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# Studies in Agricultural Economics

Volume 114, Number 1

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Manuscripts should be prepared in English and sent via e-mail to the Editor-in-Chief at [studies@aki.gov.hu](mailto:studies@aki.gov.hu).

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## Foreword

*Studies in Agricultural Economics* can trace its history back for 50 years, as the first AKI *Bulletin* in a foreign language, number 1, was published in 1962. *Bulletin* number 35 (published in 1974) was the first collection of abstracts of AKI publications, and the journal's current title was adopted with issue number 90. Number 99, with its content of peer-reviewed papers, marked the change to a scientific journal. The issue prior to this one, volume 113 number 2, completed this process of transition with the replacement of individual issue numbers with annual volume numbers.

Volume 114 number 1 provides an opportunity to look to the future. AKI's intention is to further develop *Studies in Agricultural Economics* as a good quality, regional, English language journal that publishes original research and other material on agricultural economics and rural development, and which is available in both printed and electronic formats. The geographical focus is eastern central and south eastern Europe, with Hungary at the centre, although articles from other regions on topics of interest to readers of *Studies in Agricultural Economics* are warmly welcomed.

This issue includes a varied selection of articles. Garay, Kozak, Nyárs and Radóczné Kocsis assessed the potential for biomass production in Hungary. The quantity needed to meet the 2020 goals for renewable energy production is already available, but the necessary production capacity is not. The implications for issues such as agricultural exports and subsidising of renewable energy are discussed.

The research reported by Ózsvári, Biró and Lakner has provided quantitative, statistical evidence for the effect of management practice in general, and veterinary management in particular, on the performance of pig breeding farms in Hungary. It highlights the importance of efforts for enhancement of veterinary and stock farming technology knowledge of farmers and managers.

Beal-Hodges studied the impact of Florida Forever Open Spaces on nearby property values. For five of the open space projects in the study, just the perception of the land being permanently undevelopable and publicly owned at some point in the future triggered a positive change in value to nearby property owners.

Changes in cereal land use and production level in the European Union during the period 1999-2009 were analysed by Takács-György and Takács. In the majority of the New Member States a decrease in agricultural area was accompanied by an increase in cereals (wheat and maize) production areas and yields per hectare.

The research by Skarzyńska looked at the impact of cropping intensity on the economic results of plant production in Poland. It showed that, across a range of crops, lower outlays of production means contributed to a more effective utilisation of both the natural soil fertility and labour combined with fixed assets.

Mizik's snapshot of Western Balkan's agriculture from the perspective of EU accession records changes in input use, production structure, prices and agricultural policies. He identifies several issues that show that painful and hard actions will be needed in the region's agricultural sectors in the lead-up to EU accession.

Finally, Karcagi-Kováts and Katona-Kovács listed the measures to tackle rural population decline that are included in the sustainable and rural development strategies of several EU Member States. Approaches are fragmented and there are no commonly accepted objectives for addressing the problem. They recommend that future strategies should pay closer attention to this issue.

I trust that you will enjoy reading this issue of *Studies in Agricultural Economics*.

**Andrew Fieldsend**  
Budapest, March 2012

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## Extended summary

KESZTHELYI Szilárd and PESTI Csaba

### Results of Hungarian FADN Farms 2010

The Hungarian Farm Accountancy Data Network (FADN) system consists of 1920 sample farms. The Research Institute of Agricultural Economics (AKI) is responsible for continuous operation, central data processing, publishing and dissemination of information, development of the system and for maintaining contacts with the European Union. Each year valuable micro-economic data are collected on the costs and incomes of the agricultural commodity producing farms in the framework of FADN. The results of this work are published annually by AKI in book form. The publication may be downloaded in Hungarian or English from the AKI website ([www.aki.gov.hu](http://www.aki.gov.hu)) or requested in printed form from [aki@aki.gov.hu](mailto:aki@aki.gov.hu).

The book starts with a short introduction followed by a descriptive part which (a) defines the economic terms and indicators used and (b) describes the method of deriving the economic result in agriculture. The methodology adopted for switching from Standard Gross Margin to Standard Output based typology is highlighted in the next section. The following chapter deals with the profitability and the change in assets in the Hungarian agricultural sector as a whole. The results of individual and corporate farms are then described separately in different sections, focusing on the factors influencing profitability. This is followed by an international comparison of aggregated farm data of selected EU Member States restricted to financial indicators. In the last chapter the development of the land prices and land rental fees are studied across the different FADN regions of Hungary. The book is supplemented in the annexes with an exhaustive set of tables that present aggregated FADN farm data broken down by legal form, region, type of farming and economic size.

The main findings of the book are briefly summarised as follows.

After the decline in 2009, the profitability of the agricultural sector has increased again, reaching the record level of 2008 in real terms.

Revenues per one hectare rose by 8% while the costs increased only by 1%, thus increasing subsidies have also significantly contributed to the growing profits. As a result, the net value added was 31% higher than the previous year's figure. While profits in the case of individual farms increased by 74%, in the case of corporate farms the rate of growth was 71% of the previous year's value.

Investments compared to the record level of the previous year have declined by 26%; however the accumulation of assets (net investment) was still positive (HUF 3,300 ha<sup>-1</sup>). The reduction of investments mainly occurred in the field of machinery and other technological equipment but there was also a 3% fall in the number of breeding animals. In

contrast, investments in buildings and the volume of unfinished investments have risen by 4 and 5% respectively. The level of investments, as in every year, is closely related to the investment subsidies. The sum of investments subsidies per hectare has declined by 46%.

Investments of individual farms per one hectare amounted to HUF 30,600 which is only 57% of the previous year's figure. At the same time net investments were negative again (HUF -6,600 ha<sup>-1</sup>). Investments into machinery and buildings have declined by 28% and 62% respectively. The highest portion (37%) of investments is still directed into the acquisition of machinery. Investment subsidies have halved as well and declined more than in the case of corporate farms.

After outstanding results regarding investments in 2008 and 2009, developments in 2010 declined by 13%. Investments per hectare amounted to HUF 101,400, which was almost 3.5 times higher compared to the individual farms' value.

The effects of the financial crisis in Hungarian agriculture still can be felt. Long term credits for investments in 2010 have further decreased by 3%.

In the case of corporate farms the ratio of rented agricultural areas from the owners in 2010 did not change much (up from 15.2% to 15.7%). Farms renting land from the owners (from themselves) pay a 40% higher rental fee per hectare.

Analysing profits in a European Union context it can be concluded that Hungarian farms reached 46.7% of the EU-27 average.

The increase of land prices did not halt in 2010 as they went up on average by 4% (to HUF 473,000 ha<sup>-1</sup>). Land rental fees increased by 3.6% in 2010. The average rental fee of one hectare of arable land was HUF 25,500.

The findings of the book are mainly intended for the use of agricultural policy makers and researchers but can be of considerable interest to producers as well.

## Book review

FERTŐ Imre, FORGÁCS Csaba and JÁMBOR Attila (editors)

### Changing Landscape of European Agriculture\*

Essays in Honour of Professor Csaba Csaki

\* Agroinform, Budapest 2010. 260 pp.

This volume has been published to celebrate the seventieth birthday of Professor Csáki Csaba, a Hungarian agricultural economist. On this occasion an international conference was organised on 4 November 2010 by co-workers at the Agricultural Economics Department of the Corvinus University of Budapest. As Fertő Imre, the present Head of Department wrote: 'It is a small gift of appreciation and thanks ... for the guidance, friendship and inspiration he has given us' (p.9). Csáki Csaba is undoubtedly a very successful professor not only in Hungary, having achieved here rectorship (1985) and full membership of the Hungarian Academy of Sciences (1994), but is also highly respected abroad, for example at the World Bank (where he worked for 13 years) and at the International Association of Agricultural Economists. In the introductory part of the book former rector Mészáros Tamás and Csáki's fellow worker Forgács Csaba review the career of Professor Csáki. The book closes with his publication list consisting of 283 items, many of them written in English. But Fertő Imre observes that 'this book cannot substitute to read the papers by Csáki Csaba'.

The editors have grouped the ten contributions into three parts. Part One deals with the process of agricultural transition, Part Two with the evolution of European agricultural policy while the third part is more heterogeneous, including econometric modelling. So the subject of the book coincides with Csáki's sphere of interest and it should be emphasised that all of the papers have relevance to current topics. They cover a broad range of topics from the status of today's capitalism to food security, so the book should attract many readers.

In Part One David Harvey (Newcastle) presents a lengthy and most theoretical study about societal transformation interpreted at a general level, starting from the criticism of present capitalism. He makes several important statements, for example he considers continual striving for yet more consumption as 'self defeating' (p.48), the coexistence of globalised finance and national governance as 'unsustainable' (p.43) and he notes that 'there is no competing paradigm which seeks to explain and understand global condition, other than capitalism' (p.49). It is remarkable that he calls just upon agricultural economists to fill in this gap: 'As (agricultural) economists, we have the capacity to contribute to better answers' (p.53). He applies an evolutionary approach which in my opinion coincides with present-day efforts of historians and biologists (see Beddoe *et al.* 2009)<sup>1</sup>.

Further essays in Part One deal with agricultural transition in three major regions: Russia, eastern Germany and Central

Asia. Of them the case of eastern Germany seems to be the most successful. Alfons Balman and Franziska Schaft (Halle (Saale)) present the history of transformation in agriculture as a success story resulting in a productive and profitable sector, although in the title the word success is followed by a question mark. The authors include comparative statistical tables for eastern and western German farms containing data for land use and economic indicators. The process of transition took two decades after 1989 and the authors note that it needed 'huge subsidies by the German government as well as through the European Union (EU) Common Agricultural Policy (CAP)' (p.90). Besides that the transition process was not exempt from problems, first of all because of 'enormous dismissal of employees' (p.91), which they consider as an externalisation of the social costs of the adjustment process.

The transition of Russian agriculture was also addressed by two German authors, Ulrich Koester (Kiel) and Martin Petrick (Halle (Saale)). They have sought to answer why private small farms have not replaced the persisting large farms and even emerging super-large agrohholdings with more than 50,000 hectares of land on average. As a starting point they state that neoclassical economics focusing only on the private sector cannot explain recent developments in Russia. So they have used institutional economics, mainly embedded institutions during their analysis of managers' and employees' attitudes. The authors state that economics of scale had an important role in the transition process but at the same time they have pointed to the fact that the future competitiveness of agrohholdings will largely depend on the quality of their management (p.73).

Central Asia was analysed by Zvi Lerman (Jerusalem), who compared the situation in five states to that of Russia, Ukraine and Azerbaijan. There is a debate in this region about the advantages of small farms which are free from labour monitoring costs and are not prone to agency problems. The author wished to show that family farms outperform large-scale farms, at least in land productivity. In the first period of transition (1990-1994) there was a steep decrease of production, but in the second half of the 1990s it was followed indeed by 'robust growth' (p.113). Lerman concluded that the growth rate of agricultural production after the turning point was higher in states which had larger shares of privately cultivated land (p.105).

In Part Two Johan Swinnen and Kristine van Herck (Leuven) dealt with the future of the CAP after 2013, undertaking perhaps the most complicated and difficult problem, although they restricted their approach only to direct payments. Five different official objectives for the CAP were declared in the Treaty of Rome in 1958. The authors survey

<sup>1</sup> Beddoe, R., Costanza, R. and others (2009): Overcoming systemic roadblocks to sustainability: The evolutionary redesign of worldviews, institutions, and technologies. PNAS 106, 2483-2489.

changes and the fulfilment of these goals. They found that the present system of direct payments decreased the income variability of farming households, but it does not function as a good safety net 'as most of the benefits went to larger farms' (p.124). Of the new goals of the CAP, food security is dealt with in a more detailed way. The authors state 'that the EU public in the 21st century is (much) more concerned about safety and quality than about quantity' (p.126) and that food security is mostly a demand problem instead being a supply problem. One of their conclusions is that the system of direct payments is not the proper tool for handling food security, while if food prices will increase in the future 'farmers should receive better incomes from the market' (p.130). As to the new challenge of climate change they are of the view that there are no arguments for using only direct payments for reducing the impacts, but they propose 'the development and implementation of a series of new and improved (green) technologies' (p.134). The reviewer finds wanting that rural employment has not been raised among the possible goals in such a densely populated continent as Europe (even if the possibility that increasing employment may contribute to higher food prices is taken into consideration).

Elek Sándor, Fertő Imre, Forgács Csaba and Papp Gergely (Budapest) have studied the impacts of the CAP on rural employment in the largest NUTS2 region of Hungary, the Southern Great Plain. Between 1995 and 2003 the per capita GDP of this region was only 40.4% of the EU average and it had the lowest growth rate in Hungary (p.140). The authors conducted 18 interviews with public, private and non-profit organisations which showed that popular myths do not always agree with the facts. The share of agricultural production has decreased continuously in this rural region and the research has demonstrated the dual structure of farm size (3.4 hectares in private farms c.f. 487 hectares for economic organisations on average), a similar situation why Swinnen and van Herck stated that large sized farms have enjoyed the major part of the benefits of the CAP. This team also concluded that 'agricultural subsidies based on rural development policy should be reorganised to help small and medium-sized farms' (p.164).

Tóth József (Budapest) selected the Visegrad countries (Czech Republic, Hungary, Poland and Slovakia) for the analysis of competitiveness and resource use of their agriculture. He applied modern econometric methods such as the Balassa index, Data Envelopment Analysis (DEA) and Principal Component Analysis (PCA) at the level of the state. His research produced remarkable and interesting results. For example, it was shown that the Visegrad countries as a group 'have always been improving the position of the EU on the world food market' (p.172). The author could also show that the trend of agricultural value added was increasing in the Visegrad countries after their accession to the EU. As to differences among the four states it was interesting to see that the two countries being less effective in resource use (Czech Republic and Poland) could better utilise their trade advantages (p.177). Tóth József is one of the many students of Professor Csáki who himself has very much stimulated the use of mathematical methods within Hungarian agriculture.

Part Three begins with the paper of David Colman (Manchester), Unai Pascual and Ian Hodge (Cambridge) who

surveyed land conservation policy in the second half of the 20th century at UK and international levels. The beginning of the conservation process was indicated by establishment of national parks and connecting acts in the most developed countries. In the United Kingdom 'the case of Halvergate Marshes ... became a model for Environmentally Sensitive Areas ... in the EU' (p.186). Several social attributes, such as biodiversity, amenity, visual beauty and rarity have been aspects of conservation. In the developed countries more mechanism design (selection) procedures have been applied, depending on the type of information, connecting the authority and the land operator executing the conservation activity. The developing countries rather used the method of payment for environmental services (PES), which procedure was 'perhaps the most direct form of providing conservation incentives to local land users' (p.192). For the application of PES ten examples from three continents are presented by the authors. This interesting study closes with the discussion of problems of efficient mechanism design.

William H. Meyers (Columbia) focused on the global economic crisis and in this respect on food security of Europe and Central Asia. In 2009 these regions experienced the largest decrease in real GDP among the regions of the world. The author states that current real food prices on the world market are at least 50% higher than the average of 2002-2004. According to him the former moderating tendency in world food prices was changed into a period of higher, more volatile food prices, depending as well on oil prices. He does not think that world food prices will return to the level of 2002-2004 in the near future because most analysts anticipate an 'unpredictable and unstable future' (p.206). His opinion seems to be confirmed by the FAPRI projection of United States grain prices up to 2020. In the longer term Meyers considers the restoration of economic growth as high priority while agricultural and rural development 'can indeed even be an engine of growth' (p.211). In this respect he makes several proposals, e.g. to give priority to agricultural investments, both on the levels of governments and that of international organisations. He considers the development of rural infrastructure (irrigation, roads) as important and points to the role of governments in improving market functioning (p.220).

The essay of Klaus Froberg (Bonn) and Etti Winter (Hannover) is the second one in the book using mathematical methods. They are seeking an answer to the question posed in the title, if functional forms matter for modelling the consumption and import demand of agricultural and food products. They survey procedures in modelling structures of food consumption, retrospectively back to Engel (1857)<sup>2</sup>. But in their case the possible functional forms should also be in conformity with policy making of bilateral trade flows. Finally they choose the Normalised Quadratic-Quadratic Expenditure System (NQQES) as the most appropriate method for their international trade model (p.230). As an example the authors demonstrate price elasticities and expenditure elasticities for five trading partners in different

<sup>2</sup> Engel, E. (1857): Die Produktions- und Consumptionsverhältnisse des Königreichs Sachsen [The production and consumption relationships of the Kingdom of Saxony]. Zeitschrift des statistischen Bureaus des Königlich Sachsischen Ministerium des Inneren. Numbers 8 and 9.

trading situations. Finally they draw some conclusions, so for example: the trade model parameters used 'should be in line with microeconomic theory' (p.237).

Summarising, the reader can enjoy an interesting and many-sided book about current problems of agricultural economics, and at the same time this volume is fitted to the aim of celebration. The merits of the authors must be acknowledged, as must those of the editors. I recommend this book to those agricultural economists and other agricultural experts who are interested in food supply and rural development of Europe and Central Asia. The volume will be especially welcomed by the numerous colleagues, students and friends who personally know Professor Csáki Csaba and who got in touch with him during their careers. Perhaps it would have been useful to include a recent paper by Professor Csáki in

addition to his publication list but this is not a custom in international celebrations. Those who participated in the event could listen to the closing words of Professor Csáki and thus become acquainted with his ideas and opinions on the topic.

*Changing Landscape of European Agriculture – Essays in Honour of Professor Csaba Csaki* can be purchased online at [www.agroinform.com](http://www.agroinform.com), price HUF 5600.

**Reviewed by:** Mészáros Sándor, Budapest.  
dr.emes@t-online.hu

## Studies in Agricultural Economics

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*Studies in Agricultural Economics* publishes original research papers, review papers, policy analyses and book reviews on agricultural economics, rural development and related topics including: agricultural production and competitiveness, environmental resource management, agri-food supply chain management, markets and marketing, international trade, econometrics, rural economic geography, rural economy and sociology, and development of information and knowledge based society in rural areas.

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- **Reference to a chapter in an edited book.** Mettam, G.R. and Adams, L.B. (1999): How to prepare an electronic version of your article, in Jones, B.S and Smith, R.Z. (eds), *Introduction to the Electronic Age*. New York: E-Publishing, 281–304.

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