Value added and rural development effect of POs in the fresh fruit and vegetable sector: lessons learned and future possibilities

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Executive summary

Fruit and vegetable sector is important for Hungary because it is a labour intensive rural sector, connecting around 100 thousand families to agricultural production. It contributes to bio- and cultural diversity: optimally utilizing ecological conditions and maintaining numerous specialty products. Increasing value added is important because consumer preferences are rapidly changing and extensive import competition as well the buyer-power of retail sector are extremely lowering the income level of raw products. The reason for starting this research was the fact that proliferation of POs (Producer Organization) in Hungary begin to stagnate in the last few years, although every known market trend suggested further rapid increase of their market share. We tried to find the core sustainability problems in our PO system, using GEM (governance, embedding and marketing) method which we found an appropriate tool for comprehensive syntheses of sustainable supply chain case studies.

We selected two POs, representing in many aspects two distinctively different types: DélKerTÉSZ is an off-spring of a former cooperative based production system, at present it is the second largest PO, with members mainly producing vegetables in intensive glass-house and foliage systems, Grand-Coop on the other hand is a bottom-up initiation without former cooperative background, it is much smaller in scale and mainly coordinates fruit growers.

The analysis of the governance, marketing and embedding of DélKerTÉSZ and Grand-Coop showed distinctive differences in the strategy they followed in their development. Both strategies seem to be viable. In case of DélKerTÉSZ the main driver is the governance and marketing based value chain partnership, allowing for quality innovation. In case of Grand-Coop the main driver is an extended wholesaler market activity which allows for the much required flexibility but only viable with professional and quite similar members. In both cases the major obstacles and threats come from embedding and not the local but the general economic and legistlative situation. At first it appears to be good news: because these conditions can be changed by the public administration. At second glance it is the worst possible scenario because these problems are mainly deeply embedded in our present society not possible to change without the general recovery of our morals and that’s not an objective for tomorrow.

In 2010 we would like to extend our research to all of the finally acknowledged POs, making it possible to create PO clusters with tipical success and failure factors. Our long term aim is to develope our results into a good practices handbook with emphasis on warning signals at the critical development stages.

Value added and rural development effect of POs in the fresh fruit and vegetable sector: lessons learned and future possibilities

Abstract

In the last years the expected concentration of the Hungarian fruit and vegetable sector through the PO system failed to come true. We tried to find the core sustainability problems of our PO system, through using GEM (governance, embedding and marketing) method. The case studies of DélKerTÉSZ and Grand-Coop showed distinctive differences in the strategy they followed in their development. Both strategies seem to be viable, in case of DélKerTÉSZ the main driver is the governance and marketing based value chain partnership, allowing for quality innovation. In case of Grand-Coop the main driver is an extended wholesaler market activity which allows for the much required flexibility but only viable with professional and quite similar members. In both cases the major obstacles and threats come from embedding and not the local but the general economic and legistlative situation.

Keywords: PO, value added, fruit and vegetable sector

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Introduction

Fruit and vegetable sector is important for Hungary because it is a labour intensive rural sector, connecting around 100 thousand families to agricultural production. It contributes to bio- and cultural diversity: optimally utilizing ecological conditions and maintaining numerous specialty products. Increasing value added is important because consumer preferences are rapidly changing and extensive import competition as well the buyer-power of retail sector are extremely lowering the income level of raw products. With our research we would also like to demonstrate the efficiency of increasing value-added in the agriculture sector as a rural development tool and thus contribute to the policy debate over the necessity of this kind of funding.

The structure of the paper is organised as follows. First, we provide a brief literature review and methodology used for conducting our research. Second, we describe the Hungarian fruit and vegetable value chain. Then, we present the results of our two PO case studies with some implications for further research.

Literature review and methodology

The reason for starting this research was the fact that proliferation of POs in Hungary begin to stagnate in the last few years, although every known market trend suggested further rapid increase in the market share of POs. We started to look for the reasons by visiting POs and conducting personal interviews asking questions about problematic areas of present operation. These first experiences proved to be extremely fruitfull, resulting in an extensive problem tree identifing the range of issues, which then allowed us to focus properly on the main drivers behind the current situation. We decided to use value chain analyses in the sense of Dunn [2005]: “The full range of activities that are required to bring a product from its conception to its end use. These include design, production, marketing, distribution, and support to get the product to the final consumer. The activities that comprise a value chain can be contained within a single firm or many firms.” We were interested in identifying the value chain implications for the Hungarian PO sector, by:

- analysing the evolution of the Hungarian fruit and vegetable value chain using Kaplinsky-Morris [2001] paper, through conducting short telephone interviews with the major chain captains (modern retailers) about their procurment policy of the fruit and vegetable products,
- drawing the POs development/innovation timelines suggested in the method paper of Berdegué et al [2005], through conducting structured personal interviews with the management of the two selected POs,
- and last but not least finding the core of sustainability problems of our PO system, through using GEM method of Wiskerke [2002] which we found an appropriate tool for comprehensive syntheses of sustainable supply chain case studies.

This sustainability trajectory is always a combination of governance, embedding and marketing (thus G+E+M), but different case studies show different performance (dynamism and bottlenecks) in these areas thus public and/or private support needed to improve the performance is different for each type of initiative [Wiskerke, 2002].

Analysing governance as chain innovation is helpful to identify the value-adding options, additional income and employment opportunities for small-scale farmers and rural areas, and for other actors along a chain. We think that added value should not be considered only as a monetary category but inclusion of non-monetary benefits such as improved know-how, social cohesion and enhanced social standing would reflect the real values much better [Roduner – Gerrits, 2006]. Looking at marketing as a chain differentiation allows for

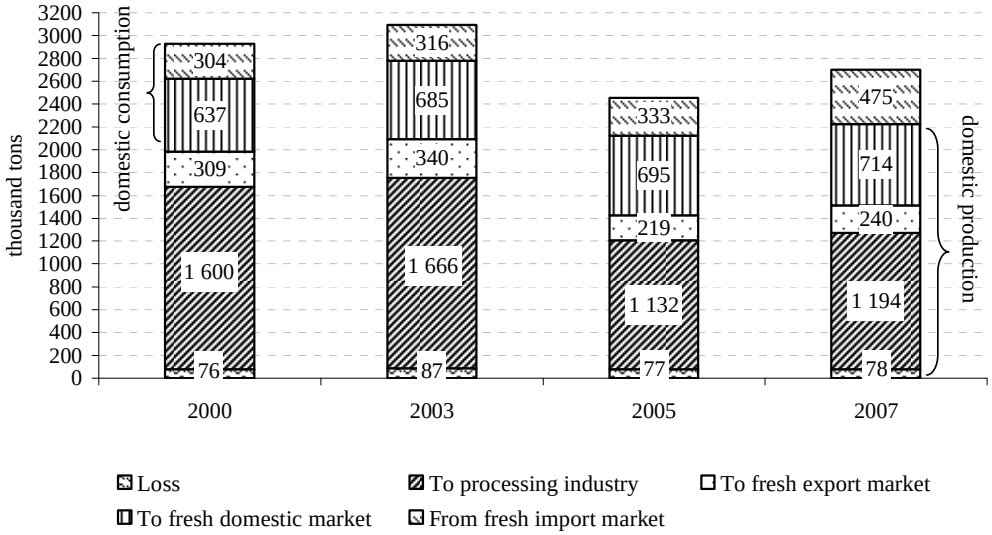
improvement of performance and profitability in an ever increasingly competitive market situation. Embedding is also a key area of sucess, also stated by Dannenber [2006] who found that the best position in competition has farms which are embedded in the local cluster in connection with integration in supra-regional networks (material and immaterial). This leads to the rural development effect of the POs, backed by the more recent approach of development programmes shifting emphasis from output increase to income and livelihood concerns, from emphasis on technology to economic and social relationships, from focusing on "supply-side" intervention to market demand and post harvest support [Humphry, 2005]. As Nemes [2005] with the "new rural development paradigm" tries to identify how rural initiatives reconfiguring local resources can be helped by the "centre" in a way to maintain local values but reaching economic sustainability.

At the second research phase we selected two POs, representing in many aspects two distinctively different types: Dél-Kertész is an off-spring of a former cooperative based production system, at present it is the second largest PO, with members mainly producing vegetables in intensive glass-house and foliage systems, Grand-Coop on the other hand is a bottom-up initiation without former cooperative background, it is much smaller in scale and mainly coordinates fruit growers. They both seemed to be successful, and sustainable which was a prerequisite to the selection for this research. However we know that negative cases can contribute just as much to a sustainability research and bear implications for the policy makers. That's why we would like to extend our research to all of the finally acknowledged POs, making it possible to create PO clusters with tipical success and failure factors. Our long term aim is to develope our results into a good practices handbook with emphasis on warning signals at the critical development stages.

The changing fruit and vegetable chain in Hungary

From the production of fruit and vegetables in Hungary the domestic fresh market increased its importance from 24% in 2000 to 32% in 2007 (1. figure).

1. figure: Product balance of Hungarian fruit and vegetable sector (2000-2007)



Source: Authors own figure from FruitVeb database

Processing industry on the other hand losed ground (61%-54%) and even the actual amount of fuits and vegetables procured decreased continuously (-406 thousand tons). From the domestic fresh fruit and vegetable consumption the share of import increased considerably from 32%in 2000 to 40% in 2007.

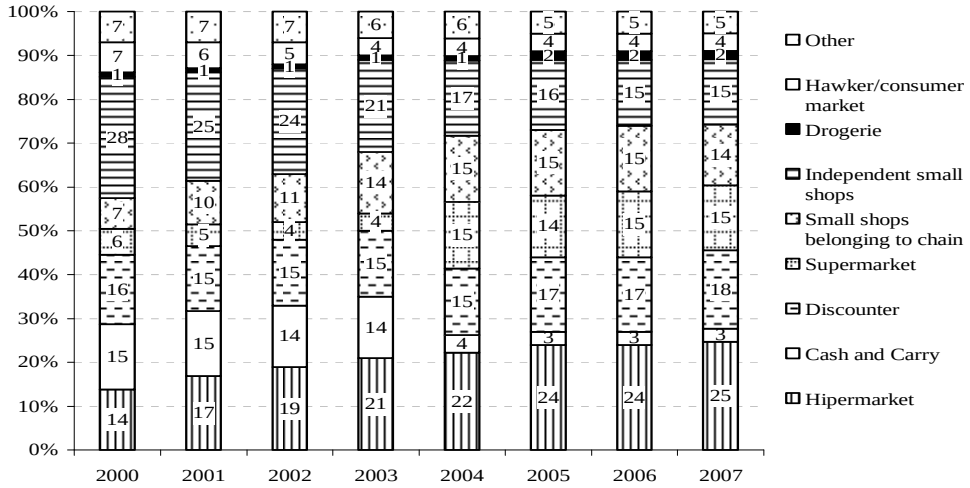
The evolution of the marketing channels

The development of the Hungarian retail trade is not only characterized by the ever growing concentration but also by the appearance of new type of store and business formats. Thus the main reason of the store number decrease is the ever growing sales and success of the large surface-low price stores, namely hypermarkets and discounts. In spite of these trends the Hungarian food retail trade can still be characterized as "two-poled" because beside the increasing popularity of the large surface stores mainly in urban areas the other special feature is the remaining large number of small stores mainly in rural areas, which has three main reasons:

- The presence of the so called "forced entrepreneurs".
- The almost franchise-like operating domestic chains coordinating mainly small-medium sized stores and mini chains.
- The low mobility of the average Hungarian making the access of large surface stores designed for car owners difficult [Juhász-Stauder, 2005].

Restructuring of the retail sector has direct and indirect implications for the fruit and vegetable value chain (2. figure).

2. figure: Evolution of the food market channels between 2000 and 2007 (%)



Source: GfK Hungária, Retail ananlysis 2007

The drastically narrowing share of independent small shops (28%–15%) effect the fruit and vegetable sector directly because the traditional greengrocers belong to this category. According to the trends the number of greengrocers started to decline after the peek of 3,5 thousand in 2003 but the number was still higher in 2007 than in 2000. The rapid rise of discounters and hypermarkets has indirect and opposite effect on the fruit and vegetable supply chain. Discounters have fundamentally different sortiment policy: they only keep basic products and special regional products are not offered or only in high season. As Szabó [2004] highlights different retail formats care and present fruit and vegetables differently (1. table).

1. table:The range of fruit and vegetable sortiment at the different retail formats

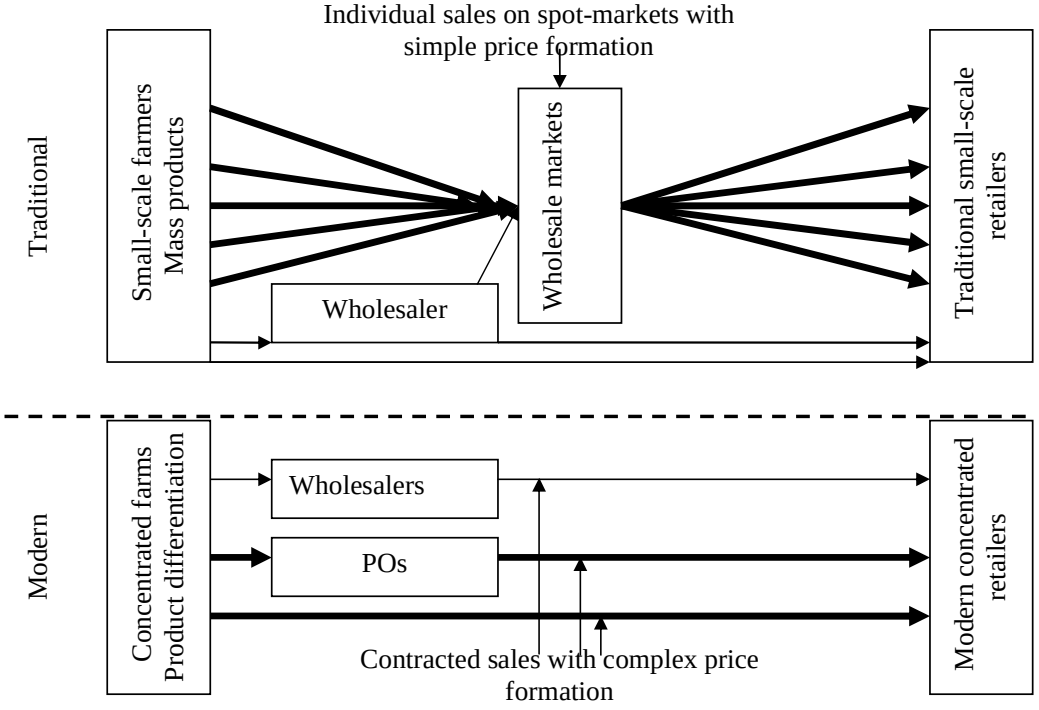
	Vegetables	Fruits	Together
Discounters	15-20	10-15	25-30
Supermarkets	20-30	15-20	40-50

Source: Szabó [2004]

Centralised order and distribution is quite widespread among the retailers present at the Hungarian market even in case of fruits and vegetables. Procurement practices in case of fresh fruit and vegetables are far from uniform: one discounter has regional center, buyer groups operate as well, coordinating two or three retailers in one country and last but not least we also have a domestic retail chain still with completely decentralized (shop level) procurement. The interviewed retailers stated that the average number of suppliers in fruit and vegetable category is quite low, between 20 and 30 and the number of small suppliers is insignificant (1-5) and usually seasonal. One exception is the above mentioned domestic retailer with the decentralized procurement. The direct small fruit and vegetable farmer sales to the modern retailers are quite low, approximately 5% at Metro, 15% at Spar, at the domestic chain CBA it is much higher around 30-40%. The interviewed retailers agreed on that requirements of large volumes and continuous supply exclude most of the small farmers. Retailers also agreeded on decreasing the number of suppliers being a strategic decision more and more common, which means prefering those partners who can supply a broad range of fruit and vegetables. These trends are favourable for POs, professional wholesalers and unfortunately also for the large importers.

At present the modern and the traditional fruit and vegetable marketing channels are the most typical ways of supplying the Hungarian consumer with fresh products (3. figure).

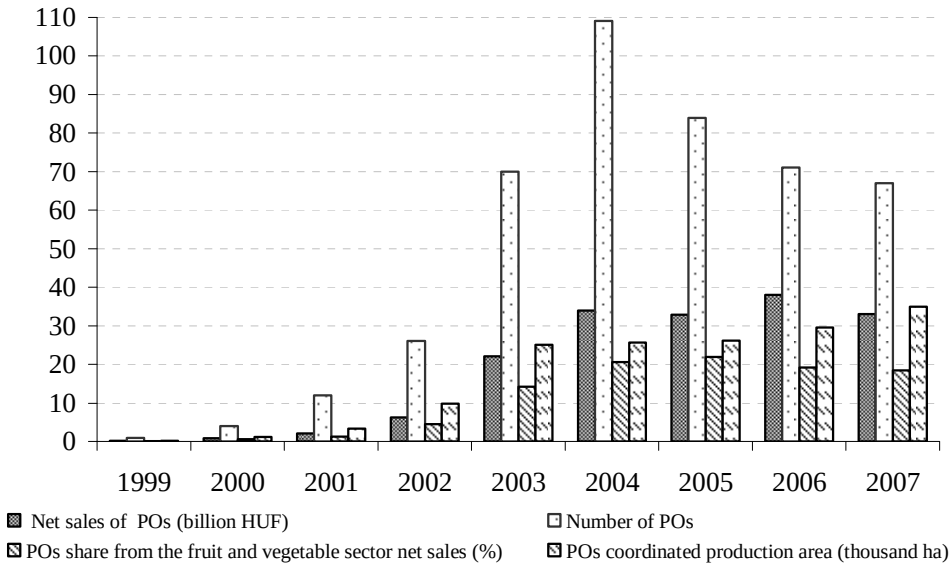
3. figure: Traditional and modern marketing channels of the fresh fruit and vegetables



Source: Authors own compilation based on Dimitri et al [2003]; Wu Huang [2004] and Varga et. al [2007]

Altough the global presence of the wholesale markets decrease continuously at regional level they still have considerable importance. For example in Hungary inspite of the major changes in the fruit and vegetable value chain the wholesale markets share of from the sales is still quite high, approximately 30-35%. The positive elements keeping it alive are the distributional importance, on the spot price formation and rich assortment of new or rare fruits and vegetables. On the negative side wholesale markets are also the place of semi-illegal "tax-minimizing" trade without the least possibility of traceability. According to international experiences hidden economy is thriving in countries where tax burdens are high, legal conditions are weak, and unemployment is high, these pre-conditions are present in the agriculture oriented rural and underdeveloped areas of Hungary.
Semi-illegal trade is a main obstacle of the further development of POs – being registered as wholesalers – because they have to operate transparently in a sector of the economy where all the others are half hidden.

4. figure: Fruit and vegetable Producer Organizations (PO) in Hungary (1999-2007)



Source: Authors own figure from data provided in Dudás [2009]

It is no wander that the forming of POs started slowly, until 2003-2004 only the very brave and strong minded formed PO (4. figure). Before the EU accession dynamic development action had to take place because POs had market regulation functions in the EU much needed for the Hungarian sector as well. The favourably changes in the subsidy system proved to be successful resulting in a peak number of POs just before the accession. Until today the number of POs decreased considerably and the sales value also seems to increase slowly. The operation of POs did not result in the expected concentration still not being a generally excepted form of cooperation among the Hungarian fruit and vegetable growers.
Appart from the above mentioned problem of semi-illegal trade the other reason of resistance is the still lingering past of the forced cooperation. After the change of political system the vertical relationship between the levels of the supply chain disintegrated. This situation was equally disfavourable for the producers, processors and retailers still the general distrust and the unstable markets was maintained for quite a long time because of the personal benefits from it. The chaotic conditions prevailed for years and it affected the SME-s multiplied. In

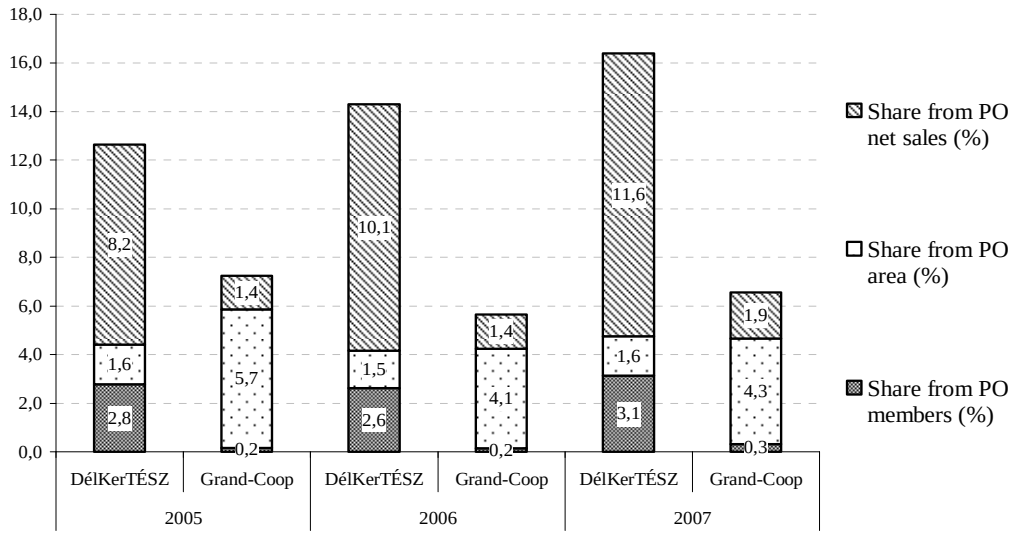
1994: 74% of the SME-s did not sign any kind of contracts and even those having contracts complained about the frequent violation events. The situation improved considerably in the last ten years, according to another survey in 2005 61% of the agricultural producers conducted written contracts but even higher, 74% of the business enterprises had contracts [Kartali et al, 2009].

GEM profile of the selected POs: implications for sustainability

Background of the POs

At this second research phase we selected two POs, representing in many aspects two distinctively different types of the Hungarian POs: DélKerTÉSZ is an off-spring of a former cooperative based production system, at present it is the second largest PO, with members mainly producing vegetables in intensive glass-house and foliage systems, Grand-Coop on the other hand is a bottom-up initiation without former cooperative background, it is much smaller in scale and mainly coordinates fruit growers (5. figure). They are on the other hand both seemed to be successful, and sustainable which was a prerequisite for the selection.
In the present case studies both DélKerTÉSZ and Grand-Coop show examples of conditions and opportunities for small and medium scale farmers to achieve viable position in the Hungarian fruitn and vegetable value chain.

5. figure: DélKerTÉSZ and Grand-Coop in the Hungarian PO sector (2005-2007)



Source: Authors own figure from data provided by Dudás [2009], DélKerTÉSZ and Grand-Coop

DélKerTÉSZ PO is located in Hungary, Southern Great-Plain region, Csongrád county, Szentes town. The area is a traditional vegetable growing region, where glass-house and foliage production appeared in the 1960's after searching for oil resulted in finding geothermal energy (hot water). In 1975 the former cooperative founded KZR (which is Early Vegetable Production System) operating as a quite successful integrator of part-time growers in the region. At the peak of KZR (mid eighties) the marketed volume of vegetable (mainly paprika) reached 23 thousand tons, 85% from glass houses and foliage. At the change of political systems, KZR stoped operation but coordination of the farmers continued at the local cooperative (Árpád Cooperative) albeit coordinated volume and number of farmers dropped considerably. The appearance and proliferation of new market players in wholesale and retail promised freedom and new opportunities for the producers. Few years of hectic market

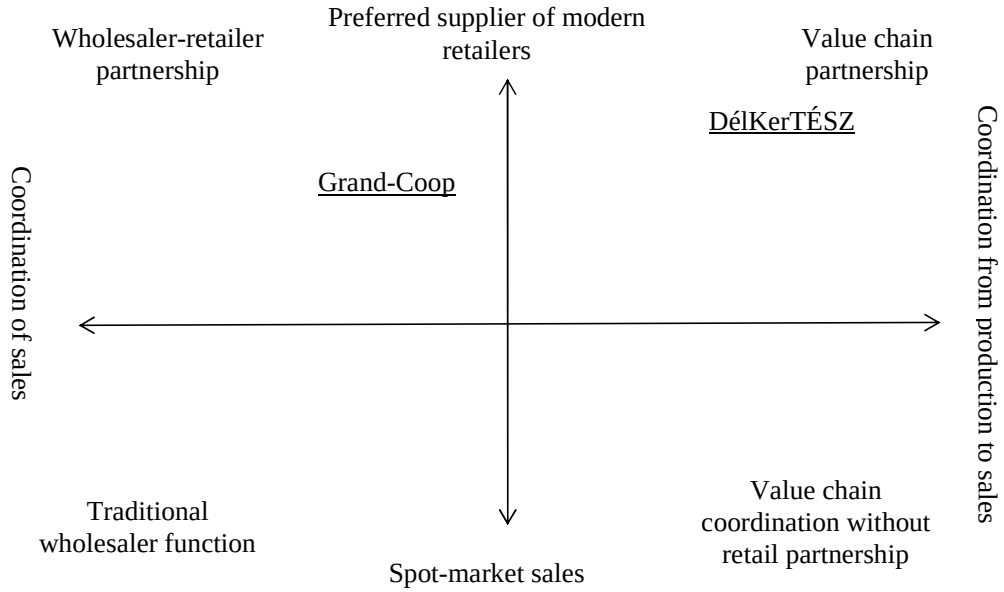
conditions had to come to raise the need of a new cooperation among the glasshouse-foliage vegetable growers. More than ten years ellapsed from the end of KZR to the founding of DélKerTÉSZ, the time was just right in 2002: the ever increasing input prices and requirements of retailers, the bad experiences with semi-illegal wholesalers, and the uncertainty of the coming EU accession all helped but the final incentive was the new, quite favourable subsidy opportunities for POs. At the end of 2002 277 members founded Délalföldi Kertészek Zöldség-Gyümölcs Értékesítő Szövetkezet (DélKerTÉSZ) PO which applied for and got the final accepted status in 2004 just before the EU accesion. In 2007 the PO coordinated the production of 587 members (most of them being small scale farmers), 347 hectars, 12,6 thousand tons of fruit and vegetable and reached 3,8 billion HUF sales (approximately 15,3 million EUR).

Grand-Coop PO is located in Hungary, Southern Great-Plain region, Bács-Kiskun county, Kiskörös town in a traditional fruit growing area. The PO was founded a few years earlier in 1999 as a bottom up initiation of 15 experienced, indepently viable and similar sized fruit growers. It had no direct link with the local former cooperative or municipality. Two POs started almost at the same time in the same growing area: Grand-Coop united the middle size farmers the other one the small growers. PO development program subsidies proved to be an effective tool of new POs initiation. In 2007 the Grand-Coop coordinated the production of 63 members (most of them still being middle sized fruit growers), 1 521 hectars, 4,7 thousand tons of mainly fruits and reached 628 million HUF sales (approximately 2,5 million EUR). Grand-Coop is a smaller initiatve than DélKerTÉSZ, thus they could only reach the final accepted status this year at the end of the possible time limit.

Sustainability profile: chain governance, marketing and embedding of the POs

The development timeline shows that the two POs moved on a very similar track, intercorporating the basic stages of: building or buying a distribution center, improving grading, packaging, transport and traceability (inclusive EUREPGAP and HACCP standards). Interesting differences also appear in their development history (1. and 2. annexes), the most important is that DélKerTÉSZ mentioned 5 quality improvement developments while Grand-Coop only one. The quality lead evolution of DélKerTÉSZ meant closer internal governance and partnership opportunities with the modern retail sector (6. figure). Grand-Coop on the other hand mentioned production volume improvement four times, while Dél-KerTÉSZ only once. The volume improvement is the most obvious answer to the evolving needs of the retailer. Grand-Coop strategy seems to be a more classical wholesaler activity with buying ever increasing amount from non-members (6. figure).

6. figure: Value chain governance types of DélKerTÉSZ and Grand-Coop PO



Source: Own figure based on information from DélKeTÉSZ and Grand-Coop PO

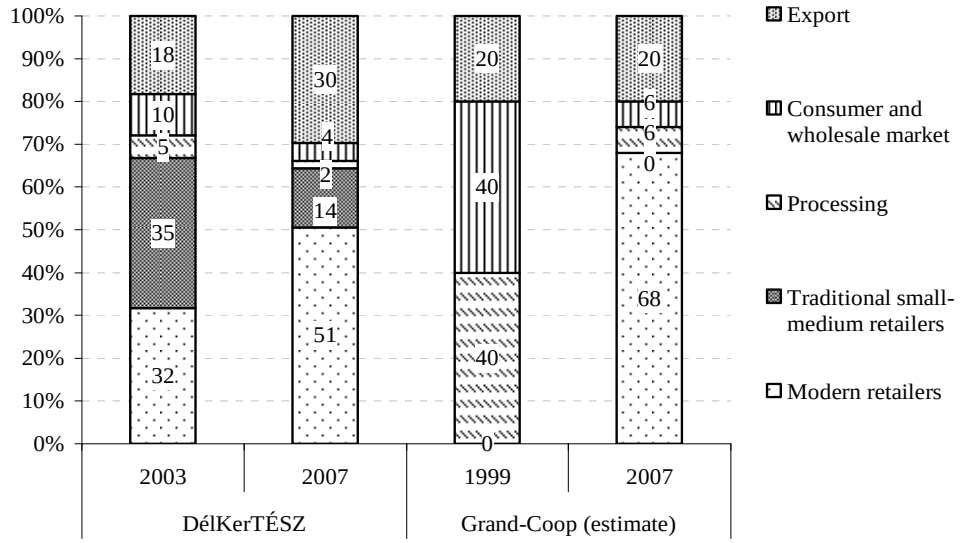
Internal governance is also quite different at the two PO: DélKerTÉSZ coordinates almost the whole vertical chain, from input suppliers, to production technology and post-harvest activites, Grand-Coop on the other hand only coordinates the post production phases. Both governance type works well, because the product and producer profile of the POs make them viable.

DélKerTÉsz coordinates production of glass-house vegetables, having special and strict technology requirements and has large number of small scale growers as members with real need of expert advisory system. Fluctuation in the membership is quite low, although the general problem of agening in the sector is present, mainly part-time growers stop production. Their place is always filled up with larger family farms because younger generation is only motivated to follow production in case of more successful businesses. These medium-large scale producers then have different need for governance, they require less production advisory and more delegated post-harvest activities. Close coordination is rewarded with constant high and – in ever increasing share – premium quality (special IPM Integrated Pest Management system) from the producers. This quality level does not always generate price premium but makes it possible to become preferred suppliers of the major Hungarian and even export market retail chains. Being a preferred supplier moved the retailer-PO relationship to a more equal partner status. This status does not mean a lot in terms of prices premium or lowering the additional costs of a retail supplier (e.g. bonuses). But it does provide the possibility of premium product innovation and less “dirty tricks of retialers” with quality reclamations, long paying periods and de-listings in case of oversupply market condition.

Grand-Coop coordinates its members in a less controlled way, main activity being the organization of markets and providing post-harvest services. Its strategy from the beginning was to operate with members being similar in size (middle) and product range (fruits, mainly apple) to minimize product quality problems and conflict if interest. The development of governance moved to different areas as by DélKerTÉSZ, instead of specializing and innovating in one product category it united with an old type fruit grower cooperative. Main reason was to gain market acces to the eastern export markets and develope the non-member

wholesaler activity to stay a constant supplier of domestic retailers. To broaden wholesaler activity they rented areas on the two major wholesale markets of Hungary which proved to be a good marketing puffer option in periods of quick demand or oversupply. They feel their size and product type makes this strategy reasonable, not being large or small enough to concentrate on one product or one buyer. Fluctuation in the membership is also quite low and quite a number of independent farmers would like to join the PO, because unstable market conditions of last years. Unfortunately they reached their limit of membership not because of internal governance or market saturation problems but because of the inability to pay for the supplied products on time, lacking short-term financing.

7. figure: Marketing channels of DélKerTÉSZ and Grand-Coop PO (1999-2007)



Source: Own calculation based on information from DélKeTÉSZ and Grand-Coop PO

The general trends of changing marketing channels in the fruit and vegetable sector can be detected in case of the two POs as well. Modern retailers gained share, wholesalers and traditional retailers lost share, exporting activities grew with the same space as the POs sales volume. In case of Grand-Coop the drastic importance decrease of processors show perfectly the general unfavourable trend of the industry.

Marketing activity of the two POs differ but even Grand-Coop is more active in this are as the sector average. Both POs have homepages, distinctive logos appearing on the packaged products which are almost 80% of the sales in both cases. DélKerTÉSZ provides one retailer with private label products. They were one of the initiators of Retailer Ethical Codex requirement to put the supplier's name on the private label packaging.

DélKerTÉSZ is more active in adding value through marketing and product development, being a larger market player they have more resources but also more results from the activity. DélKerTÉSZ is a frequent exhibitor in a broad range of domestic and foreign agricultural and food fairs, usually winning quality excellence awards. They developed a detailed IPM production system which is now accepted by export market retailers more over extended to other suppliers as well. With this strict production technology and constant monitoring they created a market segment where the market access of other producers became more difficult. They also joined a premium product initiative of a modern retailer called "Taste and

Tradition", they have to provide vegetables mainly paprika with exact and constant organoleptic characteristics. There were also an initiative to supply some local varieties but the demand of the retailer not reached the volume needed for the profitability of such production.Local varieties have much higher production risks (shorter shelf life, sensitivity to pests, difficulty to produce standard forms).

Both of the POs mentioned problems with the pricing/paying practices of modern retailers affecting their competitiveness. DélKerTÉSZ and Grand-Coop both agreed that the much debated "marketing costs" are not pleasant to face but they can be managed. Grand-Coop found delayed payment the major problem. DélKerTÉSZ found the different pricing policy applying for global suppliers the most important problem with retailers. For example one retailer asks 20% repayment in Hungary but only 5% in the UK, a global supplier being strong on the UK markets can negotiate for the same 5% in Hungary, that remaining 15% makes the Hungarian suppliers unfairly uncompetitive.

The two POs also had different views on the issue of founding joint marketing POs. DélKerTÉSZ already did it, although it is not a really success story because of the financial problems of the other PO taking part in it. The management of Grand-Coop found the idea impossible because of the general mistrust and opportunism in the Hungarian society. They had bad experiences with cooperation before so they are only open for POs joining as members – thus giving up control – is. This drives us to the embedding of the POs, in general we can say that the major problems are not with local community. The two POs provide considerable full time and seasonal employment opportunities in rural areas where industry is not dominant, and alternative options are rare. Both POs active in sponsoring local cultural and sport activities and the cohesion between the members are also quite high in both cases. In case of DélKerTÉSZ the personal relation with the municipality is extremely good, helping each other on a partnership basis. In case of Grand-Coop the relationship was characterized as neutral, we have to mention that this is not a bad scenario in the present Hungarian society. In both cases we can say that the problems of embedding not start at the local level.

4. table: Main dynamism and bottlenecks of governance, marketing and embedding at the DélKerTÉSZ and Grand-Coop PO

	Dynamism	Bottlenecks
DélKerTÉSZ	Preferred retail supplier status (G-M) Reasonable (not over) use of subsidies (G) Special IPM quality initiative (G-M) Increasing the share of ready to buy sized packaging (M) Joining a premium product initiative (M) Tradition of intensive growing (E) Similar member profile (G)	"Tax minimizing" semi-illegal traders (E) Legislative obstacles of thermal energy use (E) Retailer different pricing policy for the global suppliers (M)
Grand-Coop	Diversification of the wholesale activity (G-M) Adding-value by increasing the share of packaged products (M) Gaining market share by diversifying the offered productline (M-G)	Lack of short-term operational loans (E) Buyer power of retailers makes paying period long (M)

Source: Authors own table from the information provided by DélKerTÉSZ and Grand-Coop
G= Governance, M=Market, E=Embedding

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Looking at the major bottlenecks of developments we can state that most of them are outside the scope of the POs. The main obstacles of sustainability and development are not

governance or marketing problems but embedding issues in the form of unfavourable economic, social or even legistlative conditions (4. table).

In case of DélKerTÉSZ the first obstacle of sustainability is the strong presence of semi-illegal "tax minimizing" domestic and export buyers, at average they have a share of around 20% from the fresh fruit and vegetable market, but in their production region at certain time periods and products it jumps up to 60-70%. It is hard to compete with these buyers for the faith of their producers, because avoiding VAT means 20% price difference, so the PO has to fight for about as much retailer price premium. They try to do this with the value added services of grading, packaging and special IPM quality. The second and even more threating issue is the legistlative obstacles of thermal energy use, by defining it as a renewable energy source thus making back pumping of the water compulsory. This technology has high cost implications both to implement and to maintain, especially where already existing old wells provide the thermal water. According to the PO the possibility to apply for subsidy in case of developing the new, legistlatively compatible technology is not a real solution because the cost of the new system makes the whole production method unprofitable and uncompetitive. The tolerance period expires for the old thermal water technology in 2011 and there is no real solution of the problem in sight.

In case of Grand-Coop the major obstacle of development and sustainability is the present economic crisis making short term pre-financing of everyday operation almost impossible. The heavy mortgage on the distribution centre also does not help findig banking partners. Public support in the form of bank guarantee or subsidised loans would be the best solution but at the present economic situation opening additional financial sources for POs is not probable.

Some sustainability implications and the intended extension of research

The analysis of the governance, marketing and embedding of DélKerTÉSZ and Grand-Coop showed distinctive differences in the strategy they followed in their development. Both strategies seem to be viable providing sustainability for the POs. In case of DélKerTÉSZ the main driver is the governance and marketing based value chain partnership, allowing for quality innovation. In case of Grand-Coop the main driver is an extended wholesaler market activity which allows for the much required flexibility but only viable with professional and quite similar members. In both cases the major obstacles and threats come from embedding and not the local but the general economic and legistlative situation. At first it appears to be good news: because these conditions can be changed by administrative and legal tools. At the second glance it is the worst possible scenario because these problems are mainly deeply embedded in our present society not possible to change without the general recovery of our morals and that's not an objective for tomorrow.

In 2010 we would very much like to extend our research to all of the operating POs in Hungary, making it possible to create PO clusters with tipical success and failure factors. Our long term aim is to develope our results into a good practices handbook with emphasis on warning signals at the critical development stages.

References

Berdegué, J.A. – Peppelenbos, J. Bienabe, E. [2005]: Keys to Inclusion of Small-Scale Producers in Dynamic Markets A method for the analysis of innovative practice in connecting smallholder producers with dynamic supply chains, Resource Paper for Component 2, Regoverning Markets, p.29

Dannenberg, P. [2006]: The importance of Agrarian Clusters and Chains in Rural Areas - examples from Poland and Germany, at the Workshop "Industrial Upgrading, Offshore Production and Labor" At the Social Science Research Institute (SSRI) Duke University November 9-10, 2006, p13

Dudás, Gy. [2009]: A termelői értékesítő szervezetek (TÉSZ) lehetőségei a zöldség-gyümölcs ágazat koordinálásában, PhD Thesis, Gödöllő, p.120

Dunn, E. [2005]: Knowledge and Practice Task Order Lexicon, microNOTE # 6AMAP BDS, USAID, p.5

Gereffi, G. Humphrey, J. Sturgeon, T. [2005]: The governance of global value chains Review of International Political Economy 12:1 February 2005: 78–104

Humphrey, J. [2005]: Producers Consumers Shaping Value Chains for Development: Global Value Chains in Agribusiness, Eschborn, p.70

Juhász, A. – Stauder, M. [2005]: Hungarian food retailing: concentration, polarisation and a new entrant, Paper presented at the IAMO Forum 2005, "How effective is the invisible hand? Agricultural and Food Markets in Central and Eastern Europe?", 16 – 18 June 2005, Halle (Saale), Germany

Kaplinsky, R. Morris, M. [2001]: A handbook for value chain research, Prepared for the IDRC, p.113

Kartali, J. (ed.) – Györe, D. ─ Juhász, A. ─ Kőnig, G. ─ Kürthy, Gy. – Kürti, A. ─ Stauder, M. [2009]: A hazai élelmiszer-kiskereskedelem struktúrája, különös tekintettel a kistermelők értékesítési lehetőségeire, Agrárgazdasági Tanulmányok, AKI, Budapest, p.140

Roduner, D. Gerrits, A.[2006]: The role of donors in Value Chain Interventions Compilation of insights of the online debate Value Chains in Rural Development (VCRD) Up to February 2006, SDC, February 2006

Wiskerke, H. [2002]: Marketing Sustainable Agriculture: An analysis of the potential role of new food supply chains in sustainable rural development, Quality of life and management of living resources, Sus-chain, Qlk5-ct-2002-01349, Final report, The fifth framework programme 1998-2002, p.113

Annex

1. annex: The development timeline (innovation history) of Dél-Kertész PO

Time	Development	Type	The supply chain motive	Type	Public support (Y/N)	Credit (Y/N)
End of 2002	Forming of PO	LC	EU accession and the favourable subsidy program	MD,SP	Y	N
End of 2003	Buying the distribution center of the PO	TR, ST, PQ	It was possible to use subsidies for it and renting of the center was not cost increasing	SP, PI	Y	Y(paid back)
2003-	Forming and maintaining vegetable consultant groups. Detailed technology manuscripts. From 2007 6 part-time advisor	PQ	Ever increasing quality requirements and cost decreasing possibility	PI, RR	N	N
2004	EUREPGAP certification	FS	Retailer requirement (export) it was essential for increasing the export potential	MP, RR	Y	N
2005	Enlargment of the ULO capacity	PV, ST	Production coordination of the PO outgrow the capacity of the fromer ULO storage	MP, SP	Y	Y(paid back)
2005-2009	Improvemet of the grading and packaging technology	PQ, MA	To increase the share of ready to sell packed goods for the requirement of the retailers	MP, RR	Y	X (paid back)
2005	Development of detailed IPM technologies and POs own consultants provide help in the adaptation period	PQ, FS, EP	Export market (especially German retailers) requirement, and a product differentiation option	MP, RR, PI		
2006-2007	Complete automatization of the traceability system, using a barcode-based technology	FS, IT	Retailer and export market requirement, legal requirement from 2006	RR, PI, RC	Y	
2008	Join the “Taste and Tradition” regional product line of a retailer	PQ	It is a rare possibility to have experience in a premium product category, the retailer would also demand local varieties, but the present sales volume is not enough for further production development	MP, PI		

Development types: PQ=Product Quality, PV=Product Volume, TR=Transport, ST=Storage, MA= Marketing, FS=Food Safety, IT=Informathics, EP=Environment Protection, LC=Legal form change
Motive types: MD=Market Difficulty; MP=Market Potential; SP=Subsidy Potential; RC=Regulation Changes; RR=Retail partner Requirements; PI=Profitability Improvement; PR=Personal Reason

2. annex: The development timeline (innovation history) of Grand-Coop PO

Time	Development	Type	The supply chain motive	Type	Public support (Y/N)	Credit (Y/N)
1999	Forming of PO	MD, SP	EU accession and the favourable subsidy program	LC	Y	N
2002	Building the distribution center and ULO at Kiskörös	ST, PV	It was possible to use subsidies and	SP, RR	Y	Y
2005	HACCP and EUREPGAP	FS	Retailer requirement it was essential for market access	RR, PI	Y	N
2005-2008	Continuous improvemet of the cooling, grading and packaging technology	PQ, MA	To increase the share of ready to sell packed goods for the requirement of the retailers	MP, RR	Y	Y (still have)
2007	Building another distribution center in the other production area (Lajosmizse)	ST, PV	Production coordination of the PO outgrow the capacity of the fromer ULO storage because growers from another production area joined the PO	MP, SP	Y	Y (still have)
2007	A former cooperative joined the PO and integrated the third production area and distribution center to the PO	PV, ST	The cooperative had to change legal form, and the PO welcomed the facilities and eastern export market relations of the coop	RC, MP	N	N
2007-2008	Automatization of the traceability system	FS, IT	Trade volume outgrew the possibility of manual traceability	RR, PI, RC	Y	N
2007-2008	Improvement of transportation with modern cooler trucks	TR	Growing sales, especially to modern retailers requires consistent quality and flexible supply	RR, PI	Y	N
2008	Changed the legal form from cooperative to limited company		The increasing need for development required more resources	MD	N	N
2008	Starting a trade company to coordinate non-member trade	MA	Large retailers tend to decrease the number of suppliers forcing the PO to provide not or just seasonally produced fruits and vegetables	MP, RR	N	N
2008	Starting operation in a rented storehouse at the Budapest Wholesale Market	MA, PV	A good market puffer opportunity for the rapid and unexpected sale and buy situations	MD, MP	N	N

Development types: PQ=Product Quality, PV=Product Volume, TR=Transport, ST=Storage, MA= Marketing, FS=Food Safety, IT=Informathics, EP=Environment Protection
Motive types: MD=Market Difficulty; MP=Market Potential; SP=Subsidy Potential; RC=Regulation Changes; RR=Retail partner Requirements; PI=Profitability Improvement; PR=Personal Reason