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## **I. Major responsibilities of the research institute in 2015**

In 2015, the institute continued to implement the objectives of its research strategy. It complied with its obligations undertaken under research contracts and agreements. Its main tasks included compiling the Hungarian and English versions of the 2014 Competition and Regulation (*Verseny és Szabályozás*) and the 2014 Labour Market Yearbook (*Munkaerőpiaci Tükör*), as well as the time-proportionate implementation / completion of the research projects supported by the European Commission and the continuation of research studying the game theory, corporate strategies and competitiveness under Lendület (Momentum) programme of the Hungarian Academy of Sciences (HAS).

## **II. Major research results and results of other types in 2015**

### **a) Major research results and results of other types**

#### *MACROECONOMICS AND GROWTH*

Within the framework of the research project Growth, Capital Stocks and Productivity Hungary's total factor productivity (TFP), was recalculated, and the distribution of GDP growth was also recalculated based on the TFP figures. Compared to the available literature on Hungary, the method for calculating human capital is a novelty, as is the decision to take into account the capacity utilisation rate of factors of production. It is necessary to take capacity utilisation into account in order to get a more realistic picture of fluctuations in productivity. The calculations show that both the growth of capital stocks and the increase in productivity played an important role in the growth of the Hungarian economy, while the growth contribution of human capital (primarily the increase in employment) only became significant in the late 1990s. An attempt was made to take into account any potential connections between capital growth and productivity improvement. The neoclassical framework allowed for examining the possibilities of investment induced by TFP growth, but this requires an analysis of the connection in the opposite direction, too.

The research project Savings Types: an Adaptive-Evolutionary Approach applies an agent-based model to savings decisions; an important area of macroeconomics. Savings are not among the popular fields of application of agent-based microeconomic models, so the creators of macroeconomic models reached back to traditional savings theories and used certain simplified variants of savings behaviours in their models. This research asks two questions: whether – assuming a few popular savings rules to be valid – one can endogenously deduce the relative viability of these rules using an adaptive-evolutionary approach, and what sort of social outputs arise out of the competition of various savings rules. Three types are introduced: a prudent one, a short-sighted one and one operating in accordance with the permanent revenue theory. If the selection pressure is extremely strong, the prudent type clearly beats the other two. Perhaps surprisingly, the second most viable appears to be the short-sighted one, but neither type dies out even at a medium selection pressure. At a customary level of capital efficiency, the prudent type introduces a trend for overinvestment into the economy, and the economy shows a savings rate higher than that of the golden age. Relaxing barriers to credit may lead to even greater overinvestment, as the increase in available credit makes capital owners, emerging endogenously, allow themselves to be

exploited by those who have no positive capital income. With regard to long-term average consumption, a balanced mix of types provides the best result, however, this leads to much greater fluctuations than the scenario with prudent households only.

The research project Economic Convergence and Structural Changes in New EU Member States studies four related aspects of economic convergence based primarily on the experiences of the ten new Eastern European EU member states (EU10) between 1999 and 2013. The four aspects in question are the following: convergence of the real economy and prices, structural convergence and wage convergence. Convergence of the real economy and prices are defined as a reduction of the difference compared to the more developed member states, while structural convergence is primarily analysed in terms of the changes in market and state services based on Eurostat's (expenditure-side) purchasing power parity database. Wage convergence is analysed in terms of nominal and gross real wage costs and net nominal and real wages, and the authors point out that Eastern Europe is behind in terms of net wages compared to relative productivity, even though this is not reflected in total wage costs. The analysis shows that up to 2008, the process of convergence was fast in the EU10 with regard to the real economy and prices, but these processes slowed down in subsequent years. Based on a convergence analysis that included cross-sectional and time-series data, the authors illustrate how relative price levels converge towards a track defined by relative levels of development, and negative and positive divergences from this trend have a positive and negative impact on real economy convergence, respectively. These results regarding EU member states match certain earlier estimates made regarding developing countries. They also show that even though the share of services measured at current prices increases with an increasing level of economic development, this is mostly caused by the increase of the relative price of services. When this effect is filtered out, the catching up of the EU10 countries is accompanied by the growth of the share of goods and the reduction of the share of services with regard to their relative volume. The weakening of non-market services, and especially of in-kind state transfers, a focus of attention for the researchers, played an important role in this; their volume was exceptionally high at the beginning of the period under study, and it remained quite significant in the EU10 despite the reduction. The statistical analysis and model created by the research team based on this fact provides an explanation for why the EU10 countries are behind in terms of net wages.

The research project Corporate Foreign Currency Loans: Predisposing Factors and Risks examined the factors that contributed to the high credit default rate of foreign currency loans taken out by businesses during the crisis. Hypothetical credit default rates for companies with loans denominated in various foreign currencies were compared based on micro-level data. The two main currencies used in foreign currency loans in Hungary were studied: the euro and the Swiss franc. The results indicated that companies with franc loans were hit harder by exchange rate changes than those with euro loans. At the same time, companies with loans denominated in francs were riskier than those with euro loans to begin with, and suffered from the consequences of the crisis more as well.

#### *EMPIRICAL INDUSTRIAL ORGANISATION*

The research project The operational anomalies and performance of the "health industry" – an international outlook studied the most important characteristics of the Hungarian healthcare instrument manufacturing and drug industries. A questionnaire was drawn up on changing patient relationships, the framework for analysis and data organisation necessary for creating

the "health data bank" was set up, and the model for the theoretical analysis of the circular asymmetrical information system was created.

The analysis carried out as part of the FP7 research programme on social innovation (CRESSI - Creating Economic Space for Social Innovation) determined that the indicators used for the Innovation Union Scoreboard (IUS) only provide a partial picture of innovation performance. Although social innovations can utilise R&D results, the decisive event is usually the introduction of a new mode of operation, or the changes in organisational structure, leadership and behaviour that such a change requires. The IUS indicators cannot grasp these factors. The research analysed social innovation and outlined a new set of observation criteria.

The analysis of state participation in the venture capital sector showed that in the markets of the Central and Eastern Europe, due to the rather extensive discounts offered and due to the limited supply of potential investors, well-to-do private persons who were known to have good relationships with the state administration often became co-investors; the lack of transparency allowed these connections to be exploited when fund managers were chosen. The biased selection of fund managers and the shortage of experienced fund managers led to the dilution of the fund manager market.

## EDUCATION AND LABOUR

A research project compared the distribution of jobs by complexity and firms' willingness to hire low-educated labour for jobs of varying complexity in Norway, Italy and Hungary. In investigating how unqualified workers can cope with complex jobs, it compared their involvement in various forms of post-school skills formation. The countries were also compared in terms of the proportion of small businesses, which, it is assumed, manage and tolerate the losses from functional illiteracy more than large firms do. Unskilled Norwegians benefit from synergies that exist between work in complex jobs, post-school skills formation and civil integration. In Italy, workplaces requiring no literacy skills at all have the largest contribution but small businesses tend to employ low educated workers at a large scale even in highly complex jobs. In Hungary, insufficient skills (relative to Norway) and an undersized small-firm sector (relative to Italy) set limits to the inclusion of the low educated. An extreme degree of social isolation is likely to deteriorate their skills and jobs prospects further.

Another study analysed the entry into legitimate employment and earnings of a large sample of convicts released from the Hungarian prison system in 2002–08. The paper identified the effect of prison on post-release employment by exploiting differences in the timing of incarceration and also by estimating fixed-effect models. For convicts with a single prison term, the data suggest an initially negative effect on employment, which turns positive after about a year, though the impact on earnings is permanently negative. A comparison with recidivists (among whom the employment effect is negative and the wage effect is weaker) suggests that these results are driven by a drop in the reservation wages of 'reformed' criminals, rather than a lack of discrimination. This reading is supported by further data showing that the average ex-inmate tends to make increased efforts to find a legitimate source of livelihood and support in finding a job.

Another important result comes from a study where researchers used the 2008 cross-sectional wave of the EU-SILC survey and multilevel modelling techniques to explore the macro-level determinants of the gender-poverty gap in the ten post-socialist EU member states. They find that fast-paced, foreign capital-led economic growth is associated with a larger gender-poverty gap in Central and Eastern Europe, while generous welfare policies, specifically higher levels of spending on pensions and family policies, are correlated with women's lower

relative destitution. These findings evaluate the impact of neoliberal style “economic development” on gender inequality in a geopolitically specific context and suggest that structural adjustment and global market integration may exacerbate women’s vulnerability even when they are well equipped with human capital and other resources to compete with men in the labour market.

Using unique data from Hungary, the team assessed the gap in standardized test scores between Roma and non-Roma students and showed that this gap is comparable to the size of the Black-White test score gap in the United States in the 1980s. The ethnic test score gap in Hungary is nearly entirely explained by social differences in income, wealth and parental education, while ethnic factors do not play an important role. Using reduced-form regressions, they identified two major mediating mechanisms: first, the home environment of Roma children is less favourable for their cognitive development; second, Roma children face a lower quality educational environment. Comparing children with similar home environments from the same school and class, we find that the ethnic gap in test scores is insignificant. Ethnic differences in the home environment are explained by social differences, and ethnicity seems to play no additional role. While their disadvantage in accessing high-quality education is also strongly related to social differences, Roma students seem to face additional disadvantages as subjects of ethnic segregation. The results suggest that in addition to policies designed to alleviate poverty, well-designed interventions influencing these mechanisms can also improve the skill development of Roma and other disadvantaged children.

#### *PUBLIC ECONOMICS AND PUBLIC POLICIES*

The team's research showed that, after filtering out duplications, 1.8 million people entered into the state labour system (were registered as unemployed or participated in some labour programme). 1.37 million people were in the labour system for more than 120 days. An analysis of people's paths through the system shows that the Government's public employment scheme performs worse than other programmes in terms of participants' chances of exiting the labour system; additionally, the more times a person participates in public employment, the lower their chance of leaving the system. An active relationship with other parts of the labour system appears to be beneficial with regard to the individual's chances of entering the open labour market.

In another important result regarding the public policy issues related to public employment and the labour market, the research showed that despite the significant expansion of the public employment scheme, the average length of unemployment grew from 17.9 months to 18.6 months in 2014, with the longest average period and the largest increase coming from the Central Hungary region.

Analyses of the international application of public employment schemes show that larger programmes usually try to tackle different problems, some of which may even be in conflict, which reduces their effectiveness. In the long term, public employment programmes are rather unsuccessful in terms of subsequent employment and wage levels, but – if they are well-targeted – they can function as a social safety net – at the expense of crowding out other, alternative, more cost-effective social policy interventions. In the arguably successful Scandinavian practice, public employment – which is more an opportunity than an obligation there – is only used for certain clearly defined target groups. The employment of unemployed people must not lead to the elimination of other jobs. The main flaw of large-scale Argentinean public employment programmes was that they tried to address two problems at the same time: poverty and unemployment. Additionally, available local capacities were wildly divergent, making implementation difficult. As a result, political considerations

prevailed and many participants became dependent on the programme. In the short term, this raised aggregate employment and income, but analyses did not detect positive long-term effects.

The expectation of sustainability for microloan organisations is a dogma that severely hinders the true social integration of the marginalised, socially excluded groups that are the target groups of such schemes. A distinction needs to be made between the sustainability of the organisation – which is providing social services – and that of the newly created micro-enterprises. Requiring organisations providing social services to be sustainable causes their focus to shift from the most vulnerable groups to groups that are in poverty but doing somewhat better; therefore, such social policy expectations by the EU end up increasing the marginalisation of the most vulnerable groups and social inequalities instead of reducing them.

Research into social microloan schemes showed that the use of social collateral, which is widespread in international practice, does improve the chances of loan repayment, but it hinders the success of efforts to reduce poverty in the long run. A multi-period learning model would be a more desirable solution.

Research into the pension system showed that the compound effect of certain lax pension rules and certain strict pension rules is a pension system that greatly benefits a few people while causing minor losses to many. The groundbreaking element of the pension model is that it takes into account the fact that contributors have incomplete and distorted information about the system itself. As a result, more people moved to the mandatory private pension scheme than those for whom this was beneficial, and the majority of people retire earlier than the optimal date. Another new pension model was used to examine the social optimum of the family allowance and family tax breaks. The results of the model indicate that the optimal combination of the two strongly depends on various parameters. The greatest danger lies in the excessive polarisation between poor families with many children and rich families with few children.

A corruption research project carried out with an external partner examined the impact of unemployment experiences, the quality of government services and the inspection strategy of the tax authority on non-registered (entirely hidden or mixed) payments. The results indicate that increasing the frequency of taxpayer inspections, increasing the precision of tax inspections, introducing an adaptive tax inspection strategy, reducing exposure to unemployment and improving the quality of government services all offer effective ways of improving tax compliance and curbing tax fraud. The analysis identified two groups of people receiving unreported wages: 1) people trying to avoid poverty and 2) people with a high income who falsely report themselves as self-employed. The two groups have different motivations: for the first group, avoiding penury is the main goal, and the factors examined in normal microeconomic models (probability of getting caught, penalties etc.) do not play a role in decision making; for the second group, rational calculations and the factors examined by the above mentioned models play the decisive role. The team's analysis of public procurement procedures carried out in the 2009-2014 period shows the strengthening of political favouritism (nepotism), with competition weakening significantly over the period under examination in public procurements carried out in this market. The results so far also indicate that there is no direct link between the actual amount of political nepotism and the strength of competition.

In a health policy research project, researchers analysed the death statistics of the working-age population of 45 European and post-Soviet economies. They demonstrated that there are other important factors determining mortality rates in addition to the level of economic

development and inherited economic structures: the higher the level of education of the population and the relative prices of alcohol and tobacco products, the lower the mortality rate. At the same time, the higher the share of the hidden economy and the per capita consumption of spirits, and the further North the country is, the higher the mortality rate.

### *AGRICULTURAL ECONOMICS AND RURAL DEVELOPMENT*

According to the results of a global examination of forest ecosystems, the Kuznets law applies to afforestation, but the correspondence is not a square one, but a cubed one. The best afforestation in terms of quantity and quality is taking place in the poorest and the richest countries; however, biodiversity considerations are given less weight in the richest countries. With regard to the poorest countries, one has to wonder to what extent the plantation of high-quality forests is a result of a conscious stewardship decision, and to what extent it might be caused by the fact that the climate of these countries promotes greater biodiversity in the first place.

The research project on the spatial patterns and development potential of local food systems found that the East Hungary region has the greatest development potential, as both the current production and the production capacity are quite significant. Current production in Budapest is not very high, but small producers are better integrated into short supply chains than elsewhere, offering them a chance for greater profit. In general, the local food movement is still in its initial phase in Hungary.

The results of a study of international milk trade within the EU between 2001 and 2012, carried out using the methods of network theory, indicate that the milk trade network became denser during the period under examination, although it also became somewhat less clustered. The researchers compared the effect of the economic crisis to that of the EU enlargement and found that the latter had a much greater impact. In another important result, the integration of new member states into the EU's milk market was found to be only partial – although integration is much more advanced in the processed milk products market. Although the connections of new member states expanded between 2001 and 2012, the relative weight of most of them did not change. The only exception is Poland, which became one of the most important milk exporters.

The research project examining the competitiveness of the EU's agricultural exports in terms of price and quality in the 2000-2011 period found that an increasing proportion of agricultural products became competitive with regard to price or quality. This happened despite the fact that the EU's share in the world's agricultural and food markets fell. The research found that the share of products with competitive quality is higher than the share of products that mainly compete on price. This indicates that product differentiation is playing an increasing role in agricultural trade. EU member states are focusing more and more on the export of products for final consumption with a higher added value. This trend is strongest in The Netherlands (among old member states) and Poland (among new member states).

### *GAME THEORY*

The research project examined cooperative games with externalities in which coalitional deviations affect the other players (the residual players) as well, making different coalitional strategies beneficial to them. At the same time, the changed behaviour of the residual players affects the primary coalition as well. The recursive core that provides a consistent solution for evaluating coalitional deviations was generalised in two directions. If the outcome of the game is uncertain, cooperation needs to establish a stable configuration for all states of the world. The sustainable core introduced for games with externalities and uncertainty

generalises both the recursive core and the weak sequential core. Additionally, it was generalised to network games, including both exogenous and endogenous network structures, where the network may model infrastructure, or financial networks, for instance. The theoretical results obtained have many potential applications, subject to computability. The risk core uses risk measures to simplify the recursive core and make its calculation easier. At the same time, several algorithms were drawn up, which are capable of efficiently generating all the linearly conjugate realisations of reaction-kinetic networks.

The existence of fractional stable solutions was established for general NTU games, and this solution was used to find a heuristic solution to the stable matching problem with couples.

An experimental investigation of bank runs revealed a relationship between cognitive abilities and poor depositors' decisions.

### *FIRMS, STRATEGY AND PERFORMANCE*

"Normal" demand uncertainty can be an important determinant of trade decisions of firms as well as aggregate trade patterns. While numerous previous research projects examined the effects of "extraordinary" uncertainty caused by crises and macroeconomic uncertainty, little attention had been paid previously to everyday demand uncertainty, which is crucial to the normal operation of businesses. This research has shown that its examination requires a careful analysis of the logistics technology of the business in question. This type of modelling shows that greater uncertainty changes the optimal logistical decisions of businesses (they send larger shipments more rarely), and increases their logistics costs, and, as a result exported quantity becomes lower. Precise modelling and detailed data from France allowed for a estimating a model, and indicated that this type of uncertainty significantly affects the volume of foreign trade.

A research project examined how exporting and importing by businesses are associated with the company's markup. A previous analysis had already demonstrated that the markup of importing companies is higher even when their greater productivity is taken into account, while that of exporters is due only to selection of more productive firms into exporting. A new model was drawn up to study the phenomenon more precisely; in this model markups are affected by factors such as the productivity of the firm, the quality of the products it produces and the strength of competition. The model takes into account several channels simultaneously. First, both importing and exporting is more worthwhile for more productive companies. Second, importing helps companies achieve greater productivity and higher quality. Third, export markets are characterised by stronger competition. The empirical results suggest that these mechanisms do have a significant role in determining the markup. The research project revealed that – in addition to exporting – access to imported intermediate inputs is also vital for the competitiveness of companies.

A new research project examined the political factors affecting foreign trade policy. This empirical research aimed at understanding whether the United States is more likely to initiate foreign trade disputes regarding industries that are important for the states that play the most important role in the presidential election, especially in the run-up to the elections. The analysis showed that these political factors increased the frequency of disputes by 18 to 25 percent. These results indicate that studies of the impact of international institutions such as the WTO need to take into account the internal political environment of the countries involved.

## *ECONOMICS OF NETWORKS*

The research project *The Role of Networking and the Movement of Workers in Labour Market Processes and Corporate Productivity* was aimed at determining the network of connections between businesses and individual employees based on data on worker movement between the businesses. Researchers studied these networks in order to assess how they affect labour market processes, as well as the productivity of companies and regional development. In the first phase of the project, researchers mapped employee movements between Hungarian businesses in the 2003-2011 period. Proximity indexes characterising industry connection networks were calculated based on employee movements between firms in each industry, based on the concept that employee movement between industries is based on mutually useful skills: employees are more likely to move to a company in a different industry if it offers them opportunities to utilise their original industry-specific skills. Previous research indicated that such industry-specific knowledge primarily affects the movement of specialists, and it does not apply to managers and low-skilled workers. The initial results of this research indicate that it has little effect on the movement of low-skilled workers in Hungary, but it has a stronger impact on job changes by managers and specialists. The next phase of the research examined the transfer effects with regard to specialised knowledge; that is, how corporate productivity is affected by industry-specific specialised knowledge obtained at a foreign company or a company with greater productivity. Initial results support the notion that workers from the same industry have a positive effect on company productivity, and workers from the least related industries appear to have a negative effect on productivity. The effect of the productivity of previous workplaces seems to be quite powerful as well.

Research carried out with Swedish partners on the relationships between worker connections and regional development provides a new empirical framework for examining the role of social networks in regional economic growth. The research project examined for the first time the role of worker connection networks in regional economic processes. An analysis of co-worker networks is especially useful because it helps to reveal the potential of local learning and offers a new explanation for differences in regional productivity growth. Furthermore, the study of cross-sectoral relations offers an insight into local knowledge externalities. The research results were the first to lend support to one of the central tenets of economic geography: that the density of social networks increases a region's productivity. During the examination of worker networks, researchers also found new evidence that in large cities, the role of knowledge externalities based on diversity is the strongest, while in medium-sized cities, knowledge externalities based on specialisation have a dominant role.

### **b) Science and society**

The Institute's research portfolio contains both theoretical and applied empirical research in topical economic policy and welfare issues. A few examples of topics of this kind include the labour market situation of those employed under the public work scheme, biodiversity, pre- and post-incarceration labour market careers, the impact of crèches on mothers' labour supply, gas supply in East Central Europe and the main reasons underlying the dropping out of Roma students from secondary education.

The Institute sets great store by publishing the research results that society is likely to put to good use, raising awareness of them in the right forums and public events and making them available for the interested public at its website.

The results of labour market research are given publicity annually at a labour economics conference in Szirák, the 2015 edition of which had the title *Labour market research in 2015*



(*Munkaerőpiaci kutatások 2015*). Papers were presented in six sections on the following topics: education, labour market movements, labour market institutions, and gender inequalities.

Volume 15 of the Labour Market Yearbook presenting the topical characteristics of the Hungarian labour market and employment policy in Hungary and analysing various areas of this topic in detail was published in Hungarian and in English. The yearbook presents the characteristics of the processes in and the internal interconnections of the Hungarian labour market on the basis of available statistics, theoretical research and empirical analyses, in an easy-to-follow style and structure and in an international comparison. In keeping with the earlier practice adopted by the editors of the series, an area that is key to understanding labour market processes in Hungary and the success of fact-based employment policies was selected for special discussion. The Close-up (*Közelkép*) chapter of this year's edition discusses the Hungarian public employment scheme.

The eighth, 2014 edition of Competition and Regulation (*Verseny és szabályozás*) analyses parallel events in fusion control, presents the economic background of the system of attorney's contingency fees and the role of judicial review in competition procedures. It discusses the concept of the economics of the application of laws, quantitative analyses used in competition regulation and sectoral regulation, forensic economics experts and the welfare effects of the operation of competition authorities. Readers of this volume can also learn about the competition issues of the postal market, the experiences of the opening of the Hungarian market and the modelling of the security of the supply side of the European natural gas market. The yearbook ends with a detailed Hungarian and international bibliography.

The publication entitled Indicators in Public Education (*A közoktatás indikátorrendszere*) presents the core set of indicators used for describing the Hungarian public education system, the 2013 values of all indicators and the 2001-2012 values of most indicators. The introduction of this set of indicators created a publication that can be updated each year to provide policymakers with convenient and precise information on the current state of public education and existing trends. The publication also informs interested experts and the lay audience about the main indicators of the Hungarian public education system.

In 2015, the Institute organised two successful conferences: one in October on the internationalisation of Hungarian businesses, and one in November on Hungary's growth outlook. The *Networks, Complexity and Economic Development* conference, organised by the Economics of Networks research unit with international speakers and an international audience, was an especially important event. This year saw the 12th edition of the international conference *Transition in Agriculture – Agricultural Economics in Transition*, organised by the Agricultural Economics and Rural Development research team.

The research results achieved in the Institute and discussed in seminars were published in 57 working papers and 7 issues of the Budapest Working Papers on Labour Market (Budapesti Munkagazdaságtani Füzetek). A professional blog serving as a discussion forum for the Institute's research results, policy opinions and topical economic, public and socio-political issues is in place and is regularly used by the staff to disclose their opinions and papers thereby facilitating social interaction. News about the media presence of the staff is available in the Press Survey section. The website offers up-to-date information in both English and Hungarian on the main activities, publications and projects of as well as the conferences and seminars organised by the individual research groups.

### **III. National and international relations and co-operation in 2015**

Researchers of the Institute teach at nearly all Hungarian higher education institutions offering undergraduate and graduate courses in economics (CEU, BCE, ELTE, DE, PTE, etc.). Furthermore, they are engaged in PhD programmes at Pannon University in Veszprém, Szeged University and Szent István University under a co-operation agreement. They also teach at universities (Cardiff University, UK Open University) and work as external researchers in prestigious research institutes (CEPR, IZA) abroad.

As a result of the measures taken in the interest of establishing the professional integration of research in competition regulations, a forum has been set up for lecturers and professionals at universities, research institutes and institutions of public administration in Hungary and abroad dealing with competition regulations, the economics of network industries and the legal issues of regulations.

The Institute organised its Summer Workshop for the fifteenth time, offering a forum for young economists studying or working abroad.

Researchers provide expert services for the Competition Office, the Central Statistical Office, TÁRKI, FIW and the Fiscal Council. Its researchers include consulting experts of the Monitoring Committee of the Economic Development and Innovation Operational Programme, members of the Advisory Panel of Parliaments and Civil Society in Technology Assessment (PACITA) and the Expert Group 'Strategic Foresight for R&I Policy in Horizon 2020' (SFRI) at the European Commission's DG Research and Innovation. The Institute is an advisory member of the Evaluation Committee of the National Strategy entitled (Let's Make Things Better for Our Children *Legyen jobb a gyermekeknek* ) and the Indicator Subcommittee.

Many researchers are founders or members of the presidium of the Hungarian Society of Economics and participate as members of the presidium in the work of the Hungarian Economic Association.

### **IV. A brief description of successful national and international applications in 2015**

There were 29 OTKA project in progress in 2014. Research in 7 new topics was commenced. Regarding project applications, the HAS Lendület (Momentum) Programme, under which game theory research and research in corporate strategies and competitiveness continued, is of key importance.

A project entitled Economic Space for Social Innovation financed under the EU's 7th framework programme was launched. The project entitled Mapping European Competitiveness, in which the Institute was responsible for coordination, was successfully completed. The research project An International Comparison of Agrarian-Food Industry Product Trajectories: factors determining their competitiveness and performance in the EU and international markets was also completed.

The Institute submitted a successful H2020 application; the *Education Economics Network* project will start in 2016 with the Institute's coordination.

### **V. Major publications during the year**

*Books, chapters in books*

Fazekas K , Varga J (szerk.): Munkaerőpiaci tükör, 2014, Budapest: MTA Közgazdaság- és Regionális Tudományi Kutatóközpont Közgazdaság-tudományi Intézet, 2015. 294 p.

Fertő I , Kovacs A : Parliamentary Amendments to the Legislative Proposals of the 2013 CAP Reform, In: Johan Swinnen (szerk.): The Political Economy of the 2014-2020 Common Agricultural Policy: an imperfect storm . London: Rowman and Littlefield International, 2015. pp. 379-411. (ISBN:978-1-78348-484-3)

Hajdu T , Hermann Z , Horn D , Varga J : Varga J (szerk.): A közoktatás indikátorrendszere, 2015, Budapest: MTA KRTK Közgazdaság-tudományi Intézet, 2015. 331 p.

Kiss HJ , Rodriguez-Lara I , Rosa-Garcia A : Financial crisis and panic in the laboratory, In: Branas-Garza P , Cabrales A (szerk.): Experimental economics: Volume II: Economic applications . Basingstoke: Palgrave Macmillan, 2015. pp. 92-121. (ISBN:9781137538154)

Kónya I : Az RBC-DSGE modellcsalád és a munkapiac makroökonómiája: fejezetek a haladó makroökonómiából, Pécs: Pécsi Tudományegyetem Közgazdaságtudományi Kar, 2015. 208 p. (ISBN:978-963-642-915-7)

Valentiny P , Kiss FL , Nagy CsI (szerk.): Verseny és szabályozás, 2014, Budapest: MTA KRTK Közgazdaság-tudományi Intézet, 2015. 290 p.

#### *Articles in foreign journals*

Armenter , R , Koren M : Economies of Scale and the Size of Exporters, JOURNAL OF THE EUROPEAN ECONOMIC ASSOCIATION 13:(3) pp. 482-511. (2015)

Baráth L , Fertő I : Heterogeneous technology, scale of land use and technical efficiency: the case of Hungarian crop farms, LAND USE POLICY 42: pp. 141-150. (2015)

Bojnec S , Fertő I : Agri-food export competitiveness in European Union countries, JOURNAL OF COMMON MARKET STUDIES 53:(3) pp. 476-492. (2015)

Bojnec S , Fertő I : Are new EU member states catching up with older ones on global agri-food markets?, POST-COMMUNIST ECONOMIES 27:(2) pp. 205-215. (2015)

Csanádi M : Systemic background of local indebtedness and investment overheating during the global crisis in China, JOURNAL OF CHINESE ECONOMIC AND BUSINESS STUDIES 13:(2) pp. 147-174. (2015)

Czafit B , Köllő J : Employment and wages before and after incarceration - evidence from Hungary, IZA JOURNAL OF EUROPEAN LABOR STUDIES 4: pp. 1-21. (2015)

Fodor É , Horn D : "Economic development" and gender equality: explaining variations in the gender poverty gap after socialism, SOCIAL PROBLEMS 62:(2) pp. 286-308. (2015)

Gittins T , Lang R , Sass M : The effect of return migration driven social capital on SME internationalisation: a comparative case study of IT sector entrepreneurs in Central and Eastern Europe, REVIEW OF MANAGERIAL SCIENCE 9:(2) pp. 385-409. (2015)

Halpern L , Koren M , Szeidl Á : Imported inputs and productivity, AMERICAN ECONOMIC REVIEW 105:(12) pp. 3660-3703. (2015)

Herrendorf B , Herrington C , Valentinyi Á : Sectoral technology and structural transformation, AMERICAN ECONOMIC JOURNAL-MACROECONOMICS 7:(4) pp. 104-133. (2015)

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