

## PREFACE

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The Institute of Economic Sciences at the Hungarian Academy of Sciences launched a new series of publications entitled “*Verseny és szabályozás*” [Competition and Regulation] in 2007. Eight annual volumes have been published so far, all in Hungarian. The current volume is the first one in English, and it contains 12 selected translations from the crop of the first seven years. It offers the reader a glimpse into the current state of research in its chosen field in Hungary.

As the title suggests, the main objective of the publications was to open up a much-needed new forum for home-grown Hungarian research on the legal and economic issues of the regulation of imperfectly competitive markets. The published studies covered a very broad range of topics. Some articles of general theoretical and methodological nature dealt with the background in the law and economics of regulated markets. Others investigated current legal, economic and policy issues and cases. Others again dealt with regulation and the regulators themselves. The functions, methods, analytical tools, the institutions and the impact of regulation were discussed in those articles. Special attention was paid to regulation by the European Union, and also to recently de-monopolized key industries such as communications, energy, media, the postal sector or water and sewage. More than a half of the articles of the first seven publications dealt with the problems of key industries. The publications were designed to provide a meeting place for economists and lawyers to work together on the economic background of legal problems and the legal solutions to economic problems. They also had an educational function. In an introductory manner and by relying on timely surveys of recent developments in the analysis of imperfect markets and regulation, articles suitable for educational use have been regularly published.

Over the years, the series has become a major undertaking. Its 49 contributing researchers (40 economists and 9 lawyers) appeared in it a total of 100 times as authors or co-authors of 84 articles. Twenty of them became recurring contributors, authoring or co-authoring at least two articles each. A steadily growing interdisciplinary circle of dedicated researchers has formed around the publications. Interactions among the authors increased over time. Significant lawyer-economist cooperation demonstrated itself by the large number of contributing lawyers and articles about legal issues (9 lawyer authors produced 18 such articles), and by the emergence of articles co-authored by economists and lawyers.

Five of the 12 articles selected for publication in English in this tome deal with broad economic and legal issues of regulation, while the remaining 7 discuss the state and specific problems of key industries in Hungary and, in some cases, in the surrounding region.

The first article by *A. Kovács* examines the practice of judicial reviews of regulatory decisions, and finds it harmful if information which is pertinent to, or even crucially important for, the reviewed case is declared a commercial secret in the regulatory proceedings, and thus remains unavailable for the reviewer. The author recommends limitations to the right to protect commercial secrets. Reaching back to Law & Economics, it is suggested that protection may be appropriate only when it improves resource allocation in the economy. Otherwise commercial secrets should be made public to varying degrees, depending on their nature.

The second article by *B. Muraközy* and *P. Valentiny* takes a look at two of the various possible alternatives to straightforward government regulation: self-regulation and co-regulation (self+governmental). The authors explain how these regimes work, what variants may exist, how their history evolved, and how the Anglo-Saxon, French (Napoleonic), German, Scandinavian and the so-called socialist legal systems provide incentives and counterincentives for the development of self-regulation. An extensive survey of studies and models of self- and co-regulation is provided.

The third article by *G. Csorba* is a survey of empirical studies of Hungarian market structures. In this field of research, often referred to as Empirical Industrial Organisation, a fairly large number of studies have been produced in Hungary in recent years. The author identifies numerous generic uses in competition policy and regulation of the results of market structure studies. Among them market definitions, evaluations of market power, and the estimated consequences of various forms of market behaviour are emphasised as particularly important ones. An outline of the history of empirical market structure studies is followed by descriptions of the surveyed studies, which are organised into three groups according to the nature of the data they utilise. Studies of the first group use price data and estimate the relationship between market concentration and prices or the impact of structural and behavioural changes on prices. In the second group we find price and volume data on products and/or services sold in the target markets of the studies. The most basic findings of these studies are estimates of demand characteristics, particularly those of own price and cross price elasticities. Some variants of the classic demand function are mentioned. The third group contains models using elaborate structural information on the supply side of the market and estimating the properties of demand for factor inputs.

The fourth article by *L. Halpern* and *B. Muraközy* tackles one of the most popular topics: the relationship between competition and the research and development (R&D) activities of competing firms. Initially the authors draw attention to some problems, such as the erroneous measurement of R&D by its inputs rather than its

outputs. Errors caused by not distinguishing between endogenous and exogenous R&D are also mentioned. Based on their empirical results, the authors accept the inverted U-shaped relationship between competition and R&D at the firm level as well as at the industry level, meaning that innovative activity is lower in firms that operate either in highly concentrated or highly competitive industries than in firms in moderately competitive sectors of the economy. Interpretations are provided. There is some inconsistency in the results. The presence and intensity of competition were measured by different metrics and only some of them seemed to have had an impact on the innovative investments of firms. The empirical results are accompanied by an account of difficulties in modelling the relationship. Simultaneity (*i.e.*, competition causing R&D and R&D causing competition at the same time) is singled out as an important problem.

The fifth article by *F.L. Kiss* revisits the important but lately somewhat ignored field of productivity analysis. The author argues that the socially responsible regulator must study and understand what makes productivity grow in the regulated suppliers of imperfect markets. Following a brief conceptual clarification and overview of the method of measurement, the author focuses his attention on two topics: 1. intra-firm and inter-firm comparisons of productivity levels and changes (gains), and 2. decomposition of firm-level productivity gains into components caused by increased production volumes, cost-saving technological changes, pricing and the characteristics of corporate demand for inputs. Having accomplished these analytical tasks, the author then combines the two and causally decomposes the compared measures of firm-level productivity. An empirical study rounds out the presentation. Productivity comparisons and decompositions as well as an attempt at econometric forecasting of factor inputs are carried out for two real-life regulated companies. The resulting deep insight into the efficiency of the production processes of the two firms is demonstrated.

The sixth article by *C.I. Nagy* examines the influence of the European Union on price regulation by its member states. Three areas are identified in which such influences may exist: competition law, liberalisation law, and internal market (free movement) law. A thorough investigation of EU jurisdiction and the relevant legal cases revealed no document that would deal with this issue. The only positive finding of the author is a declaration in one legal case, that price regulation by the state does not constitute subsidy by the state, because it does not involve subsidy by the state budget. Thus price regulation by member states is neither forbidden nor explicitly hindered by the EU. However, the author notes that limitations and restriction may exist in connection with the application of other principles and provisions. It is forbidden to hinder the free movement of goods and services within the EU by any means, including price regulation. There are cases mentioned in the article in which setting maximum or minimum prices or some upper boundary such as unit cost would violate internal market law. Regulated prices may also act

as obstacles to market liberalisation, free access to markets. The natural gas and electricity markets are examined in some detail. Price regulation is also one of the possible means of artificially creating economic advantages and disadvantages among market players.

The seventh article by *I. Major* and *K.M. Kiss* deals with the regulation of access prices for firms with interconnected networks under imperfect and asymmetric information. Its point of departure is a long series of studies that address the issue of interconnection, access prices, and termination charges in particular, under the assumption that the regulator has perfect information about the true costs of providing inter-firm network access services. Interconnection is revisited under the assumption of imperfect regulatory information and informational asymmetry between the regulator and the regulated firms. Comparing incentive regulation (whereby the regulator offers the regulated firm an incentive-based contract menu) with regulation by cost-based pricing, it is concluded that under imperfect information cost-based pricing may give perverse incentives to regulated firms not to improve the efficiency of interconnection, and cost-based pricing of call termination ultimately rewards the less efficient types of regulated firms. In contrast, incentive regulation produces no perverse incentives and allows the efficient firm to earn higher profits. Various aspects of incentive regulation are discussed. It is concluded that incentive regulation works with smaller social welfare loss than cost-based pricing or bottom-up cost accounting. Principal-agent models of price regulation are more “knowledge intensive” but less time consuming than cost accounting. Most importantly, a regulatory mechanism that takes into account the existence of asymmetric information between the regulator and the regulated firm induces cooperation between the contracting parties, while cost-based pricing induces cost manipulations by the companies and inevitably brings about conflicts with the regulator.

The eighth article by *L. Paizs* is about the electricity balancing market. The term “balancing” refers to the correction of very-short-term market disequilibria that regularly result from various unforeseen fluctuations in the volume of demand for electricity. Deviations between demand and supply require efficient real-time corrections to the volume of energy supply. These are crucially important for network safety and the efficiency of the entire market. Liberalisation has brought with itself market-based institutional arrangements and processes of balancing. These and their applications to the Hungarian electricity industry are described in the article. Balancing takes place through positive and negative corrections to volumes, and involves prices and penalties. In the article it is investigated how the stakeholders’ behaviour is affected by the properties of these prices and penalties. The main conclusions are: Suppliers have strong incentives to keep their portfolio balanced. Asymmetry in the penalties makes suppliers inclined to under-contract. The structure of purchase and settlement prices is such that it motivates the public utility wholesaler to nominate more than their expected load.

For years, the Regional Centre for Energy Policy Research at Corvinus University in Budapest has been modelling European regional electricity markets. The ninth article by *A. Kiss* presents a regional simulation model of wholesale electricity markets, comprising of Hungary and six neighbouring countries. It is emphasized during the presentation of the structure and workings of the model that this market is characterised by very high concentration. Few large electricity generators, having high degrees of market power, dominate the wholesale market and drive up prices. Mark-ups due to market power are estimated to have amounted to 25-40 percent of actual wholesale prices. An examination of congestions and shortages indicates that prices could be lowered by tighter market integration resulting in improved flows of electricity and reduced market power. Simulation results, however, show that market integration alone is not nearly sufficient to eliminate the dominance by large power stations, or to realize the potential welfare gains of competition.

The tenth article by *P. Kaderják et al.* presents the elaborate Danube Region Gas Market Model of the Regional Centre for Energy Policy Research. This model depicts the combined gas infrastructure of 15 countries of Central and Southern Europe in a consistent and unified manner. Following a detailed description of the model, simulations are carried out in order to determine various economic consequences of a series of important existing or planned or proposed gas infrastructure investments. The estimated effects include price effects (among them spill-overs to third countries), benefit-cost analyses, impacts on social welfare, improvements in European market integration and the security of gas supplies in the region.

As the use of mobile telephony started spreading beyond the wildest initial dreams of market analysts, worldwide attention became urgently focussed on the issue of the relationship (substitutability and/or complementarity) between fixed and mobile telephony. This relationship was of enormous importance for the future size and structure of telecommunications markets. Results from an empirical study were reported in the eleventh article by *B. Édes et al.* A Hungarian survey of the access and usage preferences of 1000 people was used to analyse consumers' responses to price changes and the effects of lifestyle and demographic characteristics on demand. The own-price elasticities implicit the responses were low (-0,3) for mobile access and high (-1,4) for fixed access, suggesting that mobile access was much less readily substitutable by fixed access than fixed access was by mobile access. However, results with respect to cross-elasticities were somewhat inconsistent and required deeper analysis and evaluation by the authors, whose ultimate conclusion was that in Hungary mobile access was a substitute for fixed access. The rate of usage substitution was significantly lower in the short run (*i.e.*, in the presence of existing subscriptions) than in longer-term access decisions.

The last study by *K.M. Kiss* is of monographic nature, as it introduces the reader to a single key market, the Hungarian postal sector. The article consists of three parts. The first one provides detailed descriptive information on the sector's recent history

and current structure. The second part deals with the introduction of competition into, and regulation of, the postal sector. Market and regulatory developments are placed into the broader environment of the European postal reforms. The author mentions some negative phenomena, discusses important legal-regulatory cases of anti-competitive behaviour, and also points to areas in which some progress has been made in Hungary. The third part completes the description by introducing performance indicators and using them to measure the sector's performance.

*The editors*