

61127

APSTRACT

Applied Studies In Agribusiness And Commerce

<http://www.apstract.net>

Vol. 4, Numbers 3-4, 2010

Aberdeen, Belgrade, Berlin, Budapest, Cork, Debrecen, Fayetteville, Hohenheim, Kiev, Prague, Warsaw, Wageningen, Zagreb

Guest editors:

Prof. Dr. Zorica Vasiljevic

Prof. Dr. Danilo Tomic

2010

3,4

scientific-research

agribusiness

identity

branding

innovation

market

institutions



Agroinform Publishing House

www.agroinform.com

Applied Studies in Agribusiness and Commerce

APSTRACT

Official Periodical of the International MBA Network
in Agribusiness and Commerce AGRIMBA

Vol. 4. Numbers 3–4. 2010



AGROINFORM
PUBLISHING HOUSE

Editor in Chief:
Prof. Dr. Dr. Hc. Wim Heijman, Wageningen University, The Netherlands

Deputy Editors:
Prof. Dr. Dr. Hc. András Nábrádi, University of Debrecen, Hungary,
Prof. Dr. János Lazányi, University of Debrecen, Hungary

Proposed Editors:
Prof. Zorica Vasiljevis, PhD,
Prof. Danilo Tomic, PhD

Executive Editorial Board:
Prof. Dr. Bruce Ahrendsen, University of Arkansas, Fayetteville, USA
Dr. Josip Juracak, University of Zagreb, Croatia
Dr. Elena Kovtun, National Agricultural University of Ukraine
Prof. Dr. Edward Majewski, University of Life Sciences Warsaw, Poland
Dr. George Robertson, Scottish Agricultural University, Scotland
Prof. Dr. Ivana Ticha, University of Life Sciences, Prague, Czech Republic
Prof. Dr. Zorica Vasiljevic, University of Belgrade, Serbia

Honorary Editors:
Prof. Dr. Peter Bielik, Slovak University of Agriculture, Nitra, Slovakia
Dr. Jim Booth, Aberdeen, Scotland,
Prof. Dr. Harry Bremmers, Wageningen University, The Netherlands
Prof. Dr. Slobodan Ceranic, University of Belgrade, Serbia,
Prof. Dr. Dr. Hc. Mark Cochran, University of Arkansas, Fayetteville USA,
Prof. Dr. Csaba Csáki, Corvinus University, Budapest, Hungary,
Prof. Dr. Reiner Doluschitz, Hohenheim University, Stuttgart, Germany,
Dr. Garth Entwistle, Scottish Agricultural College, Scotland,
Dr. Akimi Fujimoto, Tokio University of Agriculture, Japan
Prof. Dr. Patrick De Groote, Hasselt University, Belgium
Dr. Simon Heath, ICA, Copenhagen, Denmark,
Prof. Dr. Jan Hron, University of Life Sciences, Prague, Czech Republic
Dr. Ranjith Ihalanayake, Victoria University, Melbourne, Australia
Dr. Robert Kowalski, University of Wolverhampton, UK,
Dr. Mary Mc Carthy, University College Cork, Ireland,
Prof. Dr. David McKenzie, Scottish Agricultural College, Aberdeen, Scotland,
Prof. Dr. Nebojsa Novkovic, University of Novi Sad, Serbia,
Prof. Dr. József Popp, Research Institute of Agricultural Economics, Hungary,
Prof. Dr. Zoltán Szakály, University of Kaposvár, Hungary,
Prof. Dr. Danilo Tomic, Serbian Association of Agricultural Economics, Belgrade, Serbia,
Prof. Dr. Mária Vincze, University of Babes Bolyai, Cluj, Napoca, Romania,
Prof. Dr. Dr. Hc. Harald von Witzke, Humboldt University, Berlin, Germany,

This number is published with the financial support of University of Debrecen, Faculty of Applied Economics and Rural Development and Ministry of Agriculture and Rural Development in Hungary.

English Editor:
Dr. Troy B. Wiwczarowski UD, Debrecen, Hungary

APPLIED STUDIES IN AGRIBUSINESS AND COMMERCE
Official Periodical of the International MBA Network in Agribusiness and Commerce:

APSTRACT®

©AGRIMBA

Editor-in-chief: Prof. Dr. Wim Heijman Wageningen University
Editorial office: Debrecen University, H-4015 P.O. Box 36.
Phone, fax: (36-52) 508-304

Executive publisher: Agroinform Publishing House Hungary- www.agroinform.hu
Typography: Opal System Graphics www.opalsystem.com

HU-ISSN 1789-221X – Electronic Version: ISSN 1789-7874

Home Page: <http://www.apstract.net>
E-mail: editor-apstract@agr.unideb.hu

Contents

SCIENTIFIC PAPERS

ROLE OF INNOVATIONS AND KNOWLEDGE – INFRASTRUCTURE AND INSTITUTIONS by <i>András Nábrádi</i>	7
EDUCATION, SCIENTIFIC-RESEARCH AND CONSULTING WORK IN AGRICULTURE OF SERBIA by <i>Drago Cvijanović</i>	11
REGIONAL IDENTITY IN RURAL DEVELOPMENT: THREE CASE STUDIES OF REGIONAL BRANDING by <i>ir. Lies Messely, dr. ir. Joost Dessein and dr. ir. Ludwig Lauwers</i>	19
AGRICULTURAL COOPERATIVES AND THEIR MEMBERSHIP IN COOPERATIVE UNIONS IN SERBIA by <i>Miladin M. Ševarlić, Marija M. Nikolić, Richard Simmons</i>	25
THE CLIMATE CHANGE AND AGRICULTURE – DIMENSIONS AND CORRELATIONS by <i>Mirela Matei,</i> <i>Adrian Stancu, Predrag Vuković</i>	33
ADJUSTMENT OF POLAND'S AGRICULTURE AND FOOD SECTOR TO CHALLENGES OF AGRICULTURAL POLICY OF THE EUROPEAN UNION by <i>A. Kowalski, M. Wigier, P. Chmieleński</i>	39
SMALL AND MEDIUM ENTERPRISES AS DEVELOPMENT FACTOR OF AGRIBUSINESS IN REPUBLIC OF SERBIA by <i>Radojka Maletić, Slobodan Ceranić</i>	45
STRUCTURAL CHANGE IN REPUBLIKA SRPSKA – SMALL FARMS BETWEEN SUBSISTENCE ORIENTATION AND MODERNIZATION by <i>Matteo Vittuari, Andrea Segrè</i>	51
MODELING MULTIFUNCTIONALITY OF AGRICULTURE AT A FARM-LEVEL: THE CASE OF KERKINI DISTRICT, NORTHERN GREECE by <i>Michael Vassalos, Carl R. Dillon, David Freshwater, Pavlos Karanikolas</i> ..	59
ANALYSIS OF PRODUCTION AND COMPETITIVENESS ON SMALL BEEKEEPING FARMS IN SELECTED DISTRICTS OF SERBIA by <i>Slađana Marinković, Nebojša Nedić</i>	65
WHO BENEFITS FROM EMOTIONAL LABOUR? by <i>Kornélia Lazányi</i>	71
RENEWABLE ENERGY RESOURCES IN HUNGARY – SOLID BIOMASS UTILIZATION IN TERMS OF NECESSITY AND OPPORTUNITY by <i>Veronika Erős and Tamás Biró</i>	75
THE ROLE OF CHAMBER SYSTEM IN DEVELOPMENT OF AGRICOMMERCE IN SERBIA by <i>Emil Cukic</i> ..	79
GENERALIZED COEFFICIENTS OF GOODS QUALITY AND SATISFYING OF CONSUMERS DEMAND by <i>Lenar Safiullin, Nail Safiullin, Gulnara N. Ismagilova</i>	83
FARM-RETAIL PRICE TRANSMISSION IN MALAYSIAN PORK SECTOR by <i>Tey (John) Yeong-Sheng, Randy</i> <i>Stringer and Wendy Umberger</i>	87
BRIEF OVERVIEW OF THE INTERNATIONAL FLOWER MARKET, ITS STATE AND DEVELOPMENT UNDER PRESENT-DAY ECONOMIC CONDITIONS by <i>V. Khodarchenko</i>	93
PRICE RISK MANAGEMENT USING BY A SPECIFIED FUTURES MODEL by <i>László Kozár PhD</i>	97

PHD SUMMARIES

COMPETITIVENESS OF THE HUNGARIAN PIG SECTOR by <i>Andrea Bartha PhD student</i>	103
---	-----

REVIEWS

GREEN HOUSE GAS MITIGATION AND HEADLINE TARGETS OF EUROPE 2020 STRATEGY by <i>János Lazányi</i>	109
--	-----

BOOK REVIEWS

SPACE AND ECONOMICS: AN INTRODUCTION TO REGIONAL ECONOMICS by <i>By W.J.M. Heijman and</i> <i>R.A. Schipper</i>	119
--	-----

INFORMATION FOR AUTHORS	121
-------------------------------	-----

COMPETITIVENESS OF THE HUNGARIAN PIG SECTOR

Andrea Bartha PhD student

University of Debrecen, Faculty of Applied Economics and Rural Development barthaa@agr.unideb.hu

Abstract: The number of Hungarian pig population was 3.2 million in February 2010, 150 thousand less than in the previous year. This included 226 thousand brood sows, 54 thousand less than in the previous year, and this number is expected to fall further next year. In the past two years the number of brood sows decreased to a larger extent in economic organizations than in private farms (KSH, 2010). Despite the rising costs of feedingstuffs, producer prices for slaughter pigs have decreased, therefore private farms with small herds of brood sows have sold their breeding animals for slaughterhouses. However, economic organizations mostly tried to restructure their production and place emphasis on plant production, thus improving their situation.

These market changes indicate that the sector continues to scale down, production shrinks, market losses are continuous within the sector and vulnerability threaten the players of the product cycle increasingly.

Key words: Pig production, Consumption, Competitiveness, Sector analysis

1. Introduction

Developing Hungarian pig production has ceased to exist for a long time; in addition, the most crucial problem is posed by the deterioration of its international competitiveness. However, it is to be highlighted that these competitive disadvantages are not merely due to national insufficiencies. The effects of international markets on demand – supply also play a significant role, both in terms of product quality and price (AKI, 2009).

The above mentioned facts lead to conclude that the analysis of the sector on the level of product cycle is justified in order to highlight the reasons of its decline. From producers to trade each and every economic player needs to analyze their competitiveness, efficiency and income and then identify the key problems. To maintain the sector ready for appropriate operation all the players need to produce competitively, as no competitive processing industry exists without the production of quality source material; similarly, no easy-to-sell products exist without a meat sector which functions appropriately; these statements are valid backwards as well (Udovecz, 2008).

2. Methods

To unveil the conditions – objective and subjective competitive disadvantages that hinder development – and gain a lifelike analysis, mostly prominent national and international agricultural, food-industrial and trade enterprises, organizations were visited. Sincere discussions took place with several lead experts. “Representativity” was not a conscious objective, as competitive options can be evaluated realistically from the viewpoint of significant economic players. The opinions given

by the addressed practical experts were collected and a comprehensive table was prepared which includes all the problems on product cycle level to determine the results and also to cease the reason of the problem. Examination was carried out to find out what measures for the improvement or the removal of the problem had been carried out so far. Finally, in certain cases, recommendations were made for the explored problems.

From the very outset, our research was characterized by the unity of theory and practice (usefulness), the merge of international and national viewpoints and ideas related to product cycles. There is no competitive agriculture without competitive processing and trade; there is no practice-oriented education without research! Naturally, realistic guidelines are also vital! (AKI, 2009).

I take the view that information on the improvement potentials of competitive options, correlations and expert opinions provide a sound proof for the identification of state tasks, and also for agro-economic players to assess their own strengths and to develop their long-term business policies. Hopefully, the present study will serve as a key pillar for the establishment of a realistic and modern agricultural strategy. The present research seeks to map out the SWOT analysis of the sector on the grounds of this table, followed by the creation of a problem-tree and a target-tree to provide solutions how to improve areas suffering from competitive disadvantages.

3. Results

Hungary has particularly blatant problems of competitiveness in several areas. Above all, the judgement of our taxation system is dramatically poor. Not only tax rates, but the effects of taxes and supports in the distortion of

Table 1: Competitive disadvantages on macro-economic level

Competitive disadvantages on macro-economic level	REASON	RESULT	Measures taken so far	Suggestions for the solution
Tax, contribution and administrative burdens	Personal Income tax, VAT, social security contributions, employers' contribution, employees' contributions, costs of business start-ups	Black economy 30% (trade, employment)	Standard tax system, tax law???	Reduction, rationalization of VAT and administrative burdens, elimination of bureaucracy
Support policy	Haphazard, occasional and not renewing	Pig keeping is not supported, so farmers are "helped" in several ways	EU regulation, no free activities, frittered support AGENDA 2000	Standard, clear support policy on national level
Land policy	Separated property	No feedingstuff for individual owners, guarantee for loan requests; difficulties of land rent and costs increase	Support for access to land, diversification, merging farms, Act on Arable Land	Integration
Logistics	Geographical disadvantage Disorganized transport Irrational system of supply	Lack of seaports Railway transportation is slow and obsolete Quality of road network is questionable Slaughter -processing are separated	Motorway construction Concentration in certain premises on larger farms Pick Zrt.	
Commercial chains	Standards, compliance, ethics	Domestic products can hardly compete with depressed prices, old suppliers are privileged	80-20% Ethical code?	Integration Bargaining position Homogenous, large quantity and good quality of goods ensured in the long run
Social problems confidence and morals	Inheritance of the past, morals, safety of property corruption	Joining forces, joint property are out of the question	Network of consultancy, TCS (Producer Groups) – BÉSZs (Cooperatives for Purchase and Sales)	Initiatives carried out in favour of integration
Demographic and social problems	Composition of society, urbanization, incomes in the sector	Young people are not interested in agriculture, the trade is ageing	Keeping the population in the country, supports, diversification Agenda 2000	Education is built on practice
Commitment	Lack of management, cooperation	Owners' interests are different		

Source: author's own collection

competition are heavily criticized. On the other hand, high taxes are coupled with the poor quality of public services: general opinion about law enforcement, health care but primarily about welfare policies for the reduction of unequal opportunities is especially negative. Moreover, Hungarian competitiveness is in a disadvantageous position regarding the investigated indicators of both education and training (Bartha, 2008).

This brings us to the next issue, the introduction of competitive disadvantages investigated on macro-economic level in terms of agricultural production. In addition, besides extremely high, obscure and chaotic taxes which impede efficient production, contributions and administrative costs are also considerable high, thereby further exacerbating the situation. Our support policy has been realized without thorough consideration on various levels and the pig sector was primarily hit by this period. The insufficiency of external resources and deductions is only one item on the list of factors which inflicted the players of Hungarian pig sector.

The formation of the Hungarian holding system is to be mentioned: it clearly hinders economical production as the majority of pig farmers do not possess private lands which

would serve as a basis for feedingstuff production and potential capital acquisition. Besides all these hardships, Hungary also has to cope with its disadvantageous geographical location: there is no seaport, shipping on the Danube is restricted, the railway network is slow and has also become obsolete; therefore our export opportunities are limited into third countries. In the past couple of years motorway construction improved the potentials of inland transportation but it has opened the windows of export opportunities only into nearby countries.

In contrast with such kind of infrastructure development the retail traders who set up businesses in Hungary prefer rather their own suppliers at the expense of Hungarian producers and products. They stipulate high requirements and costly standards rendering it impossible for Hungarian products to be available in hyper- and supermarkets. The only solution might be joint action, cooperation and support, which could improve our bargaining positions, uphold and promote the Hungarian will. To achieve this, Hungarian mentality has to go through considerable changes.

With a paradigm-shift, let us start the further investigation of competitive disadvantages on product cycle

Table 2: Competitive disadvantages on consumption level

Competitive disadvantages on consumption level	REASON	RESULT	Measures taken so far	Suggestions for the solution
Growing consumption	Lack of technological background	Demand is not met		Capital into the sector, takeover of technology and genetics
Healthy diet has gained ground	Impact of media	The ratio of poultry meat and pork is instable	Trademarks	Community communication to clarify misbelief
Growing demand for premium products	Accelerated life, conscious food intake	Processed products		Keeping abreast of the market, fast reactions
Diverse consumer attitudes	Different animal body regions are preferred in different regions	Not every product is quick-selling on markets		A good system of distribution is needed by eliminating inequalities in processing
Consumers depend on sales and prices	Price sensitivity	Customers always look for products on sale, by adjusting their eating habits; permanently low meat prices		
Seasonal impact	Demand for meat and meat products changes	Concentration, storing, warehousing are difficult, deep-frozen pork is not marketable		Diversification in several regions, exploitation on demand-dependent markets
Lack of loyalty	Hungarian products are not "strong" trademarks	Import intake		Restoration of the fame of Hungarian products

Source: author's own collection

level with production. The whole analysis is based on changing this approach. I have come to the realization that consumers and consumption are the drivers everywhere. In the present market-economy only those can survive who can react as fast as possible to changes in consumer attitudes and markets. Hungarian pork consumption is basically determined by its price. Domestic consumers are rather

price-sensitive and dependent on sales; therefore they are not loyal to Hungarian products. Therefore, cheap import meat and meat products could become ready-selling on Hungarian markets (Szakály, et al., 2008).

Mention must be made on seasonality and diverse regional consumer attitudes on regional level. This can only be eliminated by diversification. None of the processing

Table 3: Competitive disadvantages on commercial level

Competitive disadvantages on commercial level	REASON	RESULT	Measures taken so far	Suggestions for the solution
Counter for fresh carcass meat ceases	Consumer attitudes change	Prepared, packaged meat products are ready selling		
Prepared products are marketed at higher prices	Higher added value	Price rise is not accepted by retailers		Joining of forces, improvement of bargaining positions
Excess supply for meat preparations	Processors cannot promote their products	Retailers choose what is cheaper		
Excess number of stores in one place	Undercut effect	Prices are even more difficult to realize prices		Maximization of retail shops for the population or for a given area
Branded products gain ground in trade	Lower prices, higher price competition	Lower quality		No competitiveness on the mass-product market, unique domestic products
Difficulties of contracts between retailers and Hungarian suppliers	Long-term contractual relations with "foreign" partners	The distribution of Hungarian products is limited	Ethical code	Favourable bargaining position can be gained by standard, good quality goods in the required quantity
Date of payment	Production difficulty in both directions of the product cycle	Liquidity is difficult to maintain, go-round debts	Regulation on payment dates, Law of XVI. 2003 on the Organization of an Agricultural Market	Long term contracts, fixed payment dates

Source: author's own collection

Table 4: Competitive disadvantages on the level of processing

Competitive disadvantages on the level of processing	REASON	RESULT	Measures taken so far	Suggestions for the solution
Concentration	Lack of capital, specialization is not solved	Slaughter-cutting-product manufacturing are merged		Separation on the level of farms
Lack of contractual relations	No long-term agreements, rather oral deals are typical	Standard source material (quality, quantity) is not provided		Contract
BÉSZs (Cooperatives for Purchase and Sales)	Unity of action, but individual sales are also maintained	Standard products are difficult to be provided for processors, source material supply is unpredictable		Sales through BÉSZs only under strict regulation
Bargaining position	Pressure by commercial chains	Looking for cheap base material resources, mainly from import		Two-way long-term contractual relation
Black economy	No follow-up for the product cycle	30%	Supervision	Reduction of financial burdens imposed on work, reduction of VAT
Payment morals	Production difficulties in both directions of the product cycle	Liquidity is difficult to maintain, go-round debt	Regulations on payment deadlines, Law of XVI. 2003 on the Organization of an Agricultural Market	Long-term contracts, fixed payment dates
Utilization of capacities, distribution of source materials	Disorganization of the production cycle, utilization is under 50%	Transport problems, kilometres between slaughterhouses and processors, upward price adjustment		Regional concentration
Representative body	Several organizations	Disorganization		United representation, centralization lead by one organization

Source: author's own collection

companies can afford to slaughter only for loin in the summer grilling season just because there is demand for it. Markets for other regions of animals' bodies are to be searched for which is getting increasingly difficult with the media full of advertisements on healthy diet giving false information on pork and recommending only poultry meat (Juhász, 2008).

Hungarian consumer attitudes are easy to be influenced as a result of their price sensitivity. Retailers know it very well and take the opportunity. All this makes its effect felt on the suppliers' side, as meat prices are kept artificially low by these series of sales, causing increasing problems for both Hungarian processors and producers. Moreover, standards have been carefully stipulated thus creating considerable extra expenses, such as "shelf money", inclusion in sales etc. The situation is further aggravated by the lack of payment morals, i.e. in many cases liquidity for the actors of the product cycle is hampered by circumventing the deadline of payment laid down by regulations. This leads to constant go-round debt, which hinders smooth production and the transport of goods; these are the deficiencies and problems why retailers prefer their own foreign suppliers, leaving scope for their own branded products which are often placed on the market under lower quality requirements and at cheaper prices than Hungarian products.

The analysis of the Hungarian meat industry indicated the concurrence of several factors, out of which only problems

directly affecting processors will be highlighted. The most crucial of them is that capacity is under-utilized. It triggers high fixed costs in production and production costs are also high.

Bargaining positions in sales are weak as forces are not joined and there is no appropriate representative body on this level. Long-term contracts are not concluded by either producers or retailers, so their future is unpredictable and hazardous, giving an impetus for the boost of the black economy. Taken generally, it is impossible to follow up the product cycle.

The key problem in source material production is posed by the lack of own resources (Chikán, 2006). Producers do not possess their own lands, therefore they are unable to produce the necessary feedingstuff for their livestock and they are vulnerable to high cereal prices as fodder costs amount to the largest part of production costs.

They cannot afford to pay animal breeders and it is common practice that breeding animals are selected from their own fattening herds. Geneticists' efforts are in vain, as there is no solvent demand for their work on product cycle levels. If fattening farms worked with the appropriate genome, it would not lead to much more effective production due to the lack of good breeding technologies.

In terms of efficiency, the greatest problems are posed by low progeny number, slow weight gain and poor feed conversion, long fattening period, long sow rotation and high labour costs. Stables are out-of-date, they produce high

Table 5: Competitive disadvantages on the level of source material production

Competitive disadvantages on the level source material production	REASON	RESULT	Measures taken so far	Suggestions for the solution
Lack of own resources	Small farms, support has not been successful	Not credit-worthy, no development, not competitive		
Slaughter-house	Slaughter-cutting; further processing	Slaughter in itself is unremunerative, there is no specialization		
Breeding animal	Breeding animal, privately owned herd	Farmers fail to use products by Hungarian breeding organizations, they use their privately owned herds		Long-term contractual relations between breeders and producers
Land	Pig breeders do not own lands	There are no own resources and fodder	Act on Arable Land, merge of micro and properties lands	Integration
Weak efficiency indicators	Progeny, death, feed conversion: sow/piglet	Non-competitive production, perhaps only production costs are covered on certain farms	Genetic experiments, takeover of modern keeping technologies	Genetic experiments, takeover of modern keeping technologies

Source: author's own collection

running costs as a result of insufficient insulation, the removal and placement of manure is also problematic for lack of privately owned lands. Moreover, producers fail to join their forces, so they are unable to provide the continuous production of standard, quality source materials in bulk. As a result, their bargaining positions are weak and they cannot represent their own interests.

4. Conclusion

In contrast with developed Western-European countries, Hungarian farms are not specialized, although breeding animals and fattening pigs require diverse technologies. Our farm structure is both concentrated and disintegrated. The majority of pig breeders are vulnerable for lack of land as they are unable to produce the necessary amount of feedingstuffs and place manure safely.

The effective Act on Arable Land stipulates that self-sufficient animal farms shall not get access to land or shall no rent lands in the long run (up to 50 years) so property and land use are largely separated from livestock farming. In terms of efficiency, the greatest problems are posed by low progeny number, slow weight gain and poor feed conversion, long fattening period, long sow rotation and high labour costs. In the absence of modern farms high quality genome is not worth using. Solutions for the problem might be green or brown field investments, temporary disuse or disinfection of earlier fattening farms.

Due to geographical, economical-political and social reasons Hungarian meat producers cannot compete with developed pig producing countries. As a result of Hungary's location, the acquisition of protein sources and the export of pork to third countries are considerably more costly than for our competitors. Costs of heating and cooling are much higher than e.g. in Denmark, the Netherlands or Brazil, where temperature fluctuations are lower. Animal farms see

the increasing number of crimes against property, so the establishment of safeguard services also increases production costs. Further problems are posed by the high interest rate of foreign capital (14-16%), (MNB, 2008), the disorganization of the product cycle and the lack of technical advice.

In conclusion, the product cycles of the sector face a large number of problems on each level and solutions can only be provided by strategic decisions. It is not enough to improve certain levels of the product cycle, the sector needs to be analysed as a unit and problems are to be handled simultaneously.

5. References

- AKI (2009): A versenyesélyek javításának lehetőségei az élelmiszer-gazdaságban Agrárgazdasági Tanulmányok, 2009 Budapest: Agrárgazdasági Kutató Intézet.
- Bartha A. (2008): 'Vész, fék – Megroggyant magyar versenyképesség', *Heti világgazdaság*, vol. 30, no. 41, pp. 99–103.
- Chikán A. – Czákó E. – Kazainé Ónodi A. (2006): *Gazdasági versenyképességünk vállalati nézőpontból*. Budapest: Corvinus Egyetem, Vállalatgazdaságtan Intézet, Versenyképességi Kutató Központ.
- Juhász Á. (2008): 'Nemzetközi húsipari trendek', *Mai Piac*, vol. 17, no. 2, pp. 27–29.
- KSH (2010): *Mezőgazdaság, Gyorstájékoztató*
- MNB (2008): *Elemzés a konvergencia-folyamatokról (2008 március)*. Budapest Magyar Nemzeti Bank.
- Szakály Z. – Fülöp N. – Nábrádi A. (2008): 'Fogyasztói attitűdök elemzése a sertéshús és -húskészítmények piacán' in: *A sertéságazat versenyképességének javítása*. Debrecen.
- Udovecz G. (szerk.) – Popp J. (szerk.) – Potori N. (szerk.) (2007): *Alkalmazkodási kényszerben a magyar mezőgazdaság – folytatódó lemaradás vagy felzárkózás?* Agrárgazdasági Tanulmányok, 2007/7. szám. Budapest: Agrárgazdasági Kutató Intézet.