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Development of competition in the sectors with a natural monopoly component: justification, options, constraints

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Introduction

Competitive policy in the deregulated sectors is important for a whole number of reasons. The natural monopoly sectors or at least the ones containing a natural monopoly component occupy a prominent position in Russia's economy – more so, than in the economies of developed countries. This is connected both with the basic commodity orientation of Russian industries and traditionally high energy consumption. In such set of circumstances the efficiency of, for example, fuel and energy sector, a significant share of which is composed by natural monopoly sub-sectors acts as an important factor of the efficiency of the country's economy as a whole. The majority of sectors with a natural monopoly component are currently undergoing or at least expecting the reforms related to regulation and organisation of the sector.

As the international practice shows, there are various potential sources of threat for competition both on the part of the traditional market players and on the part of the regulatory authorities. The principal differences between the sectors comprising a natural monopoly component render standard antimonopoly regulation tools not sufficiently effective. The specifics of such sectors establish a basis for continued market power (in accordance with the Russian antimonopoly law, market domination). That is why one of the tasks pursued by the policy aimed an effective deregulation is to fight the abuses of dominant position. In the first place, this objective is being achieved through adjustment of specific decisions and adopted statutory acts to the incentives for market players and the creation of opportunities for the market players to get adapted to the changes and implement the previously concluded agreements.

The present report has an inception nature and is not claiming a detailed and exhaustive coverage of the problems related to competition development in the deregulated sectors. References to the specific problems of the competition promotion in Russia are random and declaratory; in the first place, they have to do with telecommunications, railways and gas sector. The analysis undertaken here is not sufficient to determine the problem areas that are most important in view of promoting competition in Russia's deregulated sectors.

At the same time, we expect that the report will allow drawing attention to the important issues requiring solution in the course of the reforms pursuing the improvement of public administration, antimonopoly regulation and competition policy. It is our intention to show that both in Russia's antimonopoly legislation and in the specific legislation of deregulated sectors a set of rules sufficient for successful reform is missing. Consequently, the reform of natural monopoly sectors in Russia is taking place against the backdrop of underestimated opportunities for the application of competition policy instruments in the deregulated sectors.

The set of issues discussed in this report is determined in the first place by the context of the ongoing discussion in the society, while the sequence of parts within the paper is designed is so as to ensure convenient perception of the problems to be tackled when developing competition in the sectors with a natural monopoly component.

The first issue to be dealt with will be the one about the basis for the existence of a natural monopoly and classification of such operators (Section 1). In spite of the fact that the problem of defining natural monopoly is believed to be solved in the framework of economic theory (which is proven by the presence of the natural monopoly as a special market structure

in nearly every textbook on microeconomics), some of the definitions used in the relevant discussions are significantly distorting the essence of the problem in question.

The demand for and logic of the competition promotion in the deregulated sectors will be scrutinised after that (Section 2). The considerations contained in the second section are specifically related to such issues as development of the rules for entry and contract conclusion in the deregulated market (Section 3), identification of natural monopolies and potentially competitive sub-sectors within the reformed sectors (Section 4), and identification of essential facilities and access procedure to the essential facilities taking into account the specifics of each sector (Section 5).

Because the development of competition is connected with the changes in the regulatory framework, the reform of tariff regulation system as leverage for the development of competition is discussed as a separate issue. Not only do natural monopoly sectors have important properties from the point of view of service provision, but also the services as such have important features affecting the regulation system and creating additional impediments for the development of competition. In the first place, we are talking about universal services. Finally, in Section 8, the question is discussed about competency delimitation between the regulatory bodies in the deregulated sectors.

The materials of the following research projects by the Bureau of Economic Analysis Foundation were used in this report: “Development of the concept for the regulation of services delivered by natural monopoly operators and structural reform (on the example of federal airports)” (1999-2000), “Mechanism for the improvement of antimonopoly law in the field of gas supply in Russia’s goods markets” (2001), “Problems of the distribution of limited resources when monopolism is excluded (on the example of telecommunications sector)” (2002), “Local monopolies and public utility reform including the analysis of international practice and prospects for the application of the concession mechanism” (2003), “Comparative analysis of the methods of competition fostering in the sectors utilising essential facilities (on the example of railways) (2003), and the comparative analysis of the regulatory framework for the natural monopoly regulation of the Single Economic Space member countries. Besides, the materials from the annual surveys of economic policy prepared by the Bureau of Economic Analysis have been used (in Russian - “Obzor ekonomicheskoy politiki v Rossii...” - “Survey on economic policy in Russia in 1997”, Moscow, 1998; “Survey on economic policy in Russia in 2003”, Moscow, 2004).

1. Natural monopoly: economic content and legal structure

Based on the existing legislative practice designed to regulate the interface between the contract parties in the field of natural monopoly relations, one can indicate two approaches to the definition of the natural monopoly conditions. The first approach is based on the concepts in the framework of the economic theory. The second one is connected with the definition of specific kinds and sectors of business included in the statutory legal acts. The first can be indicatively referred to as the analytical one. The second, as the classification one. It should be noted that Russian legislation employs both approaches.

Each of them has its own advantages and shortcomings. Because the analytical approach in the first place describes the environment for the emergence of natural monopoly, no business can be classified as natural monopoly by definition. The analytical approach allows to avoid the costs associated with the ex post regulation. At the same time, the identification of specific natural monopoly cases on the basis of the usage of analytical criteria can be quite labour consuming, since it is suggested that in order to establish the fact of the existence of natural monopoly it is necessary to identify the correspondence of the economic exchange to the key characteristics of natural monopoly as a special market structure. In turn, the application of the classification approach allows saving on the ex ante costs. The ex post regulation costs, however, may turn out to be larger than in the former case. That is why, in practice, a combined approach is applied, which is embedded in the federal law “On natural monopolies”. It should be noted that a combined approach is not the only possible way. In particular, the regulation of natural monopolies in the EU is not based on the definition of the natural monopoly accepted in the economic theory.

1.1. Analytical approach to the determination of natural monopoly conditions

Let us first discuss the ways of analytical definition of a natural monopoly. It should be noted that the first one to be discussed here shows the relative nature of the difference between the approaches described above.

The notion of natural monopoly has been first applied to the situation of establishing control over the use of natural resources, hence the origin of the term. The first study into this phenomenon was made by Cournot (1838) on the example of his own spring capable of controlling the water level for the people leaving downstream. Thus, the notion of the natural monopoly is based on the exclusive rights.

The concept of the natural monopoly was further elaborated after World War II in view of the rapid growth of infrastructure sectors: electric supply, water supply, telephone networks and railways. Those sectors depend on the installation of expensive networks, which leads to the need for sunk costs. The parallelism capable of generating competition would entail too high costs and thus be suboptimal. Thus, that was the stage when the term “natural monopoly” has parted with its initial meaning, which is still the case now.

The operation of networks causes the so-called “network effect”: the more users are tapping to the network, the more beneficial it becomes for each of them, because an exponential growth of the number of users they can communicate with takes place. In such

conditions the undoubted advantage belongs to the entrepreneur who is able to build the network first. Thus, the concept of the natural monopoly began to be applied to those sectors, where technological specifics and relevant irrecoverable investment create de-facto a monopoly market structure. Because in many of those sectors the provided services are recognised as vital for the countries with a developed market economy, in order to constrain the abuses of market power, either the infrastructure companies have been nationalised or public companies subject to rigid regulation have been established, whereby the state unilaterally determined the essential clauses of the agreements between supplier and consumer of the services in the sphere of natural monopoly¹.

In the late seventies – early eighties of the last century the approach to the problems of natural monopolies has undergone serious changes. Many of them were not so natural anymore. The development of the new technologies in the field of telecommunications and, not so long ago, in the field of power supply, made it possible to develop competition. Moreover, it gave rise to criticism with regard to the public utility companies that used the advantages of the natural monopoly status in order to spread their control on many adjacent business areas, where in adverse case the competition would have developed.

The issue remains open in spite of the changes that are taking place. Even though many segments of the natural monopoly could be detached and restructured so as to develop competitive environment, there still remain a number of sectors, where most of the operations cannot be performed in the competitive environment. Technological improvements may enable the competing companies and their proprietors to deliver alternative telephone services to the clients; however, in a large city it is hardly possible to establish an alternative to the single water supply and distribution system for the citizens. At any rate, for the economists the question still remains topical as to how the “natural” monopoly has to be defined. Its urgency is caused by the fact that the solution of this issue enable to identify the object of the regulation and the possible regulatory options (taking into account their comparative advantages) that would allow to ensure more acceptable level of the overall transformation and transaction costs including the regulatory costs.

Depending on how the natural monopoly is defined, one can speak about weakening or withdrawal of the state regulation aimed at the compensation of uneven ex ante distribution of the negotiation power between the consumers and suppliers, who have exclusive rights for the essential facilities (see Section 5).

In order to identify the “services provided on natural monopoly conditions” we need to find a well-grounded answer to the question, what should at last be understood by the situation described as “natural monopoly”. Unfortunately, there is no precise answer which would enable to unambiguously identify such services. Even the traditional approach that is based on the principle of the long-term average and marginal costs is being challenged. The description of different theories covering this issue is not part of our task. Nevertheless, one cannot help mentioning some of the major approaches, which partly complement each other, and partly contradict with each other.

The first approach is based on the technological characteristics determining the productive function. The usage of some technologies implies economies of scale and of scope. If the applied technology is such that the long-term average and marginal costs are lowered with the augmentation of output, a single company can satisfy the entire market demand with higher production efficiency than several smaller sellers.

Another approach developed in the early 1980s and partly incorporating the technological point of view is focused on the study of the conditions, which can help to

¹ See also [Shastitko, 2004, Williamson, 2000], for the discussion of the main properties of structural alternatives with a different role of the state in the transaction management mechanisms.

minimise the regulation of companies possessing market power. This theory of contestable markets [Baumol W., Panzar J., Willig R., 1982] exerted a significant impact on the deregulation process of various sectors including the one of air carriage. A simplified version of the theory looks as follows. There is a situation when the subadditive cost function² prevents the equilibrium if there is more than one seller in the market. Subadditive property can emerge under the influence of technological factors and also, which is described by the theory of contestable markets, under the influence of organisational factors. In the conditions of existing cost subadditivity, the performance of the single system may be more efficient.

Furthermore, the cost subadditivity per se does not suggest that the firm's business is subject to strict regulation. The source of monopoly power lies not in the subadditive property, but rather in the high market entry barriers rendering the natural monopoly more sustainable. The necessary and sufficient condition for the maintaining the same cost-level by the firm and establishment of low prices is creation of a contestable market. If the entry barriers are missing, while capital markets are competitive, a firm's profit exceeding normal level will attract newcomers to the sector, which would in turn lead to the reduction of prices. The only constraint for the application of such approach in the framework of the problem in question would appear in the situation when competition is impossible, for example, the entry of new firms in the sector can be limited or their penetration may entail high social costs.

The third approach was developed in the framework of the transaction cost theory. [Coase, 1993; Williamson, 1996]. Its application shifts the focus of the analysis from technological to organisational factors. The transactions performed in the free market environment are pursuing the advantages arising from labour division. At the same time, there are different ways to organise transactions, each of which entails certain costs, including price mechanism.

In order to choose the most effective method it is necessary to make a comparative analysis of the structural alternatives. To make a comparison, the researcher is to decide, which method is more in line with the properties of the performed transaction. The main properties to be taken into account include the frequency of effecting certain transactions, uncertainty, and, finally, the specificity level of the investment required to effect the transaction³. One of the main postulates of transaction cost theory is the thesis to the effect that the higher the specificity of the used assets, the more stimuli the economic agents have to organise the transactions inside an individual organisation ("firm") rather than in the market. As a result, the economy of costs related to the adaptation to the changing circumstance takes place, which in turn leads to higher efficiency of the use of limited resources. We will come back to the role of specific resources in explaining the vertical integration in connection with the comparative analysis of the options for the reform of the sectors centred around a public vertically integrated company with a natural monopoly component.

The above theory is widely used in order to explain vertical integration⁴. The extended version of the theory is also used to explain the conditions whereby the monopoly power can

² In the most simple case the function of costs is subadditive if the production of goods by two sellers (1 and 2) requires higher costs than the production by one seller, i.e.: $C(y_1 + y_2) \leq C(y_1) + C(y_2)$. See also: [Shastitko, A.E., 2000, pp. 14-15], or, in a more general way $C(\sum_{i=1}^n y_i) \leq \sum_{i=1}^n C(y_i)$.

³ Following Williamson [Williamson, 1985], we determine the transactions as the transfer of goods or services between technologically separated production phases (i.e., there are no technological restrictions for the transfer process). The frequency of transactions is high if over a certain period of time (for example, one year). The level of uncertainty is considered significant if the external developments can influence the properties of the transaction. Specificity of assets is the case when specialised investment is required which cannot be used without loss of value by other agents or in another way.

⁴ Partial survey is contained in [Joskow P., 1988; 1997a], [Klein P., Shelanski H., 1995].

emerge and the conditions whereby the so-called “natural monopoly” can break into separate facilities ⁵.

1.2. Classification approach to the definition of natural monopoly conditions

When it comes to the classification approach, we should state from the outset that its discussion here is based on the comparative analysis of the legislation of the member countries to the Single Economic Space (Republic of Belarus, Republic of Kazakhstan, Russian Federation and Ukraine).

Because all the laws use not only analytical, but also classification approach to the definition of natural monopoly, each law lists natural monopoly sectors (See table 1)

Table 1

Sectors with natural monopoly share

<i>№</i>	<i>Sector</i>	<i>Republic of Belarus</i>	<i>Republic of Kazakhstan</i>	<i>Russian Federation</i>	<i>Ukraine</i>
1	Oil and oil products transportation by trunk pipelines	+	+	+	+ ⁶
2	Gas transportation by pipelines	+ ⁷	+ ⁸	+	+ ⁹
3	Transportation of other materials via pipelines	-	-	-	+
4	Electric power transfer services	+ ¹⁰	+ ¹¹	+	+ ¹²
5	Heat power transfer services	+	+	+	+ ¹³
6	Electric power dispatching services	-	+ ¹⁴	+	-
7	Rail transportation	+ ¹⁵	+ ¹⁶	+	+ ¹⁷

⁵ With reference to Russia’s economy see [Joskow P., Schmalensee R., 1997b], [Menard C., 1997].

⁶ Without specifying the type of pipeline

⁷ With a specification that reference is made to both main lines and distribution networks.

⁸ With a distinction between gas and condensed fluid, including storage, transportation through distribution network and maintenance of gas distribution station.

⁹ Including distribution and with a specification that reference is made to the natural and petroleum gas.

¹⁰ Not only transfer, but also distribution.

¹¹ Including the technical control of the discharge into network and consumption of electrical energy.

¹² Including electrical energy distribution.

¹³ With reference to the central heating supply.

¹⁴ Literally it reads as follows “services for technical traffic control of feeding into the network and consumption of the electric power”.

8	Service of transport terminals, ports and airports	+ ¹⁸	+	+	+ ¹⁹
9	General access telecommunications and postal services	+	+ ²⁰	+	+ ²¹
10	Centralised water supply and sewerage	+	+ ²²	-	+
11	Servicing and operation of airways, management of air traffic	+	+ ²³	-	+ ²⁴

It should be noted that in the above table only those sectors are indicated where natural monopoly conditions are present, which does not mean that the entire sector is the one of a natural monopoly. Strictly speaking, each of the listed sectors represents not only several kinds of business, but also a set of services (or potential services – in the event of vertical integration). Respectively, the identification of a natural monopoly as a market structure requires designation of the respective kinds of services based on the statement that: *natural monopoly is an economic area consisting of a competitive (or potentially competitive) and natural monopoly component including one or more target markets where the conditions of economic exchange are in line with the analytical approach to the definition of natural monopoly.*

More specifically, it is possible to take stock of this issue on the example of identification of the set of services provided in the framework of the natural monopoly in air carriage. In doing so, we will refer to the provisions of the ordinance “On the register of natural monopolies in the transport sector subject to state regulation and control” (hereinafter, Ordinance), approved by the Order of July 9, 1999, #215.

The basis for the application of the state regulation regime with respect to this or that economic agent is its inclusion in the register of natural monopolies. According to Article 10 of the federal law “On natural monopolies”, the natural monopoly regulation bodies establish and keep the register of natural monopoly agents subject to state regulation and control.

In order to include the economic agent into the register, 2 conditions reflected in the clause 2, Section 1, of the said Ordinance should be met.

1. The existence of the type of business that can be considered a natural monopoly according to the Russian Federation law.

2. Decision by the board of the Russian Ministry of Antimonopoly Policy (now Federal Antimonopoly Service) about exercising state regulation and control.

In accordance with Clause 3, Section 2 of the Ordinance, the following airport services are provided on natural monopoly terms: providing aircraft take-off and landing; providing for

¹⁵ With the exception of ports and reservation to the effect that the services provided by rail facilities for the movement of general use stock and rail traffic control is meant.

¹⁶ With a specification that it refers the services of the main railway lines including the local railways

¹⁷ With the following wording “usage of railway lines, dispatcher services, railway stations and other infrastructure facilities providing for the transportation of general access rail stock”.

¹⁸ With the exception of ports

¹⁹ Only specialised services determined by the Ukrainian cabinet.

²⁰ Using the local telecommunication network.

²¹ Without distinguishing between telecommunication and postal services

²² Without mentioning the centralised model of water supply and sewerage.

²³ In the wording “aeronautical services”.

²⁴ Only management of air traffic.

aviation safety in the airport area; services within the terminals delivered to passengers; servicing of passengers; handling of cargoes and mail; providing of fuel for the aircrafts; land-based servicing of the aircrafts; aeronautical services for the aircrafts; meteorological backup. This issue is covered in more detail in [A.E. Shastitko, Ed. 2001].

2. Development of competition in the deregulated sectors: demand and logic

Reforms in the natural monopoly sectors (sectors with a natural monopoly component – hereinafter, NM sectors) constitute one of the most important processes within the reform of public regulation of the economy both in the developed and developing countries. Over the past decades, not only practical deregulation experience has been accumulated, but also its theoretical assessment. Conceptual approaches to the problems of deregulation and prerequisites for its efficiency are used herein as a basis for the recommendations for further advancement of competition.

The arguments in favour of the statement about the impossibility to achieve economic efficiency through regulation in the NM sectors can be divided into two groups.

The first group of arguments is connected with the impossibility to achieve the “first-best” through regulation. Price-based regulation of the NM is not capable of providing equally effective allocation of resources as the perfect competition market, since the establishment of prices on the level of the marginal costs is impossible without the reimbursement of losses with the help of taxation, which inevitably causes the reduction of public welfare quantitatively corresponding to the value of deadweight losses.

The second group of arguments is connected with inefficiency in the broad sense of the very procedure for regulation of production parameters in the framework of the NM. Asymmetrical information creates a possibility for manipulation of the regulatory tools (for example, distorted information leads to setting regulated NM price on the level exceeding the “socially equitable” one). Thus, not only the “first-best”, but also the “second-best” is rendered unachievable in the framework of the NM regulation.

The formulated theoretical findings concerning the limited efficiency of the regulation system in the natural monopoly situation correspond to practical actions in two directions of the reform. The first one is the improvement of state regulation methods, while the second one consists in the gradual deregulation of the potentially competitive fields of business. Both the first and the second trend are exposing the state regulation to new challenges and require new organisational solutions. Not only the refusal from the previous regulatory system takes place, but also the new regulation mechanism is developed in line with the new tasks, the solution of which will enable the enhancement of the efficiency of contractual relations in the respective sectors.

As we are examining different aspects of the development and application of competitive policy in different sectors, an important principle should be kept in mind that “One size does not fit all”. When developing specific decisions with respect to the new institutional infrastructure, for the natural monopoly sectors one should not only take into account the objectives of the reform, but also the institutional environment in the given economic system. The weaker the support of the fair execution of contracts in the framework of the current system, the lower the efficiency of the system for the dispute resolution though upgrading of incomplete ex ante contracts to the complete ex post ones, the more the interface between the sector players should be governed by the special rules during the deregulation period, including sector-specific ones. The latter appears to be a paradox: while aspiring to ensure the competition in the sectors with a natural monopoly component – the same kind of competition as in the “regular” market – the regulation should nevertheless apply the approaches specific for the NM sectors.

3. Rules of entry and contract conclusion in the deregulated markets

The reform in the natural monopoly sectors suggests deregulation of prices in the market for the end products or services (representing “end” product in the framework of the particular sector). In this context, the entry of newcomers is allowed to those segments of the market that are viewed as “potentially competitive”.

In order to make the issue more clear, we will use the notions of regulation and deregulation in following sense: (1) regulation is the application of legal instruments in order to achieve the socio-economic policy goals implying the compulsion by the state of individuals and organisations to act in a *prescribed way* under the threat of penalties [Hertog Den J, 2000], (2) *deregulation of the economy is the process of replacement in transaction management mechanisms (contractual relations) of the public administration for their support (compensation of contractual risks) by structural (institutional) alternatives* [Shastitko, 2004, p.7].

At the same time, it should be taken into account that the deregulation as such understood as rejection by the state of certain instruments, does not always automatically lead to the development of competition. In that connection of great significance are both rules of entry into potentially competitive markets for the new agents and the determination of the type of contracts that can be used by the market players.

Significant impact on the competition is rendered by the rules regulating trade between the suppliers of “end” product and their clients. Of great significance is the definition of the pool of sellers of the end products and services. For example, can only the “producers” act as such, or both “producers” and “intermediaries”, or, lastly, only “intermediaries”? In certain institutional conditions the differences between those options can seriously affect the intensity and specifics of competition. The solution of this problem would to a large extent answer the question about the conditions for the entry in the respective markets.

The market entry and, consequently, the intensity of competition in the deregulated markets is to a large extent determined by the policy in the field of licensing including the list of licenses, licensing procedure and the possibility for combining licenses. A similar role is played by the rules governing certification. According to a number of experts, namely the multiple counter-competitive licensing and equipment certification rules in Russia’s telecommunications sector are creating significant obstacles in the way of improving the efficiency of the utilisation of limited resources.

Of no small significance for competition is the list of permitted kinds of contracts between the participants. Does the regulatory framework in the deregulated sector allow long-term bilateral contracts, or only spot contracts, or both? The set of permitted contracts may exert a significant influence on the distribution of expected gains between the market players, and consequently, affect their behaviour, which in the end will have a bearing on the results of the market performance as a whole.

The development of competition and simultaneous upgrading of the efficiency in the deregulated markets can be facilitated by the process of the “market system supplement”. Competition in the “basic” market of the deregulated sector (the market of “physical” product or service) would be more effective if the normative base would establish, apart from the

market of products, the market for the utilisation of essential facilities, (possibility for the resale of the right of access to the infrastructure), and also if the limited resource of the sector (for example, frequency spectrum in telecommunications) are distributed on the basis of market mechanisms rather than administrative procedures. In that context, deregulation processes in the Russian markets are still weak. There are no sectors so far with secondary markets for the rights of using essential facilities (the issue of access to essential facilities will be discussed in detail in Section 5). The ownership right on the limited resources across sectors remains poorly specified and distributed on the basis of, for the most part, administrative mechanisms.

The usage of such mechanisms creates the problem of the wasteful utilisation of resources because of the significant size of such kind of transaction costs as the influence costs.

4. The problem of split-off between the natural monopoly and potentially competitive component

It is known that there are three major ways of the competition in the deregulated sectors:

- (1) competition between networks;
- (2) competition within a network;
- (3) competition for the network.

The first type of competition means that the development of technology has made possible the emergence of several networks in the place of one, and in such circumstances the sector to a large extent is losing the signs of a natural monopoly. In fact, it means that one of the conditions of the definition of natural monopoly as a special market structure is no longer met, i.e. cost subadditivity. The competition between networks exists in telecommunications, and is possible on a limited scale in the railway sector (in the case of the so-called geographical competition possible in the territory with a high railway density) [Guriev S., Pittman R., Shevyakova E., 2003].

The second mentioned competition type suggests that there is a single network (otherwise described as “infrastructure”) which is used by the companies competing in the market of the end product. The competition in the gas sector or electric power industry is possible as a competition “on a single network”. Similar situation arises in the field of air carriage, where airlines are competing for the passengers and cargoes using one and the same infrastructure (airports).

The third type of competition exists in the conditions where not only the network has to be single, but also it can only be used by one player. In such case, the only form of competition can be the competition for the use of the network infrastructure (“competition for the market” instead of competition “in the market”), for example, competition for the concessions in the public utility sector, or in the airport services.

Without doubt, the discrimination between the three types of the competition is to some extent relative. As a rule, all three kinds of competition development are possible in the natural monopoly sectors. Thus, even though the emergence, in line with the global tendency, of mobile telephone services within the Russian telecommunications sector meant the possibility for competition between networks, the possibility of access (on the “fair and non-discriminatory” terms) the networks of Rostelecom holding remains a prerequisite for doing successful business in many segments of the telecommunications market. At the same, the competition of economic agents using the single network (infrastructure) is fully compatible with the competition for the network (as it is the case, for example, in the air transportation).

It is important, however, that the three forms and three ways for the development of competition are exposing the regulatory bodies including the ones responsible for the competitive policy to the tasks of different content and degree of complexity. Thus, the second type of competition, the competition within a single network, requires establishment within the sector of such a system of institutions under which the operators that are independent from each other and the operator of infrastructure facilities could use those facilities on non-

discrimination terms. The third type of competition suggests the establishment of a contest-based selection of the infrastructure operator that would not restrict the access of potential operators to the participation in the contest, rule out the concert between the potential operators and corruption in the system of competitive selection.

Especially acute is the problem of the selection between the alternative ways of competition in those sectors where competition within one network is the only kind of competition. The central issue is the choice between the two structural models: preservation of a vertically integrated company in the sector charged with the responsibility of providing access to natural monopoly component for independent operators on “fair and non-discriminatory terms” (sometimes this model is referred to as the model of “incomplete vertical separation”), or vertical organisational split of the existing company with the establishment of network infrastructure operator, on the one hand, and the company to operate in the competitive environment with other market players, on the other hand.

There exist multiple criteria for choosing between the two above-mentioned reform options. According to one classification, the major criteria are the economy of scale and economy of scope (reduction of losses due to large production volume and joint provision of infrastructural and end-user services) and the possibility of discrimination on the part of the vertically integrated company with regard to the newcomers to the market and, lastly, the capacity of the regulatory bodies to prevent the said discrimination [Pittman, 2003]. In the case when the effective regulatory system does not provide an opportunity to prevent discrimination (anticompetitive measures) on the part of the vertically integrated company, the comparative advantages of the vertical separation model are enhanced, even if the latter is causing loss of production efficiency. If in the given set of circumstances the vertical separation models cannot be implemented in the existing institutional framework, either, it may result in the emergence of threat for the effectiveness of the reform as such. Thus, *effective competitive policy is the main prerequisite for the effective reform in the natural monopoly sectors.*

It does not follow from the above that “competition for the network” has no significance for increasing the resource allocation efficiency. This trend of competitive policy becomes especially relevant in the case of implementing the public-private partnership strategy, where the development of concession mechanisms should be coupled with establishment of adequate incentives for the concessionaries investing in the specific assets.

5. Essential facilities and the policy of determining access procedure to essential facilities

5.1. General issues

The term “essential facilities” refers to the kind of facilities acting as a prerequisite for the production (service delivery) in the given sector that cannot be replicated for the technical or economic reasons. The definition of essential (or, in other words, “restricting”) facilities corresponds to the idea about facilities and technologies used in the natural monopoly sectors. Many contemporary economists maintain that the concept of essential facilities is strictly legal and does not bear any specifically economic contents. However, one cannot but admit that the idea of essential facilities underscores the acute problem of the interface between in the players in the deregulated sector.

Because the operator of essential facilities in the long term acts as the only participant or, rather, the only supplier of the respective service in the “target market”, the terms for the usage of essential facilities are subject to regulation by the state. The regulated price and other regulated terms of access for the infrastructural facilities determine the intensity of competition in the potentially competitive markets. The cheaper and easier the access of independent operators to the essential facilities, the lower the entry barriers to the potentially competitive market, and, if other circumstances remain unchanged, the more vigorous the competition and the lower the end-user prices.

At the same time, at least two kinds of risks emerge when regulating the charges for the use of essential facilities.

1. If the price is set at excessively low level, the infrastructure facilities operator does not receive an adequate compensation for the wear and tear of such facilities. Furthermore, a threat to long-term efficiency in the sector emerges. Besides, setting the access tariffs on too low level strips the independent operators from the incentives to developing the “competition between networks”: they are getting only the incentives to using the existing essential facilities owned by the traditional operator without investing into one’s own networks. In the strict sense, such risk corresponds to the problems of using limited resources in the free access mode (overuse and exhaustion).
2. If the price is set on too high level, the entry and competition in the market are limited compared to the effective balancing. Further to that, in the conditions of asymmetrical information about the operator’s costs of infrastructural facilities, the regulatory bodies are faced with essentially the same problems as in the framework of determining the tariffs for their end product in the regulated natural monopoly markets.

The regulation of price and procedural terms of access becomes an especially complex task in the case when the vertical separation of the market players is incomplete. Let us imagine that the tariffs for the use of infrastructure are set so as too avoid any loss. Then, the

vertically integrated company would obtain all the profit in the market for the end product (services), while provision of access to the network infrastructure for the independent market players (i.e., displacement of the company from the end-product market) means the reduction of its profits. Evidently, once the vertically integrated operator has been obliged to use the regulated price established on the level of average costs, it will spare no effort to deny access to the essential facilities for the independent market players.

What should be the price level for the vertically integrated companies for the use of essential facilities so as to, at least, not to aggravate its situation? One of the answers to this is given by the famous Baumoll-Willig rule, or the efficient component pricing rule, which prescribes setting of access price as a sum of explicit costs for access provision and alternative costs (expressed in lost profit) by the company providing access. It is not difficult to notice that if the enhancement of competition is to lead to the reduction of the economic profit in the specific market segment, the effective access charge should exceed the amount the new operator providing services at the same cost as the traditional operator is ready to pay for the access. In turn, the maximum access price the new operator is ready to pay is lower than the effective access charge preventing the restriction of access on the part of the company in control of the natural monopoly component.

The logic of the Baumoll-Willig model persuasively shows that in order to ensure an effective access mode to the essential facilities, it is necessary not only to control and regulate prices, but also the access procedures. Even if one includes into the access charge apart from the current costs, the depreciation and the component necessary for the coverage of investment needs, in the general case the market player controlling the access to essential facilities will be interested in establishing the access barriers. In turn, the price level necessary to stir interest to access essential facilities makes the market entry and doing business non-lucrative for newcomers, unless the latter have advantages in costs or quality of product (services) compared to the traditional operator. The latter result is often looked at as an additional gain from efficient component pricing: its application guarantees that only those players enter the market who have advantages compared to the traditional operator. In other words, the application of the Baumoll-Willig rule provides for the production efficiency of players in the potentially competitive market. We should, however, remember the main idea behind the further development of natural monopoly markets deregulation: the development of competition brings additional gains even if new players do not have advantages in terms of costs. In such context, the application of the Baumoll-Willig rule establishes too high requirements to the new players in the potentially competitive markets.

The regulation of access provision to essential facilities should at least include:

- Procedures for setting tariffs for the use of essential facilities;
- Procedures for accounting and disclosure of information about the costs of a vertically integrated company (rules of separate accounting);
- The procedures for endorsement and execution of the contract;
- Access procedures to the information about the terms of the contract on the use of essential facilities between different market players;
- Procedures for conflict resolution between the market players with respect to the use of essential facilities.

The international experience of the state regulation of natural monopolies shows that the development of model contract for the use of essential facilities is one of the most important instruments for increasing the efficiency of contractual relations. The very presence in the legal framework of the said rules and their contents are capable of significantly affecting the prospects for competition development in the sector.

That said, how are the issues of determining the terms of essential facilities' usage handled in the Russian legislation? As a rule, in Russia's law pertaining to the terms of access to essential facilities one can identify *three groups* of rules relevant to the solution of the problem of essential facilities usage:

(1) provisions of the antimonopoly law and law on natural monopolies which the transaction parties can refer to when developing the terms of access, and, especially, when resolving the conflicts connected with the terms of access;

(2) provisions of sector-specific legislation on natural monopolies, which directly regulates the terms of access to essential facilities (rules of pricing, contract clause drafting procedure, resolution of disputes arising in connection with the rules of access, etc.);

(3) the rules of sectoral legislation on natural monopolies, which determine the competencies of the traditional market player (administering essential facilities) and regulatory body with respect to the other market players.

The forms of abusing dominant position are described in the Article 5 of of the Law "On competition and restricting monopoly activity in the commodity markets". The Law "On amendments to the federal law on competition and restricting monopoly activity in the commodity markets" # 122-FZ of October 9, 2002 has altered the description of the forms of abusing dominant position. The previous version of the law viewed as a form of the abuse of dominant position "*creation of impediments to the market entry (exit from the market) for other economic operators*". In the new version, the list of forms of the abuse of dominant position was added with "*establishment of the access terms for the market of goods, exchange, acquisition, production and distribution of goods putting one or more economic agents in the unequal position compared to other economic agent or agents (discriminatory terms)*".

The currently effective Law "On natural monopolies", which in principle is hardly matching the objective of developing competition in the relevant markets does not carry special rules on the regulation of usage of essential facilities. Let us consider in what way the terms of essential facilities usage are regulated in the legislation of different natural monopoly sectors (on the example of various legal provision concerning telecommunications, rail transport and gas transportation).

In the Russian law, the problems of the terms of access to essential facilities are handled differently for different deregulated sectors and yet, as a rule, are treated in a very general way, which cannot be considered satisfactory taking into account the level of requirements applied to the mechanisms of conflict resolution in the sectors where essential facilities are being used.

Clear-cut and detailed methodologies for the separate accounting on different kinds of costs that would allow regulatory bodies to identify those kinds of costs which should be covered by the access tariffs are missing in the deregulated sectors. Also missing are the widely known methods for the determination of "economically justified costs" (which in the international practice are associated with the indicator of total long-run incremental cost). With the exception of telecommunications, the market players do not have model access contracts.

All of that leads to the additional costs for the new independent market players and even if other conditions remain unchanged, restrains the development of competition.

Let us now turn to the problems of utilisation of the essential facilities and access procedure thereto in the field of gas transportation, telecommunications and railway in more detail.

5.2. Telecommunications

The RF law on telecommunications adopted in 2003 (Russian Federation Law “On telecommunications # 126-FZ of July 7, 2003) contains a special chapter concerning network access (Chapter 4). The operators are obliged to provide access services in accordance with the Rules approved by the RF Government (Article 18). The law points at those issues which solution is governed by the said Rules. No special mechanisms for pre-judicial conflict resolution with respects to the terms of access has been set forth: the conflicts should be resolved through court. The contract on the connection to the network of the operator occupying a prominent position on the telecommunication network²⁵ is considered a public contract that should correspond to the requirement of non-discrimination understood as equal access condition to telecommunication network and traffic transmission for the telecom operators providing similar services (Article 19, Clause 1). The notion of non-discrimination includes among others the obligations of providing information. The rules of access to the networks by the dominant operator are also subject to the approval by the RF Government. At the same time, such requirement is in many respects undermined by the provision that on the basis of the above Rules the operator occupying a prominent position on the network can independently develop access terms (Article 19, Clause 3). Upon detection of incompliance of the developed terms with the statutory acts and non-discrimination principles, the sectoral oversight body has the right to address a motivated ruling about elimination of the detected incompliance.

It is worth mentioning that such system is not in line with the international best practice, since it (1) provides too large competencies to the operator; (2) vests the supervision of the observance of non-discrimination principle with the sectoral body (rather than antimonopoly or a special independent authority). The operators occupying a prominent position are obliged to publish the access terms and change them not more often than once a year (Article 19, Clause 3). The law sets out the rule, which is in our opinion ineffective, according to which the operator occupying a prominent position in the event of a refusal can be forced to fulfil its obligations exclusively by a court judgment (Article 19, Clause 4). The international best practice provides for a possibility to take the final decision (in the event claims are rejected by the operators) through a quasi-judicial procedure by the independent regulatory body. The

²⁵ It should be mentioned that the law provides a fairly mechanistic definition of such category of operators: “*the operator occupying a prominent position in the general access communication network which jointly with the affiliated persons possesses in the geographically designated numbering area or throughout Russian Federation at least 25% of the installed capacity or has a capacity to handle at least 25% of traffic*”. Such definition leads to the potential danger of mistakes of two kinds: the operator which actually controls the facilities can be relieved from the effect of the relevant rules, while the market players that are not capable of restraining the entry of other agents can be classified as “occupying prominent position”. It is easy to notice that the likelihood of the first and second type of mistakes depends on the correctness of definition of the geographical borders of the relevant market. Even more important is the fact that traditional operator gains opportunities of restraining competition not because of its high share in the market, but because it controls the terms of access to the facilities having a key significance for the telecommunication operators.

differences are obvious: the Russian law charges the court costs from the independent operator rather than a party which is interested in the revocation of the decision made by the regulatory authority (this is highly likely to be the operator occupying a dominant position).

The RF law determines the principle of the public regulation of pricing on the network connection services on the basis of its long-term costs and justified profit margin (which can be regarded as a certain analogue of the application of efficient component pricing rule which has been made subject to criticism in the contemporary economic theory and almost never applied in practice).

Even though, compared to previously effective legal framework (where the problem of access to the networks of the operator occupying a dominant position was not raised at all) the new law “On communications” is making a significant step forward, still, the shortcomings of the existing regulatory framework make one doubt if the issue of access can be successfully resolved by the legislative means. The factor preventing an effective connection can consist in the absence of an independent body which would be charged with the resolution of conflicts having to do with the connection. In fact, the RF Government is viewed as such independent body, but it enjoys only the competence of developing the Rules, which, evidently, cannot replace the delivery of specific rulings concerning access.

5.3. Gas transportation

In a number of cases the rules creating barriers for the effective solution of the access problems for independent market players are directly embedded in the legislation. The legislation on gas transportation can serve as one of the examples. In the Law “On gas supply in the Russian Federation” # 69-FZ of March 31, 1999, in the Article 27 is stated that “...The owners of gas supply systems shall provide for non-discriminatory access for any organisations active in the territory of Russian Federation to the vacant facilities of the gas transportation and distribution networks they own in accordance with the procedure set forth by the Government of Russian Federation”. The access procedure is described by the “Provision on access for independent entities to the Gazprom OJSC transportation system adopted by the RF Government Ordinance # 858 of July 14, 1997, and “Provision on the access of independent entities to the local gas distribution networks”, adopted by the Ordinance #1370 of 24 November 1998. According to the former document, the terms governing the provision of access to the Gazprom main lines are:

- availability of vacant facilities from the point of connection to the point of gas extraction,
- compliance of the quality and parameters of the supplied gas to the technical requirements, presence of the supplying pipelines and outlets with the registry and gas quality control stations,
- availability of documents confirming the property rights on gas,
- ability of the users to supply the confirmation from the gas buyer or consumer about the readiness to accept the declared volume of gas (Clauses 5 and 9).

The latter condition is potentially dangerous for the development of competition, since it significantly reduces the incentives of independent market players to sign supply contracts. Before the conclusion of the contract on gas transportation all the expenditures on its purchase

are irrecoverable. The presence of sunk costs makes the parties to the transaction – sellers and/or buyers – vulnerable in the course of negotiations with the owner of gas transportation facilities. In its turn, the need to incur sunk costs reduces the interests in effecting a transaction on the part of the operators independent from the gas transportation system. That is why, the practice of literally simultaneous countersigning of the contract on the sale of gas by the buyers and sellers and the contract on transportation with the company not associated with any of them, is so widely spread in the world.

The specific format of the transportation contracts is determined independently by Gazprom OJSC (Clause 13), while the prices are subject to regulation by the state. It is noteworthy that as such the free form of contract on the usage of essential facilities contradicts with the principles on which the “international best practice” is based. Single tariff rate is only used in the transportation contracts by Gazprom OJSC gas transportation units with independent organisations. In order to pay for the services of Gazprom OJSC gas transportation units for the transportation of its own gas, the internal settlement tariffs are being used. Thus, the principle of non-discriminatory pricing is reduced only to the group of independent market players and does not cover the transportation contracts between the units within a vertically integrated company. Such weakness of the statutory framework covering access to essential facilities as insufficient specificity of the procedure for interface between the parties in the course of elaborating the contract terms (in particular, the volume and timing of transportation, payment procedure, etc.) is inherent in the gas sector much more than in telecommunications. The conclusion of contract for the purchase of gas as an obligatory term for signing a transportation contract reduces the effectiveness like any other costs, which are artificially made irrecoverable.

The discussed problems are to a large extent determined by the specifics of gas transportation transactions, or, in fact, the so-called time specificity that implies synchronisation of several activities. In that case increased requirements are applied to both the degree of completeness of the contract concluded between the independent organisations and gas transportation company and the dispute resolution model, which implies the correspondence to such requirements as: (1) expedience, (2) adequacy (i.e., taking into account the specific relations between the contract parties), (3) constructiveness (caused by the need for the mechanisms not so much to punish one of the parties as to search for the compromise).

5.4. Railway transport

Let us consider how the issue of non-discriminatory access is handled in the statutory base of the railway transport²⁶. The RF Law “On railway transport” points at the following, as one of the cornerstones of the sector’s performance: “*The access to infrastructure is provided by the carrier on a non-discriminatory basis implying equal terms of infrastructure provision to carriers irrespectively of their organisational pattern and form of ownership* (Art.14). The standards of access provision are to be featured in the “Non-discrimination access rules” approved by the RF Government.

²⁶ Essentially, the applicability of the principle of non-discriminatory access to the railway infrastructure as such is just as arguable an issue as the comparative advantages of vertical separation as a model for the promotion of competition in the field of railway transport. However, it is vertical separation that is embedded in the reform concept, while for the implementation of that model the possibility of access to the essential transport facilities is needed.

The law determines only the requirements as regards the contents of the non-discriminatory access rules (principles of access to infrastructure, access sequence in the event of limited traffic capacity, procedure for access provision to infrastructure, procedure for the consideration of claims and applications). The law does not determine the limits for organisational and financial division within the vertically integrated railway operator of the functions related to infrastructure maintenance, on the one hand, and servicing of the rolling stock, on the other hand.

In turn, the rules of non-discriminatory access approved by the RF Government Ordinance # 710 of November 25, 2003, do not contain, in our opinion, a specific provision concerning a significant aspect of non-discriminatory access. The decision on access is taken by the railway transport operator, while the justification of access denial is to be confirmed by the sectoral supervising authority while the dispute resolution competence is vested in the antimonopoly body (furthermore, it is done according to the antimonopoly legislation, rather than sectoral one) or courts. As it has been already mentioned, the application of antimonopoly law procedures (meant for the solution of “traditional” problems of anticompetitive conduct) is likely not to have adequate efficiency (we will return to this issue below). Charging judicial costs from the independent market players may act as an important factor containing their participation in the competition. Extreme brevity of the elaborated document implies that all the specific issues related to access provision are in fact left unregulated and solved, in effect, upon the discretion on the railway transport operator.

6. Changing tariff regulation for the sake of the development of competition

The prospects of competition are influenced by several tariff regulation aspects in the deregulated sectors. Firstly, *the tariff regulation focus* should be shifted from the regulation of tariffs on the end services to the regulation of tariffs on the infrastructure (essential facilities) services. The preservation of regulation of the end tariffs alongside the ones on infrastructure services – as it is, for example, the case for railroads and power industry – constrains the scale of competition. Secondly, *the stability of tariff regulation* becomes increasingly important in the deregulated sectors. The potential newcomers to the market should be in a position to take decision on inward investment in the sector on the basis of the justified estimation of costs for the usage of essential facilities.

In such context, the time span of tariff regulation in Russia – one year – is, undoubtedly, too short. Besides, the very practice of regulation is such that it does not make it possible to forecast the future decisions of the regulatory bodies.

In connection with determining the time span of tariff regulation the issue should be once again raised about the stimulating and cost-based setting of tariffs. If the natural monopoly finds itself in the situation when the cost of justifying the expenditures compensated via the price (tariff) is insignificant, the tariffs in the end will be determined on the basis of the ability of the economic operator to prove the validity of costs to the regulator. Unlike the cost-based one, stimulating pricing suggests that the pricing mechanism is tuned in such a way that it allows to distribute the benefits from increasing production efficiency of the services delivered by the natural monopoly between itself and the consumers with due regard to the changing external circumstances (inflation rate) and on the conditions of observing the requirements to the quality of services.

However, the consistent application of stimulating pricing does not provide for the “insurance” of the producers from the risks related to the increase of resource prices and relevant costs. On the other hand, the stimulating pricing does not allow to withhold from the producers the rent generated due to the fact the established tariff is exceeding the costs per unit. Adversely, the cost-based pricing allows (if we ignore the asymmetry of information about the costs between the producer and regulating body) both to fully withhold the obtained rent and to insure the producers from the increasing prices on resources. Thus, the choice between the elements of cost-based and stimulating pricing is a compromise and depends among others on the external risks affecting the price on the resources of natural monopolies.

In that context it should be mentioned that the regulation of tariffs in Russia is developing in the direction of “increasing tariff validity” (that is, increasing cost of supervision on the part of the regulation bodies) and, in effect, is not using any elements of stimulating regulation. In particular, that is why natural monopolies do not have sufficient incentives to decrease costs, while the growth of tariffs on their products (services) acts as a significant source of cost inflation.

The prices on the utilised resources are ranking high among the tariff validation problems. In the case of cost-based tariff pricing the only sole supplier of prime commodities acts in the conditions that are similar to soft budget restrictions, which is naturally

accompanied by appreciation of the consumer product and increased costs. In Russia, the problem is aggravated by the embedded tradition of “managerial participation in the costs” as a way of extracting income from the property rights.

The international practice testifies that the validity control not only of the tariffs, but also of the prices on the utilised resources is a virtually unsolvable problem for the regulatory body. The alternative for increasing the regulatory costs is the introduction of a rule on mandatory tendering of procurement for natural monopolies. For example, in the EU, the procurement by natural monopolies is regulated by the same set of rules as public procurement of goods and services. The legislator issues from the assumption that the competition in the course of bidding should lead to the reduction of the prices of the procured products, while the actual and potential supplier have the highest incentive to control the observance of the rules of tendering, and thus part of the cost burden of the regulatory body is shifted upon their shoulders. The absence of the rule on the mandatory tendering procurement procedures for natural monopolies in Russia (and the absence of a set of rules regulating such procurement) necessarily reduces the production efficiency in natural monopoly sectors.

Another important problem of the tariff regulation is doing away with the cross-subsidies. As such, the cross-subsidies do not damage the allocation efficiency, however, in the deregulated sectors they exert an incomparably higher negative impact on the incentives for market players²⁷. Cross-subsidising in the regulated sectors implies that the traditional operator, as a trade-off for providing services or products at low prices to the “benefit recipients” is capable of obtaining profit (or at least recover the incurred losses) in the market with higher tariffs. Deregulation of prices in the end market (or, at least, in some of its segments) with a retained obligation to services the specific group of consumers at low rates creates a threat of the emergence of uncompensated losses with the traditional operator. In the case when the traditional operator during the deregulation period remains a vertically integrated company, such conflict dictates the need to restrict the entry into the market segments with high demand (the opportunity of obtaining profit) to compensate the losses.

Because of servicing the benefit recipient groups in the deregulated sectors, the same problems emerge as in connection with the need to provide the so-called “universal services”.

²⁷ Moreover, in the case of the sole vertically integrated company subject to regulation cross-subsidising viewed as different value as deviation of tariffs from the marginal costs may even exert a positive influence on the competition. In particular, F. Hubert has shown that cross-subsidising exerts a positive rather than negative influence on the efficiency [Hubert 2002].

7. The problems of providing universal services in the deregulated sectors

The notion of “universal service” refers, in the first place, to telecommunications. However, there are similar problems in other natural monopoly sectors. They are associated, in the first place, with the expansion of networks, introduction of new services and fulfilment of obligations arising from previously concluded contracts, etc. In all cases, we are talking about the performance of such work or provision of such services which are as such detrimental in the new environment of a deregulated sector.

The performance of detrimental operations by traditional operators in the natural monopoly sectors constitutes the basis for the relations with the regulatory bodies (or the government) on a *qui pro quo* basis. In return to the provision of universal services or delivering services at favourable tariffs that are detrimental for the traditional operator, the regulatory body restricts the entry to potentially competitive markets where the traditional operator compensates its losses.

Different institutional alternatives to the provision related to the universal services arise in the conditions of a deregulated sector.

The first group of alternatives is connected with the establishment of a special fund for the compensation of losses arising from the provision of universal services. There are different ways of both raising and distribution of means for such fund. The fund may be established as either a part of public budget or from the contributions made by the operators active in the market. Undoubtedly, from the statutory point of view the first option is more preferable; however, in the conditions of the poor budget discipline, the second one may prove more feasible. The means from the special fund can be distributed both in a traditional way, i.e. in favour of the vertically integrated company commissioned to deliver the universal service, and on a competitive way (the international practice features cases of the successful bidding between telecommunication operators for the delivery of a universal service).

An alternative method of funding a universal service is the so-called “burdening of licenses” for the operators active in the market. The essence of burdening consists in the inclusion of commitments to provide a certain volume of universal services in the license terms.

The ratio between the effectiveness of the above alternatives is non-trivial. On the one hand, the special funds for the financing of a universal service look obviously more preferable if it they are distributed on a competition basis. On the other hand, for example, if such fund it to be financed by means of quasi-tax charges from operators in favour of the vertically integrated company, it may prove even less effective an alternative than burdening of licenses. In the case of license burdening, the operators at least retain the incentives to achieve production efficiency, while similar incentives with a vertically integrated company financed on the basis of a “cost plus” principle prove much weaker.

8. Power of the regulatory bodies in the deregulated sectors

Which body is capable of solving the above problems arising in a deregulated sector in the most efficient way? In other words, how should the powers be distributed between the “traditional” sectoral authority (having existed prior to the beginning of the reform in the sector), the newly established special independent body and the antimonopoly body?

Normally, it is considered that the sectoral ministry is not capable of resolving all of the above-mentioned problems in the deregulated sectors. The causes for that are both rooted in the objectives of the sectoral regulatory body, and in the history of its interface with the natural monopoly entity. The tasks of a traditional regulating body (ministry) include the achievement of high development rate within the sector. In the case if the development of competition would threaten the growth of quantitative indices in the short term (in the first place, the ones of the traditional operator), the sectoral regulator may be objectively disinterested in its fostering. At the same time, there are no rules without exceptions: the world practice knows the cases of successful performance of competition inducing policies by the sectoral regulator (the US Federal Communications Commission and development of competition in that market being just one example).

An alternative to sectoral regulator would be either an independent body commissioned to supervise the observance of the rules of access to essential facilities along with the one of tariff regulation, or an antimonopoly agency. In terms of the nature of its competencies, the antimonopoly body is less prone to the conflict between different objectives of the regulation. At the same time, it is considered that with respect to an antimonopoly body the danger of the “regulator takeover” symptom is much lower.

At the same time, antimonopoly agency may not have adequate resources to achieve the objectives that are rather specific for the sector. That is why, the most radical reform of natural monopolies is usually coupled with establishment of a special regulatory body with the competencies in line with the objectives of developing competition and yet not connected with the financial standing and performance of the sector. The United Kingdom serves as a typical example, where such regulatory bodies have been established in all the natural monopoly sectors: OFTEL (Office of Telecommunications), OFGAS (Office of Gas Supply), OFFER (Office for Electricity Regulation), ORR (Office of the Rail Regulator), OFWAT (Office of Water Services)²⁸.

At the same time, there also exist the cases of successful performance of such independent agency functions by the antimonopoly body. It should be emphasised, however, that the point of view that the antimonopoly body can successfully promote competition in the deregulated sectors *solely on the basis of the application of antimonopoly law*, is wrong and dangerous. Antimonopoly regulation as a trend in the economic policy by the state (viewed as an *ex post* state intervention in the economy) has significant differences from the competitive policy in the deregulated sectors (which requires an *ex ante* intervention in order to establish conditions for the competition).

²⁸ OFGAS and OFFER have been later merged into one regulatory body OFGEM (Office of Gas and Electricity Markets)

The international experience of the telecommunication sector reform provides an example of the kind of problems faced in the case of the promotion of competition on the basis of the application of the traditional antimonopoly law. In New Zealand, the legal framework for the regulation of the sector in view of enhancing the competition had a general nature. The Law on Trade of 1986 served as the main statutory act, while Trade Commission and courts have been charged with regulation of the telecommunication sector. Few rules of sectoral nature have been enacted with a rather limited scope.

It has become obvious very soon that the existing sector-specific rules were not enough for the effective resolution of the conflict. In particular, the clause on the conclusion by the Telecom company of contracts with its units as if they were independent operators has not been fulfilled. In order to resolve the dispute the parties often resorted to lawsuits. A number of issues have been resolved fairly smoothly through courts. However, the courts were not in a position to deliver the judgments on the issues related to the terms of connection. The claim of a potential competitor, the company named *Clear*, to the *Telecom* has been handled by courts of various instance for five years. The courts produced different judgments and within five years the parties still got no clear ruling.

Several shortcomings related to the division of powers between various regulatory bodies are inherent in Russia's deregulated sectors. The most frequently mentioned ones are the absence of independent regulatory bodies with the competencies designed specifically to promote competition and not sufficiently prominent role of the antimonopoly bodies. In their turn, the sectoral regulatory bodies enjoy quite broad range of competencies in determining the rules of interface between the market players, access to markets and allocation of limited resources within the sector. The replacement of an independent body (according to the international best practice) with the rules adopted by the government (acting as an independent regulator) does not appear equivalent, because the government as such (unlike a specialised body) is less likely to have at its disposal the expertise capable of assessing the economic consequences of specific rulemaking and the requirements to the market players.

However, there is yet another problem: the antimonopoly body is charged with executing competitive policy in the deregulated sectors referring exclusively to antimonopoly law. For example, the rules concerning non-discriminatory access to the railway transport infrastructure (Ordinance # 710 of November 25, 2003) do not correspond to the international best practice, because they introduce the action procedure "*according to the rules of trial with respect to the violations of antimonopoly law* (Clause 17), which, to say the least, significantly increases the cost of conflict resolution for both the market players and regulatory bodies. On the one hand, antimonopoly law does not and should not contain the rules governing the state policy in the deregulated sectors. On the other hand, even according to the above-mentioned Ordinance, the antimonopoly agency, for example, has no competency to request the information necessary for the resolution of the conflict unlike the federal executive authority in charge of railway transport. The latter, in turn, according to the above ordinance is obliged not to disclose classified commercial information, which automatically hampers the obtaining of information by executive authorities from one another.

Findings and recommendations

In the conclusive part of our discussion of the set of issues related to fostering competition in the deregulated sectors with a natural monopoly component we should once again emphasise that the aspects of natural monopoly sector reform discussed above do not substitute, but complement each other. The lack of just one of the elements of effective regulation may prove a decisive factor that would make the reforms fail.

1. The adequate understanding of the nature of “natural monopoly” as a special set of conditions of the economic exchange suggests, on the one hand, that the specific features of the entry barriers to the target markets are properly identified. The barriers are connected with such notions as the subadditivity of costs in the event of demand saturation, and significant scale of irrecoverable expenditures caused among other things by the specificity of resources. On the other hand, the promotion of competition requires operational mechanisms allowing switching from one regulation model to another and, if necessary, withdrawal of the direct public regulation.

2. The development of competition in the sectors with a natural monopoly component implies not only the identification of the potentially competitive fields, but also the development of the new regulation mechanisms taking into account the specifics of the particular sectors. Of special significance is the improvement of the regulatory base, because the significance of the rules and regulations increases during the transition period both in comparison with the model of public regulation of natural monopolies and in comparison with more mature competitive markets.

3. The competition in the deregulated sectors implies not only the rejection of certain state intervention instruments, but a replacement of one toolkit with another one, which to a lesser extent distorts the incentives for the market players. In the first place, we imply the determination of the market entry rules and a set of model contracts allowed for the use by the market players. In that context, the rules governing the conduct of players in the potentially competitive markets of Russia as a rule require a much more detailed specification.

4. It is necessary to take account of comparative advantages and shortcomings of the competition development options in the deregulated sectors: competition between the networks, within the networks and for the networks. In the case of Russia it means further specification of the principles of railway transport reform (whether vertical separation of the “Russian railways” company is envisaged, and, if so, during which period), the principles of competition development in the telecommunications sector (in which sectors it would be feasible to develop the “competition of networks” and in what way it should be reflected in the regulatory documents), as well as prospects for the development of other sectors where a monopoly component is present.

5. The mechanism of access to the essential facilities should be based not only on the procedures of determining the tariff for the usage of essential facilities, but also the accounting and information disclosure procedures on the costs of a vertically integrated company; contract endorsement and execution procedures; procedures of access to information on the terms of contract governing the usage of essential facilities between different market players; procedures for resolution of conflicts between different market players arising from the usage of essential facilities. At the moment, the above-mentioned principles are not fully

implemented in the reform process of the sectors with a natural monopoly component. The rules regulating access to essential facilities require much more detailed specification, while the conflicts arising from the fulfilment of such rules should be resolved in the framework of a less costly procedure than a judicial trial. The market players should be relieved from the costs of such procedure, at least, at the initial stage of the competition development.

6. Among the main trends of the tariff regulation reform we should mention shifting the regulation focus towards the regulation of payment for infrastructure services (essential facilities), ensuring the stability of regulation (especially intervals between the changes in the tariff level), minimisation of the negative effects related to cross-subsidising (elimination of cross-subsidising wherever possible; streamlining and increasing the transparency level of cross-subsidising, where its elimination is not justified). An important resource in supporting the validity of tariffs is the introduction of mandatory tender procurement procedures by natural monopolies. At the same time, it should be mentioned that the limited possibility for the control of tariffs on the part of the regulatory bodies requires much wider application of the stimulating regulation instruments in Russia.

7. There are three options for the choice of regulatory bodies in the deregulated sectors: sectoral regulator, independent regulator or an antimonopoly body. As a rule, an effective regulation system in the deregulated sectors relies either on an antimonopoly body or a specialised regulator. In Russia's state regulation system the bodies responsible for regulation in the respective deregulated monopoly sectors are not envisaged. In view of that it appears desirable to extend the competencies (and upgrade the resources at the disposal) of Federal Antimonopoly Service.

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