

CONFERENCE REPORTS

SCALING UP THE SUCCESS OF CAPACITY BUILDING IN ECONOMIC EDUCATION AND RESEARCH

Lessons Learned and Future Directions

This article provides an overview of a conference held at the Central European University (CEU), Budapest, Hungary, on June 14–15, 2005 on scaling up the success of capacity building in economic education and research. The joint CEU and World Bank conference brought together representatives of “centres of excellence” in this endeavour. Regional centres included: African Economic Research Consortium (AERC), Nairobi; Economics Department of CEU, Budapest; the Economic Education and Research Consortium (EERC), Kiev and Moscow; New Economics School (NES) in Moscow; Center for Economic Research and Graduate Education (CERGE) in Prague; China Center for Economic Research (CCER) in Beijing, and Global Development Network (GDN) in New Delhi.

The conference opened with remarks by Yehuda Elkana, CEU and Alan Gelb, World Bank. Their remarks were followed by keynote addresses by János Kornai, Collegium Budapest and Harvard University, and Francois Bourguignon, World Bank. László Csaba, CEU, gave a luncheon address and Boris Pleskovic, World Bank delivered the concluding remarks. Five themes were discussed: (1) lessons of experience and future directions, (2) regional perspectives, (3) developing PhD programmes, (4) curriculum development, recruitment and policy research, and (5) scaling up capacity building to undeserved regions.

Yehuda Elkana presented his thoughts regarding poverty alleviation and economic research. He emphasised that research institutes and the World Bank should begin to consider seriously non-economic aspects of development which contribute to a better understanding of world poverty. Elkana expressed a desire to see a theoretical balance between different kinds of reasoning, including some un-

derstanding of social sciences and philosophy of science, which need to be taken into account.

Alan Gelb talked about three aspects of capacity building. First, a choice needs to be made between professional and academic disciplines. Second, even if capacity building has been successful but assessments should be carried out in a measurable way to build continued support for the effort. Third, the question of scaling up is critical. These initiatives produced a few thousand trained people, but that is a drop in the ocean compared to what is needed to revitalise the economics professions in developing and transition countries.

János Kornai discussed current themes in inter-disciplinary research, suggesting five approaches. The first one, theory of rational choice, was created by economists, and is currently used for studying family issues, criminality or political life. Secondly, game theory is most frequently used by economists, but could be used by other social and natural scientists as well. Multi-variant analysis of long-time series of national statistics constitutes the third approach proposed by the speaker. This method started with simple problems to explain growth and was then expanded to explore several other explanatory variables. However, the elaboration of a theoretical background to this approach would considerably increase its value. Fourth, the use of soft data is also possible. According to the tradition of the economic profession, researchers tend to use so-called hard data (e.g., production, employment). Kornai believes, however, that currently such soft variables as beliefs, norms, values, and subjective evaluation of events have shifted into the foreground of interest. Last, a system approach advocated in many works, including *The Socialist System*, Kornai's own book, looks at the social order as a system comprising various spheres including political structure, social norms, and property rights. Kornai argued that we cannot look at an issue like stabilisation as a simple macroeconomic problem, because it has so many political, cultural, ideological and social implications. He proposed three directions in building up institutions of education and research: (1) getting a minimum knowledge concerning other disciplines, (2) encouraging inter-disciplinary work through the cooperation of two or more professionals, and (3) establishing a journal covering social sciences.

Francois Bourguignon discussed four points in his presentation: (1) linkages between economic growth and investment in education, (2) higher education, (3) education in economics, and (4) how best to build local skills and capacity. He pointed out the difficulty in demonstrating a strong relationship between investment in education and economic performance. Bourguignon noted that there exist two models for developing local human capacity: obtaining the skills through sending people abroad, or training people locally. The first implies importing the

necessary knowledge without building the local capacity, while the latter resembles import substitution. One can also consider creating regional training hubs with a capacity to serve several smaller countries. This is the model that inspired the AERC in Africa, proven to be quite successful. In conclusion, Bourguignon stressed the importance of working together to understand how best to measure “success” and encourage further support to sustain and scale up capacity building efforts at existing “centers of excellence”.

László Csaba described structural characteristics of changes in higher education in Eastern Europe in terms of content, time, space, and organisational structure. He emphasised that approximation to the – not very high and by no means user friendly – practices of the European Union has been accomplished. The West European experience in terms of inadequate research and relatively little success in meeting labour market demand seems to be replicated in the Eastern region. Csaba also discussed a normative analysis of the status quo and of perspectives. He made several suggestions to remedy the situation, especially in order to avoid the mismatch with the labour market and the degradation of universities’ research capabilities. Csaba advocated promotion of centres of excellence as well as continuous review of performance and quality of faculty.

In *Session I* on lessons of experience and future directions, *William Newton-Smith* reflected on the Open Society Foundation’s experience in building new “centers of excellence” and emphasised the importance of sustainability. Experience shows that capacity building requires a charismatic driven individual and a market for the product. If there is a market, tuition should be charged and loan schemes should be developed to ensure sustainability. As it becomes harder to raise funds, another way to ensure sustainability is modification and enhancement of existing local institutions, which requires changes in education budgets and teaching methods. Future strategy should focus on slower and cheaper approaches, such as the mentoring model, working with local institutions. This should include modular doctorates in economics to provide the advanced level training. *Gur Ofer* offered his first-hand experience in creating New Economics School (NES), a Western style graduate school of economics in Moscow and discussed future challenges. The NES opened in September 1992. By July 2005, 429 people graduated from this school. It has an indigenous faculty of 15 – most with Western PhDs, many graduates of NES – not only undertaking the establishment of its own research centre but also helping to create the Center for Economic and Financial Research (CEFIR), a high level think-tank. Recently, the governance was transferred to a Russian board. NES’ immediate challenges include finishing the development of the faculty, enhancing the integration of its activities into the

Russian economic *milieu*, and securing financial sustainability.¹ *Justin Lin* presented his experience with CCER. In particular, he discussed CCER's initiatives in establishing long-term financing mechanisms through offering business degrees at the centre to subsidise economic education and its exceptional success in repatriating Chinese PhD graduates from abroad. He also outlines the factors contributing to capacity building: shared common goals, actively seeking resources instead of waiting for them, policy research relevant to local economy, continuous innovation, and outreach and networking activities. For future development, Lin recommended strengthening collaborative resources with other international and domestic institutions; developing exchange programmes for PhD students in other countries; building up a research organisation, and networking with similar institutions in developing and transition countries. *Ramona Angelescu* and *Lynn Squire* presented the Global Development Network's (GDN) five broad principles: (1) the proposed mission and structure were tested prior to the official set up of the network, with a thorough analysis of both the existing demand and supply of the kind of services GDN might offer; (2) GDN's organisational structure was designed to allow as much experimentation and learning as possible; (3) it provides a menu of services, such as mentoring, cross-fertilisation, and providing training and resources for writing, presenting and publishing research; (4) further assistance has been given to fill gaps in the understanding of capacity building and policy impact; (5) ongoing monitoring and evaluation of both the capacity building process and the outcomes have been given considerable weight. *William Lyakurwa* presented the very successful story of AERC's role in serving as the Africa region's hub for education, research and policy making, along with indigenizing economic education and research as a result of retaining trained economists in the region. AERC has two major programmes: (1) Collaborative Master's Programme (CMAP) established in 1993 for Anglophone Africa, running in 21 universities from 17 countries and (2) the Collaborative PhD Programme (CPP) started in 2002. More than 1,000 MAs have graduated from CMAP, with the enrolment of 140 students in 2004. Currently 70 students are participating in the CPP. In addition, AERC has supported about 450 thematic research projects spanning 21 Anglophone, Francophone and Lusophone countries. Future challenges include securing long-term financing, meeting demands for the CPP, and upgrading research and teaching quality, as well as effectively conveying the results of research to policy making. *Robert Campbell* provided a rich his-

¹ So far NES financial needs have been mostly met through financial support from Western foundations and the World Bank. NES has introduced tuition and student loan schemes which tilted the balance of financing more than 59 percent to Russian sources and is examining options to transform their grant-based financial support to an endowment basis.

tory of capacity building in Ukraine. The goal of the MA programme in EERC in Kiev was to create a new generation of economists. In the course of the first eight years of its operation over 300 people graduated from EERC. Of these, about 40 per cent left the country to continue their academic studies and obtain a PhD at top institutions in North America and Western Europe. Currently, however, EERC is seeking to realise longer-range goals: (1) enticing the new PhD graduates to return to their home institution and teach at EERC and (2) disseminating modern concepts of economics and its teaching to other institutions in Ukraine. EERC has begun the indigenization by transferring its operations to Ukrainians. Development banks can play a catalytic role in insuring partnerships for long term commitment of sponsors. For that reason, the Asian Development Bank should be encouraged to join in this effort in addition to the World Bank's continued support for the long-term sustainability of EERC and other institutions.

In *Session II* on Regional Perspectives, *Shantayanan Devarajan*, *Manuela Ferro*, *Shekhar Shah*, and *Priya Shyamsundar* emphasised the importance of scaling up economic education and policy research in accelerating poverty reduction in South Asia. They argued that economic reforms require greater capacity for economic policy research and education. Economic knowledge and policy research are critical to meet South Asia's development challenge, while the need for greater evidence-based policymaking and policy research stems from "second-generation" reforms. Second-generation reforms require much firmer domestic ownership and deeper local knowledge. In addition, South Asia is the world's largest recipient of remittances and the sizeable South-Asian Diaspora wants to leverage their remittances to reduce poverty in their countries of origin. In order to most effectively utilise the valuable resources through building adequate capacity in economic education and research, the establishment of a South Asia Policy Research Foundation is suggested. *Mauricio Cardenas* and *Guillermo Perry* argued that thanks to the existence of high quality master's programmes in the Latin America region, a growing contingent of economists have been seeking doctoral training abroad. Those who return to the region tend to actively publish in international journals and train very good professional economists at local universities, while conducting applied research projects highly relevant for the region. However, problems also remain: the scarcity of funding available for theoretical research due to governments' preference for applied research and the low quality peer review in local journals. In the areas of training, it is crucial to improve the quality of the young PhD economics programmes of LADE, run jointly by Universidad de Chile, Universidad Torcuato Di Tella in Argentina, and Instituto Tecnológico Autónomo de México. Regarding policy research, a large pool of think tanks in the region generates applied knowledge. Also LAC has research groups like the Economic Commission for Latin America and the Caribbean

(ECLAC), the Corporacion Andina de Fomento (CAF), or Facultad Latino-Americana de Ciencias Sociales (FLACSO), in addition to the research network of the Latin American and Caribbean Economic Association (LACEA). However, LACEA faces challenges for the long-term sustainability.

Benno Ndulu, Michael Crawford and Peter Materu discussed perspectives of the Africa region on capacity building. First, given that capacity building needs in Africa far outstrip the resources available, it is necessary not only to be selective in supporting but also to look for cost effective approaches. Second, policy think tanks play a particularly important intermediary role in improving the accessibility of research to policy. Third, given the public good nature of capacity building, sustainability is not simply a matter of self-financing, but rather a matter of diversified funding of activities and sustained high demand for the output from these initiatives. *Homi Kharas* discussed the status of higher-level economics education and research in the East Asia and Pacific. In the region, a very small group of Western-trained economists advises Governments. National databases are inadequate for many research purposes. There is a gap in indigenous research to bridge theory and practical policy, while the tradition of systematic and scientific monitoring and evaluation of economic policies is absent. The World Bank's future support for capacity building in the East Asia region will continue to cover a number of parallel initiatives, including interaction with the Boao Forum for Asia as well as a research programme on the implications of the rise of China and India. Lastly, the establishment of centres of excellence, along with simultaneous programmes of networking and research capacity-building will be considered. *Ulrich Hewer* listed the advantages of "centers of excellence" in providing Western style economic education and research in East Europe and Central Asia: (1) economists can be trained in larger numbers at a lower per capita cost than at Western universities and (2) students remain closer to their homes, develop contacts in the local professional and academic communities and become more familiar with regional issues than their counterparts studying abroad. The best results can be achieved by building upon the experience of the existing centers in the region, including early emphasis on: (a) creating local capacities for economics research, (b) designing the programmes as "*regional* centers of excellence" from the beginning, and (c) eliciting significant government buy-in locally and in the neighbouring beneficiary countries. The World Bank's Europe and Central Asia Region is in the process of making staff and funds available to help launch the *Caucasus M.A. Program* to be based at Tbilisi State University (TSU) to serve Armenia, Azerbaijan, and Georgia (a combined population of approximately 17 million), plus parts of Turkey, Iran, and Iraq as well as southern Russia.

In *Session III* on Developing PhD Programmes, *John Earle* drew on CEU experience accumulated since 1991 in capacity building and in particular challenges

in building a PhD programme. PhD programmes have much smaller classes, require a great deal of one-to-one work, and are therefore much more expensive than MA programmes. Unlike the MA, a new PhD programme in Eastern Europe competes directly with well-established Western programmes. The problem of attracting students to an untested PhD programme is therefore much greater. Perhaps the most difficult challenge is developing a vibrant research environment in which students can participate and learn as apprentices to more experienced scholars. Given that salaries at capacity-building centers seem unattractive to senior scholars, the programmes need to offer some other motivation to encourage such people to devote more time to institution-building. The best motivation would be research opportunities. Earle suggests that MA programmes may be of the “plain vanilla” flavour – simply reproducing economics the same way it is taught in Western universities – while PhD programmes may benefit from choosing some niche, as a strategy for competing with existing programmes and for providing more direct benefits to the region being served. This requires a delicate balance between providing economics education at the highest possible level, while encouraging the development of a focus that will attract senior scholars and prospective students. The natural focus therefore involves the region but transcends it, what CEU in other contexts refers to as “the particular and the general”.

Jan Svejnar provided an overview of CERGE. It was founded in 1991 with four missions: (1) training future public officials, university and college faculty, and researchers from the former Soviet bloc countries, (2) stimulating and supporting academic and policy-oriented economic research, (3) disseminating research and policy information to a wider group of professionals, and (4) transferring the modern Western standard of scientific work. CERGE produces 15–30 MA graduates and 5–15 PhDs each year. The center currently has 16 full-time local and 5 part-time visiting faculty members, with 5 English language faculties. CERGE has produced hundreds of studies which have been used by officials in the Czech government and international organisations. CERGE researchers have served as economic advisers to the President and Prime Minister of the Republic, including several ministers of the government. While in the 1990s the main challenge was to obtain local recognition, at present the greatest challenge is financial in nature, such as building an endowment.

In *Session IV* on Curriculum Development, Recruitment and Policy Research, *Ellen Hurwitz* summarised what she learnt during the conference: the importance of a financial plan and the need for an assessment study upfront that measures the quality of education and research. *Jong-Wha Lee* discussed the allocation of public and private resources for the production of tertiary education in developing and transition countries. Transitional economies, in particular those having limited resources, may face difficulties in improving school inputs at once, so setting priori-

ties is important. Also, to recruit and retain qualified professors and researchers, it is necessary to provide sufficient incentives. *Jacek Rostowski* explained that the rationale of PhD programmes in East European countries stems from: (1) a large pool of technically well trained people in mathematics and physics and (2) a desire to produce economists who will proceed into policy-making. In terms of hiring faculty, schools largely depend on visiting scholars for teaching. Regarding research and teaching, these do not have to be done in the same institution, although teaching and research need to complement each other. *Erik Livny* discussed problems facing policy research. For example, policy research tends to be considered as secondary from the researchers' point of view, compared to financial gain (e.g. research grant) or career advancement through publishing articles. In many cases, researchers know how to work with statistical data but cannot provide policy implications. One strategy to alleviate this kind of problem is to modify student enrolment criteria to admit students who are not only mathematicians but have gone through broader educational training. It should be noted that investment in a policy research nexus (e.g. EERC-Moscow) is essential to improve capacity building in policy research in the region.

In *Session V* on Scaling up Capacity Building to Underserved Regions, *Jeff Fine* raised the question of how to put a value on the kind of non client-specific research. Cross-subsidisation for economics education with business departments, unlike in the case of CCER in China, may not be feasible in many countries. Fine noted that the discussion at the conference clearly established the need for intensified collaboration on a regional and global level. He also argued that donors are in the public sector and have a responsibility to finance public goods such as economics education and research. Therefore, he deemed the establishment of a support group or network, similar to the Consultative Group on International Agricultural Research (CGIAR), highly advisable in order to ensure the long-term financial sustainability of these centers. *Eva Sundquist* presented the Swedish Government's support for EERC in Russia and Ukraine. The funding was executed through a special government fund departing from funding through SIDA due to enhanced credibility coming from the participation of the World Bank and OSI. She also emphasised the importance of a "quality stamp" attached to proposals supported by the World Bank; the long term support from sponsors; prioritising indigenisation; and regular independent evaluations. *Regina Yan* shared her experience as a sponsor representing the Eurasia Foundation, which co-founded EERC-Moscow and EERC-Ukraine. She observed that some of these programmes are lacking in financial and administrative capacities and often donors are to blame for their unwillingness to support such costs. Without such support these programmes are handicapped in their ability to develop into sustainable and well-run institutions. In order to retain long-term support, she finds that it is essen-

tial to inform donors on different aspects of the programme over time. Regina argues that capacity building requires both international donor support and long-term commitment from the local community.

In *Conclusion*, Boris Pleskovic highlighted the substantial achievements made in capacity building in economics education and research in developing and transition countries. However, challenges remain: (1) achievements should be scaled up to underserved regions through lessons learned from the experience of the “centers of excellence”; (2) the centers should cooperate with each other and provide bridges between individual countries and the global community of economists, as well as consider the establishment of an independent network as a group; (3) the centers should increase efforts to disseminate their knowledge into the domestic economic community and policy making; (4) independent evaluations of the centers should be carried out periodically; (5) as the centers face increasing financial difficulties, long-term sustainability should be tackled through tuition and student loan schemes, local financing, and building endowments, as well as ensuring continued support of donors; (6) innovative approaches should be developed to strengthen research and teaching capacity by providing fellowships and exchange programmes; and (7) the centers should meet periodically to compare their experience and assess their achievement and future challenges.

Aehyung Kim – Boris Pleskovic

2005 ANNUAL MEETING OF THE SOCIETY FOR ECONOMIC DYNAMICS

The 2005 annual meeting of one of the most prestigious economic societies, the Society for Economic Dynamics, was held between 23–25 June, in Budapest, Hungary.¹ The event was hosted by the Institute of Economics of the Hungarian Academy of Sciences (MTA KTI) and the Central European University.

With more than 400 participants, this year’s conference was the biggest international economic conference held in Hungary since 1986, the annual meeting of

¹ The Society for Economic Dynamics, founded in 1989, is currently headed by Boyan Jovanovic (New York University), who succeeded such distinguished economists as Thomas Sargent (New York University), Edward Prescott (Arizona State University, Nobel Prize winner), Dale Mortensen (Northwestern University) and Thomas Cooley (New York University). The Society publishes the *Review of Economic Dynamics*, with the main focus of macroeconomic related research. The yearly meetings of the Society, held in different locations, generally alternating between Europe and the Americas, are among the most prestigious international conferences.

the Econometric Society. The 400 participants selected from the applicants presented their research over the three days of the conference. Besides, distinguished economists such as *Jonathan Eaton* (New York University), *Stephen Morris* (Princeton University) and *Roger Rogerson* (Arizona State University) were asked to be this year's plenary speakers.

During the conference 85 sessions were held in total, with 9 or 10 sessions running parallel. The sessions were organised around a wide variety of topics, including current account dynamics, business cycles, asset pricing and labour market fluctuations. Most of the researchers came from universities in the United States (Chicago, Harvard, MIT, New York, etc.); however, European universities and research institutes (London School of Economics, University of Pompeu Fabra, National Bank of Hungary, etc.) were also represented. Note that this report due to space limitations, may illustrate only a fraction of the vast variety of topics and papers of the conference, so a subjective selection will be disclosed here.

One of the most interesting sessions in the morning of the first day dealt with issues concerning property rights. Under this topic, research is usually concerned with the process of innovation, technological diffusion across countries, and their consequences. *Boyan Jovanovic* (New York University) analysed the relationship between the product cycle and inequality. In the model, the product cycle relates to inequality by the assumption that skilled labour and technology are complementary factors of production. Thus, high skilled people have a comparative advantage in making high-tech products. As a consequence, skilled individuals have higher incentives to accumulate human capital, which leads to rising inequality. The model predicts that larger quality differences between products translate into higher inequality in a country. Another prediction of the model is that larger gaps between subsequent technologies lead to larger rise in inequality.

A closely related work is that of *Diego Comin* (New York University) and *Bart Hobijn* (Federal Reserve Bank of New York), in which the authors study the process of technological diffusion across countries. The authors' main hypothesis is that the lobby of interest groups, for whom the introduction of new technology would be unfavourable, may deter the diffusion of technology in the country. They investigate this hypothesis using their newly constructed Historical Cross Country Technology Adoption dataset to find that political barriers indeed constitute an important determinant of cross country technology diffusion.

One of the noon sessions dealt with current account dynamics. As opposed to the majority of economists, *David Backus* (Stern School of Business, New York University) argued that from a historical point of view, relative to the GDP the current account deficits of the United States are not at an excessively high level. On the basis of long time series data Backus questioned the claims that current ac-

count deficits are unsustainable and that current account deficits were caused by the large budget deficits.

Hélène Rey (Princeton University) and *Pierre-Olivier Gourinchas* (University of California, Berkeley) also addressed the issue of current account dynamics, through an analysis of the adjustment process of a country's external balance. The novelty of their research resides in the fact that the authors consider the effect of exchange rate movements on both the trade balance and the country's net foreign assets as well. Results suggest that this is an important channel: according to US data, exchange rate movements caused valuation effects that contributed as much as 31% to the US external adjustment between 1952 and 2004. Also, their model suggests that exchange rate movements act through the financial adjustment channel in the short- and medium run, while they act through the trade adjustment channel in the long run.

The session was closed by *Timothy Kehoe* (University of Minnesota), who presented his joint research with *Kim Ruhl* (University of Texas, Austin). They investigated the consequences of *sudden stops* (large, sudden capital outflows from a country). The phenomenon of sudden stops usually occurs in financially distressed countries, where a large drop in total production and productivity (both labour and total factor productivity) is also often observed. According to Kehoe and Ruhl's hypothesis, large capital outflows caused factor reallocations both within and between sectors, and they argue that adjustment costs are responsible for the decrease in production and productivity. However, their model is not yet able to explain why factor reallocations caused by large capital outflows lead to such large disruptions in this case, when other empirical research concludes that factor reallocations are mostly productivity enhancing (see Pavcnik 2002).

One of the afternoon sessions focused on a new line of research in macroeconomics: the implications of firm and industry dynamics on aggregate economy. A novelty of this approach is that it takes both firm level heterogeneity and the selection process into account. *José Wynne* (Fuqua School of Business, Duke University) analysed the effects of imperfect information on firm and industry dynamics, in particular the existence of asymmetric information about firms' survival probabilities. Wynne showed that, as expected, young firms lacking financial reputation indeed produce less than what their productivity would enable them to. However, even if information problems are relevant for firm and industry dynamics, the interesting implication of the model is that in general equilibrium the aggregate production will not be affected. The intuition for this result is that without information problems, young firms would want to produce more, but this would require them to hire more labour. However, this would drive up wages, and as a consequence older firms would cut back production. The gain in production at younger

firms is expected to offset production loss, thus rendering the information problem at the aggregate level insignificant.

Vincenzo Quadrini (University of Southern California), in a paper co-authored with *Urban Jermann* (Wharton School, University of Pennsylvania), studied the effect of financial development on macroeconomic stability. On the one hand, financial development increases the leverage possibilities of firms, with the side effect of making the economy more vulnerable to negative shocks. On the other hand, financial development makes new, alternative sources of funding accessible. Financial development leads to improved macroeconomic stability if the second effect dominates the first one.

Florin Bilbiie (Nuffield College, University of Oxford), *Fabio Ghironi* (Boston College) and *Marc Melitz* (Harvard University) studied an economy where the number of firms is endogenous. In their model they assume monopolistic competition, CES utility function, and fixed market entry costs, and introduce a new propagation mechanism in the standard real business cycle models. For the simplest case of inflexible labour supply, the mechanism consists in the following. Initially, in the steady state, as a consequence of an aggregate productivity shock, the production of already existing firms increases. However, this higher productivity induces new firms to enter the market, thus leading to factor reallocation from existing to new firms. Ultimately, the number of firms increase and the firm level production falls back to the original steady state level. Thus, in the long run, the increase in production is realized through the entry of new firms. The authors show that the introduction of endogenous labour supply reinforces this mechanism.

In his paper *Xavier Gabaix* (MIT) analyses the implications of the empirical observation that the firm size distribution in an industry is fat tailed. More specifically, his insight is that large firms in an industry can dominate the dynamics of that industry; moreover, idiosyncratic shocks to these large firms could translate into aggregate shocks. As a consequence, it might be sufficient to analyse the behaviour of large firms in order to study the dynamics of the aggregate economy. After constructing a theoretical model to explore this insight, Gabaix estimated that between 1980 and 2002 the idiosyncratic movements at the largest 100 US firms accounted for about 40% of variation in total production and the Solow residual.

The day ended with the first plenary session hosted by the Institute of Economics of the Hungarian Academy of Sciences. In the plenary session *Stephen Morris* (Princeton University) talked about the importance of taking into account higher order expectations both in macroeconomics and finance literature. One of the most important contributions of Morris, in collaboration with *Hyun Song Shin* (Nuffield College, University of Oxford), was that if one extends the macroeco-

nomic models to a setting that takes into account higher order expectations, the regularly appearing multiple equilibrium vanishes into a single equilibrium. With this result the authors are able to analyse important questions concerning the transparency of monetary policy, the monetary policy transmission mechanism, or the optimal communication strategy of the monetary authority.

After the presentation of Morris, *Robert Lucas* (University of Chicago, Nobel Prize winner) gave a moving speech in honour of Edward Prescott (Arizona State University) and Finn Kydland (University of California, Santa Barbara), last year's Nobel Prize winners. Lucas highlighted the colossal importance of their work, especially in analysing macroeconomic fluctuations, but also their research considering the time inconsistent nature of economic policies.

In one of the second day's sessions concerning the relationship between housing and business cycles, *Ádám Szeidl* presented his research with *Raj Chetty* (University of California, Berkeley). They provided microeconomic foundations for habit formation models, a commonly used framework in the macroeconomic literature. They showed that in an economy populated by consumers having heterogeneous commitments (for example different amounts of mortgage), the aggregate dynamics of portfolio and total consumption coincide with those that arise from a representative consumer model with habit formation preferences. Moreover, they provide empirical evidence for the implications of their model: consumption commitments increase risk aversion, and shocks have persistent effect on future consumption.

Ákos Valentinyi (University of Southampton and MTA, KTI) presented his joint research with Berthold Herrendorf (Arizona State University) on an analysis of the Balassa–Samuelson hypothesis that cross-country differences in total factor productivity (TFP) are larger in traded than in non-traded sectors. In order to test the hypothesis, four sectors in different countries were selected: tradable consumption, tradable investments, non-tradable consumption, and non-tradable investments. Also, the authors distinguished between purchasing and competitive producer prices in order to get cleaner estimates for total factor productivity. Using the 1996 Benchmark Study of the Penn World Tables the authors found significant cross country differences across sectors in a comparison of the 20 richest and the 20 poorest countries in the sample. The largest differences were identified in the tradable sectors, more specifically in the tradable investments sector, while the differences were less pronounced in the non-tradable investments sector and almost no differences were found in the non-tradable consumption sectors. The results of the paper suggest that trade costs play an important role in cross country TFP differences.

The paper presented by *Miklós Koren* (Harvard University) and *Sylvana Tenreyro* (London School of Economics) sought to answer the question why the

volatility of economic growth is higher in developing countries than in developed ones. Their explanation is related to the concept of technological issues. Consider the example, as given in the paper, of agriculture: if only labour and land is used to cultivate a product, the yield will be more vulnerable to idiosyncratic external shocks (like draught) than in cases when artificial irrigation or fertilisers are used to increase production. The authors formalised this idea to show that technological diversification leads to a decrease in the volatility of economic growth. Also, they provided evidence for the model's many implications.

In the next session, *Péter Benczúr* presented a paper co-authored with *István Kónya* (National Bank of Hungary), where they analysed the real effects of nominal shocks. The novelty of their approach is that, leaving aside price and wage frictions, they incorporate gradual investments and nominal rigidity. Their first assumption reflects the fact that in a small open economy investment comes mostly from abroad in a gradual manner; they incorporated this fact into the model by assuming adjustment costs. Nominal rigidity is achieved by the assumed money in the utility framework. One of the authors' main results is that one does not need price and wage frictions in order to have real effects of nominal shocks. This framework shows that nominal shocks can have persistent real effects, therefore having important policy implications. The result is especially important for economies that are trying to implement the euro, as it highlights the negative consequences of choosing a misaligned nominal exchange rate.

The plenary talk of the second day, given by *Jonathan Eaton* (New York University), encompassed the aggregate effects of microeconomic heterogeneity, a line of research that has important consequences for many fields including economic growth and international trade. With respect to economic growth this approach may tie together two parallel lines of researches in the micro (entry, exit and firm dynamics) and macro (GDP per capita growth) levels. Another application of this approach is the international trade arena where, until recently, because of data limitations, theory was devised to explain aggregate facts. In his research with *Samuel Kortum* (University of Minnesota), Eaton formulated a fairly simple probabilistic view of an economy, a model which is able to combine parallel micro and macro researches. Eaton considers heterogeneity as arising from innovation and diffusion of technologies and applies this insight to the above mentioned fields. As such, economic growth is nothing more than the accumulation of better technologies, while international trade is the exploitation of these differences in technologies across locations. This yielded already numerous insights and with more firm level datasets being available, it has the potential to further enhance our understanding of the aggregate economy.

The third day started with a session dedicated to topics in international economics, among others. *Mark Aguiar* (Federal Reserve Bank of Boston) presented

a paper, co-authored with *Manuel Amador* (Stanford University) and *Gina Gopinath* (Graduate School of Business, University of Chicago), on the procyclicality of the fiscal policy in emerging economies (see Kaminsky et al. 2004). They explained this curious phenomenon without appealing to political economy theories by pointing out that this effect might be a consequence of time inconsistent fiscal policy, and the inability of the agents to access capital markets in order to insure their consumption against future shocks. The pro-cyclical fiscal policy arises as a consequence of the government's attempts to maximise the utility of the population, but since it lacks commitment, the authors show that the best available fiscal policy will amplify the economic cycle.

Enrique Mendoza (University of Maryland) studied the sudden stop phenomenon already mentioned above. Analysing the 1994–1995 Mexican financial crises he identified a significant drop in capacity utilisation and a decrease in imported intermediate goods. Incorporating the former aspects and credit frictions into a standard real business cycle model, we can observe that when agents are highly indebted, shocks can trigger a situation that resembles, both qualitatively and quantitatively, the observed features of a Sudden Stop.

Pierre-Olivier Gourinchas (University of California, Berkeley) and *Olivier Jean* (International Monetary Fund) drew attention to the allocation puzzle: capital does not flow towards countries as would be predicted by a standard open macroeconomic model. In contrast to the theory, capital seems not to flow, *ceteris paribus*, in such countries where the ratio of investments to GDP is high. The puzzle remains even after taking into account only the private sector capital flows.

Overall, the conference may be regarded as a great success, not only because of the high professional standard of the presentations, but also because it managed to strengthen the ties between the research communities of the region, Western Europe and the United States.

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REFERENCES

- Kaminsky, G. – Reinhart, C. – Vegh, C. A. (2004): *When it Rains, it Pours: Procyclical Capital Flows and Macroeconomic Policies*. NBER Working Paper, No. 10780.
- Pavcnik, N. (2002): Trade Liberalization, Exit, and Productivity Improvements: Evidence from Chilean Plants. *The Review of Economic Studies*, 69: 245–276.

