

# **THESES OF DOCTORAL (PhD) DISSERTATION**

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## **ROLE AND IMPORTANCE OF WHOLESALE MARKETS AND PRODUCERS' ORGANISATIONS IN FRESH FRUIT AND VEGETABLE DISTRIBUTION**

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## **1. PRELIMINARIES AND OBJECTIVES OF RESEARCH**

Fresh Fruit- and vegetable distribution experienced considerable changes in the past decade in Hungary. This process was even accelerated in the past few years, due to the concentration and spread of supermarket chains. These changes mean great challenges to the small-scale enterprises – that are dominant in the fruit and vegetable production – in planning and performing their sales activities.

Growers often ask each other, the Product Council or different government or trade organisations about how to organise their sales, what shall they produce, what will be marketable in the following year? The lack of market research, the missing reliable market information and the absence of marketing activity make the work of horticultural producers and entrepreneurs more difficult, although nowadays to concentrate on professional and production issues is not enough. The large number of small-scale enterprises does not facilitate the organisation of production and sales, the continuous and reliable satisfaction of quality requirements.

In order to explore the reserves in effectiveness, increase the safety of sales, decrease of costs and losses and due to the approaching EU membership the close and coordinated cooperation among the participants of the fruit and vegetable product chain is needed. Without cooperation and common market presence the security of sales activity and the competitiveness of producers cannot be achieved.

At the beginning of the investigations it was assumed that the changing market conditions – the increasing significance of supermarket chains, the concentration of procurement – will result the change of sales

possibilities for individual and common sales, and the new conditions will influence the operation of fruit and vegetable wholesale markets. In 1998 the EU common market organisation was already well known among professionals, but a similar – EU harmonized – regulatory system did not exist in Hungary at that time. On basis of the domestic production structure and sales traditions, having former experiences regarding domestic wholesale markets it was assumed, that after the introduction of an EU harmonized market regulation system in Hungary the number of newly established Producers' Organisations (PO) will not increase rapidly.

The introduction of contact points and possibilities between wholesale markets and POs, the presentation of theoretical and practical connections of cooperation can hardly be found in domestic professional scientific papers and publications. No paper was found on investigations regarding the sales traditions and systems of the Hungarian POs, therefore the investigations might result new or novel scientific results in this field.

Considering these assumptions it is important to define and describe those factors, that affect the fresh fruit and vegetable distribution, and is should be analysed how these changes influence the operation of the present wholesale market institutional structure. The Dissertation tries to map the present state and future prospects of wholesale markets, and tries to find an answer on how the effectiveness of this sales form can be improved in a way that the modified system should be accepted internationally. It also tries to evaluate those factors that contribute to the establishment and also those that delay the strengthening of the Hungarian POs.

**Main objectives of the research:**

- The introduction of the fresh fruit and vegetable distribution system, the evaluation of those factors that affect the application of certain sales channels.
- The investigation of the main changes of wholesale markets that happened in the past years, what are the attitudes of market participants – primarily individual producers – like regarding the changed trade conditions and possibilities.
- Analysis and evaluation of operation, role and importance of foreign and domestic wholesale markets in fruit and vegetable distribution. In case of the foreign models the investigation of possibilities of application of “good practice”.
- The investigation of results and experiences of application an EU-harmonized fresh fruit and vegetable regulatory system in Hungary, the evaluation of factors that assist or hinder the establishment and strengthening of POs.
- To get acquainted with the operation of domestic POs.
- The introduction of cooperation possibilities between POs and wholesale markets on basis of the foreign examples.

## **2. MATERIAL AND METHOD**

The research work what the dissertation was based on was carried out at the Department of Agricultural Economics and Marketing and at the EU Educational Centre at the University of West-Hungary, Faculty of Agricultural and Food Sciences (Mosonmagyaróvár).

The collection of bibliography and data has been continuous since 1992. During the investigations the opinion and expertise of domestic practical experts were highly considered; many consultations contributed to the deep understanding of the practical and theoretical aspects of the research topic.

The investigations can be divided into two parts. The investigations regarding the operations of domestic wholesale markets, the data collection in connection with market information, volume and quality of produce and the structure of market participants (buyers and producers) have been continuous since 1998.

The primer data collection has been carried out between 1998 and 2002 and dealt with the buying and sales practice of producers and wholesalers operating at the wholesale markets. A questionnaire and personal interviews served as the basis of the primer data collection. In 1999, 800 questionnaires were mailed to domestic producers selling their produce at wholesale markets; the asked producers were randomly selected from the producer list of the Fruit and Vegetable Product Council. 136 (17 %) questionnaires have been returned with answers that could be evaluated. In order to facilitate data-processing questions included closed,

but also open questions to get to know the opinion and experiences of the answering producers.

The research regarding the operation of foreign wholesale markets has been carried out in three countries. Such wholesale markets were covered where different sales methods were applied for the sales of fresh fruits and vegetables, and different owner – interest – structure could be observed:

- Between 1992-98. investigations of the Dutch auction system have been carried out;
- During the summer of 1998. and 1999. the operation of the CAABMERCATI food centre (wholesale market) in Bologna (Italy) has been studied;
- In the summer of 2000. investigations of the English-type auction and the online sales were performed at the Vineland Produce Auction (New Jersey state, USA), and also the operation of the terminal market of Philadelphia (Pennsylvania state, USA) was studied.

The data provided by the Nagybani Piac Rt. and the Research and Informatics Institute of Agricultural Economics collecting data from the regional markets served as a basis for the investigations of domestic wholesale markets.

The other central topic of the research covered the operation of Producers' Organisations, the importance and role of common sales activity. Data regarding the domestic production structure originate from the database of the Central Statistical Office, the Research and Informatics Institute of Agricultural Economics and the Fruit and Vegetable Product Council. Data in connection with the establishment and operation of POs

were collected from the database of the Ministry of Agriculture and Rural Development, the Fruit and Vegetable Product Council; the visited POs also provided useful information in this topic. Data regarding the operation of POs in the European Union were selected from different reports and yearly publications of the Eurostat.

Several domestic POs were visited in 2000; until August 2000 the Ministry of Agriculture and Rural Development registered 16 POs, of which 9 were included in the research. The POs registered in 2001. and 2002. were asked via mail questionnaires, based on the questions of personal interviews.

The research also included investigations of foreign – primarily EU – producers organisations and cooperatives. Besides the experiences of Dutch and Italian POs some Austrian organisations were also studied in the frame of foreign study tours. Emphasis was put on the understanding of EU fruit and vegetable common market organisation, on the evaluation of registration requirements and experiences.

Personal contacts played an important role during the investigations; besides the asked experts (asked via mail questionnaires or during personal interviews) close cooperation was achieved with highly honoured domestic and foreign researchers and experts of the topic in order to facilitate consultation and continuous flow of information.

### 3. RESULTS

#### **Results of investigation carried out at wholesale markets**

At present wholesale markets operate in Budapest (Nagykörösi street), Kecskemét, Szeged (Kiskundorozsma), Hatvan, Miskolc, Debrecen, Nyíregyháza, Szolnok, Békéscsaba and Pécs. Although these markets operate as wholesale markets, most of them should only be considered as regional markets with limited supply and demand. Primarily small-scale horticultural producers transport their products to the domestic wholesale markets; therefore the quality or range of products is very heterogeneous. Product supply is seasonal and the daily volume changes rapidly. Unfortunately the retailers – as the dominant buyer group at these markets – do not demand the uniform quality and balanced volume; their primer aim is not to offer their buyers (the consumers) the same quality and supply but to sell what they can buy at certain days at the wholesale market.

Only two wholesale markets are open throughout the year, in Budapest and in Szeged; the other wholesale markets only operate during the production season. At the domestic wholesale markets not only wholesalers and retailers, but also end-consumers are allowed to buy produce. These markets function as collecting-, distribution and consumer markets at the same time, their role is not well defined. This mixed structure makes the management and organising of the markets difficult, and on the other hand market participants are not able to explain market prices.

The role of the Nagykőrösi street wholesale market – that has the largest yearly turnover – is twofold: it serves as a terminal market for the surroundings of the capital, and also as a distribution market for supplying other consumer centres in the country. Produce is sold from uncovered plots, mainly from the ground at this market – in some cases growers offer their produce from the back of their cars or transporters. Due to the lack of temporary storage capacity and the bad quality of transportation facilities *producers try to sell their produce immediately after harvesting.*

The supply at the wholesale market is very heterogeneous in quality; *sales do not based on objective quality standards.* Produce is often not graded; the *packing materials do not indicate any information* regarding the identification of the producer, variety, weight, quality, price etc. The products sold at the markets could more be considered as agricultural and food processing raw materials instead of end products because of the lack of manipulation (cleaning, minimal packing requirements).

The primer objective of the questionnaire was to investigate the sales traditions and experiences of domestic producers selling at wholesale markets. 67 % of producers taking their produce to domestic wholesale markets prefer the Nagykőrösi street market in Budapest, 12 % transport to Szeged and 7 % sells at the Miskolc wholesale market (the rest is divided among the Debrecen, Kecskemét and Pécs markets). 35 % of the asked producers sell twice a week or more often, 15 % once a week and 50 % occasionally, less than once a week at these markets.

Produce arrives to the Budapest wholesale market from the territory of the whole country. Despite the longer transportation distances producers prefer the Budapest market, due to the larger number of buyers and the possibility of higher prices. 22,5 % of the asked producers bring all their products to the wholesale market, 12,5 % brings more than half and 10 % approximately half of the products to the market. 55 % brings only that share of the produce that could not be sold through other channels; this group of producers indicated that horticultural production is mostly the main income source and most of them have some horticultural educational background. According to the investigation medium- or large scale enterprises are assumed to be in this group, with the intention of exterminate seasonality to have a uniform income throughout the year, and better quality originating from the technological knowledge can also be expected. These producers sell their produce directly to retailers or wholesalers, and only the refused (not accepted quality or over production) amount is brought to wholesale markets.

On basis of research conducted at foreign and domestic wholesale markets the dissertation introduces the development phases of wholesale markets and defines some grouping aspects.

Both the Dutch type auction system and the English type auction (bidding) requires great responsibility and discipline from the producers, regarding quality standards and information provision, in order to guarantee traceability. The concentration of Dutch auction markets can be observed in the past years; the reason for this concentration is that advantages of auction markets with the highest turnover could be traced back for the principles of perfect competition (homogenous products,

numerous buyers and sellers on the market who are not able to influence the prices individually, free flow of information). On the other hand small auctions with only a limited number of buyers are sensitive to the decisions and reactions of the buyers. Parallel to the increasing significance of sales contracts and as the produce is sold outside the auction, the price-defining role of auctions might decrease.

The example of the Bologna wholesale market illustrates the formation and continuous widening of product supply on the market, and also the advantages originating from the mixed ownership structure (local authority, groups of producers and wholesalers); these advantages are coming from the interest enforcement possibilities of these interest groups.

With regard to the online sales investigated at the Vineland Produce Auction (USA) it could be observed how producers stick to the traditional distribution channels. The producers' interest is basically different from the buyers' expectations: producers want higher sales prices and new buyers, they want to get rid of the surplus or make use of temporary shortage of produce – therefore they expected short-term results from the new sales method, the online sales. These two basically different interests are difficult to balance; the online marketplace is seller- or buyer-oriented, only rarely neutral.

### **Results of investigations of Producers' Organisations**

Regulation 25/1999. (III.5.) of the Ministry of Agriculture and Rural Development gives detailed information on the objectives of establishing POs, which objectives are similar to those included in the EU regulation (2200/1996. EC), namely the coordination of production, concentration of supply, decrease of production costs, stabilisation of producer prices, application of environment friendly technology, and the assurance of the technical background needed for product manipulation.

The regulation came into force in March 1999 in Hungary; until September 2002 the Ministry of Agriculture and Rural Development registered 16 POs. Most POs chose *cooperative as the basic organisation*, only three POs decided to establish a limited liability company. The *size and structure of membership differs very much*; two POs consist of only private entrepreneurs, while the other organisations have economic companies among the members besides the individuals. Members transport their produce to a central location from 30-40 km distance on the average. With one exception all the investigated POs are *able to sell everything what the members produce*; in order to increase their volume these organisations also *undertake to procure the production of non-member growers* from their area. The applied *sales channels* also differ very much, the supermarket chains, exporters and the processing industry are the main buyers; sales at wholesale markets or to retailers were rarely mentioned. At present the *cooperation between the registered POs is not characteristic*, the certain organisations only have limited information on the other POs. At the same time all POs indicated their interest on having

information on or some kind of collaboration with the other organisations, especially in the field of exchange of professional expertise and information, and also regarding the representation of common interests towards government authorities.

One major objective of POs in the European Union is to guarantee acceptable income for the members, to avoid sales through other channels, which aim is also assisted by measurements on sales obligation through the organisation. The basic regulation (2200/1996. EC) recommends the elaboration of an operational program, that should be serve as a mid-term strategy which is financed by the members contributions and from EU sources (Orientation Fund).

Although the basics of regulation regarding the operation of POs are the same in the EU, certain elements in connection with fulfilment and control might change in the member states according to the priorities of agricultural policy.

The fresh fruit and vegetable common market organisation puts emphasize on quality insurance and the traceability of the products throughout the distribution chain. Cooperative managers in North-Italy mentioned that a considerable quality improvement could be experienced in Italy after the regulation 2200/96. EC came into force, primarily due to the objective grading based on quality standards and the increasing competitiveness coming from third countries.

With regard to POs The Netherlands is in a special position with the largest operating fruit and vegetable organisation of the world, namely The Greenery with appr. 12 thousand members. The Greenery sales

cooperative tries to satisfy the needs of the large buyers like supermarket chains with ensuring equalized supply throughout the year.

There are only 5 POs operating in Austria, of which 4 are specialized in vegetable and one is specialized in fruit sales. The Austrian organisations make every effort to establish vertical integration relations; their final objective is the processing of own products and selling the value-added end product on the market.

Although the POs in Hungary continuously follow the price information coming from the domestic wholesale markets and consider these prices – primarily from the Budapest, Szeged wholesale markets – at their price-formation process, direct contact with these markets (like sales) is not characteristic.

The presence of foreign POs at wholesale markets shows a mixed picture. In The Netherlands the registered PO, The Greenery is 100 % owner of the auction market. In North-Italy producers' groups do not only participate in the ownership of the markets, but parallel to the renting of store places they also sell at these markets. The participation of producers' group in the management of the wholesale markets is also assisted by government support.

#### **4. NEW AND NOVEL RESEARCH RESULTS**

**1. A high level of polarisation of fruit and vegetable producers who are selling at wholesale markets can be observed in Hungary.**

Thos producers whose main income source comes from horticulture only sell the remaining part of their product at wholesale markets that they are not able to sell through other channels, therefore strengthening the “rest-market” chatacter of domestic wholesale markets. On the other hand those growers with supplementary income from horticultural production sell all their produce at wholesale markets, and appear on these markets with a heterogeneous quality product base. **The control of quality standards and appropriateness of plant protection requirements, and the control of issuing invoices are not of interest of market participants. Such controls should be introduced throughout the product chain in order to guarantee traceability of the products.**

**2. Although the foreign examples provide several “good practice” elements, when making suggestions for the improvement of the Hungarian system one should consider and start out from the domestic circumstances and conditions. Domestic wholesale markets should operate on different levels based on each other, with **defining the task and role of each wholesale market** consciously. The **establishment of a distribution system based on regional collecting markets and a Budapest centred distribution market** could contribute to the optimal division of tasks inside the product chain, as investigations show that even from the production areas produce is transported to the Budapest market with hopes**

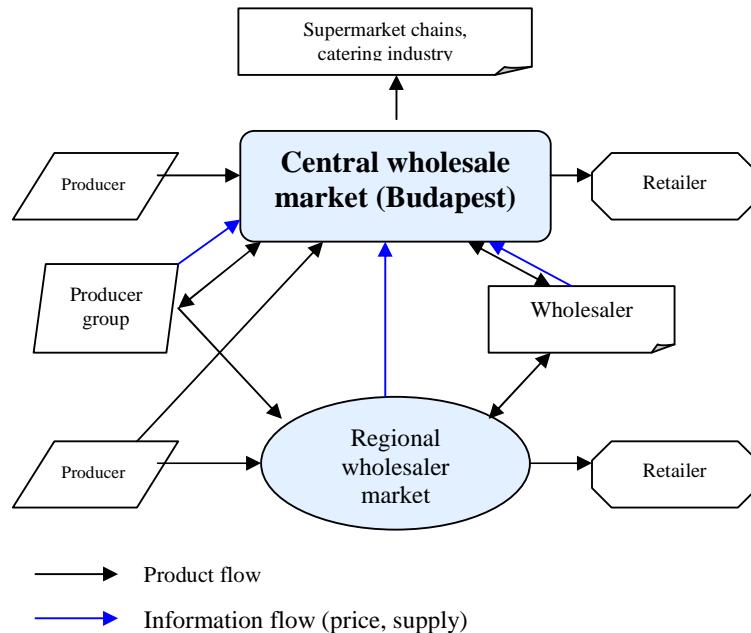
for higher prices, at the same time wholesalers are present at the regional wholesale markets expecting lower prices. **The problems of domestic wholesale markets can often be traced back to unfavourable location (in production regions, far from the consumer centres), and these problems often originate from the undefined role of wholesale markets that not only serve as wholesale but usually also as retail markets for final consumers.** At present the Budapest wholesale market is only considered as a **reference market** for POs, wholesalers and representatives of supermarket chains; the continuous follow of market prices and supply **indicate market tendencies and gives a basis for price formation.**

**The establishment of a network of wholesale markets is highly recommended especially in the field of information collection and distribution,** as the explanation of market movements (shortage or surplus), information on prices and supply are essential elements of market flexibility and immediate utilization of market possibilities (Figure 1.)

**Involving producer capital, supplementing state and local government ownership could assist to the future development of domestic wholesale markets.** The involvement of producer groups, retailers and wholesalers could contribute to the improvement of communication among the market participants and the **enforcement of interest** of these groups. Profit interest would be replaced by ownership approach, and a higher rate of profit could be used for improving the technical level (investments) and quality of services offered at the wholesale markets.

The involvement of market participants – primarily of **producer groups**

**and wholesalers operating at the markets** – could be a basic interest for the wholesale markets in order to guarantee quality products and increase the volume. **Wholesale markets cannot be seller- or buyer-oriented markets; the applied sales method should be acceptable by both interest groups.** Seller-oriented – mainly producer markets – cannot be competitive on the long term without considering the special needs of their buyers.



*Figure 1.: Recommendation for the operation of the network of wholesale markets*

3. **The importance of sales contracts increases in the future not only in The Netherlands and Italy, but also in Hungary, parallel to the**

**spread of supermarket chains.** This results the evasion of wholesale markets, because supermarket chains buy directly from POs or wholesalers. The traditional role of wholesale markets – the concentration of demand and supply – might change in the future, with putting more emphasize on the following elements:

- balancing the supply fluctuations originating from seasonality;
- supplementation of supply for wholesalers and supermarket chains (e.g. with exotic products);
- wholesale markets can be an alternative buying source of missing products;
- serving new buyer groups (catering industry, supermarket chains);
- providing information on prices and supply for enterprises involved in horticultural industry;
- immediate formation of prices.

4. In the next three years after the regulation regarding POs came into force in Hungary in 1999, 16 POs were registered that **mainly cover the production areas**, although **regarding volume and membership these organisations need to increase and strengthen. According to economic viewpoints it is advantageous if production is located close to the place of product manipulation** (waste is removed before transportation), but in certain cases manipulation should take place at a distribution channel level that is close to the retailer (product is transported in bulk, grading and packing close to the point of sales). Nowadays **most POs do not have the necessary machinery and equipment for product manipulation or processing, but due to the shortage of capital (credit) and the missing**

**conditions these POs are not able to strengthen, that can result the decrease of market share after the EU accession.**

One mayor problem for the new POs in Hungary was the elaboration of the five-year **operational program**. Market conditions change rapidly, the **unpredictable market demand and investment support system resulted that these programs are considered only as an administration requirement**, and not as a plan to be followed. **After the strengthening of these new organisations and the stabilisation of market contacts can these POs elaborate such program that is used as a mid-term strategy.**

At present the new organisations do not know much about each other, about the applied sales methods and channels. In the future **some kind of collaboration among these POs** are recommended in the field of **information flow, exchange of good sales practices and experiences**. Although these organisations compete with each other on the market, on the long term – with some kind of coordination of their strategy – they can be competitors of other POs of the EU.

## **5. RECOMMENDATIONS FOR THEORETICAL AND PRACTICAL UTILIZATION OF THE RESULTS**

1. The common market regulation of fresh fruits and vegetables and POs is a **changing process** even in the EU. In spite of the relatively intensive propaganda, domestic producers only have limited information about the basic elements of market regulation in the EU and in Hungary. **Education** plays a central role, and the support of training is accepted among the “green box” subsidies of the WTO. **Advisory services, the Ministry of Agriculture and Rural Development, The Chamber of Agriculture and the Fruit and Vegetable Product Counsil** tries to inform domestic producers; the dissertation introduces useful facts to support this activity.

Besides adult education the investigations concerning EU regulation and horticultural marketing can be well utilized in **secondary and higher agricultural education** as well.

2. For **government decision making organisations** the deep and detailed knowledge of the present situation of horticultural distribution system is essential to assist the **decision-preparation and -making process**. The dissertation might contribute to the decision preparatory process before the EU accession, and after our EU membership the government will play an important role in the formation of agricultural policy – in order to reach our goals knowledge of the starting point and the actual problems, development requirements is needed.

In case of over-production market intervention is performed through the POs. The money spent on intervention could be used to **support product manipulation (storage, freezing) and processing performed by the producers' organisations**. Product manipulation and processing gives added value to the product that increases the producer's income, and because of the storability and increasing demand for processed foodstuffs the seasonal overproduction can be solved to certain extent. Intervention does not give areal solution for the problem of overproduction; the temporary support does not encourage the producers for market research, for the acquaintanence of new market demands and possibilities.

**Government should focus more on the financial and moral support of the registered POs** besides providing financial support for the establishing organisations. At present POs cannot ask for bank loans, as they do not produce enough profit (they operate on a non-profit basis). **Government credit guaranatee** could help these organisations; state support could be given according to the number and structure of members, educational background of the producers and to minimal professional requirements. At present the POs in Hungary do not have the necessary manipulation or processing equipment, but without capital (credit) these organisation cannot develop to the required level, that might result the decrease of their market share.

3. The results of the investigations can serve as a **basis for further scientific research** works, especially for those investigating the **vertical connections in the fruit and vegetable product chain**. The **increase of competitiveness, the strengthening of current market positions** is

impossible without the common sales activity of the domestic producers. Horticultural industry can be a success story of the EU accession in case the present registered POs will strengthen enough, and with the government support product manipulation or processing might contribute to the increase of their income possibilities. The lack of financial and moral support might result the remaining of the atomistic production and sales structure, and after the EU accession foreign organisations will be able to bring their products in without any trade limits, causing catastrophic consequences for our horticultural industry.

4. During the investigations the needs of the practical experts, the participants of the fruit and vegetable product chain were highly considered. Although the dissertation deals with only two segments of the product chain, namely with the wholesale markets and producers' organisations, the results of the research could be utilized by the **supermarket chains, retailers and wholesalers** as well in planning their buyings and elaborating their strategy.

5. **Producers' organisations need to know the nature and characteristics of distributions channels well when planning their production, sales activity or future investments.** At the same time the results regarding the domestic POs might contribute to the **establishment of closer contacts among the POs** that is needed to the coordinate market strategy.

6. **Domestic wholesale markets** can consider the results of investigations of POs besides the research conducted on the wholesale markets when **elaborating their strategy**.

At present the information structure of the domestic wholesale markets is not uniform, therefore the establishment of the information network of wholesale markets, the **exact definition of market prices** (regional wholesale market, producer market, wholesale market price) is recommended.

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