ABSTRACT

The economic category “educational services” has been clarified, supplementing it with “educational products” to the category “educational products”. The classical formulation of the two-sector market model in relation to the educational sphere is described and it is proposed to use the tools of the theory of active systems and morphological analysis to improve it. The task and formation of the financial market of the OP within the framework of the two-sector model of circular flows was posed and commented on.

Keywords: education system, educational services, two-sector economy, theory of active systems, morphological analysis, financial market for educational products.

Introduction

A systematic study of the educational services market requires clarification of the categorical apparatus, analysis of various models of economic development of economic entities, which currently include educational institutions, as well as their various entities: territorial universities, industrial universities (for example, agricultural, railway), etc.

Currently, there are several approaches to solving this problem. In particular, one-sector, two-sector, three-sector, and four-sector economic models have been developed. Below, an attempt is made to consider the functioning of the market for educational products based on a two-sector economy model.

Improving the categorical apparatus.

The classic market operates with the concept of products that are classified into goods and services [1]. The goods are distinguished by the following properties: these are products that have a material form, and do not have the quality of spirituality, they always belong to material values. Services are goods that are provided to the consumer not in physical form, but in the form of some kind of activity, and as a rule, the consumer takes an active part in this activity.

Traditionally, in the scientific and methodological literature there is an idea of the "market of educational services" (OU), but, in fact, we are talking about a wider range of products (that is, educational goods, too). Further research will be carried out precisely from these positions: we will talk about the market for educational products (OP), further dividing them into goods and services. In the market of EP, the goods are: educational equipment, manuals, personnel, and services are represented by knowledge, competencies of students, the process of obtaining them. In fact, when in the scientific and methodological literature they talk about the OS market, they mean, of course, the OP market.

Features of the economic development of Russia (as before the USSR) formed a negative idea of the diploma (certificate) as a product. The presence of an educational document (outside of the competencies acquired in an educational institution) opened (unfortunately, it still opens) many doors on an individual’s career path. This trend in modern conditions of economic development (the decisive role in the production and business of intellectual resources, the introduction of digital economy technologies, the ideology of Industry 4.0) must be overcome.

Thus, EP is a special type of products presented by educational institutions to consumers, which are: the population, enterprises, industries, regions, and the state.

A fairly wide range of differences are also observed among manufacturers of OP. The differences here are determined by the following aspects:

- The level of education provided (secondary, higher, post-graduate, advanced training, etc.).
- OU affiliation (state, departmental, private, foreign).
- The intended use of educational products (meeting educational needs, obtaining educational qualifications).
- A form of interaction between producers and consumers of educational programs, both in terms of financial relations and in the organization of the educational process (classroom, distance learning, mixed classes), etc.

These features require careful study to ensure effective management of the educational process, which confirms the relevance of this study.

**Two-sector model of the educational products market [1].**

Obviously, the study of the OP market should begin by identifying the most common essential patterns of the functioning of economic markets, that is, by studying the macroeconomic relationships of the OP market. A two-sector model of the economy is well suited for these purposes [1], see Fig. 1. In this model, two macroeconomic agents are distinguished (here we have it: producers and consumers of OP) and two markets (in our case, the market of OP and the market of economic resources).

Consumers of EP (in terms of the theory of the classical market - households [1]) acquire products, forming a demand for educational goods and services. Manufacturers (in theory, firms) produce and supply OP products to the market (implement a product offer).

![Figure 1. - Two-sector model of the market OP](image)

To produce EP, its producers form the market for resources (create demand for economic resources), which are owned by consumers of OP. Thus, a supply of economic resources arises. Demand and supply form material flows that move counterclockwise.

In the opposite (relative to material resources) direction, cash flows (clockwise).

Like any other model, the two-sector model is based on a number of assumptions (limitations). The most important of them are [1]:

1) The economic system is considered closed to external disturbances (neglects its connections with the environment).
2) The interaction of only two economic entities is taken into account.
3) Only two markets are considered: resources and products.

The two-sector model takes into account the flows of two types of “inflow” (income, received resources, products) or “outflow” (expenses, produced products, spent resources). The difference (balance) between the “inflows” and “outflows” characterizes the change in the size of the property of the macroeconomic entities concerned.

In real practice, these restrictions are not fulfilled, but the two-sector model nevertheless has important theoretical significance. It serves as the basis for refining market models (three-sector, four-sector model), and allows you to build approximate valuation models.

The three-sector model additionally includes the flows of revenue and expenditures of the state, and the four-sector model takes into account international trade in the product. Unfortunately, the latter mechanism has not yet been worked out at a conceptual level: a specialist who has gained knowledge and competencies at the state expense can freely spend the potential gained abroad. It would be correct when the economic system was changed to compensate for its costs of obtaining the OP.

**Direct application of the two-sector market model in the educational field.**

In the framework of the two-sector model, the author of the article [2] manages to analyze the behavior of the natural monopoly, considered as the producer of a certain product, in interaction with the rest of the economy, positioned as the “consumers” of this product. This is a fairly approximate model, but it allows us to predict the volume of product output by a monopoly, evaluate the role and importance of production factors, price characteristics for both sectors of the economy formed above.

This statement can be successfully used to describe simple mechanisms of interaction between educational institutions and their environment of immersion. Here is the corresponding statement.

The two-sector model under consideration is characterized by two sectors:

- “Monopolist” is an educational institution of a region (for example, its supporting university), which has monopoly opportunities in a region in a given
educational field; group of educational institutions (for example, medical, agricultural, railway universities of the country).

- The rest of the regional (respectively sectoral) economy.

In the two-sector model, the state acts as a regulator of relations between the selected sectors. Means of regulation are:

- Price policy: prices for the educational products of the “monopolist” are tied to prices in the rest of the economy. Indeed, education for various reasons should be accessible to a wide range of consumers.

- Non-price regulation, that is, the establishment of the parameters for providing EP to consumers (population, enterprises). These parameters include: the quality of the OP, the minimum and maximum numerical values of the graduation of specialists, the provision of the consumer sector with other intellectual resources.

The considered economic agents are guided in their activity by some performance criteria.

The state seeks to maximize the consumption of OP at a given quality and level of agreed prices. This provides an increase in the intellectual potential of the economy.

Each of the selected sectors of the economy seeks to maximize profits. The “monopolist”, in addition, wants to increase production capacity, and the additional criteria of the “consumer” are to increase the quality of the OP, expanding their spectrum. Which will help increase its intellectual potential and adaptability in changing economic conditions.

These considerations allow us to form specific analytical dependencies that diversely characterize the studied process of production and consumption of OP. It is easy to see the criteria of the parties have the properties of consistency and inconsistency. The first allows you to unite participants in development clusters, the second requires the introduction of mechanisms for reconciling conflicting interests [3, 4].

The proposed model allows forecasting changes both in the OP market and in the “consumer” economy under various environmental influences. This serves as the basis for the development of various development scenarios in both selected sectors. The instrumental basis of such a study is morphological analysis [3, 5].

**The development of a two-sector model of the market for educational products.**

Let us return to the scheme of the two-sector economic model presented in Fig. 1. Educational institutions, producing educational programs, need additional funds for development. In this regard, additional forms of relations arise, as a result of which consumer savings turn into investment resources of OP producers (Fig. 2). This logic of the functioning of the subjects of market activity has not yet been worked out for the OP market and has prospects, both for the development of theory and for practical applications.

Indeed, the lending process in the general case can occur in three ways:

1) Manufacturers take loans from financial intermediaries (primarily from banks), to which consumers provide their savings. A financial market is being formed.

2) Consumers under a contract with the manufacturer pay for the ordered OP.

3) Manufacturers issue securities that are purchased by consumers who have savings, but do not necessarily need EP now, and in this educational institution. The status of an educational institution, the success of its activities serve as a catalyst for profitable investments of free funds.

In the first case, the relationship between consumers and producers is established indirectly - through the financial market, in the second and third directly. The third case characterizes the aggressive policy of educational institutions on the market of EP: the reputation, embodied in securities, is brought to the market.

For the entire educational system of the country, the considered model of organizing the provision of EP is obviously not suitable. Like every other model, it has a number of stringent restrictions on the adequate application (see "model assumptions" above). But at limited intervals, in a limited area, such a model is quite functional. At least it can give an approximation of the solution.

**Conclusions:**

1. The economic category “educational products” has been introduced.
2. The market for educational products is described in the framework of the classical formulation of a two-sector model of the economy.

3. A toolbox of the theory of active systems and morphological analysis is proposed for the study of difficult formalized processes of economic development.

4. Within the framework of the two-sector model of the economy, the formation of the financial market for educational products was commented on.

Literature:

ABSTRACT
The proposed article is devoted to certain aspects of measuring the effectiveness of implementation development strategies of the economic subject. One of the enterprise-specific structures of St. Petersburg, operating in the format of small and medium-sized businesses for a long time on the market of biomedical and pharmaceutical products of the Northern capital, was chosen as the object of research. The studied company in its