

# Strategies and effects of milk producers' organisations in the Czech Republic

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**Abstract:** In the Czech Republic, milk producers' organisations arose spontaneously from farmers' initiatives in the late 1990s as a response to the need to secure fair market conditions for dairy farmers. At present, there are 39 milk producers' organisations operating locally, nationwide or even on the central European markets. The paper aims at a better understanding what market conditions and transaction attributes have favoured the emergence and the success of the Czech milk marketing cooperatives as well as if their current objectives and strategies are sufficient for securing their future success. The methodological approach rests largely in the theory of industrial organisation combined with the new institutional economics. Establishing marketing cooperatives, dairy farmers balanced market power with processing industry. It is showed on six case studies that the Czech milk marketing cooperatives follow traditional objectives (securing sales, fair price and payment discipline); however, their priorities and strategies differ according to their market environment. If the concentration of the dairy industry continues, there will be a need for reconsidering the objectives of milk marketing cooperatives toward a more vertical coordination in the dairy chain.

**Key words:** marketing cooperatives, milk, strategies

Milk market belongs to agricultural sectors where farmers' cooperatives often play an important role. The specific characteristics of the dairy sector have influenced the governance of the dairy sector and in some cases; they positively contributed to the development of dairy cooperatives (Henriksen 1999). The dominant role of cooperatives in some industries and the co-existence of cooperatives and investor-owned companies in others (Hendrikse 1998) suggest that cooperatives must have comparative advantages in some dimensions that can dominate or at least outweigh their disadvantages in others (Bogetoft 2005).

In the Czech Republic, dairy farmers' organisations intermediate 70% of milk sales to dairy industry and thus they represent a significant bargain power. The objective of the paper is to improve the understanding which of the institutional and governance factors were the most influential for their emergence and their functioning, which effects have their current strategies, as well as whether such a form and strategies may constitute a sufficient base for securing their future success. Concerning the latter, we question a further exceptional reliance on concentrating bargain power and milk supply raising the hypothesis that if they are to be an effective instrument of farmers for the market stabilisation, a more long term strategy

thinking is needed with a deeper integration between farmers and processors.

The investigation is structured in five steps. In the next chapter, we review the existing literature on marketing cooperatives and bargaining power. In the third chapter, we outline the methodology. In the fourth chapter, an overview of the basic market and production conditions' and institutions' development is given and the consequence response of the dairy market structure is described. In the fifth chapter, based on the in-depth interviews, we show the current functioning of marketing organisations confronting their expectations and strategies with the real effects for farmers. In the final step, we discuss the results and draw conclusion on the likely future development and on the challenges they are going to meet including the need for the vertical integration as an option of future strategy

## LITERATURE REVIEW

The present agribusiness exhibits an increasing concentration in the downstream industries. This "gigantism" and centralization of the food flow concern farmers and consumers who are, by comparison,

relatively small and unorganized (Kohls 1990). The common response to this issue is the emergence of producers' organisations, namely agricultural marketing cooperatives (AMCs). In literature, we can distinguish two research streams: one focussed on the role and the performance of the AMC and the other one concentrating on their development and functioning.

The pragmatic definition perceives a cooperative as a voluntary organisation formed to obtain economic benefits for its members through a common enterprise based on the mutual cooperation and self-help (Munker 1976). In the literature (Nilsson 1999; Bekkum and Bijman 2006), it is called the traditional cooperative which can be characterized by three essential organizational elements: (i) user-benefit (i.e. benefits are distributed on the basis of use), (ii) user-control (i.e. control is exercised on a membership basis, mainly applying the one member-one vote system) and (iii) user owned i.e. the ownership is grounded in use transactions rather than in capital investments (Barton 1989).

Traditional agricultural marketing cooperatives (TAMCs) are built on the advantage of considerable economies of scale in acquiring market information and in collecting-selling and even processing agricultural commodities (Meulenberg 1978; Bogetoft 2005). Since they are usually motivated by the weak position of farmers in respect to concentrated processors, their emergence inevitably changes the market structure. However, the performance of the market will also essentially depend on the conduct of the TAMCs. Vergossen (1989) applied an extension of the S-C-P framework proposed by Shaffer (1980) "Environment-Behaviour-Performance" when investigating the role and development of agricultural cooperatives in East Asia. Meulenberg (1978) provides extensive review objectives and marketing strategies and instruments used by various types of the TAMC in various market environments. He argues that in the course of time with changing general economic and market environment, the TAMCs in West Europe gradually adapted their goal of realising a maximum price for the products supplied by farmer-members into the more general goal of a satisfactory income and continuity of business (marketing, processing). Meulenberg (1978) also showed that marketing instruments to achieve the TAMCs' objectives are the same as for investor firms, however, the internal governance of cooperatives might considerably limit their efficient use (see also Hendrikse and Veerman 2000; Krol et al. 2010).

The focus of scholars has gradually shifted to the functioning of the AMCs, particularly to their internal

governance. Since the shortcomings of the TAMCs were largely recognised by farmers-members in many countries, they have gradually converted into hybrids of cooperatives and investor companies, member-investor cooperatives; Chaddad and Cook (2004) name them the new generation cooperatives (NGCs). This institutional change has attracted the attention of researchers; the investigations aim at the advantages and disadvantages of the various forms of the AMC (e.g. Bekkum and Bijman 2006; Bijman and Dijk 2006) and the challenges of the cooperative internal governance vis-à-vis changing the economic and institutional environment of the AMCs (e.g. Chaddad and Cook 2004). Krol et al. (2010) made a study of this kind applied on the dairy sector.

Czech literature on the role, the development, the functioning and the performance of the AMCs is rather scarce. Wolz et al. (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. They constructed two social capital factors, the "participation in interest organisations" and the "use of marketing cooperatives"; consequently they showed by the regression analysis that these two factors have a significant effect on their economic performance.

The performance of the AMCs and particularly the dairy ones was a part of the study carried out by Curtis et al. (2006). They found that farmers regarded the AMCs as useful. In the milk market, however, the participation rate was substantially higher among farming companies than among the family farms, despite the fact that family farms exhibited a very small involvement in negotiating the delivery contracts.

## METHODOLOGY

The methodological approach rests largely on the theory of industrial organisation combined with the new institutional economics. We follow the structure-conduct-performance paradigm (SCP), showing that the industry is characterized by its structure (e.g. how concentrated it is), conduct (i.e. the behaviour of its firms), and performance (market power, allocative efficiency and so forth) (Cabral 2000). The structure and conduct components we extend by the factor of internal organisation of cooperatives (in both the structure and the conduct) to be the endogenous aspect. There is also the main focus of the paper while the performance is not fully assessed explicitly – predominantly, it is an implicit driver of the change in structure and conduct.

Market structure and partly performance are assessed on the base of the statistical data coming from the Czech Statistical Office, the Czech Agricultural and Intervention Fund, the statistics the Ministry Agriculture of the Czech Republic and from other sources of central evidence.

To understand better the objectives and functioning of dairy marketing cooperatives/producers' groups, we conducted 12 case studies: 6 dairy marketing cooperatives, the national 2<sup>nd</sup> level cooperative, 3 farms (a member, a former member and a non-member) and a dairy processor. The criteria for the selection of 6 marketing cooperatives included: the size in terms of milk sales, regional coverage, participation in the national 2<sup>nd</sup> level cooperative and the intensity of relationships to and integration with food industry (Table 1). The selected farms were significantly specialised in milk production but not exclusively. The chosen dairy processor was characterised by a balanced share of purchases from marketing cooperatives and from individual farmers in the South-West and North-East parts of the country.

The investigation was qualitative, based on the semi-structured face to face interviews with the representatives of the case study subjects. For the interviews, we elaborated a questionnaire on the factual data (e.g. sales, number of members and milk purchasers, etc.) and a list of open answer questions on the MMC strategies, their internal policies and the performance. Similarly, semi-structured interviews were conducted in the other case studies. Due to the qualitative nature of the research and a small number of cases, all relevant cases are always presented and discussed in the following paragraphs. A generalization of the case studies' findings is presented in the conclusions.

## BASIC MARKET AND PRODUCTION CONDITIONS, THE DAIRY MARKET STRUCTURE

Agricultural marketing and service cooperatives quickly ceased after the beginning of the collectivisation of agriculture in the early 1950s; their renaissance came with the political changes and the transition to the market economy. In this chapter, we briefly mention the main institutional changes relevant to the dairy sector over the last twenty years and the corresponding development of the dairy market structure, explaining the circumstances and drivers of the establishment and the developments of the current AMCs in the dairy sector.

Two distinctive institutional processes can be recognised in the recent economic history of the Czech Republic: market liberalisation and adjustment to the EU common market. Market liberalisation dominated the 1990s; in the middle of this period, agricultural marketing organisations (AMC) emerged. At that time (around 1995), all important market legislation was issued and the economic agents went through a rapid and massive privatisation (Matthew et al. 1999). Nevertheless, the economic structures and institutions were far from being settled in the late 1990s. The EU accession brought new objectives in the development of the agri-food sector. First of all, it was the need to comply with the Acquis Communautaire. High costs of the compliance with the acquis determined to a large extent the development of the dairy sector at all levels of the market chain. Consequently, new development opportunities appeared with joining the EU common market.

Table 1. Selection criteria of case studies

Name of MMC	Criteria				
	size	regional coverage	participation in the 2 <sup>nd</sup> level national cooperative	number of purchasers (dairy plants served)	integration with food industry
L_MMC1	very large	Southern Bohemia		4	
L_MMC2	very large	Southern and Central Moravia	member	21	
L_MMC3	large	East Bohemia	collaborating	4	an attempt in 2007–2010
SM_MMC1	medium	Local (North-east Moravia)		1	until 2006 the dominant owner of a dairy plant
SM_MMC2	medium	Local (East Bohemia)	member	1	
SM_MMC3	small	Local (East Bohemia)		1	indirect support to a dairy company in 2004.

Source: own survey

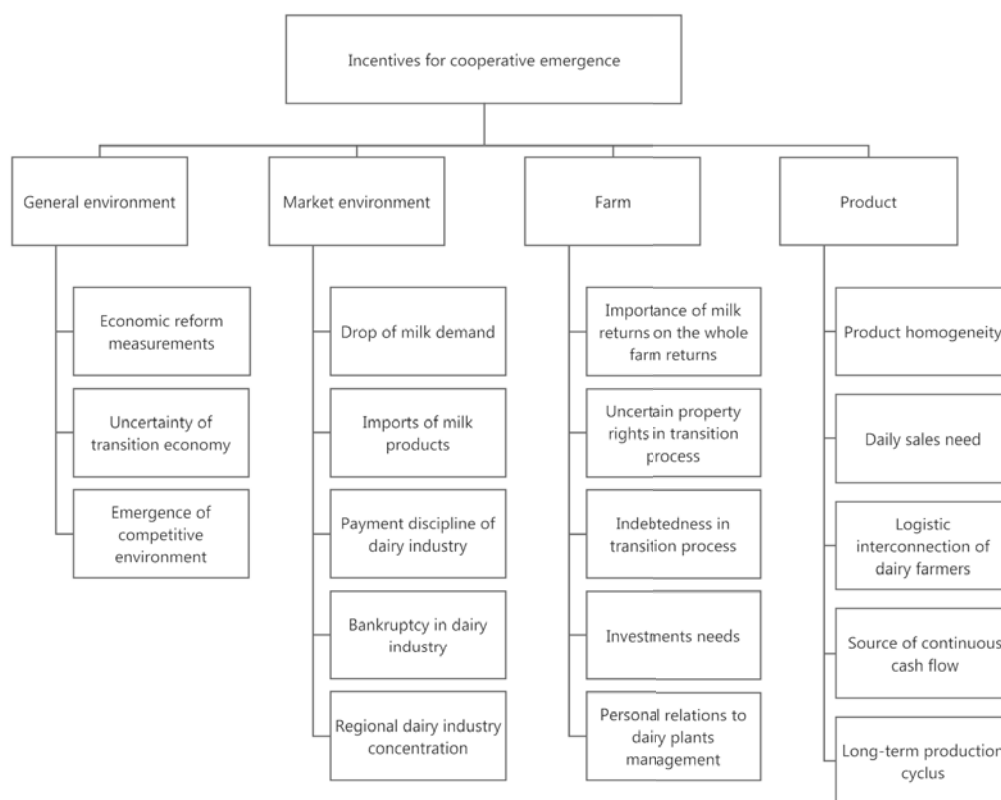


Figure 1. Conditions and drivers of the emergence of milk marketing cooperative

Source: own design

### Emergence of marketing organisations

The transition of the national economy from the planned system to the market economy hit agriculture in three respects: (i) price liberalisation changed the relative prices and led to the decline of demand for food and agricultural products, (ii) the disruption of the former economic relationships resulted in the highly uncertain business environment in general, and (iii) privatisation and restitution triggered the outflow of the capital from agriculture and imposed high transaction/transition costs on farms, while there was almost no inflow of new private capital into the sector (Ratinger 1994; Ratinger and Rabinowicz 1997).

The domestic processing industry was affected by the drop of the domestic milk demand and the increase of milk products imports. Losing their sales, the domestic dairy plants suffered by a low utilization of their production capacities and by the consequent operational inefficiency (Landell Mills 1996). Problems of the dairy processing were immediately transmitted to primary producers; the payment discipline deteriorated followed by closing down the dairy plants.

The dissatisfaction with the development of the raw milk market led farmers to establish the first milk marketing cooperatives in the middle of the 1990s. These dissatisfactions in terms of conditions and drivers are summarized in a structured way in Figure 1. The incentive for establishing marketing cooperatives stems from four aspects of the farm business: (i) general economic environment, (ii) specific market environment, (iii) farms' economic situation and (iv) product specificity. Each of these aspects can be further divided in a number of attributes.

The perishable character and the daily sales needs, the dependence of farmers on the current collection route, the product homogeneity, the long-term production cycle bring about high transaction costs<sup>1</sup> for the individual producers and thus weaken their position in respect to milk processors (assets specificity, see Krol et al. 2010). The other three main aspects are discussed throughout the paper.

### Dairy market structure

*At the farm level*, the main structural changes over last twenty years include (i) the decrease of

<sup>1</sup>Krol et al. (2010), regard these characteristics as assets specificity in Williamson's sense (Williamson 1985).

Table 2. Dairy herd development

	Unit	1989	1991	1993	1995	1999	2003	2005	2009	2010	2011
Cows	1000 head	1 247	1 195	933	768	608	586	562	560	551	562
Dairy cows*	1000 head	x	x	x	x	583	460	438	394	378	374
Milk efficiency	l/year	3 982	3 712	3 825	4 117	5 022	5 756	6 254	6 870	6 904	7 128

\*No recording for suckler cows up to 1995

Source: MoA – Situation and outlook report (2011); MoA – The Report on the State of Czech Agriculture 2003 to 2011

Table 3. Milk production and utilization (mil. l milk equivalent)

	1989	1991	1993	1995	1999	2003	2005	2009	2010	2011
Production	4 892	4 100	3 443	3 031	2 736	2 646	2 739	2 708	2 613	2 664
Domestic intake	4 473	3 518	2906	2 564	2 490	2 531	2 476	2 292	2 251	2 304
Imports*	x	25	83	102	160	281	535	854	849	853
Exports*	1 393	901	923	833	707	772	833	910	902	1010
Consumption*	3 070	2 642	2 008	1 840	1 964	2 081	2 182	2 233	2 197	2 139

\*Not evidenced in milk equivalent

Source: MoA – The Reports on the State of Czech Agriculture, years 1991 to 2011

milk production and (ii) the herd concentration. Between 1989 and 1999, the cows herd dropped by 51% (Table 2) and the produced milk volume dropped by 44% with the main decline in the first five years (Table 3). The decline of agricultural production was a common process in the 1990s, (the gross agricultural production fell by 29% between 1989 and 1999) (MoA 2000), however, the milk production was hit the most. In the next period (the adjustment to the EU common market i.e. 2000–2010), the dairy market recovered and milk production exhibited a more or less stable level.

The dairy herd has undergone a remarkable process of concentration. According to the milking record (Kvapilík et al. 2011), which covers around 95% of dairy cows in the country, the number of dairy farms under the milking control decreased from 4224 in 2000 to 1782 in 2010, which in turn means a

reduction by 58%. This trend refers to the dramatic adjustment process of the primary production to the market, in which only the most competitive farms could survive.

*The dairy processors* have been facing the economic pressure of three sources: (i) the investment costs carried from the past, which can also be marked as an internal economic pressure, and two more or less permanent external pressures; (ii) from the downstream market and (iii) from farmers and particularly the MMCs. The figures of the annual retail research Shopping Monitor (Shopping Monitor 2012) display that in 2010 already 80% of consumers purchased milk products in hypermarkets, supermarkets and discount stores, while this figure was around 60% in 2000. Processors have thus become highly depended on the retailer chains policy. On the other side, the tight economics of the primary milk production drives farmers to bargaining for the high milk price.

Due to a heavy economic stress in 2010, there was only one third of dairy plants comparing to 1989 (the first row of Table 4 and the last row of Table 5) and a further concentration is expected. On the other hand, two German dairy plants located close to the Czech border extended their procurement to the Czech territory and a small quantity was processed in other close countries (Table 6). Foreign direct investments supported the domestic dairy industry. The key contribution of the FDI rests in

Table 4. Milk processing capacities

	Unit	1989	1994	1995
Dairies number	<i>n</i>	113	100	89
Processing capacity	mil. l	5 420	4 800	4 600
Milk intake	mil. l	4 470	2 650	2 560
Capacity utilization	%	82.5	55.2	55.7

Source: Landell Mills, Dairy Sub-sector Study (1996)

Table 5. Producers' organisations – MMCs

	Unit	2005	2006	2007	2008	2009	2010	2011
Dairy farms*	<i>n</i>	2 969	2 871	2 562	2 571	2 493	2 344	2 182
– of that organised	<i>n</i>	1 071	1 212	1 212	1 210	1 268	1 217	1 147
– of that organised	%	36	42	47	47	51	52	53
– of that in top 5 organisations	%	25	25	28	27	29	29	31
Milk marketing organisations	<i>n</i>	25	37	42	41	42	37	39
Dairy plants	<i>n</i>	48	49	41	38	38	38	39

\*Producers registered in the quota system

Source: SAIF (2012); MoA – The Reports on the State of Czech Agriculture, years 2005 to 2011

the improved efficiency of the production and even more, in the extension of markets for the products made from Czech raw milk. Bongrain S. A. and the Danone group belong to the early investors, while the Lactalis group, the Müller A. G., the Brazzale S. p. a. and the Bel group to the latest (post-accession) ones.

As the *milk marketing organisations are concerned*, there is a two-level structure in the Czech Republic. At the bottom level, there are organisations unifying the primary agricultural producers. Marketing cooperatives are the most common form, but by far not the exclusive one. Joint stock companies or limited liability companies are also possible. At the top level, there is a cooperative, associating some producers' organisations. The Decree No. 258/2005 excludes the 2<sup>nd</sup> level MMC (Mlecoop) from milk sales (as a second intermediary). Its role has turned in coordinating the sale and price policies of its members; however, following the common policies is only voluntary for the member MMCs. In addition, the Agriculture Association of the Czech Republic provides a political umbrella and a platform for the experience exchange from most of the producers' groups including the MMCs.

The distribution of sales of the MMCs is unequal; the top 5 MMCs account for almost 60% of the total MMCs' milk supply. Similarly, the top 5 dairy processors (including a German one) purchase about 45% of the total national raw milk supply. The MMCs supply about 29% of the raw milk processed in the

top 5 Czech dairies; the individual shares range from only 2% up to 72%.

## STRATEGIES AND EFFECTS OF MARKETING COOPERATIVES

### The performance of the dairy market and marketing cooperatives

There are three main objectives followed by all the investigated MMC: (i) to get a fair price, (ii) to secure sales of milk and (iii) to assure payment discipline, which are clearly interlinked (Table 7). Their priorities vary among the individual MMCs (even among those which are under the umbrella of the national second level MMC) and have also changed in the course of time. It resulted from the interviews that the primary objective was securing sales of milk at the beginning of their existence in the middle of the 1990s. In the most MMCs, it was followed by the payment discipline objective and at the third place, it was the fair price.

*Securing sales.* This priority links usually to the decline of the dairy market. Since the sector restructuring has not been finished yet, this priority sequence persisted in the cooperatives dealing with a large number of dairy plants as for example the L\_MMC1. If there is a problem with a dairy plant (collapsing or having a very poor payment discipline), the cooperative is

Table 6. Allocation of milk processing

	Unit	2003	2004	2005	2006	2007	2008	2009	2010	2011
Raw milk supplied	mil. l	2 531	2 539	2 625	2 612	2 618	2 639	2 588	2 508	2 555
– of that raw milk exported	mil. l	0	36	211	304	394	437	453	388	428
– of that raw milk exported	%	0	1.4	8	11.6	15	16.5	17.5	15.5	16.8

Source: SAIF – Commodity Reporting (2011); MoA – customs statistics (2012)

Table 7. Main priorities of the interviewed MMC

Objectives	L_MMC1 2005	L_MMC1 2011	L_MMC2	L_MMC3	SM_MMC1	SM_MMC2	SM_MMC3
Securing sales	1	2	1	2	1	1	2
Fair/best price	2	1	3	1	3	2	1
Payment discipline	3	3	2	3	2	3	3

Source: own survey

able to redirect milk deliveries to the other plants in their rich portfolio. Securing sales was also a top priority of the SM\_MMC1, when it sold their majority stocks of the dairy plant; the deal was conditioned by getting a ten year contract for delivering milk under the average national price. Similarly, the SM\_MMC2 pays most attention to securing sales; it likely follows from the turbulent history of the dairy plant which the MMC is fully linked to; the ownership of the plant changed three times over the last 15 years. The five year contract concluded with the former owner will expire soon and the MMC management feels the need to start thinking about the diversification of the portfolio of milk purchasers. The other small cooperative (SM\_MMC3) feels that its members' sales are secured after signing a 5 year contract with the Saxonian (German) processor, however, they understand that things might turn worse when the quota system is abolished; then the dependence on only one purchaser might be fatal.

The other large cooperative (L\_MMC3) believes that securing sales is no longer their main priority objective after signing the five year contracts with their four milk purchasers, particularly the German one. Instead it is the fair price which is in the focus of the cooperative management.

The priorities of the largest MMC (L\_MMC1) have circularly changed. Around the year 2000, this MMC dealt with only one purchaser (at that time, the largest dairy company in the country). In contrast, the processor had a number of actual and potential alternative suppliers. The lack of alternative sale opportunities weakened the bargaining position of the MMC; it concerned not only the price but also the quantity of the raw milk and the payment discipline. Although it was perceived to be risky by many members, the management redirected a substantial part of the milk into the dairy plant in Germany, close to the Czech border. At present, this MMC has a portfolio of four milk processors, the sales to the original one dropped to about one third. This diversified, but still concen-

trated portfolio of milk purchasers strengthened the position of the L\_MMC1, their milk prices belong to the highest. However, different prices came with the new purchasers. The price policy moved on the top of the MMC agenda.

*Price policy.* The traditional payment scheme that the members get the price of the dairy processor they deliver to was perceived as unjustifiable in the South Bohemian L\_MMC1. The management proposed a change of the policy resulting in the single basic price. Even the premiums per unit are unified to a single value regardless which processor the milk was delivered to.

The other large cooperative (L\_MMC2), however, has not followed this way yet. Instead, they try to establish a common price formula scheme, i.e. that all price negotiations with the processors follow the same price formula: (i) the basic price<sup>2</sup> which equals to the average national basic price of the last month plus the negotiated processor's surplus/discount<sup>3</sup>, and (ii) the premiums which are more or less common but can also reflect the processor's performance. The representatives of the national 2<sup>nd</sup> level cooperative argue that the common price formula scheme is preferential with respect to the competition legislation, because differentiated prices witness for no abuse of the market price formation.

The SM\_MMC1 agreed to a similar but tighter binding to the national average with the fixed surplus for the whole contract period (i.e. 10 years). The L\_MMC3 and SM\_MMC3 follow a modification of the common price formula scheme; the difference rests in leaving out binding to the average national price, instead the rather blurred "competitive price" is used. Obviously, the term "competitive price", guarantees little, but further negotiations. There is no problem with it at the time of high and growing milk prices, but it might be a very tricky contract term when the prices turn down again.

The price policy of the SM\_MMC2 follows a two tire scheme: the MMC sale price is negotiated as a

<sup>2</sup>For the standard quality milk of 3.4% of fat, 3.7% of proteins.

<sup>3</sup>Depending on the current performance of the processor.

simple price for milk corresponding to the average quality and the fat and protein contents; however, the members are paid individually for the milk quality and the fat and protein content according to their actual values.

Although the price policy is not always the top priority of the MMCs, negotiating milk price is the main (and regular) activity of most of the investigated MMCs. The current price is negotiated between the MMC and the respective processors every month, regardless of the applied price scheme.

*Payment discipline.* This aspect is the continuing problem mostly of the purely national dairy processors. The German dairy processors as well as the companies with the FDI pay usually on time. The importance of the payment discipline objective has showed to reflect the proportion of the national and foreign processing companies in the sale portfolio of the given MMC. Naturally, the cooperatives will favour increasing sales to those who pay on time. This might be uneasy, unless the cooperative will help if any problems arise by covering some delayed payments (or loses) from its own funds and by reshuffling payments (those who are weak are paid with urgency and the strong one are paid later). In contrast, the MMCs which have just one purchaser who pays well might be hampered to seek for alternative destinations of milk sales, even if they know that the current good milk market conditions are probably temporary.

In the former paragraphs, we have mentioned that things changed with the expansion of the raw milk market over the borders and with the entry of foreign companies with the EU-wide operations. From the interviews, we learned that beside the stabilised demand, farmers have received with it a much better treatment in negotiating and implementing contracts than ever before.

The unfair treatment from the side of milk processors brought farmers to establishing cooperatives;

The contrasting much more fair behaviour of foreign milk processing companies now discourages farmers to join or to stay in the MMCs (as it was pointed out by the farmer who left a cooperative as well as the representative of the investigated dairy processor).

### Penetration of processing industry

While milk marketing cooperatives have grown stronger, they still exhibit the adherence to rather transitional objectives. In the interviews, we investigated if the representatives of the MMCs considered building a long term prosperity on a deeper integration with processors. There are four questions related to this issue (Table 8). It seems that there is a little attention paid to the business performance and the strategy of the milk purchasers. Also, there is almost no concern about what is produced from the delivered milk in terms of the production programme has any future or not. In contrast, there were two significant attempts to penetrate the milk processing industry, however, both of them failed.

In the first case, an evident problem was that the farmers were not willing to put their capital together and to form a cooperative or a joint stock company which would hold the shares of the dairy plant.

In the other case, instead of the MMC buying a dairy plant, the processing was contracted with dairy companies and the MCC started to sell dairy products under its name. The current manager of this MMC sees the failure of that attempt in three causes:

- The lack of the marketing management experience of the management for penetrating the wholesale/retailing markets;
- The cooperative was unable to control processing costs; particularly it was a problem when food prices fell under the pressure in 2009;
- There was an insufficient mutual trust among the members and particularly between the manage-

Table 8. Questions on integration with milk processing industry

	L_MMC1	L_MMC2	L_MMC3	SM_MMC1	SM_MMC2	SM_MMC3
Importance of its business performance and strategy for the choice of milk purchasers	no	no	medium	high	no	medium
Are you concerned of what is produced from your milk?	no	no	no	no	no	partly
Have you experienced any deeper integration with the processors?	no	no	yes	yes	no	partly
Will you consider penetrating the milk processing industry?	no	no	no	no	no	no

Source: own survey



Table 9. Financing of the MMCs

	L_MMC1	L_MMC2	L_MMC3	SM_MMC1	SM_MMC2	SM_MMC3
Financing the MMC	sales of inputs to members	0.02 CZK/l	0.05 CZK/l sales of inputs to members		volume premium	–
Paid management	yes	yes	yes	partly	partly	no

Source: own survey

ment and the ordinary members. And the trust even deteriorated with business problems. The members accused the management of fraud while the management was disappointed of the little commitment of members to follow their business policy.

### The internal governance

The conduct (market behaviour) of the MMCs is significantly affected by internal institutions and governance. In all 6 cases, the members have to handle all milk through the cooperative. Except L\_MMC3, all selected MMCs follow the rule “one member one vote”; in the L\_MMC3 case, the “one member one vote” rule is maintained for the election of governing bodies (the board of managers and the supervisory committee), for the rest of decisions, it is fully proportional to the volume of sales. The “one member one vote” rule is considered as crucial by most MMC managers emphasizing that for maintaining the trust to the management and the commitment of members, it is important that the cooperative is not controlled by a narrow group of large farms.

Enhancing the mutual trust between the members and the management as well as among the members is an issue of all investigated MMCs. The MMCs use only few instruments for it, mainly: (i) negotiating good price for all members and (ii) transparency of decisions. Negotiation of good price will be most appreciated by the members; however, it is not always possible. Thus most emphasis is put on transparency. The “one member one vote” rule and the regional representation in governing bodies are a part of it, the common and transparent price formula and bind-

ing price to the national average belong to it as well. Distributing information on the price development in the country, the EU and the world and on the position of the MMC price helps to justify the management decisions (Table 10).

Nevertheless, three of the 6 investigated MMC experienced hard times to maintain trust in the cooperative: one when it diversified its portfolio of milk purchasers, the other after the failure of the attempt to expand activities beyond selling milk and the third when it wanted to establish the current cooperative after the break-down of the former one.

Financing cooperative activities is closely linked to the trust issue. In spite of clear transaction cost savings, the farmers are very concerned about the cost of their cooperative. Only large MMCs can afford a paid fulltime staff and they keep it to minimum. The other costs are the accounting, the ICT and legal services and the participation of representatives in the negotiations with milk purchasers. These costs are usually covered by charging each litre of milk, from the volume premiums or from the profit from sales of inputs to members (Table 9).

### Non-participating farmers

Although there are marked/noticeable benefits from participating in a MMC, a large number of farmers sell their milk directly to the dairy processors. In our sample, there were two farms staying outside any MMC. The one with 200 cows left a MMC (with internal problems) recently and its management is discouraged from joining any other in the near future. The other one is a large farm with 800 cows – never

Table 10. Other services of the MMCs to their members

	L_MMC1	L_MMC2	L_MMC3	SM_MMC1	SM_MMC2	SM_MMC3
Supply of inputs with discounts	yes	yes	yes		yes	
Information and education activities	yes	yes	yes	yes		
Advisory/exchange of experience		yes				

Source: own survey

taking any effort to participate in any MMC. In both cases, they sell milk to only one big processor. Their contracts guarantee the volumes (deliveries) but by no means the price. There is even no platform for negotiating price; the price is stated by the respective processor each month (compare with Curtiss et al. 2006). Both farmers trust the processor that they get a similar price like the other milk suppliers.

On the other hand, these farmers appreciated the independence of the collective decision making and they are critical to the levy imposed on each litre of milk by most MMCs for financing their cooperative activities.

## DISCUSSIONS AND CONCLUSIONS

In the section Basic market and production conditions, the dairy market structure we showed that the dissatisfaction with the development of the raw milk market led to the establishment of milk marketing cooperatives. The emergence of the MMCs changed market structure as an underlying condition for balancing the market power between the farmers and milk processors. To understand if it was effective yet, we carried out the case studies on the conduct and performance of the MMCs. In spite of their own specific development paths and diverse organizational, size and location characteristics, they followed the same three principal objectives. All of them have to be regarded as the traditional marketing cooperatives, although one exhibits some characteristics (decision making proportional to sales) of a hybrid model<sup>4</sup>.

The common traditional objectives (guaranteed deliveries, fair price and payment discipline) might seem to be conservative; on the other hand, they probably reflect the unconsolidated situation of the dairy industry.

The interviewed MMCs, however, differ in the strategies to reach their objectives. The main aspects which make the strategies diverse seem to be (i) the economic situation of processing industry in the area and the access to alternative purchasers, (ii) the relation between the size of the MMC and of the processor(s), (iii) the number of the current purchasers, (iv) the personal characteristics of the management staff.

The economic efficiency of processing industry affects the priority ranking of objectives in the MMC strategy. In those regions, where dairy industry declines, dairy plants are insolvent and heading to bankruptcy, the preference is given to securing milk sales.

Once this is achieved, the main interest of the MMC moves to the other objectives. An example of that is the preference change of the L\_MMC1 between 2005 and 2011.

The relation between the size of the MMC and of the processor leads the MMC either to the bargaining strategy if the MMC dominates or to the portfolio (of buyers) diversification strategy in the case of the processor's dominance.

Among the individual cases, two strategies are possible: both the MMC and the processor will diversify their portfolio of business partners, or they will need to coordinate among themselves. The latter calls for vertical integration.

Following the right strategy is essential for the success of the MMC, but it might be limited by its internal governance. While the choice of a strategy is well under the control of the MMC members, its implementation is in the hands of managers. In the interviews, the top managers emphasized the need for transparency of their policy, activities and decisions vis-à-vis the members. In all cases, the effort of the management was to demonstrate to the members that the price is settled objectively and for the benefit of the farmers-members. The transparency of decisions was of a particular importance in those cases when the trust of members had to be recovered after the earlier MMC failure. The personal charisma, skill and leadership of the top manager seem to be the factors contributing to the success of a MMC too.

To save transaction costs, dairy plants seem to like purchasing milk from the MMCs. However, they are concerned of the supplier power, definitely, they want to avoid any dependence on the strong MMCs. The examination of the strength of a MMC with respect to a given dairy processor rests in the assessment of (i) the share of this MMC in the purchase of the given dairy plant, (ii) the volume marketed by this MMC in total and (iii) the number and position of the competitors – dairy plants supplied by this MMC.

In their defence, the dairies will continue keeping in their supplier portfolio quite a few independent farmers. To attract them they may provide favourable conditions to independent farmers comparable with the conditions for the MMC members. In this respect, we can consider the attitude of those farmers as a free-riding.

Those MMCs are powerful which are large and deal with a small number of rather big but competing dairy companies (e.g. L-MMC1, L-MMC3). The risk aversion approach of the L\_MMC2 dealing with a large number of dairy companies might rise transaction

<sup>4</sup>Cook and Chaddad (2004), Nilsson (1999)

costs and prevent the MMC to benefit from the scale; such a safeguard might be costly (inefficient and in the end ineffective).

Because of the economies of scale, one can expect the gradual concentration on both sides in the future. The MMCs might grow up to the size tolerated by the completion legislation<sup>5</sup>. The Mlecoop (the second level cooperative) will, if it integrates deeper, be at the threshold. When such a concentration happens, there will be a question what to do further. One option is the vertical integration with the processing industry. It would require reconsidering the traditional principles of the farmers' cooperation (see Chaddad and Cook 2004). At the moment, however, farmers are not ready for either of these changes also due to the well-known failures.

The new CAP proposal on the common market organisation emphasises the growing responsibility of the market participants for the market stability. In this context, the MMCs are encouraged to take the leading role, regardless if the vertical integration is achieved sooner or later; the MMC may already have the sufficient capacity for taking this role in terms of trust and credit among the farmer-members and the business partners, the experience and market power, as we showed in the analysis.

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<sup>5</sup>This issue is treated in the CMO proposal of the CAP 2020 reform. Under the specific provisions for the individual sectors, the limit for collective bargaining in the milk sector is set up to 33% of the national production.

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