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SCHOOL

THE IMPACT OF QUALITY ON THE COMPETITIVENESS OF PORK VERTICUM

Thesis of the doctoral (PhD) dissertation

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INTRODUCTION

Present situation and requirements that defined the aim of the research

The priorities of the agricultural-rural development policy within the 2nd National Development Plan (Europe Plan) between 2007-2013 are among others: strengthening the competitiveness of agriculture and forestry and especially improving the quality of the products, protection of the environment and environmental management.

Related to the EU accession it is stated in the domestic professional literature that in those sectors which do not receive support, e.g. swine sector, the single European market will surely bring tighter competition with all its opportunities and risks. The life and productivity of these sectors will depend on external factors, on the supports of the Hungarian budget, and also on the competitiveness of sole proprietors and economic associations.

The new European food regulation stresses the responsibility of the producers, the "whole product line" approach, the traceability and the carefulness. Voluntary quality assurance and the implementation of related systems play significant role. Quality safety, which is a conscious responsibility taking and can be realized with effective methods and systems, is the fundamental requirement of staying on the market. Though, at the same time due to competitiveness approach the emphasis has been put on quality management rather than quality assurance over the past few years.

But we also must mention the statements of Beládi et al (2005). They say that the different quality assurance systems can be regarded as rather obstacles in stepping onto the market, whose existence does not mean any advantage to the suppliers, but their lack does. And their aim and effect do not include only the assurance of quality. A question can be raised namely that under what market conditions are the quality requirements are kept and how the consumers evaluate the existence of quality assurance systems.

Theoretical and practical starting points

The abovementioned expressions like competitiveness, sustainability, quality safety are in close coherence with each other and also with quality. These coherences are well presented in the model made by Csete and Láng (1999).

According to the authors food quality is a complex system consisting of biological, technical, technological, public health, consumer, market, nutritional, environmental, food safety etc. factors. In accordance they defined the major dimensions of quality: social – economic (competitiveness) – natural environment (sustainability), product line, raw material and end product. They say that it is key importance to have convergence, coherence and rational development among the dimensions determining the quality improvement (Csete-Láng, 1999). The consequence of the model is that the dimensions of quality are also the elements of quality improvement.

Thus, the improvement of quality can only be imagined as a complex system similar to technical development.

In my dissertation I analize the coherences of quality and competitiveness and the conditions of competition according to the dimensions of Csete and Láng (1999) since the 90s up to now. With such an analysis we can easily define the future directions of quality improvement and also the obstacles of realizing the quality strategies.

Aims

My major aim is to define the sectoral strategy and the development fields in accordance with the dimensions mentioned, with literature and empirical analysis.

In the empirical part of the dissertation I analize the players of meat sector based on the following aspects, looking for the solutions for the following questions:

- What groups constitute the meat industry at the moment?
- How can we characterize the different meat industry players and the different groups from quality improvement point of view?
- What are the future strategies and development plans?
- What can be expected concerning the future role of the groups?
- How can the quality improvement be imagined in the verticum, and what are the future development directions?

Taking the borders of the research into consideration I analize the players in the meat industry only, because the development opportunities of the stages of product lines at lower levels also basically depend on the opportunities of processing industry.[1]

The situation and the operational conditions of the agricultural producers primarily depend on the processing industry. In the developed countries with competitive food production, it is coordinated by the processing industry. Although processing industry is adjusted to the needs of consumers and traders, we cannot forget that the competitiveness of processing companies highly depend on agricultural production.

The variables applied in the grouping and analysis of the meat industry players have close connection with the issue of vertical coordination. It has the following reasons:

- Efforts on quality can fail due to the disharmony of the different agricultural product lines regarding time, share, interest, power, modernization and productivity.[2]
- Based on the literature it can be stated that at the moment quality is provided along with the product line, thus most of the problems are connected to the structure and coordination in quality improvement.
- The required quality safety and traceability have close relationship with the level of organization in the product line and with the harmony among the interests.
- The requirement included in the Commission's food hygiene regulation is partly connected to the abovementioned, saying that the application of HACCP systems must be expanded to the basic material producers too.
- The level of coordination of the product line highly influences the effectiveness of quality management systems.

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[1] Potori, Udovecz, 2004, Papp, Nyárs, 2002

[2] Csete, Láng, 1999

- The problem mentioned by the meat companies in the survey is the lack of coordination.

2. MATERIAL AND METHOD

The material background of the research consists of the critical comparison of both national and international literature which provided the basis for the comparison of former experiences and opinions. I studied the morals of wide range of theoretical and practical analysis in accordance with my research aim and the logical frame of the dissertation. In my dissertation I analize the topic along with the three dimensions of the model by Csete-Láng (1999) (environmental, product line, product), since these aspects appear almost in every literature. While the model provides a good frame for studying the topic, making it possible to classify the related fields too. The model is very spreading, some dimensions have close relations with the others, thus I analize the dimensions and the fields with the required detailedness. I used 5 main groups of the processed literature (social, economic, natural, product line, end product dimensions).

An important prerequisite of the research was collecting, processing and analysing a lot of data and information. I adjusted the main sources of the data and the classification during the processing and analysis to the research tasks.

Table 1.

Companies approved by the EU according to activities (December 2005)[a]

Activity	Number of companies	Questionnaries arrived	Rate of questionnaires arrived to the total number of companies, %
V+D+F	19	8	**42**
V+F	5	0	**0**
V+D	10	4	**40**
V	20	1	**5**
F	48	6	**13**
D	8	2	**25**
DF	14	8	**57**
Total	124	29	**23**

Source: own calculations

After the interpretation of the national and foreign publications I compiled the questionnary and drew up the most important hypotheses. I distributed the questionnaires by post. I chose the companies of the survey on the basis of the list of registered companies displayed on the website of the Ministry of Agriculture and Rural development and of the National Institute of Food Analizing. The different groups of companies got different questionnaires because of the different features of the two groups. I addressed the questionnaires to the production managers in the case of larger scale companies, and to the heads of the companies in the case of smaller ones. Out of 124 companies registered I got answers from 36, and 29 could be evaluated, which is 23,4 (Table 1.). This also means their share in the total number of

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[a] Legend: V+D+F: slaughtering, slicing; V+F: Slaughtering and processing; V+D: Slaughtering and slicing; V: Slaughtering; F: Processing; D: Slicing; D+F: Slicing and processing

companies registered by the EU producing meat products or fresh meat according to December 2005. The rate of willingness in answering was 29%.

In the case of approved and derogated companies the questionnaires were sent to 153 farms (52,6 %), and 151 companies. 4 were sent back because of misaddressing. Thus, out of 149 farms 41 sent back replies (27,5%), out of which 39 could be evaluated, which is 25% of the distributed questionnaires. In the case of derogated companies I sent questionnaires to all of them (14) except one (because of lack of address). Out of the small scale (approved) companies (276) every second got questionnary, but separating them according to activities (Table 2.). I always considered only the swine farms or farms dealing with swine among others. Data represent 29% of the derogation farms and 13% of the approved farms.

Table 2.

Small scale companies according to activities (January 2006.)

Activity	Number of companies	Questionnaires arrived	Rate of questionnaires arrived to the total number of companies, %
V+D+F	18	4	**22**
V+F	24	2	**8**
V+D	4	1	**25**
V	98	13	**13**
F	103	11	**11**
D	9	0	**0**
DF	20	5	**25**
Összesen	276	36	**13**

Source: own calculations

Beside the approved and derogated farms 5 derogated farms sent back questionnaires. Two of them are processing (so they are already among the small scale processors) and only derogated for slaughtering, while three of them are derogated for slaughtering. According to the list dated January 2006, there are 15 derogated farms operating, who all do swine slaughtering. 6 companies are approved as processors, so they are among the small scale companies too. 7 companies are derogated slaughtering companies. 2 have approved processing unit and also derogated slaughtering house.

In total, 68 filled and evaluable questionnaires arrived from the different groups of companies (277 units).

First part of the questionnary covered the issues related to quality and traceability, the second one covered questions on past and future investments, while the third was about the purchasing channels, and the fourth and the fifth were about the main data of the enterprises. The sixth part, which is also the last one, covers the main advantages and disadvantages of EU accession and also an open question. I tried to compile the questions according to the quality-competitiveness-strategy relationship, not to make it too long. The questions about the general data of the enterprises in the case of registered companies ask about the relations with the retail chains in 7 ranks, while the questions about the quality requiring information about the obstacles of the operation of the branded meat programs in 5 ranks. The questions about the enterprises contain questions on the structure of supply and distribution channels for both

company gropus. I recorded the data in Excel format, then I interpreted them with SPSS 14.0 software.

I examined the mutual relations between the variables chosen with factor analysis, i.e. I tried to define the coherent variable groups.

I have done cluster analysis with the variables applied in factor analysis. My aim was to classify the observatory units into relative homogenious groups based on the aspects chosen. I try to find such clusters whose elements are similar to each other and different from other clusters' elements. The indicator suitable for showing the similarity/difference was the Euchledes distance, the method was K-centre cluster analysis. Before doing the non-hierarchical clustering I have done hierarchical clustering to define the number of different groups. Due to its dendogram it was suitable for discovering the hidden structures. During the hierarchical clustering the „furthest neighbor method" was used to differentiate the relative closed groups and to define the distance between the elements the quadratic Eukhledes distance method was applied.

3. CONSEQUENCES

According to the dimensions of the quality, the future directions of quality improvement and the obstacles of realizing the quality strategies are the following:

1. Recently the Hungarian meat industry can be characterized by the strategy of selling at a depressed price and the survival strategy, which is largely caused by the retailers. However the strategy of the "low price" or the "cheap bulk goods" (mass-product) can be no longer maintained, which is confirmed by the fact that despite of the decreasing real price, the pork consumption is decreasing steadily. The main reasons for this are the changing preferences, or taste of the consumers, and the shifting of these preferences to other products. So the increasing income of the population does not result in an automatic increase of the pork consumption, the change of the consumers' attitude to red meat, and the way of their thinking are needed to change these tendencies.

2. The results of the empirical research works prove that the perception of pork is very negative in the whole society, and also that the Hungarian consumers will demand processed premium products and they will be ready to pay a higher price for it. However the competition with the import products is very sharp in the field of these premium products. The situation is shaded and the chances of the domestic products are improved by the fact that the Hungarian consumer appreciate the sensory product attributes especially the freshness and the palatability at the most in connection with the meat products and also that the origin and processor of the product become a more important factor at the consumers' food choice. It is very important that the actors of the supply chain can make the best of this opportunity which needs co-operation and collective promotion and campaign essentially.

3. My empirical research connected to the field of pork consumption only indirect. In the survey I asked the registered plants about the operating problems of the branded meat programme. It is an interesting result that the lack of the able demand is considered as the leading problem of the certified quality assurance schemes for pig meat (Certified/Branded Pig Meat Programmes) by most of the registered plants. The insufficient promotion connecting to the schemes hardly falls behind this aforementioned reason, which emphasize the necessity of the co-operation and the collective promotion to increase the competitiveness of the sector.

4. The most important change relating to the measures of food safety and hygiene in the regulation of food manufacturing is that the category of so-called "approved plant", which can sell product only in the domestic market, will expire and only the registered plants can operate and sell products in the whole territory of the EU and to third countries. Of course the suppliers of a registered plant must be registered also. (Of course the raw materials arrive in a registered plant must be derived from a registered plant also.) These plants must operate according to the new hygienic regulations and the approval and control of the operation are the competences of national authorities. In connection with these requirements it can be stated that the vast majority (87%) of the plants surveyed in the present research wants to fulfill the requirements needed for the registration or some of them have already done the necessary impovements.

5. To fulfill the requirements of the new food regulation (supply of information, traceability) the meat processors must get in closer connection with the farmers who provide slaughter animals and they have to apply a system of requirements against the suppliers. The HACCP method, which operates professionally, provides a good opportunity to develop such a system. In connection with this it must be submitted that 31% of the surveyed registered slaughterhouses require the supplier to apply the

HACCP method. At least a part of the slaughter pigs should derive from a farm which implements a QAS or Food Safety System at each of the registered plants, while the slaughter pigs derive solely from farms which implement a QAS (including HACCP) at an astonishingly high rate of the approved plants (65%).The situation is much better in the case of the processors, since their suppliers are mainly slaughterhouses and cutting plants which had to implement the HACCP method obligatorily from the beginning of 2002. To utilize these advantageous opportunities the applied food safety and quality management systems or solutions must be inspected and it must be determined whether there is a need to complement them from the aspect of the requirements of food-safety, quality, or consumer protection and whether these systems operate effectively enough.

6. In the relations between the processors and the farms poducing slaughter animals my hypothesis was that the traceability is much more problematic for the processors than for the slaughterhoses. This hypothesis proved true in the case of the registered plants, but it was not verified for the approved plants, which can be explained by that the buying of small-scale pigs is rather typical for the approved plants. The origin of the products cannot be or can be partly traced back to the farms at 31 % of the registered processors and at 15 % of the registered slaughterhouses. With a slight difference but smaller group of the approved processors (16%) have problems with traceability than approved slaughterhouses (19%). The problem could be the building-up of the facultative inner traceability systems in the case of the most slaughter-houses.

7. In connection with putting emphasis on the protection of the nature, the food-safety, and the differentiation of the product, organic farming and organic pork production become sustainable alternative for some of the actors in the supply chain (stakeholders). It was often claimed in many publication that those who can not afford environmental investments costing millions can integrate into organic farming systems most easily and that the small - and medium – sized firms of the meat industry can take a chance from organic production. However, attention must be called to some limiting factors of the organic production. It causes problems also in the conventional producing forms that no agricultural area belongs to the 25-30% of the present livestock and there is a higher rate of those who have inadequate area. On the one hand many stock-breeders have problems with the allocation of the manure, and on the other hand the conversion to organic production can only be imaginable if the soil-plant, plant-animal, animal-soil cycle is provided. (At the moment the animal density in the organic farming is very low, which excludes the evolvement of the cycle.) From the point of view of the market it must be emphasized that the Hungarian producers producing organic products mainly for export purposes are facing a sharp competition in the common organic market. That is why the producers who want to change to organic farming must improve the production structure, the level of processing and stabilizing the distribution channels is also necessary. The producers also have to prepare to satisfy the domestic demand. In connection with this it must be considered that the consumer price of an organic product is much higher than the price of a conventional product, which sets a limit to the consumer interest in any case. The other reason for the limited consumer interest is the unsettled domestic market, which relates to the export orientation of the Hungarian organic farming. It can be stated also that the Hungarian consumer's negative attitude to the red meat impresses its effect upon the organic production. This effect can be demonstrated by the proportion of the pig production (3,4%) in the whole organic production in 2005.

8. One of the most important tools to achieve the desired quality improvement is the incentive price system, which is also an effective way to influence the quality.

Nevertheless, one of the insufficiencies of the Hungarian SEUROP grading system is that no adequately evolved, market based price system belongs to it. Therefore the pig grading system could not exercise its effect without public support before the EU accession. By the EU-accession this form of intervention was finished and it also emerged from the survey that one part of the slaughterhouses do not pay the farmers on the basis of the S/EUROP classification for pig. 16 % of the surveyed registered slaughterhouses, and almost the half (48%) of the approved and derogated slaughterhouses do not take into consideration the results of the grading when settle the accounts with the farmers. In the slaughterhouses, where the result of the SEUROP grading is taken into consideration when settling accounts with the farmers, the delivery price is calculated on the basis of SEUROP grading only between the farmer and the slaughter-house and the carcasses are usually sold independently of the grading. Consequently the carcasses containing more lean meat on the basis of SEUROP classification and bought at a higher price cannot be sold at a price which is in accordance with their quality. All of this is in strong relation with the structure of the domestic meat industry also. In Hungary one of the remains of the former trust meat company structure is that the big meat processing plants were also slaughterhouses, so the primary processing was not separated from the further processing, and the trade of the carcasses did not operate as adequately as in those member states of the EU which have a developed pig sector and where these two activities of the meat industry were separated. Consequently, there was no interest for a long time to sell the carcasses according to the grading and to extend the price calculations. Beside the afore-mentioned in the member states of the EU having the most competitive pig sector developed market institutions and market organizations of the producers (auction, producers' groups) operate and provide better bargaining power for the producers and make it possible that they can exercise their interest. To settle the above-mentioned problems the co-operation between the product board and the interest protecting organisations would be very important.

9. The followings must be emphasized in connection with the grading problems of the slaughterhouses with small capacity: The European Union makes the SEUROP grading optional for the small sized slaughterhouses with limited slaughter capacity. The product selling of such slaughter-houses is geographically limited and the member states have a reporting obligation in the case of such slaughter-house. In order to keep the "black slaughtering" back the Hungarian regulation was stricter for a long time, this means that the grading was obligatory for each slaughter-house. But the circumstances of the enforcement of this regulation were not given, so the unmanageable anomalies became usually. According to the data published by the Association of the Meat Processors and Meat Trader, HÚSCÉH in 2005 71 approved plants, i.e. 45% of the approved plants has no grading licence. 24% of the approved slaughterhouses with small capacity surveyed in this research has no licence for SEUROP grading. However the recent regulation in force makes it possible not to classify carcasses under a certain number of slaughtering per year, but it orders further that only classified product shall be traded. This contradiction must be dissolved as soon as possible.

10. The cost of the grading can mean great expenses to the small sized slaughter-houses. These costs are connected with the building-up of a grading point in a slaughter-house and the charges of an independent grading company. This later-mentioned charges could be reduced if the "two points", so-called ZP method was allowed to use again (it was an allowed method until 2003) in the slaughter-houses with small capacity instead of the instrument grading. According to the examinations, the reliability of the method

meets the requirements of the relating EU regulations and it is used also in other member states of the EU.

11. Now the implementation of a certain quality assurance and food safety system, the traceabilty and through the implementation of these systems the assurance of a determined quality are the minimum requirements to enter the market in the case of foods. Independently of the level of processing, 69% of the surveyed registered slaughter and cutting plants implements only the HACCP method, only 31% of them (3 vertical combines and 1 slaughter and cutting plant) has integrated system (ISO and HACCP together, and IFS, BRC certificate). Most of the slaughterhouses (62%) has implemented their system 5-10 years ago (so they introduced the HACCP before it became obligatory) and only one plant has had the quality assurance system (ISO) for more than 10 years. In contrast to the afore-mentioned it is a significant difference that the approved plants apply only the HACCP method (77%) which is integrated with the application of the GMP and/or GHP in 6 plants. In connection with the small size of a plant, none of the approved plants has integrated system. One half of the registered processors has integrated system, while the second half applies HACCP. Only one plant has had quality assurance system for more than 10 years. None of the approved processor has integrated system. 23% of the plants (3 of them) integrated the obligatory HACCP with the GMP or/and GHP. It is typical to the approved plants that they apply the HACCP since it became obligatory for the food plants. To sum up, it can be stated that we are on the right way regarding the introduction of the QAS, but many of the approved plants evaluated problematic that many systems operate only "on paper", and also the controlling authority checks only the documents. In this latest issue positive changes can be expected as an effect of the new EU regulation related to the controlling, but the controlling causes many problems also in the SEUROP grading, and it connected to the number of the controllers.

12. In the cases of products with high added value, the competition is expected to strengthen, in which the various labels could provide an effective competitive tool due to their distinctive function. The EU regulations connected to the labels do not offer the combined labels certifying the quality as well as the origin of the product, because the quality has a priority over the emphasising of the origin. The system which is financed by public moneys must be open, i.e. the label must be available for everybody also from other region or country. However, in the general requirements of the Quality Food from Hungary Label we can find that: "it is a basic requirement for the applying on processed food that it shall be produced at food production premises registered in Hungary, having a valid license to operate". So the combination of the quality and origin is evident. The solution could be that the Quality Food from Hungary Label will be backed by professional associations of the industry. It is worth considering the practice of member states which had already faced this problem (for example Germany). In connection with the geographical indications and the traditional specialities it raises a problem that however the legal regulation was already issued in 1998 in Hungary, only a few geographical indications and collective brands have been described. Traditional speciality was not registered at all until 2006. Although the certifying of a special characteristic is of the same importance, the low level of interest can be explained by the fact that only those producers might be interested in this category whose products are expelled from the protection of origin. There is a significant difference to the products being under the protection of the system of designated origin, and it can faulty restrain the products from registration. Namely, the registered brand of the traditional speciality do not provide territorial absoluteness, so everybody who observes the specification provably, can produce the product in the

whole territory of the Community. So the stakeholders' attention must be drawn to the chances being inherent in the traditional specialities. Otherwise there were attempts made at this issue.

13. The structure and the standard of the slaughter pig production determine the competitiveness of the processing and the quality status of the sector to a great extent. After the EU accession, the large decrease of the pig stock was caused by the structural problems, i.e. by the typically large proportion of the pig production of the small scale farms (before the EU-accession the sector could be characterized by that 50% of the stock was held in this circle of the farms, where the farms with 1-2 pigs were typical). This circle of the farms has never meant a stable level of the sector. However, the pig stock has decreased also in the companies owing to the declining income position determined by the added costs of the investments relating to the environment protection and animal welfare. But the poduction of the Hungarian meat industry should not be based on import products, because the import based production do not mean a safe solution for a long term, and the domestic consumer demand does not support this either.

14. The 1-2 % level of income proportional profitability in the meat industry is due to the increased costs caused by the ever stricter requirements of the environment protection and the food safety on the one hand and the selling difficulties caused by the sustained efforts of the big retailers and supply associations to reduce the price on the other hand. The companies of the meat industry surveyed in this research find the low prices and the payment of entering fee as the most difficult requirements in the relation with the retailers. The firms in the Hungarian meat industry try to compensate the effect of the price reducing aim of the multinational retailer chains and the increasing costs by the reduction of the investments, especially in those fields which do not serve the purpose of meeting the requirements (food-safety, environment protection). For example such field is the marketing of the product, in which only a small share of the investigated plants intend to invest in the future, and the former investments did not connect also to the marketing, however it would be very important to improve the competitiveness of the firms. These tendencies can lead to the reduction of the choice and deterioration of the product quality.

15. To increase the effectiveness of the retail trade it is necessary in the future that the suppliers and the retailers should build a closer contact in the form of long-term agreements and strategic associations. In connection with this it can be stated that the results of an empirical research done in this topic shows that most of the Hungarian retailers take the wide choice and the flexibility as the precondition of the market success. So the cheap product line is no longer enough alone to access and keep the markets.

16. In relation to our EU-accession, though some concentration and specialization have begun, we are still facing considerable surpluses in capacity, and we are lagging behind the developed pork-producer EU countries in several areas. It is partly due to the change in the hygienical requirements (the approved plants can only sell their products in the domestic market) that 81% of the surveyed approved plant satisfies the local and regional demand in contrast with the data of the other category, from which it can be stated that 76% of the registered red meat plants sells products on a country-wide scale and none of them restricts its sales to local level. Some specialization can be observed also in the product structure among the registered and the approved plants. More than 80% of the registred plants has a wide product range, and most of them do not want to change this range in the future, which relates to the main distribution channel. The main channel is the retail chain for 62% of the EU registered

plants. The approved and the derogated plants have a narrow product range or they satisfy special demand typically. They also sell directly to the consumers as one of the main distribution channels (among their main distribution channels we can also find the "direct selling to the consumer"). So the specialization among the small and large scale plants has been mostly finished, to which many small scale plants could owe his surviving. The effect of that process might be very interesting which the sector facing in the future and in the frame of which many of the approved plants become registered and the restriction of the selling and the capicity regarding the slaughterhouses will be released. Also in this case it is worth trying to fulfill special demands.

17. On the basis of the factor and cluster analysis the surveyed plants (66) can be classified in 5 groups. Summing up the characteristics of 3 from the 5 groups it can be stated that these three groups have a distinctive strategy, through which their future development seems to be provided. Namely these groups are the "Plants with quality management system of high standard", the "Vertically integrated plants", and the "Plants with few suppliers and long term relations". Analysing the groups it can be stated as it was expected that the traceability depends on the level of coordination chiefly and relating to this on the kind of the suppliers (mainly small sized farms, dealers). The strategy of the "Plants without stable supplier background" of the further two groups is based on the cheap raw material, and the production of the approved slaughterhouses belonging to this group is based on the slaughter pig production of the local small scale farms, and since the raw material production of these farms is unstable their contracts are occassional. The group of "Plants lacking for investments in different fields" is full of contradiction. It appears from the data that most of the plants belonging to this group has no long-term strategy. The future sustainability of some members of this group is doubtful. The backbone of the quality improvement of the sector could be the following three groups: "Plants with quality management system of high standard", the "Vertically integrated plants", and the "Plants with few suppliers and long term relations".

4. NEW SCIENTIFIC FINDINGS

1. In my dissertation I analize the coherences of quality and competitiveness and the conditions of competition according to the dimensions of Csete and Láng (1999) since the 90s up to now. With such an analysis we can easily define the future directions of quality improvement and also the obstacles of realizing the quality strategies.

2. I was involved in the systematization of the domestic effects of food regulations, especially in the examination of the impacts of the hygienetic regulations of the EU on the companies producing red-meat, focusing on the approved small-scale companies. In accordance with this, it is important to discover the problems and impacts of the regulation mentioned on the investments and future plans of the companies.

3. Supplementing the groupings, differences and coherences with the economic policy and competition-related coherences, especially with the more objective-oriented application of cluster method. With multi-variable mathematical-statistical analyses I created 5 clusters, which provide good base for the future development strategies and fields of the players in the meat industry. Summarizing the features of the different groups we can draw the consequence that three clusters have strategies well-distinguished, thus their future development opportunities seem quite sure. The three groups may form the main stream of the quality improvement in the sector („Those with high level quality management", „Vertically integrated, coordinated enterprises", and „Those having few suppliers, based on lomg-term supplying relations").

4. The examination of the ongoing structural transformation of the domestic pork sector influencing the high quality production with concrete questionnaires and on the basis of secunder data. Based on it we can state that with the EU accession the domestic slaughtering structure has been simplified, favourable concentration and specialization have started, but we still face the problem of capacity surplus and we still lag behind other EU member states having developd pork sector. Furthermore, the specialization between the small- and large-scale companies concerning the product structure has started and mainly realized in the selling, which caused the surviving of many small-scale companies.

5. The examination approaches of the present aspects of the market and integrational operation of the slaughtering-swine and pork sector. From the abovementioned factors we must emphasize the assessment of the future process of qualifying most of the approved companies to licensed ones and their distributing and capacity limits will be abolished (in the case of slaughtering houses). In addition, further examination should be done on the market opportunities of ecological pork products, their market channels as weel as a deeper research is necessary on the impacts of multinational chains' activities resulting low prices, putting back the companies' development.

CURRICULUM VITAE

Name: Nagyné Pércsi, Kinga
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- Association of the Meat Processors and Meat Trader, 2001-2002
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<center>**LIST OF PUBLICATIONS**</center>

1.) Scientific papers
Scientific Articles in periodical Journals
In foreign languages

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