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# PUBLIC REGULATION IN A MARKET ECONOMY

## 1. INTRODUCTORY COMMENTS - MARKET AND STATE AS CO-ORDINATING AND OPTIMALIZING MECHANISMS IN ECONOMIC ACTIVITY

Discussion regarding co-ordinating and optimizing functions of the state and the market was traditionally based on the assumption which can be defined as the dichotomous contrasting of 'an ideal market' or perfect competition, and an ideal state. In this presentation, I start from a completely diverse methodological premise, based mainly on the achievements of New Political Economy, (frequently also called the theory of public choice), or in a slightly broader interpretation, new institutional economics, whose creation and development is contained within the last thirty years. The functioning of every, and also therefore a fully mature market system should be seen in comparison to that existing in reality and not model institutional alternatives such as an ideal market and an ideal state. Therefore following Demsetz, a distinguished representative of this new trend in modern economics, (he is in particular one of the co-creators of the theory of the ownership rights which, together with the theory of transactional costs, constitutes a completely new basis for examining the market and state as alternative co-ordinating mechanisms). I assume that the dichotomy - a perfect market and a perfect state should be replaced by dichotomy imperfect market - imperfect state (Demsetz 1982). This also means that the imperfections of the market traditionally analysed on the basis of the theory of economics (market failures), should be contrasted with the imperfections of the state (state failures). The latter are above all connected with the fact that in practice we cannot talk about a uniform aim of activity as subject regulating the functioning of the economy because particular state institutions can be characterized by diverse sets of preferences. (It cannot be either excluded that they can be contradictory).

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And also diverse are possibilities of exerting pressure to achieve particular aims in macro-economic policy. Such possibilities can be different because of the varying access to information (Fiedor 1992).

The second assumption of the analysis conducted in this dissertation is as follows. The problem of state (public) economic regulation in the market system is considered in the context of general, neo-classical, methodological premise that all forms of public regulations aim not at replacing the market but only at its widely interpreted improvement in the area of its co-ordinating and optimizing functions. Thirdly, the neo-classical approach also implies that the problem of public regulation should be seen according to a methodological paradigm of individualism which in this case means mostly the necessity of including costs and benefits achieved by individual participants of 'regulating game': political institutions, direct regulators (regulating agencies), and regulated economic subjects. This approach refers in particular to the so-called economic theory of regulation, to which I shall return in a later part of the lecture.

In economic literature (particularly American one), dealing with the problems of state regulation in a market economy, there is sometimes applied a distinction between economic and social regulation. Without offering sharper definitions at this moment, we can state that the scope of economic regulation involves the direct influencing of conditions of production and the accessibility of the market for economic subjects; whilst social regulation regards mostly the safety and health of people regarded as consumers and citizens. Therefore it deals with safety of consumption of goods and services, health, environment protection, and safety and hygiene of work. Because of the restrictions of size in this presentation, I will omit this distinction, assuming in particular that all forms and kinds of social regulation imply directly or indirectly the effects connected with costs and competitiveness such as exists in the case of narrowly interpreted economic regulation.

In this conclusion of my introduction, I would also like to stress that the subject of this lecture deals only and exclusively with regulating the sphere of the real economy and therefore that it leaves out specific problems connected with regulating financial sector or financial markets. It is at the same time clear that regulations regarding this sector indirectly, but to a significant degree, can influence the conditions of functioning, supply and demand, and competitiveness in 'the real markets'. Prime examples here are all the regulations influencing the conditions of creating credit by banks or banking prudential regulations.

## 2. THE NOTION (DEFINITION) AND GENERAL CLASSIFICATION OF REASONS FOR PUBLIC REGULATION IN A MARKET ECONOMY

Both in specialist literature and in practice of the activities of public institutions dealing with economic regulation, we can come across very diverse, narrow and broad definitions of regulation. For example, Stigler presents a very broad, and therefore insignificant in an operational sense, definition, which describes economic regulation as a result of the state exercising its power to coerce (Stigler 1986).

Kahn, whose definition of regulation is widely used in economic literature and in the practice of regulation, accepts that in defining this category one should mostly refer to the fact that in reality the subjects of regulation are above all the infrastructural sectors of the economy and operating within them utility companies (both public and private). Hence, economic regulation means defining by the government the main aspects of structure and economic activity of public utility companies (Kahn 1991). Such definitions seem too narrow because they leave out the fact that the intended purpose of state activities can also be influencing the sectors of industry and services which are not of an infrastructural nature, or influencing the decisions of consumers. Therefore, in accordance mostly with the interpretation of Spulber, public regulation in a market economy will be ultimately defined as follows: public regulation of economic activity constitutes general principles or specific actions of government agencies or other subjects of public administration which directly influence the allocation mechanism of the market via influencing the decisions of producers and consumers regarding supply and demand (Spulber 1989).

So interpreted, into public regulation, we can and should include, although it is not so in the literature of the subject, the activities of some corporations of public law. This means corporations which are the organs of professional self-government (medical, judicial) active in the so-called professions of public trust if these activities influence the conditions of supply and availability of services in the markets corresponding to these professions.

We should not include however in public regulation such activities of the state which serve to promote economic growth, or either stimulating or slowing prosperity conducted within fundamental macro-economic policies: monetary, fiscal and commercial. In this case this would mean identifying regulation with all forms of state intervention in the economic sphere. A similar argument implies that as to public economic regulation, we should consider activities undertaken within the so-called selective sector policies (industrial, agricultural, etc).

Remaining within the neo-classical approach, as I defined it in the introduction to the lecture, the need for public regulation within the market economy should be connected with the fact that in many real markets we can observe failures of the market mechanism in achieving a state which is in accordance with the fundamental assumptions of a model of a perfect competitive market: effectiveness of allocation, equilibrium, maximization of the possible to achieve economic surplus that is social welfare (Pareto optimum). These so-called market failures (imperfections) can be divided into two large groups:

1. failures connected with abusing the principles of competition;

2. failures connected with the functioning of the system of individual (private) property laws (laws of disposing).

Because of limited space, we do not enter into a detailed classification of the varieties of market failures connected with these two groups. I shall restrict myself to listing those among them which occur most frequently or have the broadest area of occurrence, and because of that, are most often the subject of public regulation.

a) Situations of monopoly, including in particular those connected with natural monopolies. Natural monopolies occur most frequently in public utility sectors, and other infrastructural sectors. A certain sector is a natural monopoly when the total costs of producing a specific homogenous goods are always smaller when it is produced by one company and not by several, as in conditions of a competitive solution. In a more formal way, a natural monopoly can be defined as a situation where in the long-term curve the average costs in a given branch shows a constant decreasing trend. In other words, there occur long-term economies of scale in this sector. Natural monopolies have very frequently a local or regional nature, and can be connected with companies with a relatively small scale of production or services rendered (for example, entities providing heating, water, sanitary services etc) (Sharkey 1982).

b) Occurrence of so-called direct external effects both negative and, what is more rarely noticed, positive ones (connected for example with environmental protection, the educational process, creating and spreading scientific and technical knowledge). This can lead both to excessive (in relation to the level maximizing social welfare), and insufficient (in the case of external benefits) supply of certain goods and services.

c) Occurrence of public goods therefore goods characterized by their non-rival nature of consumption where this consumption also frequently generates external effects.

d) Information imperfections creating unjustified competitive advantage for certain subjects or unabling other subjects making optimal decisions from the micro-economic viewpoint.

e) Occurrence of uncertainty and risk (Forlicz 2001).

Let me underline this once again. Public regulation does not signify replacing the market. It is used only to remove market failure or also (generally) to minimize negative social and economic results of their occurrence. In effect, regulation serves the growth of the effectiveness of the allocation mechanism of the market. There is even the possibility of the situation where regulation creates certain new markets. This can take place owing to creating institutional solutions without which markets cannot be even formed, or are functioning very poorly. Such an example could be: the market of tradable permits for certain types of pollution, or the markets of scientific and technical information which can function effectively under the condition that the state creates for them such regulations as: a system of administrative concessions, system of patents and licenses etc.

At the beginning of the lecture, I mentioned that, in the real world, the institutional alternative that we deal with is generally not a perfect market versus perfect state, but an imperfect market versus an imperfect state.

Particular dimension of this alternative comes from the fact that, frequently, the ineffective functioning of a certain market has its source in errors of the state or, to put it more precisely, in particular parliamentary bodies formulating regulations or regulative agencies responsible for their implementation and functioning. A spectacular current example here is the regulation of the power generating sector in the USA, particularly in California (in American tradition, regulation has a frequently decentralized nature, which means it is realized at state level). The energy crises in California in 2001 was in fact the result of regulatory errors occurring mostly from the effect of enforcing on the companies very high standards regarding security and safety and environmental protection, whilst at the same time they had no possibility of transferring respective costs to the prices paid by consumers which inevitably had to lead the companies of this sector to financial crisis.

## 3. FORMS AND METHODS OF REGULATION

Public regulation and market economy can be and is realized using a very diverse set of instruments. Firstly, it results from the necessity for the precise addressing of diverse, as I mentioned before, forms of market failures. Secondly, it is caused by the specific technical and economic nature of the regulated sectors of the economy. Thirdly, it results from the specific nature of the concrete aims which the regulating agencies want to achieve thanks to the use of certain instruments. Due to restrictions of space, I shall limit myself to showing such regulating instruments which are most frequently implemented in practise (Kahn 1991):

1. Controls of entering a given sector (entering a market). This is connected with the varied concessions and administrative permits. However, sometimes this control can have an indirect character. I shall use here the example of the fishing industry of New Zealand, which is one of the most important sectors of the economy in this country. Using the criteria of the long-term sustainability of resources of certain species of fish, the government determines only the so-called global quotas of catchment, and their allocation among particular companies takes place as a result of the market actions.

2. Control of costs and prices. This can contain many kinds of regulating activities. Among them:

■ direct determination of prices, the dynamics or top-level of prices

■ determining the principles of shaping prices, for example through the so-called tariff systems (especially in the case of the power industry)

■ determining the kind and level of costs that can be included when calculating prices. Frequent phenomena here are regulating errors stemming from the fact that the companies do not have any, or to an insufficient degree, the possibility of including costs which are indispensable to their functioning and development. And so for example, before the introduction of new energy law in Poland (1998), the existing regulations did not allow for the inclusion of financial costs connected with the modernizing and development of investments, including investment in environmental protection.

3. Direct influencing of profitability through:

■ setting a possible ('sensible') rate of return on invested capital; the method frequently used in the sectors of infrastructure.

■ determining the possible profit margin; the solution frequently used in regulating water and sewage management.

4. Determining the quality and conditions of rendering services in connection with the mechanism of issuing administrative permits. The example here can be the regulation of the radio and TV broadcasting market and the telecommunication market in many countries. In particular, regulations regarding them frequently include a clause of 'common availability' in the area where the regulated company is active. Such availability in conjunction with the principle of non-discrimination in terms of pricing towards the receivers of the service often forces the companies into so-called cross-subsidization their services and products; that is covering the deficit connected with the services rendered for certain (for example, regionally defined) groups of consumers, high profits obtained from the sales of such services

and products to other groups of consumers. Determining standards regarding quality and conditions of services rendered can sometimes, as for example in the sector of telecommunications, result in the necessity of making significant investments, therefore high costs which in practice will also influence the 'conditions of exit' (high sunk costs act as a two-way barrier both on the side of entering a given market and the exit from it).

5. Applying standards of safety, ecological, technical and other nature. This instrument has a fundamental significance in environmental protection as well as in protecting the health and safety of consumers. And it is frequently applied, somewhat independently, in relation to other regulating tools.

## 4. THEORETICAL PREMISE OF REGULATION

The public regulation of a market economy can and should be considered also on a strictly theoretical level, therefore through referring to the theory of general equilibrium, category of social welfare (optimum Pareto), as well as to fundamental methodological assumptions, especially - if we assume as it is in this presentation the neo-classical approach - the assumption of methodological individualism. Theoretical reflection on the public regulation allows for a fuller understanding of its essence and reasons and also can contribute to such modification of institutions and regulating instruments which will result in the increase of its efficacy and efficiency. Lastly, such a reflection can also justify the need for the complete or partial deregulation of certain sectors, the process of which can be observed in the economic reality of the most developed countries within the last twenty years. The character and extent of this presentation results in the fact that further on I shall restrict myself to a very synthetic presentation of the fundamental theories of regulation in a modem economy (Spulber 1989; Viscusi, Vernon, Harrington 1997).

### 4.1. Normative theory of regulation

In a perfectly competitive market, in the state of general equilibrium, the maximizing of social welfare takes place, that is, equilibrium is Pareto optimal. Such a fundamental statement of neo-classical economics, translated into the language of practise, means that individual decisions regarding supply and demand made by the owners of the factors of production and the sellers and buyers of the final goods lead to the simultaneous maximization of economic surplus achieved by all economic subjects. As regards the final products, this means that a perfectly competitive market ensures that all the transactions conducted by sellers and buyers of these goods are beneficial to both sides. If so, then both sides can realize the maximum benefits in the form of a so-called consumer surplus and producer's surplus, which is fulfilling the Pareto optimum.

However, the problem is based on the previously mentioned fact that the conditions of the competitive market are very restrictive and as such are not fulfilled in many markets. Imperfections of the market do not however make it impossible to achieve equilibrium. But, such equilibrium is not effective i.e. not optimal in the sense of Pareto. Hence, the fundamental statement of the so-called normative theory of regulation is as follows:

*If such ineffectiveness is relatively large, which means it implies costs and social losses significantly exceeding the costs of potential regulation, then the state should regulate the market in order to maximize social welfare or, in other words, diminish the losses on the level of such welfare existing in the pre-regulation phase.*

### 4.2. Alternative theories of regulation

The normative theory understood in the above sense has been subject to diverse criticisms, which has meant not exactly its total rejection, but pointing out its weaknesses. I shall name here just two of these:

A. In the economic reality we can observe markets which fulfil almost completely the assumptions of the model of perfect competition and nevertheless are regulated. Such an example can be the market of road transport in several countries, including Poland.

B. Secondly, normative theory of regulation insufficiently or too one-sidedly explains why certain markets are subject to regulation. Hence, for example, the question whether a real state, understood as a system of legislative institution (producing regulation) and regulating agencies are in reality subject to one and only one criterion of counteracting losses in social welfare.

Connected to the above and other reservations, in the last twenty years there appeared several alternative theories of public regulation in a market economy. Further on I shall present briefly their nature without entering into details of model approaches or discussion over their internal consistency and ability to explain and predict real economic phenomena and processes occurring in the markets regulated by the state.

#### 4.2.1. Regulation as a service provided for entrepreneurs (Stigler)

This theory is usually called the Theory of Capture, and sometimes even the privateering theory of regulation. This is connected to one of the fundamental statements of the New Political Economy, according to which economic regulation in a market economy should be regarded as a good. Which means one should identify subjects volunteering demand for regulation and supply of regulation as well as the definite factors determined by such supply and demand. According to this general approach, regulation is treated as goods offered by regulating institutions responding to demand on the part of a certain sector or even to the demand of entrepreneurs active in this sector. They come to the conclusion that the cheapest way of restricting entry into the market of new competitors or maintaining prices above the competitive prices (thus ensuring extra-ordinary benefits in relation to prices corresponding with competitive equilibrium) is the use of a regulating mechanism. Hence, they also exert some amount of pressure on political and legislative decision-makers.

4.2.2. Economic theory of regulation

The capture theory of regulation was criticized as being as one-sided as the normative theory. The joint result of rejecting both these theories is the so-called economic theory of regulation. Within the New Political Economy there have been formulated several models belonging to the economic theory of regulation (G. Stigler, S. Peltzman, G. Becker and others), therefore I shall restrict myself to presenting the gist of this theory:

■ The fundamental resource at the disposal of the state is the 'power to coerce';

■ All actors of political and economic life including politicians, legislators and regulators (the latter understood as functionaries of regulating institutions), behave rationally and maximize their utility (function of the utility);

■ Politicians are motivated mostly by criterion of gaming and/or maintaining a position of power. Groups of interest competing among themselves offer them their support or funds to run election campaigns. Politicians 'choose' the group which is rated highest from that point of view and, in the event of electoral victory, offer the regulation which amply repays the costs connected with exercising political pressure: lobbying, clientelism;

■ Regulation is usually more beneficial for producers than consumers. The main reason for this comes from the fact that the potential sum of benefits that can be achieved by consumers, for example due to higher standards of safety of products or ecological standards, can be very large in absolute terms, but offers small advantages per capita. Secondly, consumers, because of their numbers, find it harder to rank their preferences regarding the subjects and forms of regulation;

■ Play of interests leads to optimal (this does not usually mean optimality in the sense of Pareto) division of benefits stemming from regulation among the entrepreneurs and politicians, i.e. regulating institutions.

### 4.2.3. Regulation as a principal-agent problem

The economic theory of regulation can be subject to criticism because it totally rejects the situation when political decision-makers undertake regulation only because of the fact that the market presents certain failures and therefore should be regulated to increase social welfare. Let us remember that according to the economic theory of regulation, the government undertakes it just because it aims at maximizing its political support. This poses a particular contrast with the normative theory of regulation according to which the government is motivated only by maximizing social welfare. Without details of regulation in terms of principal and agent, we can state that it is a particular eclectic theory or 'compromise' in relation to the normative and economic theories. Its nature, therefore, can be summed up by the following statements:

- Pressure groups (industry, consumers) maximize their individual welfare (utility);
- Regulating institutions function in a similar way as a particular subordinate in relation both to parliament, i.e. politicians in the narrow sense of the word, and to economic subjects (in its broad approach also including consumers);
- The Parliament (legislator) maximizes social welfare.

An important premise of this theory is the assumption of information asymmetry, i.e. the unequal access of the above subjects to diverse kinds of information.

## FINAL CONCLUSIONS: WHETHER AND HOW TO REGULATE

1. If we start from the statement about the existence of market failures in economies functioning in reality, public regulation in the market economy has to be seen as an inevitable phenomenon and not as an institutional solution depending on particular theoretical options (monetarism, Keynesism, new political economy, etc).

2. Market failures cannot be treated in an ahistorical manner but evolutionarily, in particular including the fact that modern technical progress can at least weaken the scope and effects of their occurrence. The example here is the problem of the natural monopoly in the telecommunications and power industries, whose actual range of occurrence in fact has been decreasing over recent years due to the extension of the reach of cellular telephone networks and the appearance of power generating equipment allowing to effectively produce electric energy on a small scale, either alone or in

conjunction with heating energy. This creates the premise of the deregulation of several markets.

3. In designing the regulating systems we always have to consider the costs and benefits they imply. If the level of irreversible social loss, that is a measurable decrease of social welfare occurring in a situation of a lack of regulation, is small in relation to the benefits arising from the regulation, then we have to be very prudent in introducing the regulation or even should give it up.

4. According to the economic theory of regulation, regulating systems are created as a result of a particular play of group of interests. In perfecting the existing regulations, and in designing new ones, these interests should be taken under consideration if the regulation is to be successful, that is to ensure achieving its proposed objectives.

5. Particular regulating instruments should be, like all the instruments of economic policy, assessed from the point of view of their efficacy, economic effectiveness and distributive results. Because regulation is always a particular form of redistributing income, the latter criterion is especially important. Regulation, while removing or diminishing market failures, generates additional economic advantages divided among various pressure groups. That is why institutions formulating regulation should in particular pay attention that such benefits are not completely appropriated by one group of entities, for example companies, at the expense of another group, for example purchasers of goods and services offered in regulated markets.

6. Moving slightly beyond the subject of this presentation, but on the other hand mentioning one of the main elements of the process of economic transformation in Poland, it is worth reflecting briefly on the relation: privatization versus regulation.

Theoretically they are two possible options present. The first means that sectors or areas where public regulation is inevitable, for example infrastructure and public utilities, should be quickly and at any cost privatized disregarding the quality of the existing system of their regulation. The second option, supported by the author of this presentation, means that introducing an efficacious and economically efficient regulating system which sometimes could mean only some modifications of the existing solutions, should precede the process of privatization. The argument supporting such an option is the fact that effective and efficient regulation, especially if it includes the interests of both producers and buyers in regulated markets, decreases the general uncertainty and risk in economic activities, whilst at the same time it increases the interest of private investors in entering a given market and simultaneously increases the market value of the privatized companies.

## REFERENCES

Demsetz, H. (1982): *Economic, Legal and Political Dimensions of Competition*. Amsterdam – New York – Oxford.

Forlicz, S. (2001): *Niedoskonała wiedza podmiotów rynkowych* [*Imperfect Knowledge of Market Subjects*]. PWN, Warszawa.

Kahn, T. (1991): *The Economics of Regulation. Principles and Institutions*. Massachussetts Institute of Technology, Cambridge MA.

*Neoklasyczna teoria instytucji* [*Neoclassical Theory of Institution*] (1992) in: Fiedor, B. (ed.): *Kierunki rozwoju współczesnej ekonomii* [*Trends of Development in Modern Economics*]. WUE, pp. 180–190.

Sharkey, W., W. (1982): *The Theory of Natural Monopoly*. Cambridge University Press, Cambridge.

Spulber, D. (1989): *Regulation and Markets*. Massachussetts Institute of Technology, Cambridge MA.

Stigler, G. (1986): *The Theory of Economic Regulation* in: Leube, K., Gale, T., Moore (eds.): *The Essence of Stigler*. Hoover Institution Press, Stanford, pp. 243–264.

Viscusi, W., Vernon, J., Harrington, J. (1997): *Economics of Regulation and Antitrust*. MIT Press, Cambridge MA.