Improving Competitiveness Through a Knowledge-Based Economy

Budapest, March 23-26, 2004

KNOWLEDGE ECONOMY FORUM III

Organized by the World Bank and the Government of Hungary
Supported by the Open Society Institute

Final Report
June 2004

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# Table of Contents

Acknowledgements .................................................. 4  
Preface .................................................................. 5  
Main Forum Messages .................................................. 7  
  Competitiveness ................................................. 7  
  Enabling Environment: The Role of Governments .................. 9  
  National Innovation Systems ......................................... 9  
  From Brain Drain to Brain Gain ....................................... 12  
  Public Private Partnerships ........................................ 13  
  Scaling Up through Public Investments ................................. 14  
  Next Steps .......................................................... 16  
List of participants .................................................... 18  
Forum Agenda ....................................................... 22

## List of Figures

- Figure 1. Policy Challenges in Europe and Central Asia ......................... 8  
- Figure 2. Funding for Public Research Lags in Eastern European countries .... 8  
- Figure 3. New Innovation Models ........................................ 10  
- Figure 4. An Interactive Model of Innovation ....................................... 22  
- Figure 5. Strengthening Human Resources for Science and Technology ........ 22  
- Figure 6. Key Competencies for the Knowledge Economy are Changing ........ 22  
- Figure 7. The Fruit of Knowledge ........................................ 22

## List of Boxes

- Box 1. Supporting Innovation: A Proactive Role for the Government of Hungary .... 11  
- Box 2. World Bank Support for Public Investment in the Knowledge Economy .... 15
ACKNOWLEDGEMENTS

These proceedings summarize a three-day forum, Improving Competitiveness Through a Knowledge-based Economy, held in Budapest, Hungary on March 23–26, 2004. This report was prepared by Giuseppe Zampaglione, Natasha Kapil, Vivien Gyuris, Vladimir Hrkac, and has benefited from the concluding remarks of Roger W. Grawe, and numerous presentations made during the conference. The forum organizers—the World Bank and the Government of Hungary—are grateful for the additional support provided by the Open Society Institute, enabling the participation of civil society representatives from 15 countries in the region.

The organizers appreciate the contributions of the Organization for Economic Co-Operation and Development, the European Bank for Reconstruction and Development, the European Investment Bank, the European Training Foundation, the World Economic Forum, the British Council and the World Bank Institute. They also acknowledge the fundamental contributions of the 23 delegations from the region that attended the Forum, in particular from: Albania, Armenia, Azerbaijan, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, FYR Macedonia, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Poland, Romania, Russia, Serbia-Montenegro, Kosovo, Slovak Republic, Slovenia, Turkey and Ukraine.
Knowledge Economy Forum III, *Improving Competitiveness Through a Knowledge-based Economy*, held in Budapest on March 23–26, 2004, is the third milestone in the World Bank’s efforts to support its client countries in the transition to a knowledge economy. Initial efforts to engage client countries in a dialogue on the knowledge economy were made in 2002 at the Paris Forum and focused on establishing national strategies in the EU accession countries. These efforts were furthered at the 2003 Helsinki Forum that addressed the progress made in implementation of these national knowledge economy strategies in the EU accession and candidate countries.

This third forum in Budapest was organized by the Government of Hungary and the World Bank, in collaboration with the Open Society Institute, to build on the lessons learned and experiences shared in both Paris and Helsinki and concentrate on issues essential to improving national competitiveness. The Budapest Forum expanded its coverage beyond the Helsinki Forum to also include delegates from Albania, Armenia, Azerbaijan, Bosnia-Herzegovina, FYR Macedonia, Georgia, Kazakhstan, Serbia-Montenegro and Kosovo who are engaged in advancing the development of knowledge economies in their respective countries. A list of approximately 200 attendees, including representatives from government, industry, business, academia, think tanks, civil society and international development organizations is provided at the end of this report.

The main goal of the Budapest Forum was to:

- Sensitize participating policy makers and key constituencies on the significance of developing a strong knowledge-intensive economy to improve competitiveness and enhance economic growth.
- Identify common determinants of competitiveness as well as perceived challenges in progressing to a knowledge economy, in the context of an enlarged Europe and more importantly, increased global competition.
- Strengthen the expanding regional network of professionals and policymakers dealing with issues related to research and industry, innovation financing, tertiary education and national innovation systems.
- Facilitate the sharing of experiences on the implementation of policies and investments to transition towards a more competitive, knowledge-based economy among country delegations and international organizations.
- Engage participants in a dialogue with the World Bank and with other international institutions participating in the Forum, on specific advisory and lending products available to promote innovation and enhance competitiveness.

In semblance to the previous conferences, participants in Budapest benefited from the framework for discussions provided by international experts in an intensive plenary session, as well as case studies presented and analyzed by country specialists in breakout sessions. These were
also complemented by site visits to related leading Hungarian companies, research labs, and higher education institutions. These sessions elaborated on the core issue of competitiveness by focusing on the four major themes of: 1) bringing research from industry to markets, 2) financing of innovation, 3) tertiary education and skills for the knowledge economy, and 4) innovation in traditional industries and its impact on local development.

At the time of the Budapest Forum, Hungary served as a model host not only to future EU candidate countries, but also opened the horizon for issues of competitiveness to be reviewed in the context of the Balkans, the Caucasus and Central Asia. As a result of this third successful forum, the Government of Turkey has proposed to host the fourth forum in Istanbul in March 2005. The challenge, hereby, is to maintain the momentum generated in Budapest in order to mainstream and implement the themes discussed during the forum into concrete projects and tangible results at the local and national levels.

Fernando Montes-Negret
Director
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MAIN FORUM MESSAGES

Today improving competitiveness is much less an issue of choice, and rather one of necessity to sustain longer term economic growth and social welfare that most countries in the region have been experiencing since transition. The third Knowledge Economy Forum addressed competitiveness through the prism of four themes: (i) bringing research to industry and markets, (ii) financing of innovation, (iii) developing skills for the knowledge economy through tertiary education, and (iv) supporting innovation in traditional sectors. In this report, we highlight some of the main messages and implications emerged for all stakeholders, involved in developing and promoting the knowledge economy in the Europe and Central Asia (ECA) region.

Some of the main findings of the Forum are built on the following propositions and are elaborated subsequently in greater detail:

1. Competitiveness is the driving force of the global economy.
2. The knowledge economy commons benefit from an enabling government.
3. National innovation systems (NIS) require flexible linkages.
4. Brain drain is a considerable challenge.
5. Public-private partnerships are to be used as a tool to enhance quality.
6. Lessons from case studies at the local level must be scaled up regionally and globally.

1. COMPETITIVENESS

Competitiveness is the key to make the best of opportunities in an increasingly uncertain and risky world, i.e. optimizing the impact of favorable events and minimizing the impact of economic shocks and downturns. Professor Luc Soete, MERIT, demonstrated the key role knowledge has played in creating competitive economies that are able to trade and exploit increasing returns of scale by agglomerating resources to meet the needs of the constantly evolving global economic environment, i.e. growth through integration. Concerned that ECA economies may not be capitalizing on global opportunities, Prof. Soete highlighted the worrisome trend that the region was less successful in attracting foreign direct investment (FDI) than emerging markets in South and East Asia that are able to position themselves as strong competitors (Figure 1). It is crucial for small open economies, such as most in the ECA region, to create the capacity for individuals to respond efficiently to global events.
Figure 1. Policy Challenges in Europe and Central Asia

Policy challenges

- Positioning of ECA countries within these new global trends, in particular with respect to knowledge-based activities
- Progress in absolute terms impressive, but in relative terms position has deteriorated
- New knowledge challenges:
  - FDI are moving out to China, India… FDI bypassing ECA countries, in spite of tax-free zones
  - Human capital is moving out
- Need for national knowledge anchorage policies


Carl Dahlman, World Bank Institute (WBI), expanded on the knowledge revolution, accompanying the globalization of the world economy in which the gap between Europe and the US was widening rather than narrowing, as the European Union (EU) Lisbon agenda would aim at. This is evidently reason for caution among economies poised to join the EU in the near future. According to Jerry Sheehan, OECD, even though the knowledge-intensity of OECD economies is on the rise, considerable variation among advanced countries remains. ECA economies, in particular, tend to lag relative to the OECD countries despite some progress they have been making in absolute terms in improving their knowledge indicators in recent years, such as funding of public research. (Figure 2).

Figure 2. Funding for Public Research Lags in Eastern European countries

Source: OECD, MSTI Database, November 2003.
The competitiveness data from the World Economic Forum (WEF) presented by Augusto Lopez-Claros demonstrated that small open economies on the periphery—similar to Finland, Sweden and Ireland—can create promising competitive dynamics. The WEF competitiveness evaluation process is itself evolving with future rankings to give greater weight to labor markets and training, health systems, environmental sustainability and openness, thus reinforcing the concept that competitiveness is a continuous challenge, requiring constant efforts to maintain and improve one’s competitive positioning.

The presentation on Hungary underlined the need to shift the emphasis from cheap labor as a source of growth to human capital and technology as a means to sustain Hungary’s competitiveness in the longer term. Bill Maloney, World Bank, indicated the need for developing “innovation—effective human capital” to safeguard competitiveness. Both sessions on Hungary and Latin America illustrated the fine line between virtuous circles of policy and structural reform in the context of real and financial openness and vicious circles when structural reforms fall short. Pál Gáspár, International Center of Economic Growth Hungary, noted that it is for these reasons that successful open economies not only reward good policies, but they also punish retrogressive ones.

2. ENABLING ENVIRONMENT: THE ROLE OF GOVERNMENTS

At the forum in Helsinki, the concept of government as the “missing” or fifth pillar of the knowledge economy emerged. The presentations and discussions in Budapest deepened this insight and established the collective nature of the foundations of a knowledge economy—research, education, communication technology and a stable business environment. As knowledge itself has significant indivisibilities and scale effects, this often leads to under-investment by societies without public intervention. It is no coincidence that societies that have high private expenditure on R&D also have significant public programs to support private R&D, increasingly at the small and medium enterprise level. Therefore, it is important that the government plays a key role in setting the incentives right in ECA countries. Just as investments in education are characterized by the need for similar synergies, the public role in establishing access to ICT infrastructure is crucial. Similar to the case of the global environmental commons, the collective nature of the knowledge economy demands meticulous attention to incentives in order to ensure an optimal mix of public and private involvement.

3. NATIONAL INNOVATION SYSTEMS

The attention afforded to National Innovation Systems (NIS) in the Forum yielded five sub-propositions to this theme. First, effective linkages are non-linear, which disbands the common perception of innovation being a direct outcome of resources invested in research. The triple helix concept presented by Professor Yalabik, METU, provided a useful image to help us move away from linear compartmentalized thinking about a NIS by intermingling the roles of industry,
government and higher education institutions and thereby creating knowledge and innovation spaces for networks to operate and develop products. (Figure 3). The universal dissatisfaction with university-industry linkages and bringing research to industry and markets, reported by Professor Andrew Slade, Sunderland University, where universities perceive research as their domain and industry views innovation as their monopoly, must reflect in part the failure of the “linear” research—product—market model. It is highly probably that the key linkages may in fact be the ones in the reverse direction.

Second, knowledge economy linkages must bridge from the local to the global—the successes and failures discussed in the case studies dealing with innovation in traditional industries and regional development underscored this. It is just as important to bring global knowledge to local problems as it is to bring local solutions to a global platform. If local players do not have the opportunity to engage global players such as multinationals, it is most likely that they will remain local in their impact, and their impact on competitiveness will be relatively small. In this process national policies and institutions should mediate to enhance quality, not insulate to protect.

Third, linkages should be stimulated through multiple entry points. While there is no one way to get into the linkages, it is important to begin where a country has capacities, processes, activities and products that are already ongoing in both the local and national context. The numerous case studies on the second day clearly demonstrated that there is no one model or sequence for building successful linkages, the triple helix is again a good analogy.

Figure 3. New Innovation Models

- **Triple-helix**: Knowledge-based economic model. No rigid roles but either may take the role of each other in the innovation process.
- Various ways such as top-down, bottom up.
- Regional and multinational approaches
- "Knowledge spaces", "innovation spaces" where ideas and experiments are created by joint ventures
- Evaluation mechanisms include "networking"
- Networks formed not on a regional basis but in knowledge bases

*Source: Nese Yalabik, METU, 2004.*

Fourth, irrespective of the entry point, the challenge remains to build an effective system of reinforcing linkages that support innovation. The exposition of the Estonian case, by Alar Kolk, illustrated just how complex and management-intensive it is to bring all the elements of an innovation system together in a sustainable fashion. Ultimately, promoting innovation comes down to support for the entrepreneur and innovator. Jean Eric Aubert, WBI, commented that the
government has the choice of adopting either the “orchestra approach”, by implementing a full set of interactive incentive instruments, or experimenting with single instruments to stimulate the NIS. (Figure 4). This again emphasizes the importance of leadership and high level commitment as essential ingredients in the process of supporting strong a NIS.

**Figure 4. An Interactive Model of Innovation**

![An interactive model of innovation](image)


Fifth, as indicated in the innovation financing break out group by Professor Slavo Radosevic, the risk of failure is high and weak systems that cannot sustain the complexity of a Finnish or Estonian system, will dead end in technology capability rather than product, production and market capability. Many of the transition economies have been down this road before. As relayed by Stephen Wright, European Investment Bank, many of the factors mentioned by participants as barriers to attracting innovation finance—limited absorptive capacity of human capital, poor managerial and organizational capability, poor public research and development (R&D) budget allocation mechanisms, lack of innovative SMEs, limited R&D by FDI, poor intellectual property rights (IPR) systems—are not, in fact, barriers in the finance sector at all. These are all interrelated elements of a highly-linked NIS, where the importance of the role of government becomes apparent. In the upcoming highlight, we look at a recent attempt by the Government of Hungary to provide such support through a structured innovation fund to stimulate private sector involvement in innovation. (Box 1).
Box 1. Supporting Innovation: A Proactive Role for the Government of Hungary

In Hungary, growth performance since 1987 can be divided into three stages: 1987–1992: transition recession; 1992–2001: fast and sustainable recovery; 2002–2003: signs of slowdown (not shown). During the transition, FDI played an important role in enhancing the knowledge base of the economy, while direct investment in knowledge (R&D) lagged.

Currently, the Hungarian Government is focusing its efforts on creating incentives for demand-driven innovation growth, increasing interest of the private sector and encouraging it to take on a greater role in operating the innovation system. According to Imre Szekeres, successful innovation calls for coordinated, effective cooperation between government, local authorities, companies, and research and development institutions.

The Innovation Act is the most important component of the Hungarian legal framework. The objective of the Act is to increase innovation spending to match the EU average, strengthen network formation (demand-driven innovation model), provide support to SMEs, secure predictable financing, and improve the social acceptance of innovation. Another component of the legal framework is the Research and Technology Innovation Fund, set up in January 2004. Its objectives include raising government spending and encouraging private spending on R&D; promoting regional innovation programs, and reducing the gap between annual government budget cycle and R&D projects requiring several-year financing commitment. The Hungarian Government will match contributions to the Fund by corporations on a 1:1 basis.

4. FROM BRAIN DRAIN TO BRAIN GAIN

Throughout the ECA region, creating skills relevant to the knowledge economy is a challenge that requires as much attention as devising incentives to retain these skills, since in most transition economies brain drain remains a significant concern. While it is certainly futile and probably inappropriate to try to stem the tide of increasing returns, which draws highly-skilled individuals to the United States, Western Europe and other centers of excellence in innovation, there are measures that can help repatriate (brain gain) or prevent brain drain, i.e. skilled individuals from leaving in the first place. Special support for young researchers, attention to the non-remunerative elements of research environments were variously cited in case studies as incentives to retain skills locally. The challenge here is to create an environment in which people can innovate instead of having to migrate. (Figure 5).

The linkage between skills and companies employing them would suggest that policies to encourage FDI will also facilitate brain gain; but our discussions suggested that more work needs to be done to understand the dimensions and implications of this problem in the region. Another dimension of skill retention is in the workplace itself where there is an increasing problem of low absorptive capacity for production innovation, due to low skills and because worker skill upgrading is not keeping pace with the demands for relevant knowledge-intensive skills. (Figure 6). This theme was discussed at length during the Forum, especially in the break-out group on tertiary education. In the session on financing innovation, many participants felt that this problem exceeded even the lack of seed capital as a constraint on moving from technology to production innovation.

Figure 6. Key Competencies for the Knowledge Economy are Changing

Key Competencies Are Changing

- Individuals need knowledge, skills, competencies to:
  - Meet changing economic conditions, job requirements and technology
  - Encourage risk taking, flexibility and adaptability
  - Function independently, use tools interactively and work well with others
  - ECA countries do not fare well on international tests benchmarking skills and competencies rather than factual knowledge (e.g. PISA test)

5. **PUBLIC PRIVATE PARTNERSHIPS**

Several presentations, including Soete and Dahlman, emphasized the key role of FDI by large firms as a major source of innovation and their role in enhancing a country’s competitive position and image alike. Public private partnerships (PPPs) can be an effective instrument to attract such investments. Furthermore it is clear, as Shigeo Katsu, World Bank Vice President for ECA, noted that the traditional lines of public and private are blurring giving scope for more flexible forms of partnership. Daniel Levy, State University of New York (SUNY), cited the evidence of new public-private mixes in higher education with, for example, privatization within public institutions freeing up space for dealing more effectively with knowledge economy issues. Effective PPPs, however, require a strong regulatory framework with special emphasis on transparency and well-defined objectives. Such partnerships should not be viewed as an alternative to mobilize additional resources. Instead PPPs should be perceived as a means to ensure quality and better management from the private side and alignment of incentives and goals from the public side while encouraging diversity of solutions. One issue that recurred often in the discussions on the public-private interface was the ambiguity surrounding Intellectual Property Rights (IPRs) in many countries throughout the region with consequent impact on incentives for private sector investment in R&D, technology, and other knowledge economy-related activities. It is in such areas, where the interests of both the public and private citizen need to be protected, that PPPs can be expected to contribute the most.

6. **SCALING UP THROUGH PUBLIC INVESTMENTS**

The range of experiences cited in the various case studies suggests that there is a basis for building better performance and closing the competitiveness gap; but this demands scaling up in a way that has not yet happened across the ECA region. The constraints on scaling up successful policies and projects are well known from development experience generally: achieving critical mass in infrastructure and skills, supportive and efficient institutions, finance, a different role of the nation state, as highlighted by Luc Soete in its opening speech.

One factor that struck many of the participants during the discussions was the general perception of a certain lack of urgency. And yet, acting quickly to show immediate tangible results even at the very local level can be instrumental to successful scaling up. Perhaps the complacency stems from the still nascent private sector in many countries or the continuing labor cost advantages that mask the urgency to improve productivity. Delving further into the constraints to moving to scale in knowledge economy investments and innovation systems could receive attention in a next year’s forum. Meanwhile, participants at the Budapest Forum had the opportunity to learn about advisory and lending services that the World Bank has been developing in partnership with clients to meet their needs in enhancing their knowledge indicators, innovation systems and improve their competitiveness. (Box 2).
Box 2. World Bank Support for Public Investment in the Knowledge Economy

The World Bank has devised an expanded menu of lending products based on the four policy pillars of the knowledge economy, in the areas of innovation systems, lifelong learning, information society building and economic and institutional regime.

**KE: From Concept to Public Investment**

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<thead>
<tr>
<th>I. INNOVATION SYSTEMS</th>
<th>II. LIFELONG LEARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Institutional Capacity Building</td>
<td>A. Develop Key Competencies for KE</td>
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<tr>
<td>B. R&amp;D Capacity Upgrading</td>
<td>B. Reform Governance &amp; Management</td>
</tr>
<tr>
<td>C. Technology Transfer &amp; Dissemination</td>
<td>C. Diversify and Reallocate Financing</td>
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<td>D. Technology Commercialization &amp; Upgrading</td>
<td>D. Improve Mobility &amp; Access</td>
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<tr>
<th>III. INFORMATION SOCIETY</th>
<th>IV. ECONOMIC &amp; INSTITUTIONAL REGIME</th>
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<tbody>
<tr>
<td>A. Information Infrastructure</td>
<td>A. Competition Policy</td>
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<tr>
<td>B. e-Leadership, Policy &amp; Inst. Development</td>
<td>B. Financial Sector</td>
</tr>
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<td>C. e-Government</td>
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<td>D. Capacity Building/ Human Resources</td>
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<td>E. ICT Industry Promotion</td>
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<td>F. Socio-Economic e-Dev Applications</td>
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| E. Enhance S&T and Research in Formal Education |

Khaled Sherif and Severin Kodderitzsch, World Bank, discussed two World Bank projects currently under preparation in Romania and Turkey, as examples of how governments can expedite the scaling up of knowledge economy concepts through investment in specific projects.

**Romania: Knowledge Economy Project (US $50 million):** The overall objective of the proposed project is to help Romania to accelerate its progress toward a knowledge-based society and economy. The expected outcomes of the project will be directly linked to the e-Europe+, and include: i) expanded access to ICT; ii) improved digital literacy; and iii) use of the Internet and e-services. The impact would be higher competitiveness, technically-skilled labor force, and modern ICT infrastructure.

**Turkey: Knowledge and Innovation Project (US $100 million):** Building on the analysis and recommendations compiled through the recent Turkey: Knowledge Economy Assessment Study, and the success of the past two Industrial Technology Projects, a new Knowledge Economy project is under preparation. The main components in this project will include: (i) Support to Enterprise Innovation, (ii) Information Society Development, and (iii) Developing Skills for the Knowledge Economy.

### 7. NEXT STEPS

The Budapest Forum has fulfilled the mission late Paul Siegelbaum of the World Bank charged us with at the closing of the 2003 Helsinki Forum, namely to extend the network of engaged countries beyond Central Europe and the Baltic Region to Southeastern Europe and the CIS, and correspondingly spread out the scope of case studies to build a broader base of experiences relevant to this expanded constituency. The challenge now is to strengthen the network that the Budapest Forum has created in a viable framework.

Building on the principles of partnerships, it seems clear that the initiative should pass to country and regional networks, linking researchers, entrepreneurs, government officials and...
international partners. In an environment in which there is still much to learn from the widely varying institutional experience of different countries, the approach of guided self-assessments with peer evaluations offers considerable promise. It is no surprise then that issues surrounding human resource development, elements of the legal framework that support IPRs and PPPs were ranked highest among potential themes for next year’s forum in Istanbul. Participants also considered financing models for R&D and innovation, improving the business environment and strengthening institutions for R&D as important themes for the next conference. Delving further to understand the constraints to moving to scale on these issues through knowledge economy investments and innovation systems could also receive attention in a next year’s forum. Already in Budapest delegations from the Balkans and Central Asia expressed interest in this approach as a means to carry knowledge economy work forward in a country-led process.

However, as our partnerships evolve, no one doubts that this is a long difficult road. As Szilvester Vizi, President of the Hungarian Academy of Sciences, said in his opening remarks, citing Imre Madách’s great Hungarian novel, The Tragedy of Man, our survival is a matter mainly of hard work and a voice to warn and encourage. (Figure 7) Coincidentally, a leading representative from the private sector, Miklos Boda, Vice-President of Ericsson Hungary, also referred to the same passage. Hence, from academia to private sector, and from civil society to government representatives, let our Forum be that voice of perseverance and resilience over the coming months.

Figure 7. The Fruit of Knowledge

“Adam:  
You left me free to taste the Fruit of Knowledge  
But took away your guiding hand from me.

The Lord:  
Your arm is strong, your heart is elevated:  
The Geld is vast and calls for endless labour,  
And if you listen you will always hear  
A voice to warn you or encourage you”

Imre Madách: The Tragedy of Man

# LIST OF PARTICIPANTS

## Albania

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## Bulgaria

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<tr>
<th>Name</th>
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<tr>
<td>Mariana Borissova</td>
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<tr>
<td>Dinka Dinkova</td>
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<tr>
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<td>Deputy Minister of Economy</td>
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<td>List of Participants</td>
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<td>Roumen Nikolov</td>
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</table>

**Croatia**

| Mira Lenardic | Croatian Competitiveness Council |
| Esad Prohic | President’s Adviser for Education and Science |
| Slavica Singer | Dean of Faculty of Economics, University of Osijek |

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| Rainer Nőlvak | CEO, Curonia Research Ltd and Celecure Ltd |
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| Fani Karanfilova-Panovska | Program Director, Open Society Institute |
| Viktor Stefov | Head of Science Department, Ministry of Education |

**Georgia**

| Levan Ramishvili | Liberty Institute |

**Hungary**

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| Miklós Bárczi | Director, Prime Minister’s Office |
| András Benedek | Administrative State Secretary, Ministry of Children, Youth and Sports |
| Miklós Boda | Vice President and General Manager of R&amp;D, Ericsson |
| Erzsébet Czakó | Head of Department, Budapest University of Economics and Public Administration |
| Zsófia Czoma | Director, Prime Minister’s Office |
| Kinga Deák | Officer, Prime Minister’s Office |
| Gábor Dénes | General Secretary, National Association of Managers |
| Ákos Detrekői | Rector, University of Technology and Economics |
| Zsuzsa Dombi | Chief Advisor, Prime Minister’s Office |
| István Erényi | Director General, Ministry of Informatics and Telecommunication |
| Pál Gáspár | Director, International Center of Economic Growth, European Center |
| Edit Gibba | Officer, Prime Minister’s Office |</p>
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**Kazakhstan**

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<td>Uriy Anoshenko</td>
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<tr>
<td>Jaser Jerkenbayev</td>
<td>Director of Department, Ministry of Economy and Budget Planning</td>
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<tr>
<td>Maksat Mamashev</td>
<td>Chief Expert, Administration of the President</td>
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<tr>
<td>Valeri Mogilnii</td>
<td>Head of Science Department, Ministry of Education and Science</td>
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<tr>
<td>Talgat Muminov</td>
<td>Rector of the Kazakhstan National Medical University</td>
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<tr>
<td>Nurtas Sarsenbayev</td>
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**Kosovo/UNMIK**

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<tr>
<td>Skender Ahmeti</td>
<td>Permanent Secretary at the Ministry of Trade and Industry</td>
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<tr>
<td>Ymer Havolli</td>
<td>Project Manager, Riinvest</td>
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<td>Orhan Niksic</td>
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<td>Sefedin Sefaj</td>
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**Latvia**

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<td>Valdis Avotins</td>
<td>Project Manager, Latvian Investment and Development Agency</td>
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<tr>
<td>Ilga Preimate</td>
<td>Undersecretary of State, Ministry of Economy</td>
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<td>Una Vanaga</td>
<td>Head of the Innovation Division, Ministry of Economy</td>
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<td>Frantisek Toth</td>
<td>State Secretary, Ministry of Education</td>
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<td>Marko Hren</td>
<td>Counselor to the Government, Ministry of Information Society</td>
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<td>Darja Piciga</td>
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<tr>
<td>Mustafa Alper</td>
<td>Secretary General, YASED</td>
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<td>Mustafa Atilla</td>
<td>General Director, Mobilsoft</td>
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<td>Canan Cilingir</td>
<td>Vice-Rector, Middle East Technical University</td>
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<td>Aysen Kulakoglu</td>
<td>Department Head, WB Projects, Treasury</td>
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<td>Avniye Tansug</td>
<td>Member of Advisory Board, CEKUL Foundation</td>
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<td>Instructor, Istanbul Bilgi University</td>
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<td>Vice President, TUBITAK</td>
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<td>Head, Strategic Initiatives Dept, Administration of the President of Ukraine</td>
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<td>Marinskiy Georgy Sergeevich</td>
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<td>Valeriy Heyets</td>
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<tr>
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<td>Chris Edwards</td>
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<tr>
<td>Maria Vagliasindi</td>
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<tr>
<td>Paola Maccani</td>
<td>ERVET, SpA</td>
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<tr>
<td>Maria Kayamanidou</td>
<td>Principal Administrator DG Research</td>
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<td>List of Participants</td>
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<td><strong>European Investment Bank</strong></td>
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<td>Steve Wright</td>
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<td><strong>European Training Foundation</strong></td>
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<td>Jean-Raymond Masson</td>
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<td><strong>MERIT, Maastricht University</strong></td>
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<td><strong>PROPHE, SUNY University</strong></td>
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<td>Andrew Slade</td>
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<td><strong>University College London</strong></td>
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<td>Slavo Radosevic</td>
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<tr>
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<td>David Herbert Fretwell</td>
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<tr>
<td>Franz Kaps</td>
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FORUM AGENDA

TUESDAY, MARCH 23, 2004

10:00–18:00  Registration/Check-In  
Venue: Hotel Sofitel Atrium Lobby

15:00–18:00  Registration  
Venue: National Academy of Sciences of Hungary

14:45–15:40  Press Conference by World Bank and Hungarian Government Officials  
Venue: The Parliament of Hungary

Session I: Welcome Address and Opening Remarks  
Chair: Szilveszter E. Vizi, President, National Academy of Sciences  
Venue: National Academy of Sciences of Hungary

18:00–19:30  Welcome Address and Opening Remarks:  
Peter Kiss, Minister in the Prime Minister’s Office, Hungary  
Introduction by the World Bank  
Shigeo Katsu, Vice President, Europe and Central Asia Region, The World Bank  
Knowledge Economy Concepts—Keynote Address:  
Luc Soete, Director, MERIT, Maastricht University  
Venue: National Academy of Sciences of Hungary

19:30  Welcome Reception  
Venue: National Academy of Sciences of Hungary

WEDNESDAY, MARCH 24, 2004

Session II: The Global Perspective  
Chair: Shigeo Katsu, Vice President, Europe and Central Asia Region, The World Bank  
Venue: Hotel Sofitel Atrium

9:00–9:30  Knowledge Economy Concepts—The Europe and Central Asia Perspective  
Carl Dahlman, Senior Advisor, The World Bank Institute

9:30–10:00  Trends in Science, Technology and Industry: The OECD Perspective  
Jerry Sheehan, Senior Economist, Science and Technology Policy Division, OECD

10:00–10:30  Moving towards a Knowledge-Based Society: Progress Made Since the Lisbon EU Summit  
Franz Kaps, Senior Partnership Advisor, Office of the Vice President, The World Bank

10:30–11:00  Coffee Break

11:00–11:30  The World Economic Forum’s Perspective on Global Competitiveness  
Augusto Lopez-Claros, Chief Economist and Director, Global Competitiveness Program, World Economic Forum

11:30–12:00  Discussion

12:00–13:00  Lunch

Session III: Innovation Policies in Transition: The Case of Hungary  
Chair: Luc Soete, Director, MERIT, Maastricht University

13:00–14:30  Innovation Policies in Transition: The Case of Hungary  
Pál Gáspár, Director, International Center for Economic Growth, European Center
Forum Agenda

Imre Szekeres, Political State Secretary, The Government of Hungary
Miklos Boda, Vice President, Ericsson Hungary Ltd.
Attila Mesko, Deputy General Secretary, National Academy of Sciences

14:30–15:00 Coffee Break

Session IV: Thematic Presentations
Chair: Dan Nica, Minister of Communications and Information Technology, Romania
15:00–17:00

From Research to Industry and Markets:
Nese Yalabik, Professor, METU Institute of Informatics, Turkey

Financing of Innovation:
Alar Kolk, Member of Management Board, Enterprise Estonia

Tertiary Education for the Knowledge Economy: New Public-Private Mixes
Daniel Levy, Professor, State University of New York

Innovation in Traditional Industries and Local Development:
Paola Maccani, Head, Local Development Initiatives, ERVET SpA, Italy

20:00 Boat Dinner

THURSDAY, MARCH 25, 2004

Please note that sessions on this day are divided among four groups. The four groups follow different schedules for the whole day. Please select the relevant group to access its agenda.

Group A: “From Research to Industry and Markets”

Session V: Case Studies on the Selected Theme—Break-Out Session
Venue: Hotel Sofitel Atrium, Room Wright & Cialkowsky
9:00–10:15

From Research to Industry and Markets:
Moderator: Maria Vagliasindi, Chief Economist’s Office, EBRD
Rapporteur: Andrew Slade, Professor, Sunderland University
Commentator: Jean-Eric Aubert, Lead Specialist, The World Bank Institute

10:15–10:30 Coffee Break

10:30–12:00 Session V Continues: Break-Out Session: Country Case Studies
12:00–13:00 Lunch

Session VI: Site Visit
Venue: Hotel Sofitel Atrium, Room Wright & Cialkowsky

Site Visit A: From Research to Industry and Markets: Knorr-Bremse Hungary

Knorr-Bremse is among the leading international companies in software systems for trucks Electronic Breaking Systems (EBS). The company develops the intelligent component of the EBS, with 60 engineers and top world expertise. The company also develops intelligent system for automated/unmanned driving. Knorr-Bremse testing facilities are open to visitors and are located in a dismissed soviet military airport. Knorr-Bremse management is available to discuss factors of success of innovative firms, based on the company’s experience and on its collaboration with the University. In fact, Knorr-Bremse Hungary was born from of a spin-off of Budapest Technical University.

13:00–13:30 Presentations by the Site Visit Hosts
Venue: Hotel Sofitel Atrium, Room Wright & Cialkowsky

13:30–14:00 Discussions

14:00 Departure to the Site Visit Venue (Kiskunlachaza)

20:00 Dinner back in Budapest, at Restaurant Karpatia (for all the groups)
Group B: “Financing of Innovation”

Session V: Case Studies on the Selected Theme—Break-Out Session
Venue: Hotel Sofitel Atrium, Room Kármán
9:00–10:15  Financing of Innovation:
    Moderator: Jerry Sheehan, Senior Economist, Science and Technology Policy Division, OECD
    Rapporteur: Steve Wright, European Investment Bank
    Commentator: Slavo Radosevic, Professor, University College London

10:15–10:30  Coffee Break

10:30–12:00  Session V Continues: Break-Out Session: Country Case Studies

12:00–13:00  Lunch

Site Visit B: Financing of Innovation: ComGenex Co.
ComGenex, is a Hungarian company specialized in drug discovery technologies, and it is an international leader in knowledge management tools for pharmaceutical, agrochemical, and biotechnology industries and research activities, and in particular in bridging the gap between genomics / proteomics and novel drug candidates. The company was established at the beginning of the 90s, and has a management team of highly educated and motivated people. ComGenex has received the ISO 9001 certification and was awarded the 2002 first prize for innovation by the Hungarian Association for Innovation.

13:00–13:30  Presentations by the Site Visit Hosts
    Venue: Hotel Sofitel Atrium, Room Kármán

13:30–14:00  Discussions

14:00  Departure to the Site Visit Venue (Laboratories in Budapest)

14:15–15:45  Site Visit

15:45  Departure back to the Hotel

16:00–17:00  Wrap-Up Discussions
    Venue: Hotel Sofitel Atrium, Room Kármán

20:00  Dinner at Restaurant Karpatia (for all the groups)

Group C: “Tertiary Education for the Knowledge Economy”

Session V: Case Studies on the Selected Theme—Break-Out Session
Venue: Károly Róbert College, Győngyös
8:00  Departure by bus to the Site Visit Venue

9:30  Arrival to Győngyös

10–12:30  Thematic Session on Tertiary Education for the Knowledge Economy:
    Moderator: Chris Edwards, Project Development Officer, British Council, UK
    Rapporteur: Maureen McLaughlin, Sector Manager, Europe and Central Asia Region, The World Bank
    Commentators: Jean-Raymond Masson, Senior Advisor, European Training Foundation

12:30–13:30  Lunch

Session VI: Site Visit
Venue: Károly Róbert College, Győngyös

Site Visit C: Tertiary Education: Karoly Robert College, Gyongyos
The Karoly Robert College was established in 1962 as the North-Eastern region’s college for viticulture and wine growing. Today, the College consists of two Faculties—Economics and Agriculture—with several departments each.
Students can choose from a range of majors, such as: economics, finance, tourism, environmental management, agriculture or game management. The College also offers practical training for students at a 476-hectare Demonstration Farm. Research is conducted on irrigated and non-irrigated fields to study crop development. The Farms offers species and hybrid demonstration projects, performing small-parcel four-cycle experiments on more than 200 hybrids (corn) and species (winter wheat, sunflower). The Farm also deals with fodder production, in addition to wine growing and dressing experiments that constitute the major pillar of the Farm’s activities. Wine experiments compare more than 250 species and clones. Due to its wine experimental activities, the Farm generated a significant wine growing business in the Mátraalja wine, region, allowing for conducting state-of-the-art genealogical studies.

13:30–14:00 Presentations by the Site Visit Hosts
14:00–14:30 Discussion
14:30 Departure to the Site Visit Venue
14:45–16:10 Site Visit
16:10–17:00 Wine Tasting
17:00 Departure back to Budapest
20:00 Dinner at Restaurant Karpatia (for all the groups)

Group D: “Innovation in Traditional Industries and Local Development”

Session V: Case Studies on the Selected Theme—Break-Out Session
Venue: Korona Mushroom and Wine Company, Kerecsend
8:00 Departure by bus to the Site Visit Venue
9:30 Arrival to Kerecsend
10:00–12:30 Thematic Session on Innovation in Traditional Sectors and Local Development:
Moderator: Giuseppe Zampaglione, Senior Operations Officer, Europe and Central Asia Region, The World Bank
Rapporteur: Fiona Paua, Assistant to the Executive Chairman, World Economic Forum
Commentator: Paola Maccani, Head, Local Development Initiatives, ERVET SpA, Italy
12:30–13:30 Lunch

Session VI: Site Visit
Venue: Korona Mushroom and Wine Company, Kerecsend
Site Visit D: Innovation in Traditional Industries and Local Development: Korona Mushroom and Wine Company, Kerecsend

The Korona Mushroom and Wine Company is a fully Hungarian private firm, about 110 km away from Budapest (Kerecsend). The mushroom firm deals with all stages of the product cycle, i.e. from a spawn laboratory to mushroom processing. It uses the latest technology. The firm is the leader in the national market in each stage of the product cycle and exports heavily to principally the post-socialist countries in the region. It now faces challenges in getting into the EU market. The firm’s wine company was established two years ago and it is an excellent show-case for the most modern technology used in quality wine-making. This case study would be valuable to view a best practice in a niche type of industry.
13:30–14:00 Presentations by the Site Visit Hosts
14:00–14:30 Discussions
14:30 Departure to the Site Visit Venues in Two Groups
14:45–15:15 Site Visit
15:30 Meeting of the Two Groups in the Wine Tasting Area
15:30–16:15 Wine Tasting
16:15–17:00 Wrap-Up Discussions
17:00 Departure back to Budapest
20:00 Dinner at Restaurant Karpatia (for all the groups)
Friday, March 26, 2004

Session VII: The Latin American Experience
Chair: Annette Dixon, Director of Operations, Europe and Central Asia Region, The World Bank
Venue: The Parliament of Hungary

9:00–10:00  The Latin American Experience: Closing the Gap in Education and Technology
William F. Maloney, Lead Economist, Latin America and Caribbean Region, The World Bank
Daniel Levy, Professor, State University of New York

10:00–11:00  Summary Reports from Break-Out Sessions, Site Visits and Discussions
Four Rapporteurs:
From Research to Industry and Market
Andrew Slade, Professor, Sunderland University

Financing of Innovation
Steve Wright, European Investment Bank

What Did We Hear? Reflections From Education Case Studies, Site Visits and Discussion
Maureen McLaughlin, Sector Manager, Europe and Central Asia Region, The World Bank
Fiona Paua, Assistant to the Executive Chairman—Policy Affairs, World Economic Forum

11:00–11:30 Coffee Break

Session VIII: Concluding Session
Chair: Dr. András Benedek, State Secretary, Ministry of Children, Youth and Sports, Hungary

11:30–12:30  World Bank Knowledge Economy Products:
Khaled Sherif, Sector Manager, Europe and Central Asia Region, The World Bank

Turkey Knowledge Economy & Innovation Project:
Severin Kodderitzsch, Lead Operations Officer, Europe and Central Asia Region, The World Bank

The Country Perspective:
Halil Ibrahim Akca, Deputy Undersecretary, State Planning Organization, Turkey

12:30–13:00  Conclusions and Follow-up of the Forum
Roger W. Grawe, Country Director for Central Europe and the Baltics, Europe and Central Asia Region, The World Bank

13:00 Lunch