriculture in GDP. Source: Eurostat Nat. Accounts (1995-2007), Czech Statistical Office (2008-2009).

2.2 Agricultural output per sector

The most important products of the agricultural sector are cereals and milk. Both have expanded since 1998, nevertheless, variability of the cereal output is high. In contrast pork meat production has significantly lost its importance, being substituted to some extent by poultry meet. Figure 2 provides information on the main sectors in the Czech Republic. There is no olive and olive oil production in the Czech Republic and goat and sheep production is negligible, 0.03% of the total agricultural output. Therefore, these sectors are not displayed in Figure 3.

The wine sector is small (1% of the total agricultural output), however, it is regionally important: it constitutes about 10% of the agricultural output in South Moravia[3].

[1] CZK of the year 2000

[2] Based on Economic Accounts for Agriculture, Czech Statistical Office.

[3] The region produces about 90% of the Czech wine production.

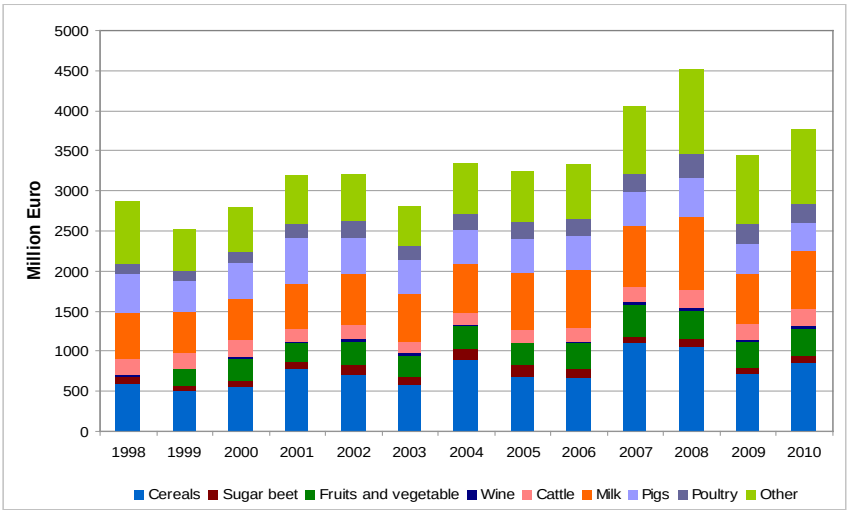


Figure 3 Development of the different sectors in agriculture, value of production at producer prices, in millions of Euro. Source: Agriculture Economic Accounts, Eurostat

As pointed out earlier, agricultural output in constant prices was stable during the last decade. The average annual growth rates presented in Figure 3 indicates changes in the production structure: declining sugar beet, cattle and pig production and increasing cereal, fruit and vegetable, sheep and goat and milk production. Concerning sugar beet, the decline is due to Sugar Reform.

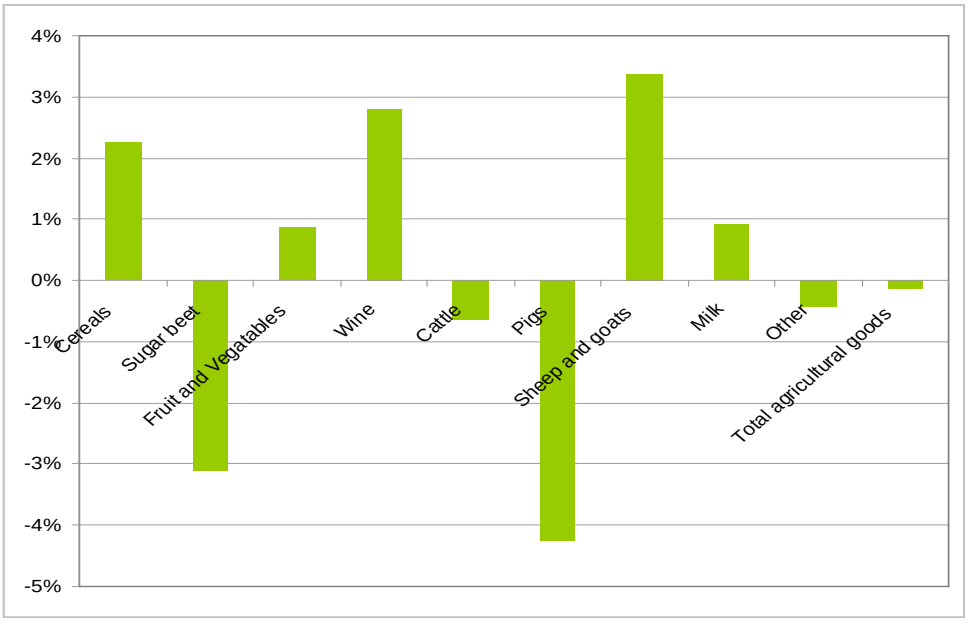


Figure 4 Average growth rates of agricultural sectors 2001–2010 (constant prices 2000). Source: Economic Accounts of Agriculture, Czech Statistical Office.

2.3 Development in the number of farms

The number of farms declined in the Czech Republic by 14 percent between 2003 and 2007. The structure and dynamics of this change is given in Table 1 and Figure 5. Again, the most dramatic decline of the number of farms is for farms specialised in pig production. This is given by the decline of pig production (2.1.2) mainly. Following sugar reform, also the number of sugar beet farmers dropped significantly (by one fifth). On the other hand, a fast growth of sheep and goat

farms can be observed; nevertheless, these are small farms usually, the volume of the production remains negligible.

Although the number of specialised farms is high, most of the production in some sectors (e.g. dairy) is produced on farms with combined crop-livestock production (see also Graph 7B)

Note that FADN typology is used in Table 1 and Figure 5. The numbers will change if NACE categories are used while the trends of structural change will be similar.

Table 1 Number of farms

Year	2000	2003	2005	2007	*annual change 2003-2005*	*annual change 2005-2007*
Cereals	#N/A	5210	5530	5410	*3.0%*	*-1.1%*
Sugar	#N/A	6000	5380	4760	*-5.3%*	*-5.9%*
Fruit and vegetables	#N/A	1700	1860	1970	*4.6%*	*2.9%*
Wine	#N/A	4510	4030	4110	*-5.5%*	*1.0%*
Olive oil and table olives	0	0	0	0		
Dairy	#N/A	2010	1840	1770	*-4.3%*	*-1.9%*
Sheep and goats	#N/A	4750	5480	5890	*7.4%*	*3.7%*
Pigs	#N/A	3360	2130	1460	*-20.4%*	*-17.2%*
Other	#N/A	18230	16000	14030	*-6.3%*	*-6.4%*
Total	#N/A	45770	42250	39400	-3.9%	-3.4%

Source: Eurostat, Farm Structure Survey.

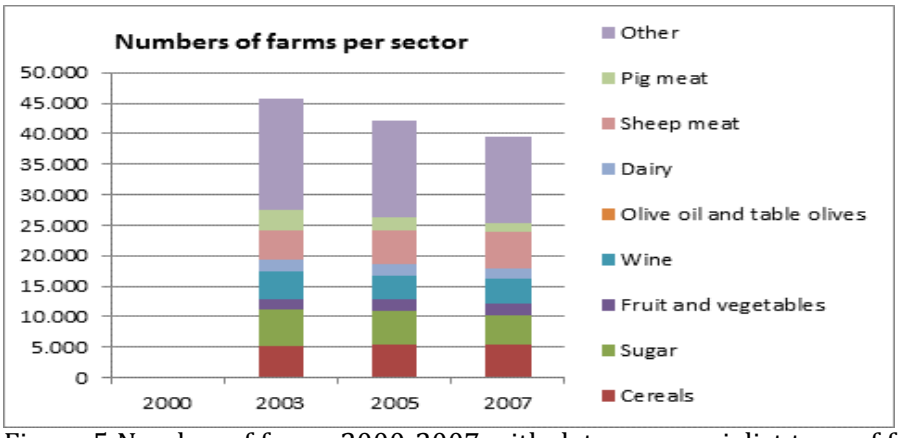


Figure 5 Number of farms 2000-2007 with data per specialist type of farming. Source: Eurostat, Farm Structure Survey.

2.4 Size of farms

Farms come in different sizes from small part-time farms to large exploitations. Figure 6 shows the distribution of farms per size class, measured in European Size Units (ESU). It is obvious that there are three sectors in which very small farms specialise. These are usually subsistence or hobby farms: 1) still traditionally, quite a few farmers have a pig in the court yard, 2) newly,

rural households like to have sheep or goat to produce milk and cheese, and 3) a number of rural households in the wine region of South Moravia have established a vineyard.

All specialisation tend to be equally distributed from ESU 2 up to ESU 40, and then quite naturally the number of farms decline with the size. There are almost no big sheep and goat farms. Mixed production farms tend to be large.

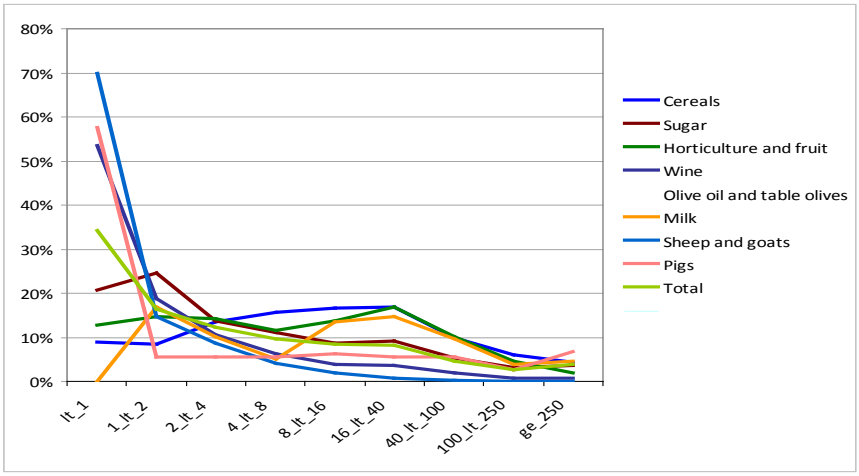


Figure 6 The distribution of farms per size class, measured in ESU, per specialist type of farming. Source: Eurostat, Farm Structure Survey (2007).

2.5 Age of farmers: distribution of farms to age classes

The Czech Republic exhibits age a structure of farmers better than the EU average (Figure 6). However, the figures represent the age of the farm holder (in the case of cooperatives or companies the age of the top manager). The age structure of those who engage (work) in agriculture is different as showed in Table 2 (the column "No. of workers"). Particularly, the share of young people is twice higher. One can also see that those engaged in individual farms are equally distributed in the first four age classes and also the class of retired persons (over 65) is high, while in the case of corporate farms the distribution is uneven with the last class being considerably smaller (only 3 %).

Table 2 Age structure of the Czech farming sector

		No. of workers incl. working owners and family labour		
	No. of holdings	Total	Individual farms	Corporate farms
Less than 35 years	10%	20%	23%	18%
From 35 to 44 years	17%	19%	18%	20%
From 45 to 54 years	27%	28%	22%	32%
From 55 to 64 years	28%	25%	22%	27%
65 years or over	17%	8%	13%	3%

Source: FSS 2007, Eurostat, Czech Statistical Office

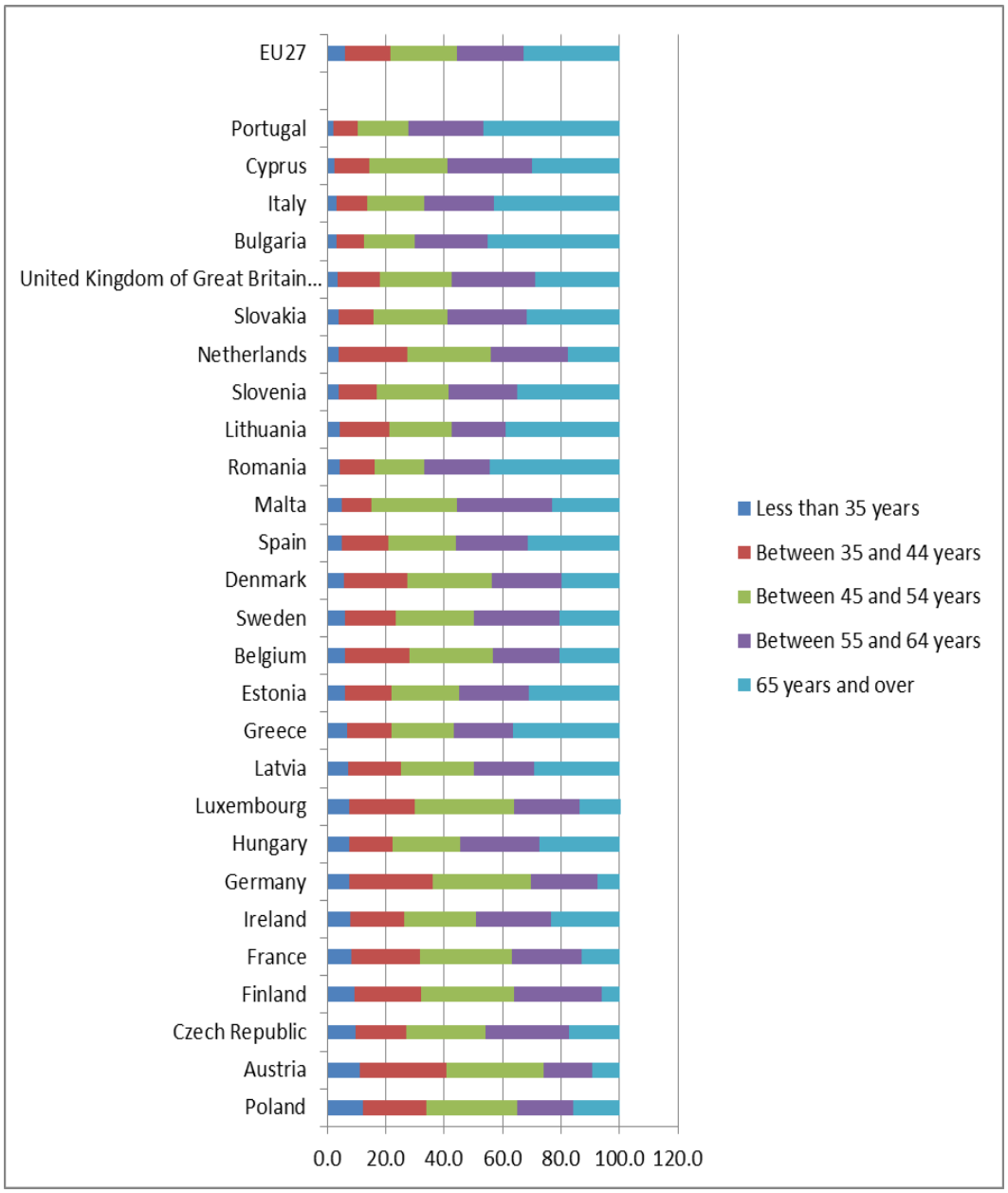


Figure 7 Percentage of farmers (holdings) per age class, per Member State and EU27, 2007 (ranked with countries with the lowest percentage of young farmers on top). Source: Eurostat, Farm Structure Survey.

2.6 Specialisation of farm production

Cooperatives might not only have member-farmers with different farm sizes or of different age. Farms also have a different composition of their production and therefor their input. This is even true for specialist farms, where e.g. some so-called specialist dairy farmers also have beef or sheep or sell hay. In addition to that a lot of mixed (non-specialized) farms exist. The heterogeneity of farming in terms of specialisation can be estimated by calculating the share that specialized farms have on the total commodity production. This is what Figure 8A for plant production and Figure 8B for animal production show. It can be seen that specialised farms are important for commodities like wine, sugar beet, pork meat, sheep and goat products (around a half of the production), and also cereals are increasingly produced on specialised farms (about 30%) while most of the milk output is produced on mixed farms.

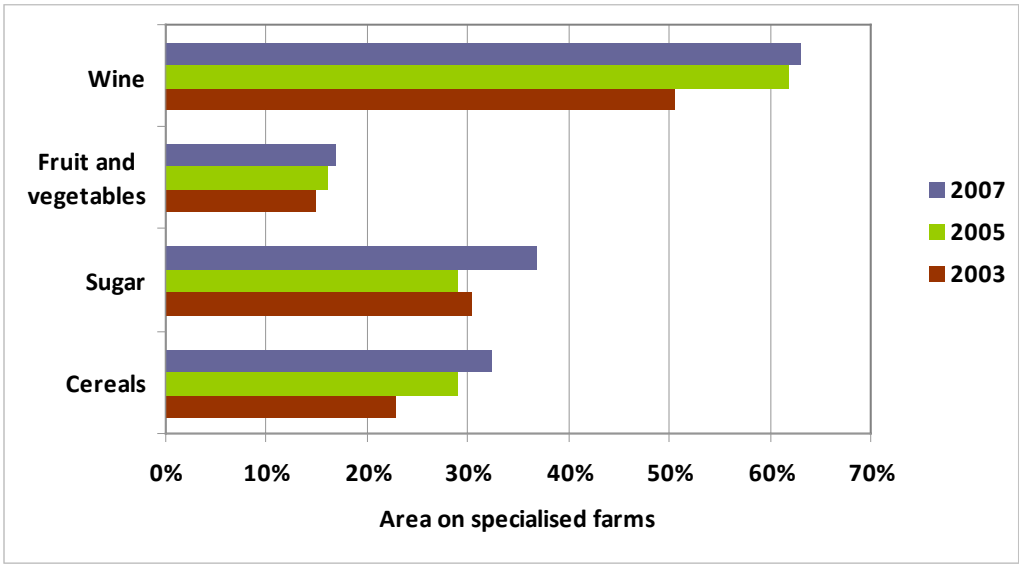


Figure 8A Heterogeneity in farm production: the share of specialist farm types in total production (crop production)Source: Economic Accounts of Agriculture, Eurostat.

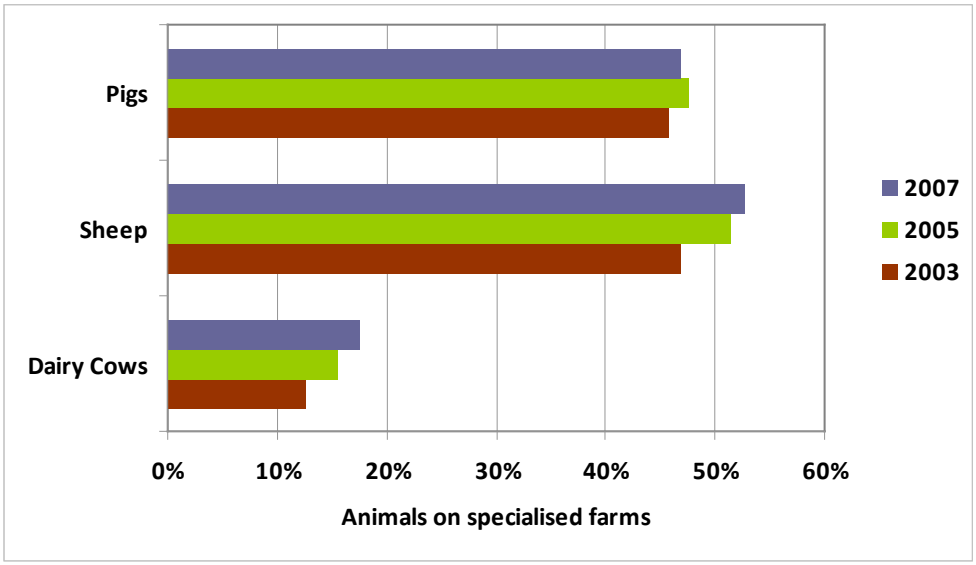


Figure 8B Heterogeneity in farm production: the share of specialist farm types in total production (animal production). Source: Economic Accounts of Agriculture, Eurostat.

2.7 Economic indicators of farms

The description of agriculture is concluded with some economic indicators (Table 3). These indicators focus on the net value added and income from farming for farmers, as well as the level of their investment. Some of this investment might be in equity of the cooperatives, but far the most will be in farm assets.

Table 3 Economic indicators for farms (2007)

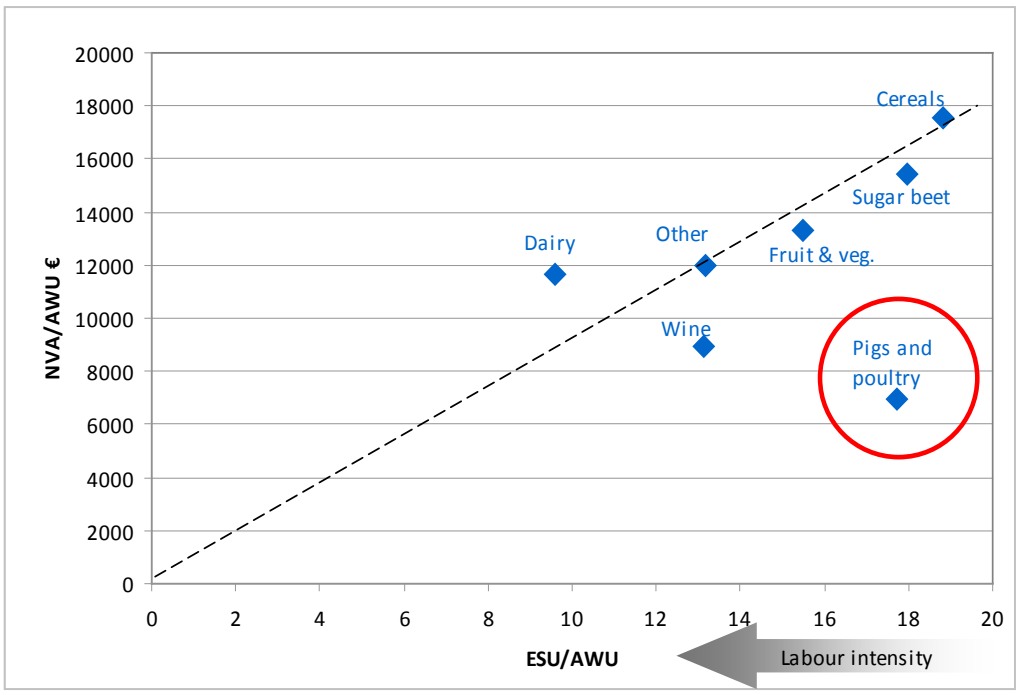
	Cereals	Sugar	Fruit and vegetables	Wine	Dairy	Pigs and poultry	Sheep and goat	Other
Economic size-ESU	57	116	63	50	81	209	-	304
Total labour input-AWU	3.04	6.46	4	3.79	8.47	11.81	-	23
Total Utilised Agricult. Area-ha	174	205	27	25	201	28	-	600
Total output €	143209	280096	139066	70392	240976	640357	-	819982
Farm Net Value Added (NVA) €	53305	99643	54010	33829	98605	82219	-	276847
Net Farm Income €	28151	35968	27826	18229	32701	-15898	-	45053
The share of NVA on total output	37%	36%	39%	48%	41%	13%	-	34%
Total assets €	380104	649903	250588	266782	687781	1437065	-	2143473
Net worth €	317308	528483	212696	205189	518226	1120995	-	1611460
Gross Investment €	20689	28052	8062	11683	34351	23869	-	101012
Net Investment €	926	-1854	-5285	-791	7308	-19176	-	27683
Total subsidies-excl.investm. €	38522	53461	5847	12765	72156	12272	-	191385
Farms represented	4353	1667	1137	907	910	470	4353	3417

note: - less than 3 years available

Source: DG Agri, FADN.

The average figures for 2006-2008 confirm poor performance of the pigs and poultry sector: very low Net Value Added (NVA) of 13% on the Total Output and disinvestment of about 1.33% (Net Investment/Total Assets). In contrast, other specialisations including the mixed farms exhibit NVA between 34-48% on Total Output. Concerning the Net Investment, only cereal, dairy and mixed farms showed expansion tendencies, cereal farms only marginal (0.24% increase of Total Assets) while dairy and mixed farms significant with more than one percent.

Figure 9 illustrates the relationship between labour intensity (pictured in the reciprocal way, ESU/AWU) and return (NVA) per AWU. For most of the specialisations NVA/AWU is proportional to the business (ESU) carried by the labour unit (AWU), except for pig and poultry farms (mainly pig farms). This is mainly caused by the drop of pork prices in the investigated period (see part 3). Also it is clear that dairy farms are more "efficient" than the rest.



Figrue 9 Relationship between labour intensity (ESU/AWU) and economic performance (NVU/AWU, average 2006-2008). Source: Eurostat, own calculations

3 Evolution, position and performance of cooperatives

3.1 Types of cooperatives

Cooperatives have a long lasting history on the territory of the Czech Republic, the first dated to the middle of the 19th century[4]. There was a boom of the cooperative movement particularly in agriculture in the period between 1918 and 1938. The number of agricultural cooperatives doubled during this period reaching its peak of 9482 in 1937 (Slezak, 2002). More than a half (56%) of them was agricultural credit cooperatives. Among those which were non-credit cooperatives, 27% were marketing cooperatives, 24% aimed at processing farm products and the rest were auxiliary/supporting cooperatives. In association with the land reform, there emerged almost 1.5 thousand small agricultural production cooperatives with more than 80 thousand members covering 126 thousand hectares of agricultural land. After the World War 2, there was a short period of recovery of the cooperative movement with a particular increase of agricultural machinery cooperatives. However, almost all non-production agricultural cooperatives gradually ceased to exist after 1948. Instead, the communist government pushed farmers to organise in agricultural production cooperatives, which were effectively controlled by the state and the communist party.

The cooperative business form is given by the Commercial Code (the Law 513/1991 Coll.). The cooperative is a legal entity with a minimum of 5 members (it can be less than 5 if there are at least two legal entities among the members). The membership in a cooperative is not limited. The existence and operations of saving and credit cooperatives are further guarded by the Law 87/1995 Coll. The housing cooperatives are also influenced by the Law 72/1994 Coll. about the flat ownership. The Law 42/1992 Coll. regulates transformation of "socialist" cooperatives into the new cooperatives according to the Commercial Code of 1991. Naturally, it concerns those cooperatives which existed before the political changes: agricultural production cooperatives (collective farms), housing/flat cooperatives and consumption cooperatives. Particularly in the case of collective farms, the law states options for members to decide to withdraw their assets or decide on any commercial form in line with the Commercial Code of 1991 (for details see Ratinger, Rabinowicz, 1996). The restitution rules missed, however, agricultural marketing and processing cooperatives. Since their importance for marketing and processing of agricultural products in the pre- and post-World War 2 period was recognised, there was a believe for some time that a special legislation on their restitution will be launched. The government also put aside a certain proportion of food industry shares excluding them from the large scale privatisation (voucher privatisation) to be distributed to agricultural producers' organisations later. However, the restitution of agricultural marketing and processing cooperatives did not happen[5] (with the only exception of the hop cooperative "Chmelarstvi") and the mentioned food industry shares were transferred into the portfolio of the Support and Guarantee Fund for Farmers and Forestry (PGRLF) in 1994.

In 2006, the Czech Republic adopted the Council Regulation (EC) No. 1435/2003 on the European Cooperative Society as well as Council Directive 2003/72/EC supplementing the regulation with regard to the Involvement of Employees in a single act, i.e. the Law 307/2006 Coll.

The producer (marketing) organisations started re-emerging in 1994. Since 1999, they have been supported by various policy measures. Marketing cooperatives are the most common form but by far not the exclusive ones. Limited liability companies are also possible.

[4] The first cooperative ("Food and Saving Association") was founded in Prague in 1847.

[5] Because it would violate the general principle that legal entities are excluded from restitution.

There is a two-level structure of producer organisations in the Czech Republic. At the bottom level, there are producer organisations unifying primary agricultural producers. These producer organisations can be either cooperatives or any other commercial forms (usually limited liability companies (Ltd.) or joint stock companies). At the top level, there are (still sectoral) national cooperatives[6]. Table 4.a provides the characterisation producer organisations in Czech agriculture.

Table 4.a Characterisation/typology of producer organisations in agriculture

	Agricultural Association	*Sectoral cooperatives*	*Primary sectoral cooperatives*	
Sector	Agriculture	Any	Any	
Main functions	Political pressure	Marketing farm products	Marketing or processing farm products	
Diversity of function and products	Political	Economic	Economic	
Position and function in the food chain	Collective (political) bargaining	Collective bargaining	Collective bargaining/ collecting farm products/ primary or secondary processing/ marketing commodities/ marketing branded products/ wholesaling/ retailing	
Type of members	**Secondary - National cooperatives**	**Secondary - Regional cooperatives**	**Primary - farmers**	
Geographical scope	National	National	Local/Regional/ interregional	
Financial/ownership structure	No share holding	Traditional or proportional	Traditional or proportional	Proportional
Legal form	Association-NGO	Cooperative	Cooperative	Ltd./ Joint stock

Source: own classification

Generally, in any sector there are several primary (bottom level) producer organisations. With a few exceptions these are marketing and in some cases (e.g. wine, hop) also processing companies/cooperatives. Their main function is economic, ranging from collecting products over their processing, marketing (wholesale) or at least bargaining price and sale conditions to retailing of differentiated (branded) products. These are usually established at the sub-national geographical level, some, like wine cooperatives, at the very local level. National secondary producer organisations concentrate on bargaining marketing conditions and price. Beside the marketing activities, mainly the primary cooperatives provide a range of other services to their members – advisory, sharing experience, some PO supply inputs or negotiate conditions for purchasing inputs.

In addition, the Agricultural Association of the Czech Republic[7] provides a political umbrella for agricultural producer organisations jointly with agricultural production cooperatives and farming companies. Although no all agricultural producer organisations are represented by the Agricultural Association, there is no alternative body representing producer organisations at the political level.

There are two other types of cooperatives in the agri-food marketing chain: agricultural production cooperatives and consumer cooperatives. Table 4.b shows their characterisations.

[6] In principle, it can be also other commercial forms, but usually there is not.

[7] Established in accordance of the Law 83/1990 on assembling/associations.

Table 4.b Other types of cooperatives in the agri/food chain in the Czech Republic

	Agricultural production cooperatives	**Consumption cooperatives**
Sector		
Main functions	Primary production	Marketing food products and other consumption goods
Diversity of function and products	Economic	Economic
Position and function in the food chain	Production of agricultural commodities/ provision of environmental services	Retailing
Type of members	Land or asset owners	Primary - Consumers
Geographical scope	Local	National or regional
Financial/ownership structure	Traditional or proportional	Traditional
Legal form	Cooperative	Cooperative

Source: own classification

The agricultural production cooperatives are actually farming companies based on assembling capital (no land) of their members and thus behaving in a very similar way as joint stock companies. The vast majority of them originate in the transformation of collective farms according to the Law 42/1992 (for details see Ratinger, Rabinowicz, 1996). There are 548 such cooperatives cultivating 22% of UAA (FSS 2007, Czech Statistical Office). Almost three quarters of the cooperatives have mixed crop and animal production. The share of 36% on the national dairy herd indicates their rather strong orientation on milk production. The agricultural production cooperatives employ 21% of the total agricultural labour.

Most of the consumer cooperatives (57) are unified in the Group Coop. Besides them, the group includes two joint procurement organisations (Coop-Centrum - cooperative in Prague and Coop Moravia ltd. in Brno) and the managerial institute and 11 cooperative educational centres. The retail turnover of the Group Coop of CZK 27 milliards (Coop, 2011) would put it on the fifth rank of the largest retail organisations.

The Co-operative Association of the Czech Republic as the coordination centre of the Czech and Moravian co-operative system represents the interests of its members in relation to legislation and state execution and to the public. Members of the national Co-operative Association are four main sectoral cooperative associations: the Union of Czech and Moravian Housing Co-operatives, the Union of Czech and Moravian Consumer Co-operatives, the Union of Czech Production Co-operatives and the Agricultural Association of the Czech Republic (integrating most of the agricultural marketing cooperatives).

3.2 Market share of farmers' cooperatives in the food chain

Market shares of producer (marketing) organisations vary considerably among sectors (Table 5). In the hop, dairy and fruit and vegetable sectors, they are important or even decisive players, while in the cereal and wine sectors, they play only a marginal role. It is important also to understand that some producer organisations are fairly specialised in a trading/processing a particular commodity (hop, wine or dairy), but a large number of medium size cooperatives actually trade a range of commodities and it is not easy to identify the individual proportions of commodities to state the correct estimates of market shares.

Table 5 Market Share of Cooperatives

	"2000"		"2010"		Comments
Sector	**Number of members**	**Market Share (%)**	**Number of members**	**Market Share (%)**	
Cereals	n.a.	n.a.	100-200?	marginal	Most of the production is contracted by two large merchants (Agrofert and ZZN)
Sugar	n.a.	n.a.	-	-	Directly purchased by sugar plants
Pig meat	n.a.	n.a.	85	25%?	
Sheep meat	n.a.	n.a.	4 (1500 through the Association of Sheep and Goats Producers)	20%?	Only one identified 3% on the production but 20% on the marketed production
Fruit and vegetables	n.a.	n.a.	163	35%	
Dairy	n.a.	n.a.		66%	
Wine	n.a.	n.a.	Less than 10	8%?	Actually only 3 identified
Hop	n.a.	n.a.	113	90%	

Sources: SZIF 2011, web pages of producer organisations

3.3 List of top 50 largest farmers' cooperatives

Table 6 The 50 largest farmers' cooperatives in the food chain of Czech Republic

Rank	***Name of the organisation***	***Sector***	***Annual turnover 2009, CZK millions***	***Support***
1	Mlékařské a hosp. družstvo JIH	Dairy	1 887.7	No
2	Mlékařské hospodářské družstvo Střední Čechy	Dairy	1 265.8	No
3	Morava, mlékařské odbytové družstvo	Dairy	1 107.2	No
4	VIAMILK CZ družstvo	Dairy	839.0	No
5	MILKAGRO a.s.	Dairy	726.1	No
6	Agropork-družstvo	Pigs, beef-cattle	719.8	No
7	Pragolaktos družstvo	Dairy	573.3	No
8	Svaz výrobců mléka a.s.	Dairy	371.4	No
9	CZ FRUIT, odbytové družstvo	Fruits&Veget.	341.7	CMO
10	Odbytové družstvo Vrchovina	Multicommod.	337.7	HRDP
11	Mléko Kunín odbytové družstvo	Dairy	325.0	No
12	GOLDSTEIG Käsereien Bayerwald CZ s.r.o.	Dairy	285.2	No
13	Obchodní družstvo ŽĎÁR	Pigs, beef-cattle	275.1	No
14	Mlékařské odbytové centrum Třebíč-družstvo	Dairy	262.5	No
15	OD MASO, družstvo	Pigs, beef-cattle	262.2	No

16	CENTROODBYT	Pigs, beef-cattle	217.0	No
17	INTAGRO Nymburk s.r.o.	Pigs, poultry	211.4	HRDP
18	Dešná, odbytové družstvo	Multi-commodity	188.7	HRDP
19	ODBYTOVÉ DRUŽSTVO TŘEBÍČ, družstvo	Multi-commodity	170.4	No
20	JIHOODBYT, družstvo	Multi-commodity	164.9	HRDP
21	VEPAODBYT s.r.o.	Multi-commodity	136.1	HRDP
22	VHM družstvo	Multi-commodity	133.5	HRDP
23	Odbytové družstvo Rožmberk	Pigs, beef-cattle	126.3	No
24	Odbytové družstvo LITOZEL	Fruits&Veget.	126.1	CMO
25	LZ- odbyt, s.r.o.	Pigs, beef-cattle	122.2	No
26	AGP Znojmo, s.r.o.	Multi-commodity	121.5	HRDP
27	AGROODBYT MORKOVSKO, s.r.o.	Multi-commodity	106.4	HRDP
28	KUNAMA s.r.o.	Multi-commodity	103.9	HRDP
29	Drůbež HK – odbyt, s.r.o.	Poultry	100.0	HRDP
30	HASINA, spol. s r.o.	Multi-commodity	98.7	HRDP
31	Odbytové družstvo Dynín	Pigs and poultry	93.7	HRDP
32	TXP odbyt, družstvo	Multi-commodity	91.4	HRDP
33	MONTANO – KVĚTINY s.r.o.	Multi-commodity	89.7	HRDP
34	Odbytové družstvo Agroodbyt – družstvo	Multi-commodity	88.8	HRDP
35	Primagra, a.s.	Multi-commodity	88.4	HRDP
36	RVO TRÁVNÍK, odbytové družstvo	Multi-commodity	85.9	HRDP
37	Odbytové družstvo Labe	Multi-commodity	85.7	HRDP
38	Družstvo Rolník	Multi-commodity	79.4	HRDP
39	LUKOS komodity, s.r.o.	Multi-commodity	77.0	HRDP
40	Zevospork s.r.o.	Multi-commodity	77.0	HRDP
41	Odbytová společnost Podzvičinsko, a.s.	Pigs, beef-cattle	77.0	No
42	SH odbyt s.r.o.	Multi-commodity	76.9	HRDP
43	BROJLER TRADE s.r.o.	Poultry	74.9	HRDP
44	AG odbyt s.r.o.	Multi-commodity	72.4	HRDP
45	CORNPIG OD s.r.o.	Multi-commodity	71.4	HRDP
46	DM Morava, družstvo	Multi-commodity	69.1	HRDP
47	ROLS ODBYT s.r.o.	Multi-commodity	69.0	HRDP
48	EB Fruit, odbytové družstvo ovocnářů	Fruits&Veget.	69.0	CMO
49	MASOODBYT – družstvo	Pigs, beef-cattle	67.4	HRDP
50	Odbytové družstvo Biota, družstvo	Multi-commodity	66.9	HRDP

Source: SZIF 2011, web pages of PO, business register

3.4 List of top 5 largest farmers' cooperatives per sector

Table 7 Most important cooperatives in the sectors studied in this project

Sector		***Name of producer (marketing) organisation***	***Legal form***
Cereals	1	Agroodbyt, družstvo	Cooperative
	2	Odbytové a hospodářské družstvo Pardubice	Cooperative
		!No more clearly specialised!	
Fruit and vegetables	1	CZ Fruit	Cooperative
	2	OD Litozel	Cooperative
	3	EB Fruit	Cooperative
	4	Jihomoravská zelenina	Cooperative
	5	Družstvo producentů rajčat	Cooperative
Wine	1	Templářské sklepy Čejkovice, vinařské družstvo	Cooperative
	2	Císařské sklepy Čejkovice, družstvo	Cooperative
	3	Družstvo božických vinařů	Cooperative
		!No more identified!	
Dairy	1	Mlékařské a hosp. družstvo JIH	Cooperative
	2	Mlékařské hospodářské družstvo Střední Čechy	Cooperative
	3	Morava, mlékařské odbytové družstvo	Cooperative
	4	VIAMILK CZ družstvo	Cooperative
	5	MILKAGRO a.s.	Joint stock
Sheep meat	1	OVEKO a.s.	Joint stock
Pig meat	1	Centrodbyt, národní odbytové družstvo	Cooperative
	2	Agropork, družstvo	Cooperative
	3	OD Maso, družstvo	Cooperative
	4	INTAGRO	Ltd.
	5	Obchodní družstvo ŽĎÁR	Cooperative

We have been able to identify only two marketing cooperatives specialised in trading cereals, while there are a number of multiple-commodity cooperatives declaring marketing cereals in their registration or reporting documents. Unfortunately, they do not report the volume or value of individual commodities actually sold or processed by them.

For the wine sector, we report only three cooperatives. In fact, only the first one (Templarske sklepy, Templar cellars) is considerable large, the second one (Cisarske sklepy, Imperial cellars) has the turnover of just one tenth of the Templarske sklepy cooperative. Still, Templarske sklepy is not among the 50 largest producer (marketing) organisations in the Czech Republic.

Only one producers' marketing organisation for sheep meat has been identified. This marketing organisation was initiated by the Association of Sheep and Goats Producers. Through the Association, 1500 sheep and goat producers are represented in the marketing organisation (the joint stock company OVEKO a.s.), although the individual producers are not direct share holders.

3.5 Transnational cooperatives

There is no evidence for these cooperatives in the Czech agri-food chain.

4 Description of the evolution and position of individual cooperatives

4.1 Data gathering per cooperative

Data on producer organisations have been obtained from several sources

- Statutes of the producer organisations
- Annual reports of the producer organisations
- Contacting offices of producer organisations by telephone
- Experts.

Most frequently we found the documents (annual reports and statutes) on the website of the business register (http://www.justice.cz/or/). Although the business are obliged to give their annual reports to the register, obviously it happens with often delays and the quality of reports as well as their technical presentation vary considerably. Older documents are often indicated as delivered (existing), but not scanned and thus not available for us.

In about half of the cases we could also use web pages of the producer organisations. However, these web pages contained extensive information on products but much less on the PO business.

Although hop is not among the selected sectors, we have decided to include the hop cooperative for its specificity, and actually the only cooperative to provide a complete service to its members staring form technology, inputs, marketing and processing, research, advisory and marketing promotion.

4.2 Position in the food chain

The position of producer (marketing) organisations in the food chain varies significantly among sectors and sub-sectors. The strongest (having the largest market share) marketing cooperatives are in the dairy sector, while in marketing cereals, producer organisations play only a negligible role. The differences in the position depends on a number of factors: the market structure, the relative size of agricultural producers, the nature of the product, the nature of "social capital", etc.

4.2.1 Cereals

In spite of their privatisation, the enterprises of the former state company "Zemedelske zasobovani a nakup"[8] kept their regional monopoly position in purchasing and storing cereals. These companies are not only cereal merchants, they also process cereals to feeding mixtures. The exception is malt barley which is sold on direct contracts with malt processors and breweries. Furthermore, the need for collective action in the cereal sector is less necessary than in some other sectors (e.g. in the milk sector) due to the facts that most of the producers are big enough to deliver to merchants or processors, price formation is rather objective (despite the local monopoly of the merchants) as a result of the integration into the common European market and that direct payments have an income stabilisation effect. Specialised cereal cooperatives are rather rare. Most of the cooperatives marketing cereals are multi-commodity (e.g. Agroodbyt) or combined agricultural input and output cooperatives (e.g. Odbytové a a hospodářské družstvo Pardubice). The share of marketing cooperatives on cereal sales is low (estimated below 10%). Moreover, cereal cooperatives are intermediaries between farmers (or

[8] Agricultural Input and Output Merchants

regional cooperatives) and cereal merchants, i.e. additional intermediaries, - a fact that is likely to reduce their attractiveness for all parties in the food chain. Direct sales to mills or the other processors are limited by the access to storage capacities (silos).

4.2.2 Wine

Similarly to other processing, wine production was nationalised after 1948 and the dominant position of the state companies lasted until the early 1990s. Over time, a number of small private wine cellars recovered and wineries and wine cellars also emerged as associated enterprises of collective farms in the wine regions. As our investigation shows, the privatisation of the sector (including the transformation of collective farms into cooperatives) did not attract "cooperation" among grape producers, instead most wineries became private companies. The exemption is the cooperative Templarske sklepy Cejkovice (South Moravia, wine region Velke Pavlovice) which built on the tradition of the pre World War II wine cooperative[9] as well as Templar wine cellars[10]. This cooperative has a share of 7% in the domestic wine production, the other two identified cooperatives account for less than one percent. The cooperative sells directly on the spot in the cellars and through internet, but most of the production is sold through wholesaler and retailers. All wine is branded and distributed under the "Teplarske sklepy" trade mark. The marketing strategy combines selling quality wine in the general consumer market with selling high quality wine and organic wine in the niche market.

Most of private wine producers opted for a more loose form of cooperation – non profit associations of wine producers from a municipality or a micro-region which provide mainly marketing promotion: a website, advertising, wine festivals, wine competitions and tastings, information about products and producers, etc. It is difficult to estimate what volume or value of sales is promoted by this activity. The majority of sales of small individual wine producers are direct sales in the local market or at wine festivals.

4.2.3 Hop

In contrast to the other crop marketing cooperatives, the marketing cooperative Chmelarstvi has a dominant position in the hop market. Hop producers with more than 90 percent of the hop production are members of this cooperative. As it has already been mentioned, Chmelarstvi provides not only market, but also processing (adding value to hop by making concentrates), advisory and services and supplies inputs. The cooperative also organises promotion activities. Its subsidiary company Bohemia Hop a.s.[11] provides world-wide export of hop and hop concentrates.

The strategic objective of the cooperative Chmelarstvi is to maintain and expand production of hop in the Czech Republic; i.e. on the one hand, to maintain production of high quality aromatic varieties of hop, and on the other, to motivate and to instruct hop producers to expand production of high yield semi-aromatic varieties of hop with a high alpha-acid content; the former as highly differentiated product to be targeted to the niche markets and the latter in the form of quality concentrates to be sustained in the highly competitive brewery markets in the country and world-wide.

[9] Founded in 1936

[10] Founded in the 13th century

[11] A joint stock company of which Chmelarstvi owns 98% of the shares.

4.2.4 Dairy

On the milk market, despite having no governmental support, there operates a large number of marketing organisations with an overall important market share. The history of these organisations dates back to the second half of 1990s as a response to an unfavourable economic situation in the dairy processing sector. Consequently to poor payment discipline and several bankruptcies of dairy plants, milk farmers initiated the establishment of farmers´ organisations to defend their interests. In 2003, the number of farmers´ organisations reached 27. As the activity scope of most of these associations was regionally limited, part of farmers´ associations started to cooperate with one another. In 1998, this cooperation got an official status by the establishment of the Mlecoop cooperative, founded as a cooperative of farmers´ associations. Mlecoop particularly focussed on negotiating milk prices, and all milk sales of members were registered as milk sales of Mleccop. However, the national government issued a regulation (Decree No. 258/2005) prohibiting more than one milk sale intermediary between farmer and dairy plant and, since that time, Mlecoop has lost the official status of a milk sales agent.

Due to milk quotas, each of the milk suppliers (dairy farmers) and each of the milk purchasers (farmers´ associations and dairy plants) is obliged to be registered at the national payment agency SZIF (State Agricultural and Intervention Fund). The regulation No. 258/2005 enforced new registration of all subjects involved in dairy supplies and sales. In 2005, there were registered 3 015 milk farmers and altogether 91 milk purchasers, thereof 51 being dairy plants and 40 farmers´ associations. Since 2005, the number of milk farmers has continuously been declining while the number of farmers´ associations has almost not changed. At the quota year 2009/10, there were registered 2 375 quota holders and a total of 83 milk purchasers, 45 of them being dairy plants and 38 farmers´ associations.

The dominant volume of milk is being purchased by a small number of cooperatives, while the rest of cooperatives trade small milk volumes only and their importance is local. In the quota year 2009/10, the mentioned 38 marketing cooperatives purchased altogether 1.7 million tons of milk, which was 66.2 % of national quantity delivered to dairy plants. A total of 0.7 million tons of milk, i. e. 27.5 % of the national volume delivered was purchased by the three largest cooperatives.

The 8 cooperatives unified in MLECOOP represent together about 450 dairy farmers from all over the country and their share accounts for around 25% on the national raw milk sales.

4.2.5 Sheep

In the Czech Republic, the market for sheep meat is tiny as compared to the market of pork, chicken or beef meat. About 85 percent of sheep and goat meat production is for subsistence or farm direct sales in the local market (mostly in family and friends networks). The rest is either marketed in the domestic retail network or exported. The producers' marketing organisation OVEKO a.s.[12] has a share of about 20 % in this marketed production. Although OVEKO is actually a subsidiary company of the Association of Sheep and Goat Producers (see Chapter 3.3), obviously, far most of animals[13] are traded outside the marketing organisation/company.

Beside sheep and goat meat, OVEKO sales wool and cheese, supplies inputs and provides information for sheep and goat producers. The strategy of OVEKO is to expand both the export of sheep meat and the sales of wool and cheese.

[12] A joint stock company

[13] Sheep and goats for slaughtering

The Association of Sheep and Goat Producers provides marketing promotion (e.g. through its website) and organises exhibitions and auctions of breed animals.

4.2.6 Pigs

The first producer marketing organisations in the pork meat sectors emerged in 1999. One of them and the largest "Agropork – druzstvo" was initiated by the Association of Producers of Pork and Chicken Meat and Eggs. Its goal was to organise export of pigs and, by doing this, to contribute to the pork meat price stabilisation.

The measure supporting "Setting up producer (marketing) organisations" of the Horizontal Rural Development Programme (2004-2006) attracted a large number of producer groups from the pig sector – 176. Due to weak viability of such producer organisations, the number gradually dropped to 85 which do currently exist. Even that is a too large number, stressing that quite a few of them must have a market share below one percent. Most of these producer organisations have a strong regional or local character; Agropork and Centroodbyt are exemptions.

Agropork-družstvo has got 180 members – producers of pigs and bulls. Agropork covers most of the country and for this has four regional centres. The annual turnover of pig sales oscillates between 500 and 600 million CZK (€20-24 millions). The second most important pig marketing cooperative OD MASO is much smaller, unifying marketing activities of 18 pig producers.

In 2004, the national cooperative Centroodbyt was established by 6 primary marketing cooperatives dealing with pigs and bulls. Currently, Centroodbyt has 10 members including Agropork and OD MASO. Besides trading pigs and bulls domestically and internationally, Centroodbyt provide market information to its members. In 2009 and 2010, Centroodbyt, including its members, sold 18% and 14.4% of slaughtered pigs, respectively. Alltogether, the producer marketing organisations marketed 25% of slaughtered pigs (and 6% of bulls).

4.3 Institutional environment

The legal framework and history of cooperatives in the Czech Republic was introduced in Chapter 2.2. As pointed out there, the general rules for cooperatives are given by the Commercial Code (the Law 513/1991 Coll.). The saving and credit cooperatives and housing cooperatives are further guarded by a special legislation on them while there is nothing similar for agricultural producer or marketing cooperatives.

In the Governmental Decree 655/2004, agricultural producer (marketing) organisations (producer marketing groups) are only defined for the purpose of the rural development support programmes: the Horizontal Rural Development Programme (EC 1257/1999) and Rural Development Programme (EC 1698/2005). There is no requirement that producer organisations must be cooperatives, any legal entity is eligible if

i) it has sales exceeding 3 million crowns (≈125 thousand euros) or at least 5 members

ii) all members must be producers of primary agricultural commodities.

In 2006, the Czech Republic adopted the Council Regulation (EC) No. 1435/2003 on the European Cooperative Society as well as Council Directive 2003/72/EC supplementing the regulation with regard to the involvement of employees in a single act, i.e. the Law 307/2006 Coll.

The producer (marketing) organisations started re-emerging in 1994. Since 1999, they are supported by various policy measures. Marketing cooperatives have been the most common

form but not the exclusive one. Limited liability companies are also possible; these other two forms are also given by the Commercial Code.

There is a two level structure of producer organisations in the Czech Republic. At the bottom level there are producer organisations unifying primary agricultural producers. These producer organisations can be either cooperatives or the other above mentioned commercial forms. At the top level there are (still sectoral) national cooperatives[14].

In the diary sectors, the national government issued the already mentioned Decree No. 258/2005 (Art. 5, d), requiring that milk intermediary (purchaser) delivers milk directly in a dairy plant) which restricts the operations of the national cooperatives (e.g. Mlecoop) to negotiating framework contracts for their members while the members are the only agents delivering milk to the processing plants.

In the wine sector, wine producers opted largely for non-profit mode of cooperation – civil associations which provide marketing promotion, like information websites, wine festivals and competitions. This non-profit cooperation form is given by the Law 83/1990 Coll. One explanation for the attractiveness of this form is that wine production and consumption has a strong cultural dimension which is able to provide a better cooperation platform (in terms of social capital) than economic relationships among rural inhabitants.

Some producers' marketing organisations were initialised by professional associations, like for example the Hop Growers' Association, the Pig Producers' Association or the Sheep and Goat Producers' Association or the regional Agrarian Chamber. In some cases, these associations participate directly in the business as members. This is particularly the case for the Sheep and Goat Producers' Association which is the far largest share holder of the marketing organisation OVEKO. Due to this arrangement, OVEKO does not fulfil the second condition of the Governmental Decree 655/2004, and thus it cannot be considered as producers' organisation in terms of this legal act. However, in terms of functioning, we believe, it should be considered as such.

An important issue is the relationship between grouping farmers in stronger marketing organisations and the Competition Law (the Law 143/2001 Coll.). The law states explicitly that an association of market agents with the annual turnover exceeding CZK 1.5 milliard (≈€ 60 million)[15] will be subject of the approval of the Office for the Economic Competition Protection (§13). In the description of the approval procedure, it is mentioned in §16a that a market share of the association of up to 25% is not considered as breaking fair competition conditions unless the opposite is shown. From this point of view, only few marketing cooperatives in agriculture might be at the range of these conditions of the Competition Law: namely, the three largest milk cooperatives (Mlekarske a hosp. druzstvo JIH, Mlekarske a hosp. druzstvo Strední Cechy, Morava - mlekarske odbytove druzstvo). The cooperative Chmelarstvi assembling hop producers with more than 90% of the hop production area has an annual turnover far below the threshold.

In general, it could be observed in the past years that trust among market agents has been significantly undermined for a number of reasons: The pervasive tolerance toward breaking trading conditions, partnership negotiations resulting in tunnelling investment funds and large business as well as managerial inexperience resulting in a number of bankruptcies during transition. This is further projected to be a barrier to deeper cooperation among farmers, preventing even existing marketing organisations/ cooperatives from being effective and efficient. A good example can be pork cooperatives which have contributed little to the sector's

[14] In principle it can be also other commercial forms, but usually there are not.

[15] With a couple of additional conditions like i) a member of the association has the annual turnover of more than CZK 250 million (≈ €10 million) ii) in the case of fusion the controlling entrepreneurial body exhibited the most recent annual turnover bigger than CZK 1.5 milliard (≈€ 60 million).

recovery. The absence of trust does not allow farmers to accumulate sufficient capital for integrating vertically with the food industry or wholesalers.

Ratinger, Pencakova and Wolz (2004) carried out a survey of 55 individual and corporate farms from four production regions (two lowland and two mountain regions). They found that a failure of a collective action (a milk marketing cooperative in the region Klatovy) deeply affected the trust among farmers and their willingness to participate in the other marketing cooperatives: While the participation rate in marketing cooperatives in the other regions was between 75 and 92%, in Klatovy only a quarter of farmers were members of marketing cooperatives.

4.4 Internal Governance

With few exceptions of very small cooperatives, the internal governance is two-layered with the board of directors and the supervising board. It is also predominant because this governance structure is stipulated by law (Commercial Code of 1992). Most commonly these bodies are elected for 5 years, in some cases the period is shorter. The initial bodies of the establishment period can operate for only 3 years.

If the cooperatives are functional (i.e. they do actual business), their management is hired. There are quite a few cooperatives which have no employees and no assets beyond the minimum equity (liability) of 50 thousand crowns. Very likely, these do not add anything to members, except the little funds from the governmental/RDP support.

From the survey, we estimate that about a half of the marketing cooperatives apply the one member one vote rule, the rest a proportional voting right. In the latter case, most frequently, votes are proportional to sales of the previous year. Obviously, in joint stock or limited liability companies, decision making is proportional to the owners' shares on equity.

4.5 Performance of the cooperatives

Milk, pork and cereal (crop) producer organisations concentrate on enhancing bargaining power of agricultural producers. In this respect, particularly dairy cooperatives have appeared to be successful. After joining the EU single market, some of the large milk cooperatives were able to redirect a significant proportion of milk sales to Germany and thus put a pressure on the domestic dairy processors to increase the price.

The milk, pork and cereal (crop) producer organisations, however, stay with bulk commodities and are rather passive in respect to penetrate food processing (to produce own processed products or to integrate with food industry vertically).

While in the fruit and vegetable sector cooperatives expanded in the last decade, currently accounting for about 35% of the market, they are rare in the wine sector. Actually, there is only one wine cooperative (Templarske sklepy Cejkovice) which has got a significant market share (about 7%) and which products are known nationwide.

The wine cooperatives, some of the fruit and vegetable cooperatives and the hop cooperative pursue the strategy of product differentiation.

Wolz, Fritzsch, Pencakova (2006) conducted a survey of 42 corporate and 20 individual farms in the Czech Republic in order to investigate the effect of "social capital" on the performance of agricultural businesses. Using factor analysis they constructed two social capital factors

"participation in interest organisations" and "use of marketing cooperatives"[16]; consequently they showed by regression analysis that these two factors have a significant effect on their economic performance. Most of the recipients participated in dairy cooperatives, some also in pig meat or mixed commodity cooperatives. From the study of Wolz, Fritzsch, Pencakova (2006), we can conclude that participating in marketing cooperatives generates significant economic benefit for members. However, there are two observations reminding us to be careful with generalizing too broadly:

i) the pig sector is in an obvious crisis (Chapter 2.1 and Chapter4) in spite of the existence of a couple of large marketing cooperatives,

ii) looking into financial reports of cooperatives (producer organisations), quite a few of them exhibited low or negative profit (at least for some years).

One explanation for the second observation is that most of the cooperatives' added value rests in the bargaining platform for market conditions and this benefit is fully transmitted to the members.

[16] Producer (marketing) organisations, a factor relating to sales through the producer marketing organisation.

5 Sector analysis

5.1 Introduction

The development trends of agricultural production in the Czech Republic were influenced by the accession to the EU. Before the accession, vegetable production represented, on average, 50.3 percent of the overall agricultural production, while the share of animal production was 49.7 percent. After the accession, the average share of vegetable production increased to 54.3 percent of the total agricultural production, while the average share of animal production decreased to 45.7 percent, both counted as an average for the period of 2004-2009. The average agricultural production amounted to 104.9 milliard CZK (in current prices) in that period and as compared to the period shortly before accession (2001-2003), it was by 5.3 percent higher.

Entering the common EU market ended in loss of competitiveness in animal production, especially concerning the commodities without direct payments (pig meat, eggs and poultry). However, payments to cattle breeding (milk, beef) supported sectoral compet-itiveness and self-sufficiency.

In the long term, the Czech Republic has been self-sufficient in all main vegetable commodities. As compared with the period before accession to the EU (2001-2003), the average rate of self-sufficiency even increased after the accession (2004-2009). Vegetable production, namely cereals and oil plants, has kept its competitiveness also after 2004. Thanks to direct payments, the profitability even increased, which in turn influenced the growth of production and exports of these commodities.

In contrast to animal production, the competitiveness of vegetable production is generally good. The self-sufficiency in vegetable commodities is rather high as well, with the exception of commodities regulated by the EU (sugar beet and sugar regulated by quotas, wine regulated by vineyards´ acreage). In 2004-2010, cereals´ and oil plants´ self-sufficiency rate was, on average, higher than 120 percent. The profitability of vegetable commodities has been positive as well, with the exception of apples and grapes. Within the EU, the profitability of Czech wheat meets the average, while the profitability of Czech barley is outstanding.

Between 2004 and 2010, the production of animal commodities was carried out in unstable environment in the Czech Republic and the competitiveness within the EU market worsened. The only efficient results were obtained with cattle breeding, both for milk and beef. Also, the Czech Republic´s self-sufficiency in these two commodities was positive: 123 percent with milk, 112 percent with beef. However, the achievements depend on direct payments without which the profitability of both milk and beef would be negative (-0.1 percent and -23.7 percent, respectively).

5.2 Cereals

Cereals cover approximately 50 percent of arable land area in the Czech Republic. Between 2000 and 2010, the average harvested area of cereals was 1.56 million hectares. However, it has declined in the long term, recently in favour of oil plants´ acreages, especially of rapeseed acreage. The average production of cereals is 7.22 million tons (with maximum of 8.78 million tons in 2004), the average yield being 4.62 tons per hectare.

Domestic consumption of cereals was gradually declining in the period of 2000-2010 from 6.38 million tons to 5.21 million tons in the marketing year 2010/2011. Since domestic production was exceeding consumption, there was the necessity for exporting cereals. The falling domestic consumption was mainly caused by lower consumption of cereals for feeding purposes.

The foreign trade balance in cereals has been positive in the long term. In 2000-2011, the average yearly volume of exports was 1.20 million tons. It has gradually grown, especially since 2004/2005 after accession to the EU. The yearly volume of imports has stabilized around 132 thousand tons.

The most important cereal grown in the Czech Republic is wheat which covers more than a half of area under cereals (833 thousand hectares in 2020/2011). The main cereal crop is winter wheat which gives higher yield, the less profitable spring wheat is grown on 5-7 percent of the total wheat area.

The second important cereal is barley, although there is a decrease in its acreage. With barley, spring varieties prevail, especially the highly valued malt barley which - together with malt produced in domestic malt houses - represents the important export commodity with the highest producer prices and profitability among cereals. The total harvested area of barley amounted to 389 thousand hectares in 2010 and as such, it was the smallest barley area within the last 20 years.

Due to quality hybrid varieties, better mechanization and plant protection, the grain maize production has increased and got more important. Its area has almost tripled since 2000 and, thus, extended on more than 100 thousand hectares over the last three years.

Cereals like rye and oats traditionally grown for food (rye) and animal feed, however, decline in importance and profitability due to smaller relative yields. The rye cropping area was smallest in 2006/2007 (22 thousand hectares); oats cultivation area dropped to 50 thousand hectares since the accession to the EU. Similarly, the expansion of triticale area after 2000 (with the maximum of 65 thousand hectares in 2005/2006) stopped in recent years as a result of falling demand for feed cereals.

The cereal market is subjected to the Common Market Organization and it is regulated through intervention purchases and sales. Since the season 2004/2005, the majority of cereal production has been of highly positive total return due to direct payments (SAPS and Top-Up) and also due to high prices (growing world market prices).

5.3 Sugar

Sugar beet growing and sugar production has more than 180 years of tradition in the Czech Republic. The development of the sugar industry was based on highly favourable climate and soil conditions for sugar beet growing followed by intensive investment in sugar refineries. Even after the crisis in the 1930s, as for the sugar industry, the Czech Republic was among the world leading countries.

In the period 1989-2000, the sugar industry was transformed. Sugar beet growers and sugar producers had lost the previous custom protection and had to face the low world prices and the high sugar supply. As a result, the industry as a whole got into the red. Both foreign capital investment (SDA, Agrana Zucker AG, Eastern Sugar) and market regulations helped to enhance the productivity level and to stabilize the sugar beet market and the sugar market. The acreage of sugar beet has now stabilized at approximately 70 thousand hectares and the lower acreage led in fact to sugar beet growing on the best soils. Along with planting productive sugar beet varieties and with improving the resistance to diseases, sugar beet yields increased.

The sugar sector has undergone profound changes with the accession of the Czech Republic to the EU, when the EU quota system came into practice: a list of sugar products subject to the Common Market Organization was created and the institutional prices were established (intervention price, basis price of sugar beet, minimal sugar beet price for producing quota A

and B sugar). Further changes of the sector development were induced by the CAP Sugar Reform (Regulation (EC) 318/2006) which was adopted in the season 2006/2007. Consequently, the sector increased its productivity, efficiency and competitiveness on the European market.

The average yield of white sugar increased from 6.8 tons per hectare in 2000/2001 - 2003/2004 to 8.7 tons per hectare during the period between 2004/2005 and 2009/2010 (an increase by 26.9 percent). Nevertheless, the average annual sugar production declined by 7% over the same period due to the reduction of the cultivated area from an average of 73 thousand hectares in the seasons 2000/2001-2003/2004 to only 45 thousand hectares in the last three seasons, i.e. 2007/2008 - 2009/2010.

Following the improved access to the European single market, total sugar imports (white sugar and sugar in products) jumped by 74.2 percent and total sugar exports grew by 59.2 percent (comparing the pre and post accession periods). In terms of volumes, exports still exceeds imports, on average, 2.5 times.

When comparing the periods before and after accession of the Czech Republic to the EU (i.e. 2000/2001 till 2003/2004 and 2004/2005 till 2009/2010), the total demand for sugar increased by 8.0 percent, but the domestic consumption decreased by 15.1. percent. In the period before accession to the EU, the average rate of self-sufficiency[17] was 105.6 percent, in the period after the accession, the average rate of self-sufficiency increased moderately to 115.4 percent. The profitability of sugar beet growing has been supported by direct payments (SAPS and Top-Up) and since 2006, also by a separate sugar payment.

5.4 Fruit and vegetables

Between 2000 and 2010, the total area of productive fruit orchards decreased from 18.349 thousand to 17.777 thousand hectares. More than 50 percent of the area of orchards is made up of apple trees whose total area is relatively constant. The same holds true of cherries, however, the area of sour cherry trees increased slightly. In the same period, the area of plum trees increased 2.5 times and the area of pear trees doubled. On the contrary, apricot and peach tree orchards decreased to half the area. Peaches gradually decline to be grown in the Czech Republic as Spanish and Italian peaches (because of their solid consistence of pulp) replace the domestic seasonal production.

The age structure of productive fruit orchards is not favourable. In 2010, fertility of 46 percent of tree orchards was at the stage of decline. The worst situation is with peach, apple and sour cherry trees. On the contrary, plum, pear and cherry trees show a favourable age structure. The bad age structure of fruit orchards is accompanied by unfavourable yields per hectare.

In the overall fruit sector, the production of apples is the most important branch in the Czech Republic. Apples make up more than 80 percent of total fruit harvest and also up to 60 to 70 percent of fruit growing company sales' revenue. Due to the old age of apple tree orchards and to insufficient financial means spent on their vital replacement,, the yield per hectare decreases. The production of apples for direct consumption decreases as well, however, the share of apples for the food industry increases. The self-sufficiency in apples is currently around 15 percent and continues to fall. The self-sufficiency in apples for direct consumption is around 55 percent in the Czech Republic.

An interesting phenomenon is the still persisting relatively high households´ self-supplies of fruits from their own gardens. In spite of this, the Czech Republic is not self-sufficient in fruits

[17] domestic production over domestic consumption

and fruits are largely imported. The negative balance of foreign trade in fresh fruit grown in the temperate[18] climate zone increased from 1.3 milliard CZK in 2000 (€42 million) to 3 milliard CZK (€120 million) in 2010. Regarding apples, imports increased by almost 80 percent in 2010 as compared to 2000 and exports decreased by 50 percent. The import of apples is almost exclusively for direct fresh consumption, whereas cider apples are mostly exported.

Agricultural producer prices of fruits vary considerably between years. In the last 10 years the agricultural producer prices increased mainly for apricots and cherries.

The consumption of fruit of the temperate climate zone has been constantly increasing in the Czech Republic. In 2000, it totalled 47.5 kg per person and year with apples making 25.0 kg of it. In 2009, the consumption figures came up to 55.4 kg per person and year, with 26.7 kg for apples. For 2010, it is estimated that fruit consumption remains the same as in 2009. One of the main reasons for the increasing consumption of fruit is the improved all year supply of fresh fruits predominantly from imports.

The total harvest area of vegetables in the Czech Republic decreased from 32 thousand to 13.4 thousand hectares, i.e. by almost 60 percent, between 2000 and 2010. This was caused by both the decrease of the number and area of commercial growers (in 2002: 1200 cultivating 14000 hectares and in 2010: only 462 vegetable growers cultivating 8600 hectares) and by the fact that households gave up gradually subsistence production (18000 in 2002 →4800 hectares in 2010). A significant drop in the vegetable area occurred in 2001 and 2002, when many companies stopped growing vegetables and small farmers restricted their production. Due to problems in the food industry, the area of vegetables for processing decreased as well. The decrease in acreage continued slowly also in the consecutive years. The extremely good harvest in 2004 resulted in over-supply in the vegetable market and many farmers were not able to sell their production and were consequently discouraged to continue their business. It was followed by high imports of substantially cheaper vegetables from Poland, Spain and the Netherlands in 2005, and the area of vegetables fell significantly again afterwards. The tendency of giving up vegetable production has persisted until present. During the last 10 years, i.e. between 2000 and 2010, the vegetable harvest decreased from 482 thousand to 218.6 thousand tons, i.e. by 55 percent. Unfortunately, the negative trend also spread out to the traditional Czech vegetables (onion, carrot, cabbage), no matter how easily they had been grown before and how long-standing the tradition of their consumption had been.

The trend in vegetable consumption has been very volatile in the long term. In recent years however, the consumption of vegetables expressed as a value of fresh vegetables, i.e. processed vegetables included, has increased again in the Czech Republic. As compared with 2000, the vegetable consumption in 2009 decreased by 1.7 kg to 81.2 kg per person and year. For 2010 however, a recovery is predicted with 82.5 kg per person and year. To cover the growing consumer demand, vegetables must be imported to a larger extent. The balance is highly negative for all kinds of vegetables and, during the last 10 years, it worsened substantially. In 2010, 563.0 thousand tons of vegetables worth 9.3 milliard CZK were imported to the Czech Republic, exports and re-exports being 99.3 thousand tons worth 1.8 milliard CZK. In 2000, 293.3 thousand tons of vegetables worth 3.7 milliard CZK had been imported, exports and re-exports being 6.9 thousand tons worth 0.09 milliard CZK. These figures illustrate the growing negative trade balance in fresh vegetables.

[18] Could winter, mild summer (e.g. non Mediterranean and non Arctic Europe) see http://www.geography.learnontheinternet.co.uk/topics/climatezones.html. The temperate zone shares most of fruits and vegetables with Mediterranean climate zone excluding citruses, avocados and similar; production comes later and the growing season is usually shorter.

After 2004, it could be seen that vegetable growers (and fruit growers in many cases, too) were not able to compete with the expanding imports of vegetables and fruits the prices of which were often below the domestic costs of production. Also, individual growers lack the ability to satisfy the demand of chain stores in terms of the supplied quality, quantity, timing and packaging of their products.

5.5 Hops

The Czech Republic is the fourth leading hop producing country in the world (the first being Germany followed by the USA and China) and the biggest producer of the fine aromatic hops of specific qualities, although with low yields. Hop is grown in three traditional regions: Zatec and Ustek regions (northern and central Bohemia) and Trsice region (central Moravia), alltogether by 135 producers in 2010. The area of productive hop gardens decreased every year; from 6,095 hectares in 2000 to 5,210 hectares in 2010.

The prevailing variety of hops is Saaz hop which was produced on 87.5 percent (i.e. 4,557 hectares) of total hops area. Hybrid varieties cover relatively small acreage of 12.1 percent (i.e. 631 hectares). Despite the falling acreage, growth of hops production could be realized (especially in 2005 and 2010 when production exceeded 7.5 thousand tons) due to higher average yields. The highest yield reached per hectare was 1.49 tons in 2010.

In 2010, the hops production amounted to 7,772 tons which meant a 17.5 percent increase against 2009. The share of Saaz hops was 84.5 percent, the rest of 15.5 percent were hybrid varieties.

The current age structure of hop plants has a negative effect on the yield stability. The optimum age is 10-12 years, but in the Czech Republic, 36.7 percent of hop plants is older than 15 years. The share of the most productive hop gardens aged 5-14 years was only 48.3 percent in 2010. The average age of hop gardens is even less favourable when 73.2 percent of frames is older than 15 years. In recent years, however, new low-rise frames are being built where new hop varieties are planted (by 2010 on an acreage of 36.8 hectares).

In hop growing, several support programmes can be applied: the programme to prevent spreading viral and bacterial diseases of hops (since 2006, when it partially replaced support programmes of 1994-2004) or the programme to build drop irrigation in hop gardens. Under the common trade organization, the Czech Republic uses the single payment scheme for hop field acreage and the supplementary direct payments. In 2010, the national supplementary payments were dissolved in the national area Top-Ups[19]..

The Czech Republic is also a prominent hops exporter (since 1998, hop was exported to 77 countries). The hop exports reached 4,464 tons in 2010, the average yearly volume of exports was 4,301 tons for 2000-2010. The imports of hops fell markedly from 1,101 tons in 2000 to 284 tons in 2010. Due to high production of hops in the last two years and to falling production of beer, the price level of hops harvested in 2010 decreased. The declining prices are the reason why the cost profitability decreased to -9.6 percent and the total profitability turned into minus, too, making -3.4 percent.

[19] The coupled Top-Up payments for hop growing ended in line with the "Health Check" conclusions.

5.6 Wine

In 2000, there were 15.5 thousand hectares of vineyards in the Czech Republic out of which 11.2 thousand hectares were productive, and the harvest was 66.9 thousand tons of wine grapes. Before the accession to the EU, intensive planting led to rejuvenation of vineyards, while since the accession, the area of vineyards has been frozen. By the end of 2010, the production potential of vineyards covered 19.6 thousand hectares, out of which 17.3 thousand hectares were cultivated, 0.1 thousand hectares were stubbed, 1.2 thousand hectares are licensed to be re-planted and one thousand hectares represents the national reserve. The production of grapes varies in dependence on weather conditions and age of the vineyards.

Thanks to the state support to vineyard recovery which lasted till 2004, the share of young vineyard area is significant. Also, the emphasis on replanting vineyards continued after accession, for example in 2008/2009 the Czech Republic restructured its vineyards more (in terms of percentage of the surface) than other Member States. One third of vineyards is in full fruitage. Still, there is a considerable share of vineyards that is older than 30 years and cultivation at these vineyards ceases because of poor profitability.

By the end of 2010, the number of registered growers incl. those licensed to plant again was 19,257. From among them, 18,789 growers engaged in vineyard planting. In comparison 20,394 and 19,351 growers were registered in 2005, respectively (previous data are not available), showing a declining tendency.

The accession to the EU has brought both benefits and risks. The domestic market has been opened to the wine exporting Member States, but for the Czech wine producers the other Member States' markets are rather unattainable. The self-sufficiency ratio in wine varies with the level and quality of harvest. During the last 10 years, the own production of wine covered merely 20-45 percent of the domestic consumption.

In individual years (since 2000/2001 till 2010/2011), the production of wine ranged from 360 thousand hectolitres to 840 thousand hectolitres.

The consumption of wine has been growing in the Czech Republic unlike the trend in the big EU-15 wine producing countries. In 2000, the consumption was 16.1 litres per person and year, in 2009, it was 18.7 litres, and for 2010, the estimated consumption is 19.0 litres per person and year.

The recent tend of growing domestic consumption of wine has been projected in increasing wine imports. Approximately 85 percent of imported wine originates from the EU countries. In 2000, 652 thousand hectolitres in the value of CZK 525 million (€17 million) were imported while the exports amounted 30 thousand hectolitres in the value of CZK 91 million (€2.9 million). For 2010, it is estimated that 1,563 thousand hectolitres in the value of CZK 3400 million (€67 million) were imported while exports and exports (incl. re-exports) amounted to 179 thousand hectolitres in the value of CZK 468 million (€18.5 million).

The price of grapes oscillated between CZK 7000 (€276) and CZK 18000 (€ 711) per ton in the last 10 years. The profitability of the Czech viticulture is on the range. In 2010, the average loss was quantified as 10 CZK per kg of grapes, i.e. 33000 CZK (€ 1305) per hectare. However, with all subsidies included, the figures move toward zero profit (still slightly negative).

5.7 Dairy

The dairy sector is the main branch of agricultural production in the country. The share of milk production in total agricultural output counted 19.1 % in 2010 and its share on total animal output reached 45.6 %.

The main development characteristics of the dairy production sector during last 10 years are continuous herd reduction, substantial technologies´ modernisation and permanent milk efficiency increase. The main characteristics of the domestic milk market are significant increase of dairy products´ imports not being compensated by exports of dairy products, while the export of raw milk reached an important share of domestic milk production. Despite the decrease of domestic self-sufficiency from 131 % in the period of 2001-03 to 119 % in 2010, the dairy sector shows a positive foreign trade balance.

Since 2000 the number of dairy cows decreased by 26.6 % to 378.4 thousand head in 2010. While at the start of the period, the trend was the reverberation of the transition process in the country, after the EU accession, the dairy herd dropped due to milk quota and milk efficiency increase. Finally, in last years, the herd decrease was an effect of poor production profitability. Continuous improvements in herd management and gene pool led to milk efficiency increase from 5,400 kg in 2000 to 7,090 kg in 2010. Due to milk efficiency improvements the total milk production remained more or less stable and reached 2.7 million tons of milk in 2010 which was only by 3.5 % less than in 2000. More than 54 % of the dairy herd is represented by Holstein breed, about 39 % of cows are combined Fleckvieh breed, and the rest are crosses with a low dairy breed share.

The accession to the EU in 2004 induced large investments both in production and processing levels of dairy industry in order to meet the EU standards. Although Czech dairy plants fully met the EU standards, immediately after the opening of the EU market in May 2004, Czech dairy farmers started to supply raw milk for processing abroad. The predominant part of the raw milk exports are performed to German Saxony and Bavaria. In the period of 2004-2007, the raw milk exports were increasing, while, since 2008, they stabilized at the level of about 17 % of domestic milk production. The reasons for exports are mainly higher milk price and good payment moral.

With the accession to the EU, dairy products imports started to rise. From 2003 to 2010, the imports of dairy products (expressed in milk equivalent) into the country rose three times and reached 39 % of domestic consumption. On the other hand, exports from Czech dairy plants in the same period only increased 1.2 times and reached 35 % of domestic milk production.

Currently, the main issue for Czech dairy farmers is the volatile milk price causing economic instability. Especially the year 2009 was difficult after the annual milk price in the country dropped by 27 % in comparison to the previous year´s price. The economic results of Czech dairy farms average a negative trend. This development results in an under-utilization of the national milk quota, e.g. the quota was only used up to 90.7 % in the last quota year. The dairy business received government support, as it is considered to be a sensitive sector.

5.8 Sheep meat

The sheep and goat branch shows low importance in the domestic meat consumption, however, the value of sheep and goat herd takes effect in its positive influence on landscape maintenance and marginal regions´ utilization. Due to these functions, the government allocates money to the sector. An extra rate on every ewe unit is paid in the form of domestic Top-Up payment, supplementing SAPS system.

Since 2000, the sector has shown recovery and rapid development. After the previous drop linked to the decline of the sheep wool market, the sheep herd started to recover during last ten years. Compared to the year 2000, the sheep herd more than doubled in 2010 i.e. from 84 thousand to 196 thousand heads. The herd consists of meat breeds and combined breeds. The importance of the goat herd is very low as the total number of goats amounted to only 14 thousand head in 2010.

The domestic annual per capita consumption of sheep and goat meat has been stable at about 0.3 kg. The self-sufficiency ratio in sheep and goat meat amounted to 90 % in 2010. Most of the consumption is covered by household slaughters since more than 85 % of total slaughters in the country are performed on farms (home slaughters). The average slaughter weight, which was registered in slaughterhouses, reached 34.7 kg l. w. in 2010. As for exports, both live animals and meat are traded, however, the importance is low from the European point of view. In recent years, consumers demand for goat and sheep cheese started growing.

5.9 Pig meat

Pig breeding is among the most important parts of animal production in the Czech Republic. Its share in the total meat production is almost a half and its share in the total consumption of meat is more than 50 percent. The share of the Czech pig meat production in the EU-27 total pig meat production is rather negligible with only approximately 1.6 percent (average of the last five years). The majority of pig meat companies in the Czech Republic are joint stock companies or Ltd. companies, i.e. they manage without possessing land.

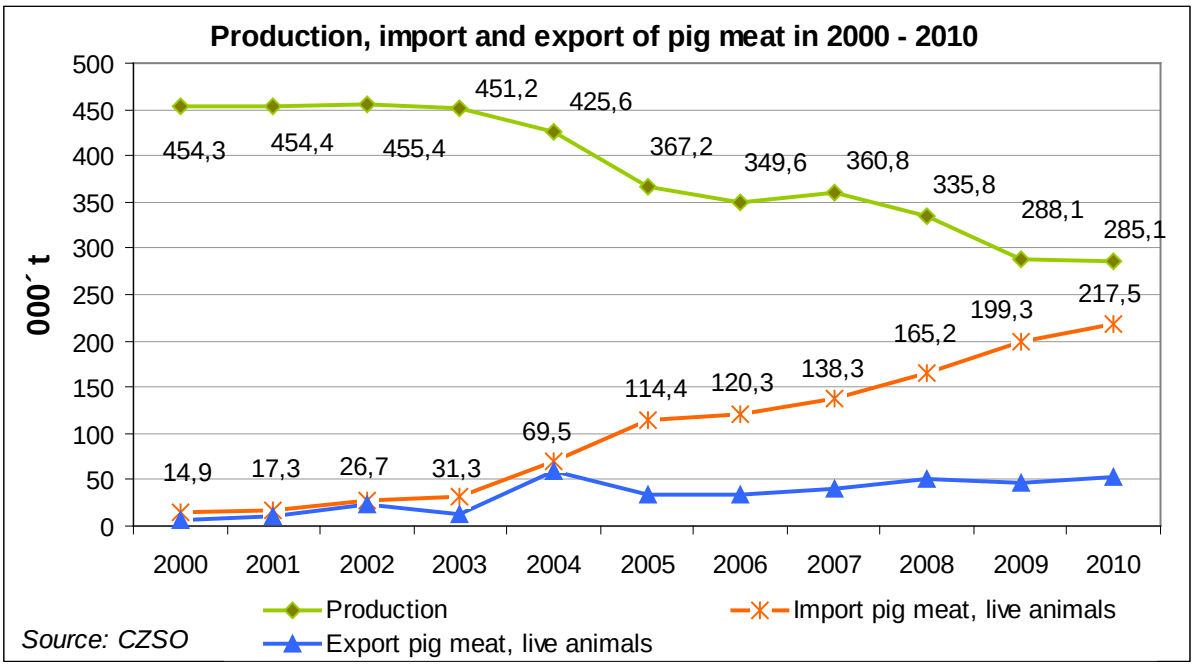
In the period 2000-2010, among all animal production sectors, the pig breeding sector reacted most sensitively to changing market conditions (accession to the EU, global economic crisis, price volatility on the European market). Due to the changes, dynamic imports of pig meat were realized, the production decreased and the number of stock diminished. The main reason is the low competitiveness of the Czech pig breeders and the meat processing industry, as compared with the more advanced EU countries. Between 2000 and 2010, the pig meat production fell by 37 percent while the pig meat consumption merely fell by 4 percent. In the same period, the number of stock in the Czech Republic fell by 1.8 million, i.e. by 48 percent. The reduction in the number of sows was even more profound. Between 2000 and 2010, the number decreased by 55 percent, i.e. from 296 thousand in 2000 to 132 thousand in 2010. The imports of pig meat incl. live pigs grew in the same period 14 times (from 15 thousand tons in 2000 to 218 thousand tons in 2010), while exports grew 8 times (from 6 thousand tons in 2000 to 53 thousand tons in 2010). The Czech self-sufficiency rate in pig meat has declined in the long term along with the shrinking production and the relatively stable consumption. Between 2000 and 2010, the self-sufficiency declined from 98 to 64 percent.

In the pig meat sector in the Czech Republic, three periods can be distinguished between years 2000 and 2010: a) the period before accession to the EU (2000-2003), b) the period shortly after accession to the EU (2004-2006), and c) the period of economic crisis and closely thereafter (2007-2010).

In 2000-2003, the situation was rather stabilized after a previous period of long-term slowdown due to an overall fall in the consumption of beef due to BSE and SLAK with European beef cattle. The demand for pork grew causing a rise in pig meat prices in 2000-2001, which improved the economics of pig meat production (relatively against the period of 1998-1999). Then, in 2004-2006, the pig meat production sector entered the highly competitive EU common market. Imports grew rapidly, the demand for domestic pigs diminished, and consequently, the number of stock decreased followed by decreased pig meat production. Among other sectors, the pig breeding sector as a whole was affected most strongly due to both low production efficiency and lower ability to compete under the new circumstances. In 2007-2008, the economic crisis

affected the pig breeding sector in all new EU member countries, but especially that in the Czech Republic.

Finally, since 2008 there has been an oversupply in pig meat in the EU leading to the fall in prices. The producers faced their losses by further decreasing the number of stock or by stopping the business. Between 2004 and 2010, the number of stock in the Czech Republic fell by 1.2 milliard (by 39 percent) and the production of pig meat declined by 33 percent (to 285 thousand tons). The self-sufficiency in pig meat in the Czech Republic decreased from 96.9 percent in 2004 to 63.8 percent in 2010. By the end of 2010, there were 3 thousand pig meat producers, their average stock being 621 animals.



6 Overview of policy measures

6.1 Regulatory framework

The performance of cooperatives (including producer organisations) is influenced by the regulatory framework in a country. This framework is multi-level: EU regulations, national laws and –in some countries- even regional policies influence the way cooperatives can operate. In this chapter we look especially at the regulatory framework that influences the competitive position of the cooperative versus the investor-owned firm (IOF) or the competitive position of the cooperative versus other players in the food chain (e.g. the retail sector).

These competitive positions are influenced within the regulatory framework by much more than the law that establishes the rules for running a cooperative (business organisation law). Well known other examples include agricultural policy (e.g. the EU's common market organisation that deals with producer organisations in the fruit and vegetables sector), fiscal policies (at the level of the cooperative and the way returns on investments in cooperatives are taxed at farm level) and competition policies. There are different types of policy measures in the regulatory framework (McDonnell and Elmore (1987):

Table 7

POLICY MEASURE TYPE	DEFINITION
Mandates	Rules governing the actions of individuals and agencies
Inducements	Transfer money to individuals in return for certain actions
Capacity Building	Spending of time and money for the purpose of investment in material, intellectual, or human resources (this includes research, speeches, extension, etc.)
System Changing	Transfer official authority (rather than money) among individuals and agencies in order to alter the system by which public goods and services are delivered

The objective of this project / report is to identify support measures that have proved to be useful to support farmers' cooperatives. In section 5.2, the relevant policy measures and their potential impact in the Czech Republic are identified. In section 5.3, a number of other legal issues are addressed.

6.2 Policy measures

The table below identifies the policy measures that are applied for stimulating organisations of producers to strengthen their position in the food chain. The Commercial Code states the principal rules for firms and it is the main legislation which influence the competitive position of the cooperative versus the investor-owned firm (IOF). Actually, there is no other legislation in this respect.

It has to be stressed that producer organisations can be of any legal entity business form.

The two policy measures: one from the rural development programme and the other from the common market organisation for fruits and vegetables, aim at encouraging farmers to organise for marketing purposes by lowering setting-up costs. In their consequence it should strengthen the competitive position of the producers' marketing organisations/cooperative versus other players in the food chain (e.g. the processing industry or agricultural merchants).

The above two measures have definitely encouraged the setting up of producer marketing organisations, however, in the sectors where this has been most needed (pig production and fruit and vegetable production) the actual share of marketing organisations on sales is relatively low (between 35% and 25%)[20]. Moreover, it is evident that setting up producers marketing organisations has not averted the decline of the sectors at all (Chapter 4)[21]. Also, taking into account that Czech farmers, as a rule, are big enough to specialise in marketing and that the largest marketing organisations in the pig and fruit and vegetable sectors did exist before the measures were launched, we can conclude that the policy measures focussed on rather non-existing or marginal problems (setting-up cost and bargain power), while they likely missed the main general problem (lack of trust for the coordination of marketing activities) as well as specific problems of the weakest sectors (the appropriate market information to farmers, development of medium term marketing strategies, development of new products/quality etc.). These two aspects (bargain power versus added value) are well reflected in the Ex-post evaluation report on HRDP-2004-2006: CSQ3.1: while coops negotiated better prices for their members, the indicators of sustainable business did not proved valid - i) the speed of the sales process did not increase; ii) the quality of commodities did not improve as a result of using joint modern technologies, iii) the costs of distribution, storage and sales of commodities through the producer groups had not been reduced in comparison with the period, when they were provided individually. The increased share of marketing cooperatives on sales (which indeed was rather small in the pig sector) means very little if it is not followed by better (and sustainable) profit[22]. As we pointed out earlier, some of the producer groups appeared to consist of two corporate farms, having neither staff nor office nor capital, and likely no effect on the market. And even, the large marketing cooperatives have been able to secure better prices for their members, apparently, it has not saved the pig and fruit and vegetable sectors from deep crises. Also, the policy received almost no response of sheep and goat farmers.

[20] We used the word relatively to indicate that the level of participation is not absolutely low, but likely insufficient to affect the market.

[21] This is also confirmed by the Ex-post evaluation report on HRDP-2004-2006: CSQ3.1 - the sales volumes of the monitored commodities did not increase. Better price, mentioned in the report might temporarily occur, however, the latest information shows that on average the prices (and particularly the relative prices) have not improved since the measure was launched (Report on the state of Czech Agriculture in 2010, MA 2011)

[22] Even we cannot confirm that it slowed down the decline of the pig and fruit and vegetable sectors (chapter 4, Report on the state of Czech Agriculture in 2010, MA 2011).

Table 8. Policy Measure Description

Policy Measure Name	**Policy Measure Type**	**Regulatory Objective**	**Policy target**	**Expert comment on effects on development of the cooperative**
(Official) name of the policy measures	**Mandate e.g.** - Cooperative legislation/incorporation law - Market regulation and competition policies **Inducement** - Financial and other incentives **Capacity Building** **Technical assistance** **System Changing** **Other**	- Correction of market or regulatory failures - Attainment of equity or social goals	- Specific to cooperatives - Specific to an agricultural sub-sector - Applicable to business in general	Description on how the policy measure affects development of cooperatives, by reasoning through the building blocks: - Position in the food chain - Internal Governance - Institutional environment of the cooperative
The Commercial Code (the Law 513/1991)	**Mandate** Cooperative legislation	Defining cooperatives as a business form	The law defines all business forms	It is a basic legislation on which cooperatives can be established
Decree No. 258/2005, National transposition of the Commission regulation (EC) 295/2004 laying down detailed rules for applying Council Regulation (EC) No 1788/2003 establishing a levy in the milk and milk products sector	**Mandate** Market regulation and competition policies	Detailed rules for establishing a levy in the milk and milk products sector – it includes in Art. 5, (2)d requirement for maximum one intermediary between farmer and dairy plant	Specific to dairy sector	Effective barrier for national second level cooperatives (e.g., Mlecoop) to act as a milk sale agents
Setting up producer groups, HRDP 2004-2006, / corresponding Governmental Decree 655/2004. The corresponding measure M142 - RDP (2007/2013) has not been launched yet.	**Inducement** Financial incentive to setting up a producer group/ marketing cooperative	Correction of market failure (strengthening bargain power of farmers, adapting the production and output of producers who are members of such groups to market requirements, concentration of supply)	Specific to agriculture / dairy and fruit and vegetable sub-sectors are excluded. (cooperatives are the most common legal form, but the measure is not exclusively targeted to them)	It has definitely encouraged emergence of producer groups (the number more than has tripled since 2004], however, there are doubts if it has brought any real benefit to farmers, and if it has improved overall competitiveness of the respective agri-food marketing chains
Producer groups - Regulation (EC) 1234/2007, Chapter 2 / the	**Inducement** Financial incentive to setting up a producer group/ marketing	Correction of market failure (strengthening bargain power of	The fruit and vegetable sector	

corresponding Governmental Decree 318/2008	cooperative	farmers, adapting the production and output of producers who are members of such groups to market requirements, concentration of supply)		

6.3 Other legal issues

The advantage of the "cooperative" business form against joint stock company or limited liability company forms for the purpose of producers' marketing organisations is the possibility of more flexible arrangement of decision making. In cooperatives, votes can be made proportional to the volume traded through the cooperative. This is often the practice which evidently encourages members to trade as much as possible through their cooperative. The other and perhaps most important advantage is that if the objective and the actual activity of a producer marketing organisation is to provide market for its members, the members with the largest traded volume can affect more the strategies of the cooperative than those who are rather passive or opportunistic.

On the other hand, the security of capital investment in cooperatives might be perceived as lower than in joint stock companies or limited liability companies, unless the cooperative statute includes rules which brings the internal governance close to the rules (given in the Commercial Code) of joint stock or limited liability companies. This approach of making cooperatives more "capital based" firms is relatively common: for example proportional voting to capital shares in the equity is common in both the marketing as well as production cooperatives.

7 Assessment of developments and role of policy measures

This chapter provides a concluding assessment on the developments of cooperatives in the Czech Republic. In chapter 2 the basic statistics on agriculture and farmers' cooperatives were provided. In chapter 3 data on individual cooperatives were reported, especially concerning their internal governance, their position in the food chain and the institutional environment in which they operate. This lead to some first impressions in section 3.5 on the performance of cooperatives in the Czech Republic in relation to their internal governance, institutional environment and position in the food chain. In chapter 4 the data gathering and analysis was broadened by looking at the differences between the sectors and the influence of sectoral issues on the performance of the cooperatives. Chapter 5 looked into much more detail on the how the regulatory framework influences the competitive position of the cooperatives in the food chain and vis-à-vis the investor-owned firms.

This final chapter assesses the (performance) developments of cooperatives and how they can be explained in terms of the building blocks (institutional environment, position in the food chain including sector specifics, and internal governance). Section 6.1 focuses on the explanation of the performance of cooperatives in terms of their internal governance, their position in the food chain (including sector specificities) and the institutional environment (including the regulatory framework). In section 6.2 an assessment is given on which policy measures in the Czech Republic seem to benefit cooperatives and which ones have a constraining influence.

7.1 Explaining the performance of cooperatives

As it has been pointed out at several places in this report the performance of producer marketing organisations varies significantly.

The success of milk marketing organisations suggests that one of the main problems in the sector was weak bargaining power of farmers vis-à-vis the highly concentrated dairy industry. On the other hand, dairy farmers have so far missed to explore the opportunity of placing differentiated products in the emerging niche markets (organic products, special regional cheeses, etc.). Clearly, there is a measure in the Rural Development Programme "Adding value to agricultural and food products" which might facilitate this and for which a certain level of vertical integration between agriculture and food industry is a precondition. Marketing cooperatives might provide this vertical integration.

The cooperative Chmelarstvi is a good example that the problem might rest not in the weak bargaining power of farmers but, instead, in a lack of understanding the changing market. Therefore, this cooperative focussed on improving the product – hop by further processing in the enriched pellets (hop concentrates) and by encouraging farmers to start producing hybrid varieties which are appreciated by the market.

Wine producers see the marketing problem rather in attracting new customers than in increasing their bargaining power. A quite loose level of cooperation largely based on social and cultural links has proved suitable. Differentiation of products and focus on niche markets - bringing customers to cellars might be an appropriate strategy in the face of the competition with countries, such as Spain, France, Italy or Greece.

Some of the above-mentioned strategies are also applied in the fruit and vegetable sector. However, it seems there is still a way to go before the sector consolidates. The fruit and vegetable sectors might need both ways of development: i) increasing bargaining power and ii) finding the right long-term marketing strategy for their products which will then be promoted by the respective producers' marketing organisation and implemented among members.

The most difficult situation is in the pig sector (as well as beef and sheep and goat sectors). Focusing on the bargaining power only seems to be short-sighted for this sector. Greater attention should be paid on studying and understanding the market situation, improving productivity and looking for vertical integration. The government assistance should aim at these targets. Marketing cooperatives might help but it is not clear if they stand for the best way. Maybe, a greater focus on extension and education would yield better effects.

It seems that the general weakness of the current producers' marketing organisations/ cooperatives is rooted in insufficient financial and human capital. Also, it seems that the social capital of farmers is not used for the benefit of the marketing organisation/ cooperative. Instead, it is a safeguard measure for each member protecting against the failures of collective action.

7.2 Effects of policy measures on the competitive position of cooperatives

Following what was said in the previous chapters, there is no policy measure which significantly improves or negatively affects the competitive position of producers' marketing organisation/cooperatives, perhaps except the Decree 258/2005 limiting the number of intermediaries in the milk marketing chain to maximum one. The incentive measure to set-up producer groups seems to miss the sector needs and their effect is slightly negative if it encourages the emergence of new producer groups which market share (even locally) will be negligible and activities dubious[23].

Table 9 Assessment of policy measures

Policy measure	**Assessment score**
The Commercial Code (the Law 513/1991) (It makes cooperatives possible)	4
Detailed rules for establishing a levy in the milk and milk products sector (Decree No. 258/2005)	-2
Setting up producer groups, HRDP 2004-2006, / corresponding Governmental Decree 655/2004	-1
Producer groups - Regulation (EC) 1234/2007, Chapter 2 / the corresponding Governmental Decree 318/2008	0

Table 9 largely refers to the explanation in 5.2.

[23] Evidently, the low benefit of this measure is also perceived by the Ministry of Agriculture and the Monitoring Committee of the Czech RDP (2007-2013), since the measure has not so far been launched under the current RDP (i.e. until the end of 2011).

8 Future research

From the report it is clear that much more research is needed. First of all, the research should collect the current experience with producer marketing organisations. A broad and deep survey among organisations and members will be needed.

Second, the experience gained in the functioning of producers marketing organisations should be confronted with market needs and performance.

Third, quantitative assessment of the economic performance of producer organisations will be needed to see how they actually affect markets and the welfare of their members.

Fourth, in-depth case studies will be needed to understand the formation of social capital and level of trust for setting up producer marketing organisations and make them a well functioning business.

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