

DOKTORAL (PhD) THESIS

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COMPETITIVE STRATEGIES IN THE DOMESTICDIARY SECTOR, WITH PARTICULAR REGARD TO THE STRATEGIC ALLIANCES

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KAPOSVÁR
2017

DOI: 10.17166/KE2018.006

1. HISTORY AND OBJECTIVES OF THE RESEARCH

In our globalized world the way companies think and do business has changed and is constantly changing. The insecurity of global markets, the problem of sustainability, the constant changing of the consumer demand are just a few of local and global difficulties. All things considered companies are having a hard time becoming and staying competitive. The secret of successful companies is made up from several components, one of which is surely the well-chosen competitive strategy. Multinational companies mostly utilize different kinds of strategies and tend to adjust it to the country's capabilities. Many firms decide to join businesses with another company to reach their goals, which we call strategic collaboration. These collaborations became relevant in the past few decades, both on local and global scale. Their advantage as part of the competitive strategy is that companies reduce the operational risk, can work more efficiently, size-economically, and with the help of joint researches they can better understand and satisfy the consumer demand and also decrease the asymmetry of information.

With my thesis I would like to unfold the *Strategic – Collaborative – Economic* connected nature of the dairy firms active in Hungary. In the conclusion part I would like to present the two so called "hard" and "soft" factors connected to the topic. The dissertation has some side objectives, that I state below:

Side objectives: I/A. First I present the main strategic characteristics of the companies that took part in the survey, so I can identify each firms based on their strategy, and later I will present their main strategic characteristics. I chose to present three sub-areas in the section "Strategy" in my research. (1) *What is the general strategy the company is using on the market,* (2) *Strategy in purchase of raw materials, sources,* (3) *sale.*

I/B. I take a closer look at how the companies' strategy resonate on the consumer side. In short, whether the product range and marketing of manufacturers is reflected. This will be done with the help of a survey, in which 500 consumers were asked.

2. As my second thought I look into the characteristics of the *companies' collaborations*. My goal is to present the collaborative types attributes of Hungarian companies active in this industry today (number of partners, goals, objections, commitment, trust, methods, influencing factors, management opinion). Although collaboration is a question of strategy, I will present the results in a new chapter separated from the strategic attributes.

3. The third objective of this research is to look into the companies' financial background. For this analysis I used a database, that includes the account data (balance, final fiscal results). With this I aim to find connections between the economic performance, strategic and collaborative attributes. I present the results of the financial analysis in the chapter of the given issue.

In the course of my research I created hypothesises for the sub-areas: general strategy, consumer feedback and certain economic performance, while for the issue of collaboration I gathered professional assumptions and questions (table 1).

Table 1

Hypothesis and professional assumptions on the target system of the dissertation

Strategy

Hypothesis 1 (H1): The conscious strategy of the milk processing companies working in Hungary is likely to have a positive financial impact.

Hypothesis 2 (H2): Most of these companies follow different types of strategies, not only one (even if they are not aware of it)

Hypothesis 3 (H3): Having its own raw material basis (raw milk), can mean financial benefits for a company.

Collaborations (Professional assumptions)

Assumption 1 (PA1) Collaborations between milk processing companies are rare, not typical in Hungary, although they would be open for such possibilities.

Assumption 2 (PA2) Collaborations have a positive effect on the companies' financial state.

Consumer side

Hypothesis 4 (H4): Consumers would appreciate products made of domestic sources.

Hypothesis 5 (H5): The companies' portfolio and marketing reflects the demands of consumers well.

Furthermore, I did not separate my hypothesis of the topic economic performance from the questions this issue might raise, instead I presented it as a connected sub-objective. My hypotheses are based on the literature I studied, and on the issues I happened to learn about during the interviews.

2. MATERIAL AND METHOD

2.1. Secondary research

During my *secondary research* I focused on finding information that are relevant and connected to the topic so I can use and present them for the primary research. My investigation was mainly based on a study about competitiveness¹ conducted by the University of Corvinus, Budapest. Also, I used books and journals connected to the topic as secondary sources. The main domestic statistical datas were provided by the Central Statistical Office database. My source of public data of companies was the electronic database of the Ministry of Justice and the provided by the Opten Company Information database. My main sources regarding my international secondary research were the database of EISZ (JSTOR, ScienceDirect, SpringerLink), FAOSTAT and EUROSTAT.

Based on the companies' data I created a database that includes the most important data of the milk processing companies in Hungary. The purpose of the database is to prepare for the primary research and to better understand the nature of today's market. With the help of the database I layed down the main characteristics and specialties of the milk processing market. The database's main parameters are presented in table 2.

2.2 Primary research

My primary research can be divided into three parts, which are shown in table 3. The criteria system of the primary survey is presented in table 4. The methods used for the primary work will be presented in the dissertation in details. The B2B surveys were anonymous, thus I did not include the names of the companies in my study.

¹ Competing the world 2004-2006 and 2007-2009

Table 2**The main parameters of milk processing companies' database**

Goal of the database	1. Preparation for the primary research 2. Laying down the characteristics/specialties of the market
Sources used	1. Electronic Company Information Service, Ministry of Justice 2. Company Information Service of Opten
Steps of creating the database	1. Main filter condition: main activity 1051 TEAOR code 08' 2. Administering the examined characteristics (Microsoft Excel) 3. Summary of Information, Queries 4. Actualization of data in case of new annual report
Data point	132 ² companies
Examined features	1. economic form 2. location, headquarters details 3. regional location 4. amount of active/closing companies 5. company size 6. market share 7. market concentration

*Source: own data***Table 3****The main phases of the primary investigation**

	Goal³	Method	Number of items
Corporate Query „A” („A” B2B)	Laying down companies strategies	List of questionnaires	26
Corporate Query „B” („B” B2B)	Examination of collaborations and strategic alliances	Half structured interview	13/15 ⁴
Consumer Survey (B2C)	Checking results of companies query with consumer demands	List of questionnaires	503 people

*Source: own data*² Data known at the latest update.³ These goals are in relation with those of the dissertation.⁴ Using filtering questions 15 companies out of 26 met the requirements, 13 of which replies could be assessed.

Table 4**Criteria system of my primary methods**

Criteria	Parameters		
	<i>''A'' B2B survey (strategy)</i>	<i>''B'' B2B survey (collaboration)</i>	<i>Consumer Survey</i>
Date of Query	September 2014- January 2015	February 2015 - May 2015	July 2015 - August 2015
Location	national	national	national
Method	questionnaire	half-structured interview	questionnaire
Group of People questioned	management	management	consumers
Base of population (sampling frame)	88	26	Age 18-75
Number of items	26	15 (only 13 is usable)	503 people
Willingness to respond (%)	29,6 ⁵	86,7 ⁶	-
Total market share In 2014 (%)	15,5	13,33	-
Representation	economic form	-	region, type of settlement, sex, age group
Special Sampling Criteria	a) main activity based on 08'TEÁOR 1051 b) excluded: companies under closure and liquidation c) excluded: companies with zero or minus income for 3 or more years	a) b) c) matches with the criteria of ''A'' B2B survey d) using filter questions with regards collaborations	random walk, birthday key

*Source: own data***2.3 Methods used for the research**

I used the IBM SPSS 20.0 and Microsoft Excel programs to process the data I had collected during my research. During my statistical analysis I determined a 95% confidence level with a 0,05 or less percentage rate as a

⁵ 26 out of 88 respondents

⁶ 13 out of 15 respondents

significant connection. For data reduction I applied factor- and cluster analysis. I present the final parameters below (Table 5):

Table 5

Parameters used for factor- and cluster analyse

Factor analysis	
Factor extraction:	Main component analysis
Data authenticity test:	Kaiser-Meyer-Olkin (KMO) and Bartlett Test
Definition of the amount of factors:	Kaiser criteria
Rotation of factors:	Varimax rotation
Cluster analysis	
1. scalar cluster method:	Ward type Hierarchy method
Used scale type:	Interval scale: square euclid distance
2. scalar cluster method	Non-hierarchy K-center method
Number of clusters:	3

Source: Sajtos and Mitev, 2007

All of my methods used in my dissertation are included in table 6:

Table 6

Methods used for the dissertation

''A'' – B2B survey (strategy)	– Descriptive analysis: average, frequency, relative frequency, cross table
	– Factor analysis
''B'' – B2B survey (collaboration)	– Descriptive analysis: average, frequency, relative frequency, cross table
	– Descriptive statistics: average, frequency, relative frequency
Consumer survey (B2C)	– Cross table
	– Factor analysis
	– Cluster analysis
	– Descriptive statistics: average, frequency
Company database	– Colleration
	– Market concentration data (CR ratios, Lorenz curve)
	– Market concentration data (CR ratios, Lorenz curve)

Source: own data

3. RESULTS

3.1. Main attributes of the domestic milk processing companies

There are 132 Hungarian companies, whose main business is milk processing *as of the beginning of 2017*. Out of these companies 110 are working as milk processing firms in 2017. After the financial background analysis, it can be stated that a significant section of these companies do not produce income at all. 56,8% of all (132) the companies make some sort of profit, and if we only look at the working companies we can say that 68,2% of them have income. As for the legal forms, data shows that from all (132) companies 79,5% work with LTD form, 10,6% as share companies, 6,1% as co-operative, 3% as limited partnerships and one company functions as joint venture. 77,3% of the 22 companies in the process of closing are ltd., 9% are share companies and 13,6% are limited partnerships. 11 companies were founded in 2016, six of them as ltd., three as co-operative and two as share companies. *As of the regional distribution*, 37,9 % (most of the companies) are located in the Central Hungarian Region. There is a strong positive relation between the number of companies⁷ and the development⁸ of the region (correlational factor= 0,87), although the location of headquarters do not show the real picture as very often no production is taking place here. There is a poor relation between the regional development and the number of factory sites (correlational factor= 0,096). The reason for this seems to be that most of the milk processing factories were built where former active ones used to be functioning.

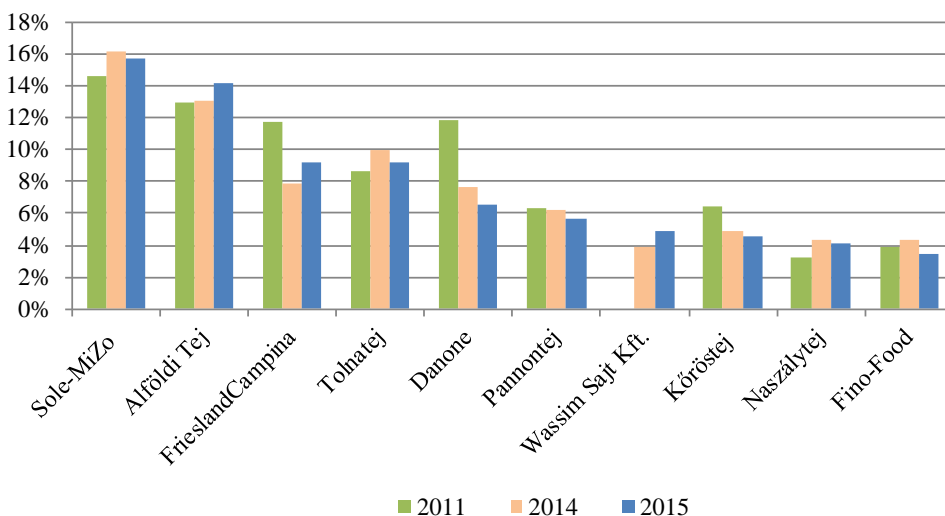
Based on the net income data I present below the milk processing market leaders in the past couple of years (Graph 1).

⁷ in case of market leader processors

⁸ based on GDP

Graph 1

The 10 highest net income of market share of milk processing companies



Source: own calculation based on annual reports

I present the domestic dairy sector concentration with CR scale (Tablet 7) and Lorenz curve (Graph 2).

Table 7

Concentration rates in domestic dairy sector (%)⁹

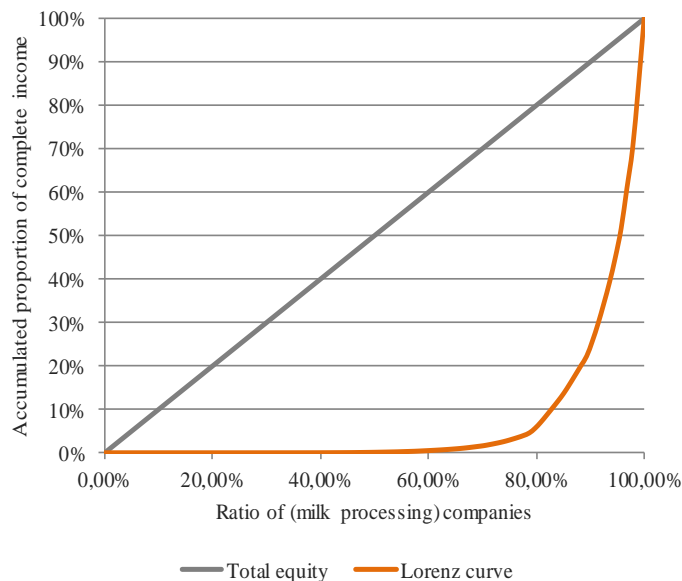
	2008	2011	2014	2015
CR2	29,14	27,85	29,30	29,90
CR3	43,59	39,74	39,26	39,14
CR4	60,08	51,56	47,14	48,37
CR5	66,80	60,22	54,78	54,96
CR6	72,42	66,72	61,01	60,62
CR7	77,77	73,12	65,85	65,56
CR8	81,93	77,03	70,18	70,17

Source: own calculation based on annual reports

⁹ based on net income

Graph 2

Lorenz curve of the Hungarian milk processing market (2015)



Source: own calculation based on net income data

We can state that the *phenomenon of concentration* is to some extent present in our domestic milk processing market, although *based on the CR rates it can rather be determined as average or strong*. The Lorenz curve shows a strongly concentrated market, but it still differentiates from the international processes, because in the Western European market the common structure is monopol or oligopol. All things considered the Hungarian participants of the dairy sector are quite diverse and fragmented, 44% of the working factories do not compete in the dairy market competition at all, based on the sales data.

3.2. "A" – B2B survey results (strategy)

Based on the B2B primary data, it is understandable that 34,6% of the questioned companies have a *standard written strategy*. My statement on the relation between strategic planning and financial performance is the following:

- Strategic planning can possibly have an influence on financial results, which was only partly (examined factors: net turnover, operating income, profit/loss balance, debt rate, creditability, ratio of income/profit, liquidity fast rate company growth rate) backed by the analysed factor system (Table 8).
- It appears that the efficiency of the independent and non-independent companies are different¹⁰.

Table 8

The analysed factor scale with strategic planning and without strategic planning

	With strategic planning (SP)	Without strategic planning (WSP)
Net turnover (value)	more favourable	
Operating income (value)		more favourable
Profit/loss balance (value)		more favourable
Net turnover (relative change)	neither group is dominant	
Operating income (relative change)	more favourable	
Profit/loss balance (relative change)	more favourable	
Indebtedness rate	higher	
Creditability		mostly higher ¹¹
Income/profit rate		more favourable
Liquidity fast rate	higher	
Company growth	neither group is dominant	

Source: own data

On their own admission the questioned groups state that they use *the discriminatory strategy mostly*. They are mainly focused on giving the consumers better valued products. I made a factor analysis to better understand the strategy of companies. Based on the Bartlett test ($p=0,000$) and Kaiser-Meyer-Olkin test ($p=0,349$), we can say that the data is not suitable for the factor analysis. Based on the outcome of the paradox results and the rotated matrix test, I came to the conclusion that some variables do

¹⁰ By independent companies I mean those enterprises that are not part of other companies and do not own another company either, independent legally and in decision. Non-independent companies are ones that are part of other companies or own another company, not independent legally and in decision.

¹¹ during 3 analysed years

not only favour the 1-1 factor but one variable might take part in more factors. *This means that the milk processing companies tested in the research do not necessarily use one strategy, they might use two or more at the same time.*

Considering the product range, we can see that $\frac{3}{4}$ of the questioned groups produce sour dairy products. However this is not the major leading product and the income made from these products are also not too considerable. Little more than half of the factories produce matured cheese and other cheese products, which is slightly surprising despite the low rate of cheese consumption in Hungary compared to the European average. Because of its added value, the income it creates is proportionately higher (together with heated products) so ripened cheese turns out to be one of the end products. Less than $\frac{1}{3}$ of the companies produce liquid milk. This group of products have the lowest additional value, and based on the answers, the income these products add is far less than those of ripened cheese and heat treated dairy products. The two lowest value products came to be butter/butty products and cream/milk products. This result is due to the lower consumption. Still, more groups produce these products than liquid milk. No question that the first on the list of leading products is ripened cheese, because most of the companies named this product as their leading product. Approximately $\frac{1}{4}$ of the companies named more products as their leading product, furthermore it is obvious that it barely influences the amount of leading products of a company, whether they have or do not have a strategic planning.

Raw material supply

50% of the questioned groups *have an own dairy farm*. From this group most of them (69,2%) have one personal estate. 84,6% of those who own one estate are exclusive owners, the rest own a 50% share. 54% of the questioned groups must buy the raw materials from other resources. Within this group 38,5% can cover 15-20% of their needs for raw milk. 46% relies partly or fully on its own supplies. 67% of the production of micro- and smaller companies is made up from their own supplies. Medium-sized enterprises rely on their own supply (if they do) at a rate of at least 35%, but it is more

typically around 50-70%. This data in case of large companies are significantly lower. The financial data of the self-supplied raw material production is as follows:

- Based on the net turnover, operating income and profit/loss balance, those companies with personal raw material supplies have done better in value during the years examined, although the dynamics of change shows an unbalanced tendency.
- I have distinguished two different groups of raw material base with the following attributes (table 9).

Table 9
The tested factor system in case of different scales of raw materials

	Raw material base 1 (RM1)	Raw material base 2 (RM2)
Net turnover (value)		more favourable
Operating income (value)	more favourable	
Profit/loss balance (value)	more favourable	
Net turnover (relative change)		more favourable
Operating income (relative change)		more favourable
Profit/loss balance (relative change)		more favourable
Indebtedness rate		higher
Creditability	mostly higher ¹²	
Income/profit rate		more favourable
Liquidity fast rate	higher	

Source: own data

Creating and using its own raw material supplies, companies might experience financial benefits. Nationwide known companies that own a dairy farm thus work with a higher rate of capacity rarely use their raw milk supplies, they determine the performance of the group ’’RM2’’.

After studying the purchase price of raw milk as raw material, it is clear that the change of the average price of these materials followed the change of other national prices in the past four years. There was a significant

¹² during 3 analysed years

difference between the two average rates in 2010, when the national average was well below the average rate of the companies tested. None of the companies could give me information regarding the costs of using own raw milk materials.

Sales

Among the respondents, a domestic milk processing company typically has six wholesale and 33 small-scale partners. Only a few groups use direct sales, which is surprising because the method is getting more and more popular. Szakály and colleagues (2008) also pointed out its existence. Direct salesmanship happens in the form of customers buying products directly in the shops of the companies.

As a matter of fact, 44% of all the products sold by responding enterprises are *private label products*. There was no significant difference between the commercial products in terms of the size and the financial performance of the companies. Companies with lower income also function better with the methods used by the market leading companies. There is not a significant difference for which commercial partner they are producing for, but Spar, Lidl and Tesco are three of the main partners. Other partners mentioned were CBA, Penny, Aldi, Coop, Auchan and Metro.

With the help of my study on price policies, it is obvious that those companies that have a lower income feel the differentiating strategy to be more pricy. Furthermore the case with companies with more income is that for them the price compensation of differentiated products by smaller companies is beneficial. From this I drew the conclusion that the size of a company –based on income- can mean a bargaining, negotiating power.

3.3 "B"- B2B survey results (collaborations)

Milk processing companies mostly take part in professional associations¹³ (54,2%) and strategic alliances (16,7%). Taking part in a cluster is also common (12,5%), while franchise and licence contracts, consortiums (4,2%) are not typical. Also only a few of them are members of

¹³ Several answers could be given (Question: Are you a member of the following forms of associations?)

a supplier network (4,2%) or a purchase partnership (8,3%). We can see that among the questioned groups it is common to collaborate with a professional association¹⁴. The most common way of partnership is related to importing activities and the least partnership can be seen in the area of sales/marketing. Although my query mainly targeted partnerships in purchase and marketing I also asked the groups about research and development production. The groups did not report of any collaborations in this field of business.

The 'hard parameters of collaborations and their financial effect

The partnerships that were studied were typically *created to cut* company expenses. The minority for better predictability and to have better negotiating position to have positive financial results. I compared the 'hard' parameter data found in the topic-related scientific writings about the Hungarian strategic associations with my own empiric results (Table 10).

The questioned company leaders firmly believe that partnerships *have a positive influence on efficiency*. There was no example of negative experience regarding financial results. I examined how partnerships boost finance on *a professional level in exact figures* (how much of a rise in income took place). None of the questioned ones could answer this question, so I assume companies do not track these changes. In addition I wanted to study *the expenses of built-up and operation*, but these questions also remained unanswered. Managers do not know/ keep track of these data.

As the questioned managers could not give exact data on how partnership influenced their income, I have done my own calculations (Table 11). Considering the whole picture, partnerships do have a *positive impact on financial development*, which tendency is mainly shown in the change of the net income values. In fact, those companies that collaborate, also have better results in operating income and in profit/loss balance.

¹⁴ The joint work with professional organizations mean mainly a membership (e.g.: Dairy Product Council, Chamber of Agriculture, Magosz)

Table 10**Comparison of the main attributes of the strategic association in the domestic dairy market sector**

Parameters	General characteristics¹⁵	Milk processing companies¹⁶ (2015)
<i>functional area</i>	sales/marketing: 35% import/logistics: 21% production: 21 % rest of the functions: 14% R&D: 9%	Main areas in order: 1. "collaboration" with trade unions 2. import/logistics 3. sales/marketing No partnership presented: research and development, other areas
<i>legal association framework</i>	informal: 20% formal: 80%	Mostly formal, partly informal
<i>number of partners:</i>	two partners: 59% more partners: 41%	Similar amount of two-partnered and more-partnered collabs
<i>nationality of partners:</i>	Hungarian: 69% EU: 22% Out of EU: 9%	Typically domestic, few EU partners
<i>partner is competitor/not competitor</i>	competitor: 51% not competitor: 49%	Mostly not competitor
<i>impact of partnership</i>	positive: 79% negative: 5% no change: 16%	Mostly positive, no change according to some leaders

Source: Buzády and Tari (2005) and own data

The companies that formed partnership clearly had more positive indicators in almost every examined year. Furthermore I find it important to emphasize that company managers also experienced positive financial benefits of collaborating with other firms, however the market does not confirm these data numerically. It is likely that partnerships on a manager level are on a rudimentary state.

¹⁵ Source: Buzády and Tari, 2005

¹⁶ The experienced cooperations altogether.

Table 11**The factor system in case of having partnership and not having partnership**

	No partnership (NP)	Partnership 1 (P1)	Partnership 2 (P2) ¹⁷
Net turnover (value)			favourable
Operating income (value)			mostly favourable ¹⁸
Profit/loss balance (value)			mostly favourable ¹⁹
Net turnover (relative change)	mostly favourable ²⁰		
Operating income (relative change)			favourable
Profit/loss balance (relative change)			favourable
Indebtedness rate			lower
Creditability	none of the groups are dominant		
Income/profit rate			favourable
Liquidity fast rate	mostly higher ²¹		

*Source: own data***The "soft" parameters of collaborations**

The next segment of my research targeted the study of the less tangible part, the so called "soft" parameters. During the evaluation of the collaboration test results, company managers had the following details to share:

- *Personal relationship, level of satisfaction and confidence*: Equally positive results
- *Rate of commitment, mutual objectives, mutual dependence*: Rather moderately positive results (worth mentioning that full dependence is not the goal of companies in a partnership)
- *Level of collaboration in Hungary today*: quite low, or no partnership at all

¹⁷ without professional organizations

¹⁸ in the 3 analysed year

¹⁹ in the 3 analysed year

²⁰ in three years dating back from previous year, for 2 yoers starting in 2011 as base year

²¹ in 3 analysed year

- *Main obstacles of collaboration:* mainly because companies have different interests, did not fulfill expectation, the missing engagement of state, incorrectness of partners or the different strategic goals of companies
- *Main factors of a successful partnership:* confidence, reliability, commitment, high-standard product, good quality. Some more detailed factors were also mentioned (see more in the dissertation):
 - ~ Shared budget for each interest group
 - ~ Shared product portfolio and shared brand
 - ~ Standing against cheap import from abroad
 - ~ Joint opposition against retail chains

It serves as a meaningful information, that half of the managers did not answer at all when asked about the influences collaborations have on a companies success. I assume they are unable to mention possible solutions, or they do not want to deal with this issue.

Based on the interviews with the company leaders I drew the conclusion that most of the question ones do not handle this "problem" on the level a leader should. By that I mean that creating and maintaining partnerships requires a modern approach of management, which as I see it is not yet present on this market.

3.4. Comparison of the strategy of milk processing companies and the consumer group

I have made a comparison between the processing and the consuming groups based on the previously mentioned factors. The detailed evaluation of the consumer survey can be found in the dissertation chapter 5.4.

Main strategic policies

While testing the strategic policies I found out that most of the processing groups follow a differentiating strategy, but when examined more closely it was obvious that most of them practise more than one strategies and most of the times they do not do it on purpose. According to most of the consumers, they consume dairy products as part of their healthy diet, also

reliability and good traceableness were mentioned as main reasons. Interestingly the demand for specialty products comes after.

In the course of testing how *well consumers know the producer and the brand*, and the difference between them, it was clear that people who live consciously healthy lives are the ones who are aware of the manufacturers and do not mix it up with the definition of brand/branding. The test on knowing the brands had a positive result, identifying 74,1% of the products. However in many cases the answers were not exact or were sketchy. Two observations are definitely worth mentioning: Many consumers thought margarine to be a dairy product and most of them can not connect the products with a brand to its producer (for example if the product's name does not associate with the company's name). At the same time I experienced a tendency of „hypocrite” answering when asked about the local patriarchy phenomenon. According to the consumers they prefer to choose locally produced products to specialty products, but after a more detailed study it turned out that consumers do not know the products that are being produced in the area very well so they can not even buy their products consciously.

As for product composition there is a significant distinction between the producers and the consumers, especially on butter. I find the reason to be the notional misconception between butter and margarine, that was presented before by other researchers. In my dissertation I pointed out how the role of butter has changed in Hungary. The repositioning of this product can open up new markets and possibilities for producer groups. In case of the other dairy products I did not experience a sharp difference between the producer and the consumer groups.

In the course of the *cluster analysis* three clusters were identified, that are helpful to better design a company strategy. It turned out that the '*Mass product consumers*' could be addressed from the most sides. Besides assuring the low price and availability they can be addressed with the issues of health and taste. For them repositioning of the mass products could also be effective. Furthermore I believe that people of this group are most likely to choose imported goods if those are cheaper than the domestic ones. That is why they need to be oriented towards Hungarian products. The '*Open for innovation*'

group can be easily addressed, from a point of view where new products are presented. It would be beneficial for producers to produce special, functional products for this group, the ability to afford these products would not mean a problem to them. The disadvantage of this group is that they are hard to keep, their demands need to be observed constantly. As for the '*Hypocrite local patriachs*' it is difficult to determine the needs of this group. Emphasizing localism is seemingly important to them so they are probably open to local products. However this group is full of contradictions, because they tend to buy products that are not necessarily local as they claim.

In case of private label products we can speak about a significant market because nearly 80% of consumers buy such products. As for the processing side we can state that nearly 44% (on average) of manufactured products are own branded goods. In this case I find the producing attitude satisfactory as a nearly 50% is a large proportion in the production of commercial brands. It is important for them to be present on the market with unique and own brands.

Base material

The analysis showed that 50% of respondents had a milk producing site of their own but only 29,2% produced liquid milk as a product. The leftover is probably exported because of the higher purchase prices. After cheese and heat treated milk products liquid milk is the most often mentioned ready-made product. The results of the consumer interrogation however showed that liquid milk is the most commonly consumed dairy product, especially among women. The corporate questioning revealed that the profitability of liquid milk falls behind that of cheese and heat treated products. The consumer answers showed us that the liquid milk (and other dairy products) could be repositioned using own raw materials. Nearly 80% would buy from producers who make the raw material themselves. In this case 5-15% would be the extra cost that the market could still tolerate, therefore the processor might settle a *hypothetic reservation price*. Women are more willing to purchase such goods than men. In particular women aged 18-39 could well be targeted with these products. Basically wealthier customer would pay a raised price. Those would pay more for the products

who know they are made from own raw materials. If producing own raw material could be done in an economical way, this would definitely result in a competitive advantage instead of buying it which would increase the price. Corporate marketing strategy could be built on focusing on the own base material.

Marketing channels

From the corporate side it was shown that retail and wholesale stores (chains) are the main characters of daily product sales, direct marketing was marginally present. According to customer replies the main places of purchase are still the hyper and supermarkets as well as discount shops. The two sides correlate in this aspect. For another thing, consumers show a greater demand for direct selling as opposed to companies. Processors will have to pay more attention to this sort of demand in the future. Direct selling can be developed in two ways in case of the companies. Firstly, running own shops in towns/villages, or even in markets. Secondly, online selling will prove to be an extremely good alternative of producers considering direct selling. Mainly those processors have to consider this opportunity that make special products (e.g.: special flavour or texture) but, due to their size, are not capable to produce vast supplies of ready-made goods and be present on the national retail market. Although distributing food products online, in particular non-durable ones, is still at an early phase, in my opinion the digital world will make a change.

4. CONCLUSIONS, RECOMMENDATIONS

Market structure

We can conclude that the Hungarian dairy industry shows a rather diverse picture. Currently 44% of the market participants are not present in the dairy competition. We have to talk about a fairly fragmented market structure because 10-20% of the annual turnover is accumulated among the 80-90% of competitors with the fact that 132 milk processing enterprises (as main activity) were operating on the market at the time of the making of this analysis. On the other hand, the concentration values and the Lorenz curve showed a concentrated market. In the light of the western European milk processing market structure we can state that the one here does fall behind in comparison.

Suggestion: In our case the market structure would be „healthier” only if the mentioned enterprises, currently not participating in the competition, left the market. A monopolistic or oligopolistic processing structure could not be necessarily realised in Hungary. There is a need for middle-sized and large companies which are present nationwide with their products and at the same time smaller ones are also desirable producing unique products. To achieve this, a scale of value added products and modern corporate strategy is inevitable.

Strategy

Besides the special Hungarian dairy market structure I still suppose that there are enterprises where a competent strategy resulted in measurable financial effect.

Hypothesis	Justified/Rejected	Detailed result
H1: The competent strategy of the Hungarian Dairy enterprises might have positive financial effect.	Rejected	Chapter 5.2.1.

Based on this research, we can state that although we can identify connection between strategic planning and financial result, the datas do not support a related tendency. We have to bear in mind that during the analysed years the domestic dairy market faced a number of challenges (quotas,

Russian embargo, Chinese import, military conflicts), therefore the decreasing values can be considered as improvement. With regards to this I would like to make a personal comment: In my opinion the replying companies' strategy does not show an effectiveness to significantly influence the financial outcome. Strategically, the majority of the dairy sector is not up-to-date and modern enough. This observation of mine is parallel with those of other researchers' findings, who drew the same conclusion as far as the small and middle sized sector management skills and strategic preparedness are considered²².

I have set up my second hypothesis followed by revealing the strategic deficiencies of small and middle sized firms and based on the information collected from B2B questionnaires.

Hypothesis	Justified/Rejected	Detailed result
H2: The majority of Hungarian dairy companies do not follow a standard strategic guideline. Instead they follow several ones (even though not consciously)	Justified	Chapter 5.2.1.

After a factor analysis I proved that the dairy companies follow several strategies at the same time. However, it required further analysis to prove if they use them consciously or randomly. During the examination of the financial effects (H1) some relation could be shown but I had expected a more definite relation so I attributed this to the less effective strategy. In addition, the random strategy is supported by another observation: the executives frequently showed attitude without concept.

Suggestion: If strategic planning does not exist yet, enterprises should introduce one. Where it already exists, it should be made more precise in accordance with consumer demands. I think planning a strategy does not depend on the size of the company. It is vital for managers to acquire and deepen strategic skills.

Within strategy, during the examination of raw material basis we could conclude that half of respondents owned a milk producing site. Slightly over half of them are forced to purchase the majority of raw material from elsewhere. Also, less than half of the manufacturers are capable to averagely

²² Varga (2015), Hugi and Takácsné (2011), Salamonné Huszti (2000), Karda (2009), Sára and colleagues (2014)

cover 10-20% of their need for raw milk. The rest of companies mostly or completely cover the annual need from their own raw material. Half of the ones with own site have a written strategy but only one in every five make one where there is no own raw material. The enterprises with own site perform better financial results than the ones without own raw milk basis, but the dynamics of positive results is more fluctuating. In case of raw material coverage the „Raw material basis 2” values are better which is due to knowing the processors with more nationwide popularity among consumers. According to the results I consider my third hypothesis justified.

Hypothesis	Justified/Rejected	Detailed result
H3: The own raw material basis (raw milk) might ensure strategic and financial advantages.	Justified	Chapter 5.2.2.

Suggestion: It is highly recommended to make financial analysis of each division. It would be important to examine the level and efficiency of milk production. The findings, however, are interesting because the own produced raw material, for the purpose of secure raw material supplies, means a strategic advantage.

Cooperations

During corporate interrogations half of the companies claimed they were participating in some form of cooperation. It could be seen that the proportion of real cooperating companies was 13,6%²³. Furthermore, most of the executives found national cooperations very poor. As for local milk processing, as opposed to the national one, selling and marketing is where cooperation is least typical while research and development is where it is non-existent. My expectation that the processing market would be open to cooperation also became justified. During the interviews over half of the respondents were open to working together. Besides, there were the uncertain ones and only a small minority of executives refuse the possibility. The refusal here has two reasons: lack of concept, incompetence and the individually successful attitude. It is to be noted that one of the main problems is the way of cooperation. Several executives had no idea „how”

²³ Real cooperation was experienced at 12 companies. This, compared to the sampled frame (88), is 13,6%.

and „what” to do for this. The modern management attitude is even less present in this market. Consequently I consider my first professional supposition justified.

Professional assumption	Justified/Rejected	Detailed result
PA1: In Hungary the number of cooperations is low among milk processing firms. However, they would be open for working together	Justified	Chapter 5.3.

Suggestion: It would be worth strengthening the cooperation in the field of selling/marketing because during the interviews selling was the most concerned issue. To improve innovations it would be required to create research/development cooperations in the long term. In the short term the non-technological innovations could be the solutions for the financially less stable processors. The interviews also brought up particular recommendations (see chapter 5.3.3.) on the issue that might be good initiatives for cooperations. The willingness to cooperate would be necessary. I am deeply convinced that this is the question of management knowledge and supposes a skilled managerial attitude.

All in all it can be stated that cooperations have significant positive financial influence, which, in terms of absolute values, was demonstrated mostly in net turnover. However, the operating balance figures showed better performance in case of cooperating companies as well. As for the relative values, it is clearly proven that the cooperative firms’ results are far better in every analysed year. Moreover, I have to highlight that the executives reported positive financial effects in every case but the market does not support this with numbers, so it is probable that cooperations at managerial level are immature and not tested. In the light of the results I find my second professional supposition justified.

Professional assumption	Justified/Rejected	Detailed result
PA2: Cooperations might have a positive influence on the financial state of companies.	Justified	Chapter 5.3.

Suggestion: I suppose a properly prepared cooperation could be a good strategic alternative mainly for companies with smaller production

capacity and funds. Above all, cooperations should be initiated and operated through a modern management concept.

Consumer feedback

I have justified my fourth hypothesis because nearly 78% of respondents would rather purchase goods made from own raw material. The willingness to pay higher price for this was averagely 5-15%. The main target customers could be under-40 women with a salary of higher than average.

Hypothesis	Justified/Rejected	Detailed result
H4: The own raw material would be welcome by costumers.	Justified	Chapter 5.4.

Suggestion: In this strategy I suggest using marketing tools that really make the customer be aware of such positive features of the product. If the production of the raw material can be done at lower cost, that is to say as if the raw material was purchased and the end product was sold at higher cost, this would definitely mean competitive advantage. As liquid milk profitability falls behind that of higher value added products, it is advisable to reposition this product accordingly.

We can claim that there was a significant difference between the customer and manufacturer side in terms of the range of products, particularly those of butter. It might be caused by the notional confusion of butter and margarine which had already been proved by former researchers. However, I explained how the importance of butter is changing in Hungary. In case of other dairy products there was no such significant difference between the customer and the manufacturer. Neither have I found extreme difference among the demand for commercial brands. Analysing selling/purchasing channels I found no significant difference as for purchasing points either. But at the same time I raised attention for the opportunities of direct marketing, especially the possible spread of online food product distribution. As a result I consider my fifth hypothesis justified.

Hypothesis	Justified/Rejected	Detailed result
H5: The customer demand is well reflected in the portfolio and selling.	Justified	Chapter 5.4. Chapter 5.5.

Suggestion: Repositioning butter might open new markets for processors. Exploiting direct marketing channels could become part of a future strategy, especially among manufacturers of unique, low-capacity products.

After analysing customer interrogations it became clear that the consumers who considered themselves as conscious local product consumers less know milk producers near their hometown. Improving local patriotism could create a potential market for milk factories. They ought to be present in the county/region more consciously and by this I do not mean brand presence only. They should make customers be aware of their existence and work. If we take for example a smaller company (and admittedly they are less well-known by the public) brand presence can prove to be insufficient in lack of capacity to get the local firm to be known by local customers. On the other hand, if it becomes known by the consumer, he will probably search for or purchase the product in the future. In order to achieve a well-thought marketing strategy is needed.

5. NEW SCIENTIFIC RESULTS

From my research the following new and innovative findings have been outlined:

1. While analysing the domestic dairy sector, I have found that the development of a region does not define the location where competitors would like to be based.
2. Financial performance of the conscious corporate strategy mainly appear in higher net turnover compare to companies without strategy planning. With the help of factor analysis I have justified that dairy processors operate several strategies at the same time, most of which are not planned.
3. My research has proven that milk producing enterprises using their own base material can have a positive influence on financial efficiency.
4. I have defined the components of collaborations and associations of dairy producers and their unique diversity compared to other industries. During my work I have defined that 13,6% of Hungarian milk producers operate real cooperations. The Hungarian milk processing associations have positive financial effect which is also experienced at managerial level, although it is not measured in figures by the market.
5. Using factor and cluster analysis I have defined three types of consumer clusters, which could provide help in finding dairy target markets: the 'mass consumers' the 'Open-minded to innovations', and the 'hypocrite local patriots' In addition I also concluded that almost 78% of respondents would be willing to buy products made from own raw material even at a readiness to pay an additional 5-15%.

6. PUBLICATIONS IN THE TOPIC OF DISSERTATION

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Tejgazdaság: Tudomány és Gyakorlat 70:(1-2) pp. 47-51. (2010)
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Proceedings of the 4th International Conference of Economic Sciences
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Könyvrészlet /Konferenciaközlemény /Tudományos
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