

About the Authors

Choonmo Ahn

Choonmo Ahn is currently a Senior Researcher at the Electronics and Telecommunications Research Institute (ETRI) in Korea. His research interests include engineering economic analysis, strategic technology planning, and spectrum policy. Dr Ahn holds a PhD from the Graduate School of Management at the Korea Advanced Institute of Science and Technology (KAIST).

Scott C. Beardsley

Scott C. Beardsley is a Director at McKinsey & Company's Brussels Office. Since joining the firm in 1989, he has been particularly active in helping clients around the world on a range of strategy, regulation, reputation, and stakeholder management; performance transformation; and sales and marketing topics in the telecommunications, technology, and media sectors. Over the past decade, he has served many fixed and mobile telephone companies in emerging economies in the Middle East and Africa, Eastern Europe, Latin America, and Asia, in addition to numerous telecommunications firms and a leading global equipment provider in the West. He is a world leader of McKinsey's Telecommunications Practice and formally leads McKinsey's Strategy Practice in Europe, the Middle East, and Africa. A frequent author and public speaker, he has written extensively on a variety of telecommunications, broadband, media, and strategy topics. He has co-authored chapters in several editions of *The Global Information Technology Report* series and has delivered presentations on digital readiness, the telecommunications sector reform, and the future of telecommunications regulation. Prior to joining McKinsey, Mr Beardsley was Editor and Marketing Manager at the *MIT Sloan Management Review*; he also worked in the strategic sales and product marketing functions for Advanced Micro Devices and Analog Devices of the semiconductor industry. He was a Henry S. Dupont III Scholar (highest honors) for outstanding academic performance at the MIT Sloan School of Management, where he graduated with an MBA in Corporate Strategy and Marketing. He holds a Bachelor of Science in Electrical Engineering magna cum laude from Tufts.

Brian C. Boeggeman

Brian C. Boeggeman oversees a wide range of research projects for Cisco's Corporate Positioning team. His work has focused on thought leadership based on research investigating global issues impacting culture, process, and technology. He has worked extensively with institutions around the world including INSEAD, the Dubai School of Government, MIT, and other recognized organizations. Mr. Boeggeman's extensive technology and computer networking industry experience spans over 15 years, with proven track records in marketing, business development, and operations. He received his BA from the University of California at Santa Barbara.

Eduardo Moreira da Costa

Eduardo Moreira da Costa is the Director of Innovation at the Brazilian Innovation Agency (FINEP), a government company based in Rio, under the Ministry of Science and Technology. It disburses US\$2 billion a year for universities, R&D institutes, and private companies. Dr Costa directs the private companies' side of FINEP and commands the operation of several programs that promote innovation in the private sector through grants, subsidized loans, and venture capital money. He is also a Professor of Computer Science at the Federal University of Minas Gerais. Before joining FINEP in 2004, Dr Costa founded and directed Nest-Boston, an international private consulting firm based in Boston, while also working as a visiting scholar at Harvard's Program on Information Resources Policy. Also in Harvard, Dr Costa wrote *Global E-Commerce Strategies for Small Businesses* (MIT Press, 2001), which was translated into Japanese and Chinese in the following years and adopted as a textbook for graduate programs in several universities in the United States and other countries. In Brazil, Dr Costa created and managed a large program of export incentives to the software industry (SOFTTEX) and was Director of the National Council for Scientific and Technological Development. He has also worked for 10 years at the Brazilian Telecommunications R&D Center in Campinas in the areas of microelectronics and software development. Dr Costa holds a PhD in Electronics from the University of Southampton in the United Kingdom and an MSc in Computer Science from the Federal University of Minas Gerais in Brazil. He has been a consultant with the World Bank, the Inter-American Development Bank, the World Economic Forum, and several other institutions. His main interest today is the formulation of public policies to promote development through entrepreneurship and the extensive use of ICT.

Kalyan Dasgupta

Kalyan Dasgupta is a Managing Consultant at LECG in London, which he joined in 2006. This followed a stint at the London Business School, where he was part of a team investigating the social and economic impact of ICT. Much of his work centered on quantitative estimates of the contribution of ICT to economic growth, while other work specifically quantified the impact of mobile phones on economic growth in developing nations. Since joining LECG, he has been a key part of the team that developed *The Connectivity Scorecard* for Nokia Siemens Networks. Prior to his work at the London Business School and LECG, Mr Dasgupta worked for NERA in Cambridge, Massachusetts, as part of its telecommunications practice. Much of his work there involved studying the North American telecommunications industry. He has a Master in Economics from the London School of Economics and has undertaken PhD coursework in Economics and Business at the University of Pennsylvania.

Soumitra Dutta

Soumitra Dutta is the Roland Berger Chaired Professor of Business and Technology, and Dean of External Relations at INSEAD. He is the founder and faculty director of eLab, INSEAD's center of excellence in teaching and research on the digital economy. Prior to joining INSEAD's faculty in 1989, Professor Dutta was employed with Schlumberger in Japan and General Electric in the United States. He obtained his PhD in Computer Science and his MSc in Business Administration from the University of California at Berkeley. His current research is on technology strategy and innovation at both corporate and national policy levels. His latest co-authored books are *Throwing Sheep in the Boardroom* (Wiley, 2008), *Innovating at the Top* (Palgrave, 2008), and *The Global Information Technology Report 2007–2008* (Palgrave, 2008). Professor Dutta is actively involved in policy development at national and European levels. He has taught in and consulted with international corporations across the world. Professor Dutta's research has been showcased in the international media such as CNN, CNBC, BBC, and international publications. He is a fellow of the World Economic Forum.

Nagwa El Shenawi

Nagwa El Shenawi is currently working as the Director of the Information Center at the Ministry of Communications and Information Technology (MCIT) in Egypt. During the last two years, she worked as the Strategic Planning and International Cooperation Director in the Information Technology Industry Development Agency (ITIDA—one of MCIT's affiliates). During her career, she gained extensive experience in formulating policy and positioning papers related to the education and health sectors and in formulating bilateral and multilateral cooperation frameworks, agreements, and studies with several international organizations, in addition to the management and leadership of European projects and outreach activities funded by European and UN organizations. She also conducted polls and surveys nationwide to gain an understanding of public perception on specific decisions and studies that cover critical economical and social issues resulting in possible scenarios for advising decision makers. Dr El Shenawi is also a Professor of Macro and Micro Economics, International Finance and Public Management for undergraduate and graduate educational levels in private and foreign universities in Egypt. She holds a Doctorate in Business Administration from Maastricht School of Management in the Netherlands. She also graduated from Harvard Business School, attending the Senior Executive Program for the Middle East.

Luis Enriquez

Luis Enriquez is a Principal at McKinsey & Company's Brussels Office, where he has worked primarily in the areas of corporate finance, strategy, and telecommunications. He has broad experience in telecommunications, focusing on corporate finance, strategy, operations, and regulation. Prior to joining McKinsey, Dr Enriquez also worked extensively on telecommunications liberalization and regulation issues. In 1994, he assisted the Czech Ministry of Finance in developing price regulations to support the privatization of Cesky Telecom (then SPT Telecom), and taught courses and seminars for the ministry staff and other industry stakeholders. He has participated in proceedings on liberalization and privatization in Mexico, Argentina, Poland, and other Eastern European and Latin American countries. He assisted the Chief

Economist of the US Federal Communications Commission in areas including interconnection, universal service subsidies, and developing dispute-resolution mechanisms, and has worked with US incumbents and new entrants on various regulatory topics. Dr Enriquez has a BA in Economics from Harvard University and a PhD in Economics from the University of California at Berkeley, where he focused on the economic dynamics of interconnection among telecommunications networks.

John Garrity

John Garrity is part of a Strategy team in Cisco's Emerging Markets Business Development Group. He holds a Master in Applied Economics from Ohio State University and, before joining Cisco in late 2006, worked for the Federal Trade Commission and the World Bank.

Thierry Geiger

Thierry Geiger is an Economist with the Global Competitiveness Network and a Global Leadership Fellow at the World Economic Forum. His responsibilities include the construction and computation of a range of indexes, as well as data analysis for various projects and studies. His main areas of expertise include econometrics, international trade, and finance. Most recently, he co-edited *The Ukraine Competitiveness Report 2008*. Mr Geiger holds a BA in Economics from the University of Geneva with a specialization in monetary and financial economics, and an MA in Economics from the University of British Columbia. Prior to joining the Forum, he worked for the World Trade Organization and Caterpillar Inc. During his studies, he was a member of the board of Junior Enterprise Genève. He is also cofounder of Procab Studio SA, an IT company based in Geneva.

Mehmet Güvendi

Mehmet Güvendi is a Principal at McKinsey & Company's Istanbul Office. He joined the firm in March 1999. During his career at McKinsey, he has worked in strategy, regulation, operations, and IT topics in many different sectors. In particular, he has extensive experience in regulation in the telecommunications sector, where he has helped clients in regions such as Europe, Asia, and the Middle East. Before joining McKinsey, Mr Güvendi was an IT Group Manager at Procter & Gamble Company. He worked as an IT Manager for six years in Western Europe, North America, and Turkey. He led multi-functional global process design teams for planning, and managed several major global pilot projects. Mr Güvendi also managed a data center and a multinational communications network, and was in charge of IT systems and operations at several manufacturing sites. He is a member of the Prime Ministry Telecom Special Expertise Committee for the development of the Turkish National Five-Year Development Plan. He sits on the Advisory Council of Bilkent University Industrial Engineering Department. Mr Güvendi holds a BS with high honors in Industrial Engineering from Bilkent University in Turkey.

Vijayakumar Ivaturi

Vijayakumar Ivaturi is CTO of Wipro's IT businesses covering Wipro technologies, Wipro Infotech, and Wipro BPO. His responsibilities include technology strategy planning, governance of centers of excellence, innovation process, technical stream management, and technology alliances with industry and academic forums. He has been with Wipro for the last 18 years and was one of the

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Peter Knight

Peter Knight is Coordinator of the *e-Brasil* Project (www.e-brasil.org.br), President of Telemática e Desenvolvimento Ltda. (www.tedbr.com), and Partner of Telematics for Education and Development (www.knight-moore.com). Before joining the private sector, he led the World Bank's Electronic Media Center (1994–97), and before that was Chief of the National Economic Management Division in the Bank's Economic Development Institute (EDI) and Lead Economist for Brazil. Dr Knight's World Bank career spanned over 20 years, with more than 8 devoted exclusively to work on Brazil. Earlier he held positions at Cornell University, the Ford Foundation, the Brookings Institution, and the *Centro de Treinamento para o Desenvolvimento Econômico* (CENDEC). He received his PhD and MA in Economics from Stanford University and holds degrees in Government from Dartmouth College (US) and Politics, Philosophy, and Economics from Oxford University (UK). Dr Knight has published over a hundred books, monographs, chapters, and articles in various languages: his latest books are (co-edited and co-authored) *E-gov.br – a próxima revolução brasileira* (São Paulo: Financial Times Prentice Hall/Pearson Education do Brasil, 2004); *Rumo ao e-Brasil* (Rio de Janeiro: Garamond, 2006), (co-edited and co-authored) *e-Brasil – Um programa para acelerar o desenvolvimento socioeconômico aproveitando a convergência digital* (São Caetano do Sul, SP: Yendis, 2006), and *e-Desenvolvimento no Brasil e no mundo: subsídios e Programa e-Brasil* (São Caetano do Sul, SP: Yendis and Câmara Brasileira de Comércio Eletrônico, 2007). He is a member of the Board of the *Journal of E-Government*.

Bruno Lanvin

Bruno Lanvin is Executive Director at eLab, INSEAD, managing the teams in Fontainebleau, Singapore, and Abu Dhabi. From 2000 to 2007, Dr Lanvin worked for the World Bank, where he was inter alia Senior Advisor for E-strategies and Regional Coordinator (Europe and Central Asia) for ICT and e-government issues. He also headed the Capacity Building Practice of the World Bank's Global ICT Department, and was Chairman of the Bank's e-Thematic Group. From June 2001 to December 2003, he was the Manager of the Information for Development Program (infoDev). In 2000, Dr Lanvin was appointed Executive Secretary of the G8 DOT Force. Until then he was Head of Electronic Commerce in the United Nations

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Jae Kyu Lee

Jae Kyu Lee is Professor and former Dean of the KAIST Business School. He was the founding Editor-in-Chief of the international journal *Electronic Commerce Research and Applications* (Elsevier) and founder of the International Conference on Electronic Commerce. He has received many awards in research papers and social achievement both internationally and domestically in the area of electronic commerce, intelligent systems, and information systems. Professor Lee received his PhD from the Wharton School of the University of Pennsylvania.

Miguel Lucas

Miguel Lucas is a Partner at McKinsey & Company's Lisbon Office. He is a leader of the European Telecoms Practice. He joined McKinsey in 1989, where he worked on a variety of projects with a concentration on financial institutions, telecommunications, and transportation. In the telecommunications sector, for wireline players, his experience includes leading the redesign of SMEs strategies and of global organizational structures; supporting the design of a performance measurement system and of an objectives incentives system for managers of a major European player; supporting the launch of a telecommunications data attacker; reviewing the voice and data portfolio of the retail front, leading to the launch of flat rates; and supporting the design of a strategy to manage the fixed mobile transition. For wireless players, his experience includes supporting the turnaround of two mobile players, which took in the global revision of the product offer for the residential and corporate segments as well as for the distribution channels, and leading the merge of five regional operators into a national entity at a moment when international attackers were entering the market. Mr Lucas has also been an active developer of telecommunications knowledge in the regulatory area—where he led projects on the new regulatory framework resulting from the European Directives—and in the corporate segment, in pricing and fixed/mobile substitution. Mr Lucas holds a BA in Management from Universidade Católica Portuguesa in Portugal and an MBA from Harvard Business School.

Darcilene Magalhães

Darcilene Magalhães works for the Minas Gerais State Agency for IT Development in Brazil. She is an economist graduated from the Catholic University of Minas Gerais, and also holds an MSc in Public Administration from the Federal University of Minas Gerais. Ms Magalhães has more than 30 years of experience in the development and management of diverse IT projects for the State Government of Minas Gerais. In the past 7 years, she

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Irene Mia

Irene Mia is Director and Senior Economist with the Global Competitiveness Network at the World Economic Forum. She is also responsible for competitiveness research on Latin America and Iberia. She has written and spoken extensively on issues related to national competitiveness, serving as lead author and editor on a number of regional and topical competitiveness papers and reports; notably, she is the co-editor of *The Global Information Technology Report* series. Before joining the Forum, she worked at the headquarters of Sudameris Bank in Paris for a number of years, holding various positions in the international affairs and international trade divisions. Her main research interests are in the fields of development, international trade, economic integration (with special reference to the Latin American region), and competitiveness. Dr Mia holds an MA in Latin American Studies from the Institute of Latin American Studies, London University, and a PhD in International Economic and Trade Law from L. Bocconi University in Italy.

Hrishi Mohan

Since May 2008, Hrishi Mohan has been associated with the Innovation Initiative of Wipro Technologies, where his primary area of contribution has been around managing the human resources dimension of innovation. From 2001 to 2008, he has worked in different areas of Wipro's Human Resource Management, which included institutionalizing a training function in a business unit, leading the human resources function for the fastest growing business unit in Telecom vertical, designing and facilitating leadership workshops and leading change management engagements in US geography. Mr Mohan holds a BSc in Mathematics and Physics from the University of Udaipur, India, and an MBA from Symbiosis Institute of Business Management, Pune, India. Prior to joining Wipro, he was working for GE in Mumbai, India.

Robert Pepper

Robert Pepper is Vice President, Global Advanced Technology Policy, at Cisco. He leads a team directing Cisco's global agenda for advanced technology policy in areas such as broadband, IP-enabled services, wireless, security, privacy, and ICT development. He joined Cisco in 2005 from the US Federal Communications Commission, where he served as Chief of the Office of Plans and Policy and Chief of Policy Development beginning in 1989. His focus was on telecommunications regulation, spectrum policy, and policies promoting the development of the Internet. Before joining the government, he held faculty appointments at the Universities of Pennsylvania, Iowa, and Indiana, and was a Research Affiliate at Harvard University. He serves on the Board of Directors of the US Telecommunications Training Institute (USTTI), advisory boards for Columbia University and Michigan

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Enrique J. Rueda-Sabater

Enrique J. Rueda-Sabater joined Cisco in 2006 and is currently Director, Strategy and Business Development for Emerging Markets. His role involves working on a unique "win-win" strategy: Cisco's business in emerging markets will grow inasmuch as its activities help those countries to harness the potential of IT and network connectivity for economic growth, competitiveness, and social inclusion. Before joining Cisco, Mr Rueda-Sabater spent two decades at the World Bank. His last role was as Director of Strategy and Integrated Risk Management. Earlier stages in his World Bank career included policy roles, fund-raising activities, and operational work with countries in East Asia, Africa, and the former Soviet Union. He holds degrees in Business and Economics. He worked for Procter & Gamble early in his career and has lectured for academic, think tank, and business audiences around the world (including on his work on Global Scenarios for 2020). He is now Vice-Chair of the nonprofit Center for Transformation and Strategic Initiatives.

Sergio Sandoval

Sergio Sandoval is an Engagement Manager at McKinsey & Company's Brussels Office. Since joining the firm in 2001, he has been serving clients in Europe, the Middle East, and Asia on strategy, regulation, and stakeholder management topics in the telecommunications, banking, and electricity sectors. He is also a member of McKinsey's Strategy Practice, where he focuses on developing knowledge around key regulatory topics. Prior to joining McKinsey, Mr Sandoval was an Advisor to the Colombian Minister of Finance on macroeconomic policy matters. Additionally, he worked as a Macroeconomic Advisor to the President of the Republic of Colombia. Mr Sandoval holds a Bachelor of Science in Economics (highest honors) and a Master of Science in Macroeconomics (highest honors) from Los Andes University in Colombia. He also holds an MBA (highest honors) from Solvay Business School in Belgium.

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Leonard Waverman

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Sacha Wunsch-Vincent

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