

METHODOLOGICAL ASPECTS OF THE FORMATION AND DEVELOPMENT OF SECTORAL MARKETS

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Abstract

The aim of the paper is to study the methodological aspects of the formation, enhancement and strategic development of industrial markets. Currently, the industrial market theory is a field of economic analysis that studies the functioning of markets, considering all their diversity and peculiarities. This scientific direction is currently developing very intensively; in the literature it is known as the 'industrial economics', 'industrial organisation', but some sources also utilize the 'economics of industry markets', 'organisation of industry markets', as well as the 'theory of industrial organisation'. The theoretical and methodological aspects of enhancing the efficiency of functioning and development of industry markets are examined. Within the study, general scientific methods of analysis and synthesis, generalization, comparison, abstract-logical analysis, etc. were used. A systemic approach is the common methodological basis of the economy of industry markets. The main conclusion is that modern markets are the imperfect competition markets, and therefore various factors that restrict freedom of competition and to some extent regulate the activities of organisations in industry markets must be considered and introduced into the models. When analysing the efficiency of industrial markets, the achievements of modern institutionalism must be considered and the influence of market institutions on the behaviour of economic entities, which will affect the social-and-economic efficiency of the market, must be included in the analysis.

Keywords: cluster, industrial economics, organisation of industry markets.

Introduction

In world economic science, there are two approaches to research of the industry markets: the Structure-Conduct-Performance approach and the Price Theory approach. The first approach was proposed by E. Mason and Joe S. Bain and later became known as 'structure-conduct-performance'. The second approach employs the microeconomic models to explain the behaviour of firms and the structure of markets. Within the framework of the first paradigm (this concept is also called the Harvard tradition in industry organisation), the functioning of the industry (and the industry and the market in the framework of the theory of industry organisation, unless specifically stated otherwise, are treated as interchangeable concepts) depends on the behaviour of sellers and buyers, which is determined by the market structure (Jacquemin, 1999).

Roy L. V. and Tretyak V. P. distinguish the 'industry' and 'industry market' notions. According to them, 'pursuant to the theory of industry organisation, the market is a phenomenon analysed from the standpoint of demand. The industry, on the other hand, is considered from the perspective of the supply of goods on the market. An industry market comprises numerous firms that produce products within its boundaries, often based on similar resources and technologies. The distinction between an industry market and an industry is that the market is defined by the satisfaction of the needwhile the industry is defined by the nature of the assets utilised' (L. V. Roy & V. P. Roy, 2008).

Entry barriers to the market, preventing the emergence of new competitors, are important for the structure of the modern market. Industry barriers (entry-exit barriers) are a combination of objective and subjective factors that either prevent the incoming enterprise(s) from organising profitable production in the industry

market or prevent an established organisation (firm) from leaving it without significant losses.

In economics, there are two main approaches to the definition of the concept of industry entry barriers: from the point of view of the theory of industry markets (Industrial Organisation) and from the standpoint of strategic management (Strategic Management). The first approach aims at identifying entry barriers and analysing the characteristics of the industry in which such barriers exist.

The second approach involves assessing the existence of barriers in terms of the company's strategic decisions within the framework of strategic management policy. Joe S. Bain, the founder of the barrier study, defines barriers to entry as anything that allows advantaged firms to earn excess profits without the threat of entry (Doyle & Stern, 2006).

Strategic types of barriers are a combination of objective and subjective factors that either prevent the incoming firm from organising profitable production in the industry market or prevent it from leaving the market without significant losses. Formation of strategic barriers depends on the behaviour of an active firm in the industry market.

The objective is to study the methodological aspects of the formation, enhancement and strategic development of industrial markets.

Materials and Methods

Within the study, general scientific methods of analysis and synthesis, generalization, comparison, abstract-logical analysis, etc. were used. A systemic approach is the common methodological basis of the economy of industry markets. In this regard, when analysing an industry or market, a complex of cause-effect relationships within the framework of the paradigm (structure-conduct-

performance) is explored, both in statics and in dynamics, and the existence of a connection between the parameters characterising the blocks of the paradigm is revealed. Herewith, it is important to investigate the existence of a connection between paradigm blocks in various industries (or markets), as well as the relationship between theory and practice of the actual functioning of industries and markets, as well as conduct a comprehensive study of each individual industry (market). Modern economics tries to consider the problem of the efficiency of industrial markets from the standpoint of

classical economic theory, which considers the microeconomic foundations of the behaviour of an economic entity. This is since the new industry market can be considered as an activity of a single firm that has begun to produce a new product or service.

Results and Discussion

Conditions of production of products and services, pricing principles, the need for government regulation are determined by the 'market model'. The main features of market models are summarized in Table 1.

Table 1

Main features of market models

Feature	Market models			
	Perfect competition	Monopolistic competition	Oligopoly	Monopoly
Number of firms	Unlimited number	Multiple	Several (2–6)	One
Type of production	Same	Differentiated	Traditional or differentiated	Unique or close substitutes
Price control	None	Some, but within narrow bounds	Limited by mutual dependence significant in case of conspiracy	Significant
Conditions for joining the industry	Very easily, there are no obstacles	Comparatively easier	Significant obstacles	Blocked
Non-price competition	None	Emphasis on advertising, trademarks, brands	Typical for production differentiation	Promotion of communication with public organisations

Traditionally, the efficiency of the market is considered from a market perspective of perfect competition in two aspects. The first one is the distribution efficiency (allocative ability). In this case, consumers receive the highest combined benefit from the consumption of various goods and services, i.e. the volume and structure of the output is fully consistent with the volume and structure of the purchasing needs of consumers. From this point of view, the efficiency of the industry market formation can be seen as an increase in the aggregate surplus received by consumers. In fact, this means that the creation of new industry markets is feasible if the needs of buyers are better met at lower prices for the products offered (Efimenko, 2009).

In economics, when analysing the distribution efficiency, the concept of X-efficiency is often used. Unlike the classical concept, X-efficiency considers the conditions in which a given set of resources is used to produce products. It does not consider the option of making the best use of these resources in other areas of activity.

The second type of efficiency is the production efficiency. It consists in producing goods in such a way as to ensure that the price of the products sold is consistent with the minimum possible average cost of the production. If this condition is met across all economy sectors, then it ensures the efficient use of the

limited resources available to the economy. From this point of view, the creation of new industry markets is useful if the average cost of production across the national economy is reduced.

It is believed that the types of efficiency under consideration are integral to the state of statics, i.e. the market equilibrium. However, funds are regularly invested in the development of the sector of the economy to implement innovations, develop and enhance production technology, which leads to the need to consider the dynamic efficiency. Organisational population ecology considers the competition as a process analogous to natural selection, providing for the survival of the fittest. Herewith, in a stable environment (in statics state), those firms that best meet its requirements are considered the most adapted, while in a dynamically developing environment the most adapted ones are those having the more universal skills. This means that firms that are efficient from the point of view of an equilibrium, stable state in the industry do not always turn out to be efficient in the context of the dynamic development of the industry market (Radaev, 2003). Unlike allocative and production efficiency, the dynamic efficiency is not easy to measure. It is even more difficult to compare the relative magnitude of static inefficiency (allocative or production) with the magnitude of dynamic inefficiency. Therefore,

economists have always tended to pay more attention to static inefficiencies than to dynamic inefficiencies (Cabral, 2023).

When analysing the efficiency of an industry market, one should not forget about efficiency from the point of view of the firm operating in this market, and social-and-economic efficiency from the point of view of society, manifested in the implementation of the law of economy of time. An industry market is formed if the most economic production is achieved, economies of scale in production are achieved, and the products offered by the firm satisfy the market needs. Such a market may take the form of a monopoly or oligopoly, since there is a positive dependence of the number of sellers with the value of savings on the scale of production.

The industry structures emerging in practice are not always the ones that minimise costs; they are a fair, reasonable approximation of efficient structures. The influence of the market must necessarily make a highly inefficient market structure vulnerable to entry, displacement of established firms by foreign competitors, or some other destabilising impact (Baumol, 1982).

First, attention should be paid to the relative size of the organisation (firm) operating in the industry market. This is an important element of the market structure that influences firm policies and practices and the efficiency of the industry market. Firms of the same size in relation to the size of their markets may have different price and production policies in different market situations. Differences in price response to changes in costs or demand conditions can be explained by differences in the internal organisation of the firm and the structure of the market in which the firm sells its products. Consequently, the price depends both on differences in the organisation of the firm as such and the differences in the organisation of the industry market.

The industry market (using the example of road transport services) is construed as a system of institutional relations ensuring the interaction of the state, carriers, consignors and consignees. This system determines the behaviour of road transport organisations in such matters as pricing and investment policy, the degree of openness of agreements between organisations, as well as influences the formation of strategies for these organisations in various industry segments. The main activity of the state in this field is the creation of strategies for the development of certain types of activities and the service market. Herewith, these strategies should not be equated with direct state regulation of certain types of activities, because in general they do not imply state control over pricing and cash flows but are primarily aimed at setting development goals and areas of state support for industry players. The status of a segment of the motor transport services market is proposed to be assessed by the following criteria: the state and competitive

environment within the industry, the level of supply and demand in the services market, geographical location, market dynamics, price, analysis of competitors, organisation of the transport process, the number of producers and consumers of products and services, name, type of cargo, etc. (Efimenko, 2009).

The main production element of the market economy is an enterprise (firm) that produces economic benefits to meet the needs of the individuals and society. A firm should optimise the size considering the ability to control its activities, employee motivation, cost effectiveness, facilitating the search for external partners, responding quickly and flexibly to changes in the industry market, and shape product and price policies in such a way as to maximise profits and ensure sustainable development. One of the main tasks of the company is to create harmonious relationships with the external environment, to ensure the coordinated evolution of the company and the environment in which it operates, to counteract the lag of internal changes from external changes. To achieve this task, it is necessary to combine the stability of the rules for making strategic decisions and the flexibility in making tactical decisions in an optimum manner.

When analysing the efficiency of an industry market, it should be considered that entry into an industry market is difficult if incumbent firms have sufficient power to make a firm that decides to enter this market unprofitable. These capacities may not be fully employed in the absence of attempts by new firms to enter the market, which may lead, for a given output, to higher than necessary production costs, and, as a result, to higher prices and a lower level of production, compared to various forms of restrictive pricing. Thus, production capacity and other investment instruments are effective means of preventing new players from entering the industry market because they are irreversible and represent certain obligations to the industry.

The efficiency of the industry market is influenced by the research and development activities and their results. The possibilities of small organisations (firms) are maximum in the early stages of the production cycle, when economies of scale are not very significant, market share is volatile, and there are many attempts to enter the industry market. At this stage, the success of entry largely depends on scientific and technological capabilities. At the stage when research is relatively complex and specialised, the high costs of ensuring the success of research and development form a barrier to entry into the industry market, contributing to the emergence of large scientific laboratories, that is, technological competition prevails, and large organisations (firms) have advantages. Initial success in research provides a foundation and opportunities for further success; successful organisations (firms) become leaders in the industry market. As technology reaches its full development, the scale and efficiency of production become more important, and the capabilities of small firms decrease. At the product maturity stage, major

patents expire, manufacturing methods are standardised, and barriers to entry into an industry market are based not on the difficulty of meeting research requirements, but on the scale of production and marketing. Price competition replaces the technological competition.

Herewith, studies of the American economists (Clodius & Mueller, 1961) on the correlation between the degree of monopolisation of the industry market (the size of the firm, the degree of ease of entry into the market) and innovative activity have shown that the possession of monopoly power is a necessary (but not sufficient) condition for the effective functioning of the market. Entrepreneurial leadership and competition are qualified as the necessary conditions. When evaluating the effectiveness of industry markets, it should be considered that the market is a complex mechanism. Modern institutionalism considers the market as: the interaction of traditions, pursuant to which the parties get used to certain restrictions; agreements that are supported by social norms regarding the objects of sale, etc.; legislative acts regulating the process of competition and pricing; actions of other interested market participants.

All of this comprises the industry market and determines its effectiveness. While analysing the behaviour of industry economic agents, it should be borne in mind that enterprises do not always rely on the interest of cost recovery and maximum profits. They work with business partners on the principles of reciprocity and future benefits, not necessarily in equivalent form. Constant contacts in the industry market enable the industry market participants to exchange useful information, learn from each other, adopt technological and organisational innovations, exercise mutual control, form social capital in the form of trust and business reputation and, ultimately, stabilise the market and enhance its efficiency.

Contemporary institutionalism is closely linked to the organisation theory. From this point of view, the market is an institutionalised space. The major players in the market use stronger resources and specific social skills to stabilise or change the existing industry market institutions. The market structure can be destroyed and made more effective by the intervention of stronger actors that emerged both within and outside the industry market. It should be borne in mind that the market order or method of coordinating the behaviour of enterprises (firms) in the industry market may collide with other coordination mechanisms. There are methods of coordination associated with the interests and institutions of the industrial method of coordination (production technology, the effect of economies of scale in production, etc.); the interests of households based on traditional relationships, kinship, locality; interests of a civil society built on collective interests and adherence to the principles of democracy. As a result, striving for market efficiency may run into rejection of such an approach by other ways of coordinating the industrial market, which leads to a

redistribution of resources between subjects and branches of the economy. From this point of view, participants are interested in stabilising the industrial market, forming an agreed order, which is a mechanism for deterrence of the short-term economic interests, a condition for maintaining a competitive environment and market efficiency.

Representatives of the theory of market organisation distinguish three categories of markets: the market of perfect competition with the maximum degree of competitive interactions; a monopoly market with a minimum degree of competition and an imperfect competition market (competition is present, but its effect is distorted by the behaviour of economic agents).

Competition is part of the market structure. On the other hand, the structural approach identifies the relationship between profit and concentration level in the industry. The aggregate industry profit (P) is calculated by the formula:

$$\Pi = \sum (P - C_i) q_i, \quad (1)$$

where P is the market price;

C_i is the average amount of expenses of a similar firm in the market;

q_i is the sales volume of the i^{th} firm.

The difference between the price and the average expenses of the i^{th} firm is expressed through the Lerner's index (L):

$$L = (P - C_i) + (s_i P) / e \quad (2)$$

where s_i is the market share of the i^{th} firm;

e is the price elasticity of demand.

By substituting the above expression to formula (1) and multiplying the entire expression by Q/Q , which is the industry volume of sales, we obtain:

$$\Pi = HHI P Q / e \quad (3)$$

where HHI is the Herfindahl-Hirschman index that characterises the industry concentration degree.

This expression can be presented in a different way:

$$\Pi / PQ = HHI / e \quad (4)$$

The right part of this expression shows the share of industry profits in total sales, and the left part shows the ratio of the Herfindahl-Hirschman index to the price elasticity of demand.

Consequently, the value of industry profits (as a percentage of sales) is directly proportional to the level of concentration in the industry (measured by the Herfindahl-Hirschman index) and is inversely proportional to the price elasticity of demand. Respectively, high concentration level in the industry results in high profitability and organisational (firm) profitability – and vice versa.

The global nature of competition leads to the situation where the leading role in the development of the company, along with competition, is played by the processes of cooperation and integration, which require continuous coordination of the behaviour of firms, ensuring the economic effect of joint activities. Cooperation is gradually becoming a strict business requirement as a mechanism for adapting to constant changes (Welborn & Kasten, 2004). In integration at the industrial stage of development of society, organisational forms of unions of enterprises (firms) with a hierarchical management structure prevailed.

With the transition to the post-industrial stage of development, this form of organisation has ceased to cope with the increased flows of information and innovation that lead to the permanent renewal of all aspects of the enterprise (firm) and of the economy. The hierarchical structures are therefore replaced by self-managed networks built on horizontal links and special, participatory interactions (Gnatiuk & Efimenko, 2017; Efimenko & Gnatiuk, 2023). Enterprises (firms) master a hybrid version of the organisation of production and management (employ the cluster network principle), which is more flexible compared to the hierarchical model and more integrated compared to the market model of economic organisation.

In the market economy, the interpretation and hierarchy of effectiveness criteria and their content have changed. Since the main objective of entrepreneurship is profit, then the criterion of economic efficiency is the maximisation of profit per unit of capital (resources) expenditures with a high level of labour quality and ensuring the competitiveness of products. In the application of resource-efficient technologies, the criterion of efficiency is the minimisation of costs and resources per unit of output. Under market conditions, the general criterion of efficiency is retained: maximisation of national income, gross domestic product per unit of expenditure and resources to enhance the standard of living of the population.

Conclusions

1. Currently, the functioning and formation of industry markets must be consistent with the essential

2. Principles of state sovereignty, as well as with the ability of various economies to integrate into the world economy. The concept of 'market' is close to the concept of 'industry'. If markets bring together sellers and buyers of goods that are close substitutes from the point of view of their buyers, the industries combine sellers (producers) of goods (services) that are close substitutes in production or 'on the supply side'. In a certain sense, the market is larger than the industry, as it includes not only the sellers of close (demand-driven) substitutes, but their buyers as well. However, the industry is generally larger than the market. The concept of 'industry market research' can be defined as the collection and analysis of data to make decisions on the independent development of a product (service) or the acquisition of appropriate technology.

3. When evaluating the economic efficiency of the formation of industry markets, it should be considered that modern markets are the imperfect competition markets, and therefore various factors (like regulatory frameworks, institutional influences, behavioural constraints on socio-economic efficiency) that restrict freedom of competition and to some extent regulate the activities of organisations in industry markets must be considered and introduced into the models. When analysing the efficiency of industrial markets, the achievements of modern institutionalism must be considered and the influence of market institutions on the behaviour of economic entities, which will affect the social-and-economic efficiency of the market, must be included in the analysis.

4. Most enterprises (firms) are forced to change their organisational form, enter into various agreements with other enterprises under the influence of the following factors: permanent changes in the external conditions for the functioning of the enterprise and the need to adapt to these changes; complication of production and commercial activities of enterprises in the context of globalisation and openness of the national economy; increasing the role of the time factor requiring prompt action, a new approach to production and management methods; expanding the market space of the enterprise in order to survive in a competitive environment.

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