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Bożena Borkowska, *Regulacja monopolu naturalnego w teorii i praktyce* [Regulation of a natural monopoly in theory and practice], Wydawnictwo Wrocławskiego Uniwersytetu Ekonomicznego, [Publishing House of the Wroclaw University of Economics], Wroclaw 2009, pp. 229.

Monopolization of the economy may result from a company's market strategy consisting in winning over its competitors and reinforcing its position on the market. Achieving such a position may be the consequence of effective rent seeking leading to State protection of businesses against competition and collecting monopoly rent. Monopolization of the market may also be the end-result of economic calculation which may show that increasing benefits of scale justify the operation of just one business in a given sector. The latter case, called a natural monopoly, is the subject of Bożena Borkowska's considerations when discussing various types of regulation. The author also presents case studies of three natural monopoly markets in the US: the transportation, cable telephony, and electricity supply sectors.

The first chapter interestingly and chronologically analyzes the understanding of a natural monopoly, starting from its classical concept up to the contemporary understanding of the essence of such a market structure. The theory of monopoly itself was the subject of considerations and theoretical generalization by A. Cournot in the first half of the 19th century. The classical concept seeks to justify the existence of a monopoly by increasing economies of scale and by optimized allocation of resources resulting from the operations of one company on the market.

Borkowska presents the views of economists who theoretically contributed to the development of monopoly theory, including natural monopoly (J. Dupuit, F.Y. Edgeworth. J. S. Mill, T.H. Farrer, H.C. Adams, R.T. Ely, A.M. Henderson, R.A. Posner, A.E. Kahn). Their common feature is that of highlighting the assumption of the economies of scale and resulting optimization of allocation of resources as justifications for operations of one entrepreneur, i.e., a natural monopoly. Economic and technological premises indicated market monopolization, but the monopolist's behaviour could go against customers and consumers' interests as he could take advantage of his market position to maximize monopolistic profit. The views differ, as their authors point out other premises of a natural monopoly. For instance, T.H. Ferrer stresses political reasons while R.T. Ely speaks of competition possibilities in natural monopoly markets, although he calls them destructive.

Contemporary concepts of a natural monopoly represented mainly by: W.J. Baumol, E.E. Bailey, R.D. Willig, J.C. Panzar assume that this market structure does not necessarily require the administrative interference of the State. Representatives of this line of thinking also propose we understand a natural monopoly as an outcome of increasing economies of scale but, at the same time, they accept it is linked with subadditivity of the cost function. They also draw attention to the issue of sustainability of a natural monopoly assuming that when certain conditions are met a monopolist may not abuse his position without provoking potential competitors to enter the market controlled by the incumbent. The above laid the foundations for the theory of contestable markets, which was a reaction to regulatory ideas concerning natural monopolies. Classical natural monopoly concepts led to the conclusion that an economically justified monopoly in some markets and possible conflict of interest between a monopolist and his customers and consumers call for State-originated regulations imposed in the public interest and with a view to maximize social welfare.

The second chapter of the book is devoted to views on regulating a natural monopoly in the public interest. The starting point is an assumption of market weakness under optimum allocation of resources in monopolized markets. The theory of welfare economics recognizes Pareto optimum conditions and reasons why the reality diverges from the optimum. In accordance with the concept of regulations adopted in the public interest, the State is expected to eliminate market weaknesses and to regulate the market to arrive at optimal allocation of resources and, by the same stroke, to prevent negative external effects resulting from market monopolization.

Consistently with the theory of institutional economics, the starting point for these views is the assumption that the State acts in the public interest, its interference is cost-free, and weaknesses are characteristic of the market – not of the State. Regulation of a natural monopoly by specifying an optimal price of goods or services of a given monopolist is of key importance to these ideas. When these theories emerged, a natural monopoly was true of markets of goods having primary importance to both the consumers and the economy (power generation, railway transport, telecommunication) and limiting the increase in monopolists' prices was the main objective in order for it not to translate into higher costs of manufacturing, higher prices, and the reduced welfare of society. In a slightly more moderate form, the problem remains up to date, hence the search for effective and efficient ways of regulating natural monopolies of local and regional scope.

Searches for optimal price led to the following concepts: marginal cost pricing (A. Marshall, A.C. Pigou, R.F. Khan, A.P. Lerner, H. Hotelling, J. Dupuit, R.H. Coase), average cost prices (R.D. Willig, J.M. Clark), two-part tariff (J. Hopkinson, M.S. Feldstein, S.C. Littlechild, R.D. Willig), multipart tariff (S.J. Brown, D.S. Sibley, J.A. Ordover, J.C. Panzar, R.A. Meyer, D. Dimopoulos), peak load pricing (J.M. Clark, O.E. Williamson, M. Boitex, J. Hirshleifer, A. E. Khan) and finally price differentiation in accordance with Ramsey's principle (F. Ramsey, W.J. Baumol, D.F. Bradford, M. Boiteux, S.V. Berg). All these concepts form a part of the traditional theory of natural monopoly regulation, have their roots in the theory of social welfare, and assume the need to regulate natural monopoly because of market weaknesses and negative external effects of market monopolization resulting from them. Various concepts of price regulation came into being in attempts to find a solution bringing outcomes as close to optimum Pareto as possible.

Three types of potential State interference feature in the views of the advocates of classical theory: by means of taxes and subsidies, by regulating private monopolies, or by nationalizing a natural monopoly and subjecting it to direct supervision of the State. The author outlines these views highlighting the diversity between them that exists despite their common starting point. She asks many questions to which theory not always can find an unambiguous answer, but which inspire us to further theoretical and empirical studies. The problem cumulates especially in subsequent chapters where Borkowska refers to practice. The critics of market failure theory, State reliability, and cost-free State regulation of natural monopolies (K.J. Arrow, R.B. Horowitz, R.H. Coase) was the starting point for models of economic regulation based on interest groups.

The third chapter of the book reviews concepts of interest group behaviour in the context of State regulation of natural monopolies (G.S. Becker, A.F. Bentley, M. Olson, S. Peltzman, G.J. Stigler, D.B. Truman). Ideas for regulation disregard the thesis of a regulator acting in favour of optimal allocation of resources and care for social welfare but with reference to practice, facts are quoted confirming that operations by regulators are subject to political pressure and take account of not only consumers' interest as the weaker side of market transactions, but also producers', especially natural monopolists as influential players in the market of political services.

This chapter provides interesting descriptions of the behaviour of regulators and businesses subjected to regulations using examples from the US and resulting in the operations of pressure groups, lobbyists, and rent seeking. Differently from classical theory, regulation (as operating models for pressure groups) considers economic benefits equal to political ones, e.g., winning political popularity and votes by pressure groups. Politics and economics intertwined together is a more reliable reflection of reality. The theory of pressure groups also draws attention to the asymmetry of information between a regulator and a regulated company (classical theory assumes both sides of the regulatory process are perfectly well informed) and to the possibility of regulation being taken over by a regulated entity. G.S. Becker, J.J. Laffont, and Tirol construed an agency theory which says that conflict of interests between groups may deepen regulation inefficiency.

The final part of chapter three includes case studies of regulation history in the US in sectors like railway transport, cable telecommunication services, and electricity markets. In the late 19th and early 20th centuries in the US it was decided that all of the above sectors manufacture products and render services in the general economic interest and for that reason they should be regulated by the State in the public interest. Observations of regulatory activities in the market of railway transport show these activities were outcomes of the pressure of many different groups of interest and consumers, as the weakest and the least organized group were not represented in the game. We cannot say that regulation was taken over by railway companies as its content took account of business users of railways. The description of regulation in the market of cable telephony tells a story of a natural monopolist, which Bell Telephone Company (BTC) was at the end of the 19th century. That history starts with BTC building monopolistic power with the support of the State, while in 1949–1982 they forced out the division of the company enjoying such a strong market position that competition could not develop, whether real or potential. Telecommunication and antitrust regulators had problems with information asymmetry and with the involvement of a group of eminent economists and lawyers on the side of the operator who fought for the company's interests.

The author draws our attention to a very important element which weakens the need for regulation and competition. That is technical progress which created competition to cable telecommunication from the side of mobile telephony and VOIP. The example of electricity market regulation is not as unambiguous as the previous ones. The reason is the high share of sunk costs in capital investment outlays to start and to continue operations in the market of electricity and power. The description of American experiences include many aspects familiar to Poles from their own experience: the dilemma of operations concentrated in huge multinationals, unbundling of transmission and distribution from generation and sales, and stimulating energy generation from renewable resources. In presenting historical American experiences, the author asks numerous interesting questions but finding answers to them would require deepened studies. These questions are also to the point for the Polish regulatory experience of the last two decades.

The fourth chapter presents new regulations for natural monopolies based on the theory of new institutional economics. Following R.H. Coase's concept it is assumed that information in the market (economic, political) is incomplete and asymmetric, the rationality of market players is limited, they are inclined to display opportunistic approaches and in the entire regulatory process we should compare the weaknesses of market and public administration. The new approach to regulation consists in proposing the following theoretical solutions applied in practice: auctioning as a form of competing to enter the market (E. Chadwick, H. Demsetz, O.E. Williamson, M. Armstrong, S. Cowan, J. Vickers), yardstick competition (A. Shleifer, J.J. Laffont, J. Tirole, M. Armstrong, S. Cowan, J. Vickers), price-cup regulation (S.C. Littlechild), essential facility access price (R. Willig, W.J. Baumol, J.G. Sidak, M. Armstrong, S. Cowan, J. Vickers), and structural regulation of natural monopoly (S. Peltzman, R.J. Gilbert, E.P. Kahn, O. Shy, O.E. Williamson, M. Armstrong, S. Cowan, J. Vickers, P.G. Klein). All these concepts assume activated competition if not on the market, then by relating regulation instruments to averaged economic reality. Proposed solutions may be applied in regulating municipal monopolies where in practice it is usually difficult to find solutions directly based on market competition.

By the end of the fourth chapter the author focuses upon the relation between exercising political power and effective regulations, with efficiency here meaning the smooth exploitation and development of natural monopolies. The studies quoted in the book reveal a large scope of discretion in political decisions which does not favour investments in infrastructure as the absence of regulatory stability contributes to higher investment risk. The studies on regulatory contracts cited in the book show they offered poor protection to entrepreneurs against the opportunism of political authority.

The theory of new regulation is a response to imperfect interference of the political system with the economy, also in natural monopolies. Theoretical attempts to make objective the criteria used in regulatory decisions proved to be little effective: hence the new approach to economic regulation based on the principle of regulation for competition. The author's reference to experiences of countries with long-established regulatory practice and a democratic state is very instructive for Polish readers and the book can be recommended not only to theoreticians but also to practitioners engaged in natural monopoly sectors as well as politicians with whom many regulatory operations and decisions originate. The book is based on well selected, representative publications, mostly American and British. The book allows us to follow the development of economic and political views on regulating natural monopolies. The developmental trends indicate a rather clear direction of changes: from normative to positive concepts resulting from experiences accumulated in regulatory processes.

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