

Preface

The last economic and financial crisis has heavily threatened European and other economies around the globe. Also, the Eurozone crisis, the energy and climate change crises, challenges of demographic change with high unemployment rates, and the most recent conflicts in the Ukraine and the near East or the Ebola virus disease in Africa threaten the wealth of our societies in different ways. The inability to predict or rapidly deal with dramatic changes and negative trends in our economies and societies can seriously hamper the wealth and prosperity of the European Union and its Member States as well as the global networks. These societal and economic challenges demonstrate an urgent need for more effective and efficient processes of governance and policymaking, therewith specifically addressing crisis management and economic/welfare impact reduction.

Therefore, investing in the exploitation of innovative information and communication technology (ICT) in the support of good governance and policy modeling has become a major effort of the European Union to position itself and its Member States well in the global digital economy. In this realm, the European Union has laid out clear strategic policy objectives for 2020 in the **Europe 2020 strategy**¹: *In a changing world, we want the EU to become a smart, sustainable, and inclusive economy. These three mutually reinforcing priorities should help the EU and the Member States deliver high levels of employment, productivity, and social cohesion. Concretely, the Union has set five ambitious objectives—on employment, innovation, education, social inclusion, and climate/energy—to be reached by 2020.* Along with this, Europe 2020 has established four priority areas—smart growth, sustainable growth, inclusive growth, and later added: A strong and effective system of economic governance—designed to help Europe *emerge from the crisis stronger* and to coordinate policy actions between the EU and national levels.

To specifically support European research in strengthening capacities, in overcoming fragmented research in the field of policymaking, and in advancing solutions for

¹ Europe 2020 http://ec.europa.eu/europe2020/index_en.htm

ICT supported governance and policy modeling, the European Commission has cofunded an international support action called eGovPoliNet². The overall objective of eGovPoliNet was to create an international, cross-disciplinary community of researchers working on ICT solutions for governance and policy modeling. In turn, the aim of this community was to advance and sustain research and to share the insights gleaned from experiences in Europe and globally. To achieve this, eGovPoliNet established a dialogue, brought together experts from distinct disciplines, and collected and analyzed knowledge assets (i.e., theories, concepts, solutions, findings, and lessons on ICT solutions in the field) from different research disciplines. It built on case material accumulated by leading actors coming from distinct disciplinary backgrounds and brought together the innovative knowledge in the field. Tools, methods, and cases were drawn from the academic community, the ICT sector, specialized policy consulting firms as well as from policymakers and governance experts. These results were assembled in a knowledge base and analyzed in order to produce comparative analyses and descriptions of cases, tools, and scientific approaches to enrich a common knowledge base accessible via www.policy-community.eu.

This book, entitled “Policy Practice and Digital Science—Integrating Complex Systems, Social Simulation, and Public Administration in Policy Research,” is one of the exciting results of the activities of eGovPoliNet—fusing community building activities and activities of knowledge analysis. It documents findings of comparative analyses and brings in experiences of experts from academia and from case descriptions from all over the globe. Specifically, it demonstrates how the explosive growth in data, computational power, and social media creates new opportunities for policymaking and research. The book provides a first comprehensive look on how to take advantage of the development in the digital world with new approaches, concepts, instruments, and methods to deal with societal and computational complexity. This requires the knowledge traditionally found in different disciplines including public administration, policy analyses, information systems, complex systems, and computer science to work together in a multidisciplinary fashion and to share approaches. This book provides the foundation for strongly multidisciplinary research, in which the various developments and disciplines work together from a comprehensive and holistic policymaking perspective. A wide range of aspects for social and professional networking and multidisciplinary constituency building along the axes of technology, participative processes, governance, policy modeling, social simulation, and visualization are tackled in the 19 papers.

With this book, the project makes an effective contribution to the overall objectives of the Europe 2020 strategy by providing a better understanding of different approaches to ICT enabled governance and policy modeling, and by overcoming the fragmented research of the past. This book provides impressive insights into various theories, concepts, and solutions of ICT supported policy modeling and how stakeholders can be more actively engaged in public policymaking. It draws conclusions

² eGovPoliNet is cofunded under FP 7, Call identifier FP7-ICT-2011-7, URL: www.policy-community.eu

of how joint multidisciplinary research can bring more effective and resilient findings for better predicting dramatic changes and negative trends in our economies and societies.

It is my great pleasure to provide the preface to the book resulting from the eGovPoliNet project. This book presents stimulating research by researchers coming from all over Europe and beyond. Congratulations to the project partners and to the authors!—Enjoy reading!

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