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ECONOMIC EFFICIENCY OF OUTSOURCING IN THE FIELD OF
TRANSPORT AND LOGISTICS
ЭКОНОМИЧЕСКАЯ ЭФФЕКТИВНОСТЬ АУТСОРСИНГА В СФЕРЕ
ТРАНСПОРТА И ЛОГИСТИКИ

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Abstract. In the modern economy, the aggregate supply of "goods and services", i.e., the services (transportation, storage of goods, warranty service, etc.) associated with the purchase of a good, along with the goods to the buyer, is becoming increasingly important. Thus, in addition to producing or selling goods, businesses are also engaged in the delivery of products, customer service, and other logistics operations, resulting in prices that are not only close to the cost of production, but can exceed it several times. That is, businesses are becoming increasingly multifaceted. This requires a wide variety of resources and skills of employees, which complicates the management process and the organizational structure of the enterprise.

Аннотация. В современной экономике все большее значение приобретает совокупное предложение «товаров и услуг», т. е. услуг (транспортировка, хранение товаров, гарантийное обслуживание и т. д.), связанных с приобретением товара, а также товара покупателю. Таким образом, помимо производства или продажи товаров, предприятия занимаются также доставкой продукции, обслуживанием клиентов и другими логистическими операциями, в результате чего цены не только приближаются к себестоимости

продукции, но и могут превышать ее в несколько раз. То есть предприятия становятся все более многопрофильными. Это требует самых разнообразных ресурсов и навыков сотрудников, что усложняет процесс управления и организационную структуру предприятия.

Keywords: outsourcing, logistics, economics, services

Ключевые слова: аутсорсинг, логистика, экономика, услуги

Введение. As a result, multifunctional enterprises have begun to concentrate available resources into a limited number of processes. These functions, which are not related to the main activity, are gradually transferred to other enterprises within the framework of outsourcing. It should be noted that the entrusted functions are in most cases the main activity of the receiving enterprises (outsourcers).

Основная часть. The literal meaning of outsourcing is "sourcing", and it's a combination of "out" and "outside" and "source". In economic terminology, this means outsourcing some or all of the functions of an enterprise to an outside contractor.

The term was first used in March 1979 in an article about the British automotive industry. In the Soviet Union and other socialist countries, a phenomenon similar to outsourcing has been known since the 1960s and 1970s, and it was defined as a system of complementary specialized industries. So, it's on this basis that large projects have been built to create competitive products with low cost-effectiveness.

- Outsourcing, in general, is divided into two types:

– Outsourcing of production functions. YA transfer some or all of the industrial functions to specialized organizations. For example, Hewlett-Packard does almost no manufacturing itself, which means it outsources its entire industrial functions to contractors.

Therefore, in recent years, companies offering consulting, insurance, commercial mediation and information services have become more and more popular.

As for the theory and practice of logistics, it uses the term "outsourcing" as well as its synonyms, for example, "contract logistics".

1. According to the proposal of the World Trade Organization, the types of outsourcing can be classified according to the following criteria:

2. depending on the geographical location of service contractors. According to this criterion, the outsourcing enterprise can be located within the country, in which case this outsourcing is called "onshore" or it can

operate outside the country, that is, at the international level, in which case outsourcing is called "offshore";

3. according to the participation in the executor's property. Accordingly, there may be outsourcing within the firm and outsourcing of independent firms. The difference is whether the enterprise is a partner in the executor's property and can control its activities.

4. Depending on the type of activity being commissioned - production, service, logistics, production outsourcing, service outsourcing and logistics outsourcing.

The effectiveness of outsourcing transport functions depends on several factors, the main ones of which are:

- reduction of total costs and changes in the organization's cost structure (reduction of transport costs);

- improving the quality of transport services (adherence to the delivery schedule, monitoring the movement of goods on the road, reducing the number of errors, quickly correcting errors, etc.);

- increasing the efficiency of the transport and logistics infrastructure (at the expense of the outsourcer's specialization in the provision of railway transport services, competent planning of transport flows, offering optimal logistics solutions).

The assessment of the economic efficiency of outsourcing work (services) is carried out by calculating the economic efficiency indicator (coefficient) according to the following formula, taking into account all types of risks arising from the use of outsourcing:

$$K_{\phi} = \frac{Z_{\text{сoб}}}{Z_{\text{aymc}} + Z_{\text{дон}}} I_{\phi O} I_{\text{IT}} I_{MO}$$

If the cost-effectiveness ratio is > 1 , then you are better off buying outsourcing services. If the coefficient is < 1 , it is preferable to implement the business process itself, because transferring it to an external organization does not bring benefits in the form of cost reduction.

The initial data for calculating these indicators are presented in Table 1.

Table 1 - The list of preliminary data for determining the coefficient of economic efficiency of outsourcing work (services) and business processes:

Indicator	Designation	The value of the indicator before the outsourcing of work (services).	The value of the indicator after outsourcing the work (services).	Document
Revenues from the sale of products, goods, works, services, billion soums	B	3438	3428	Form No. 2 (Appendix L, 23)
Average annual value of fixed assets, billion soums	ОПФ	4542	4532	Form 1 (Appendix I, 24)
Average number of employees, people	СЧП	13159	13089	Figure 69 gel (Appendix X, 25)
Material costs, billion soums	M3	3161	3152	Form No. 69-gel (prilogenia X, 25)
The costs of this type of work and services when the enterprise produces them, billion soums	З _{соб}	266	-	Figure 69 gel (Appendix X), OMTS delivery list (Appendix 26)
Costs of purchasing works (services) from an outsourcer, billion soums	З _{аутс}	-	258	OMTS Delivery List (Appendix 26)
Transition to outsourcing and additional expenses related to it in the future, billion soums	З _{доп}	-	-	-

To calculate the index of changes in the efficiency of using fixed assets, we use the following calculation formula:

$$I_{\Phi O} = \frac{\Phi O_1}{\Phi O_0} = \frac{B_1 / ОПФ_1}{B_0 / ОПФ_0}$$

Here, ΦO_0 , ΦO_{11} are fund productivity of fixed assets before and after outsourcing work (services);

B_0, B_1 - revenues from the sale of products, goods, works, services before and after the outsourcing of work (services);

$ОПФ_0, ОПФ_1$ - income from the sale of products, goods, works, services before and after the outsourcing of work (services).

To calculate the index of changes in the efficiency of the use of labor resources, we use the following calculation formula:

$$I_{\text{ИТ}} = \frac{\text{ИТ}_1}{\text{ИТ}_0} = \frac{B_1 / \text{СЧР}_1}{B_0 / \text{СЧР}_0}$$

Here:

$\text{ИТ}_0, \text{ИТ}_1$ productivity before and after outsourcing work (services).

$\text{СЧР}_0, \text{СЧР}_1$ average number of employees before and after outsourcing work (services).

To calculate the index of changes in the efficiency of the use of labor resources, we use the following calculation formula:

$$I_{\text{МО}} = \frac{\text{МО}_1}{\text{МО}_0} = \frac{B_1 / \text{МЗ}_1}{B_0 / \text{МЗ}_0}$$

Here, $\text{МО}_0, \text{МО}_1$ – are material productivity before and after outsourcing work (services);

$\text{МЗ}_0, \text{МЗ}_1$ – material costs before and after outsourcing work (services).

Indexes reflect the ratio of the efficiency of using the main resources of the organization before and after the outsourcing of work (services), which allows to increase the obtained efficiency (coefficient of economic efficiency) and prevent its decrease.

Using formulas 1-4, we calculate indices of change in efficiency of resource use.

$$I_{\phi O} = \frac{3428 / 4532}{3438 / 4542} = \frac{0,7564}{0,7569} = 0,9993 ;$$

$$I_{\text{ИТ}} = \frac{3428 / 13089}{3438 / 13159} = \frac{0,2619}{0,2613} = 1,0024 ;$$

$$I_{\text{МО}} = \frac{3428 / 3152}{3438 / 3161} = \frac{1,0875}{1,0876} = 0,9999 \cdot$$

Using the obtained calculations, we calculate the coefficient of economic efficiency of outsourcing work (services):

$$K_{\phi\phi} = \frac{266}{258} \cdot 0,9993 \cdot 1,0024 \cdot 0,9999 = 1,033$$

Since the cost-effectiveness ratio is > 1 , it means that it is economically feasible to outsource the supply services.

Summary. The calculated indices reflect the efficiency ratio of the use of existing resources of the organization before and after the outsourcing of services, which can increase this effect (coefficient of economic efficiency) and level it in the conditions of practical implementation.

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