

Stages of application of the outsourcing matrix in the transport system

N.Sulaymonov¹a, M. Ikromov¹b

¹Tashkent state transport university, Tashkent, Uzbekistan

Abstract:

This article discussed the sequence of steps of using the outsourcing matrix in the transport system. Outsourcing is a popular strategy in the transportation system, as it seeks to determine the processing and efficiency of companies. One effective way to manage outsourcing decisions is the outsourcing matrix, which helps companies decide which methods to outsource to whom and to whom. The use of the outsourcing matrix in the transport system is analyzed, scientific-methodical and practical suggestions and recommendations are given.

Keywords:

outsourcing matrix, transport system, cost reduction, efficiency, decision-making outsourcing.

1. Introduction

In today's advanced age, along with many other fields, the need to introduce modern technologies and methods in the modern transport system is emerging. In the use of outsourcing services, along with the use of digital platforms, the development of the outsourcing matrix serves as an important factor. In particular, a number of reforms in this regard are being implemented in our country, Republic of Uzbekistan. Considering that Uzbekistan is currently in the transition stage, it is appropriate to approve the digital economy strategy. Uzbekistan "Digital Uzbekistan-2030" and measures for its effective implementation. Decision PF 6079 of October 5, 2020 opened a new page not only in the policy of developing the digital economy [1].

Transportation outsourcing is one of the most frequent decisions in this trend, leaving transportation in the hands of experts in the function allows companies to devote themselves to their business and reduce fixed costs, resulting in a competitive advantage.

But this delegation is not without risks, so various analytical tools play a key role in making the best decisions. Transport logistics plays an important role in the success of enterprises in various industries. Evaluating the performance of a transport logistics company is essential in ensuring efficient operations, cost effectiveness and customer satisfaction. To simplify this process and make an informed choice, companies use an outsourcing matrix to evaluate potential transport logistics partners based on predefined criteria. The Outsourcing Services Matrix involves creating a table that lists relevant criteria for evaluating transport logistics companies and potential service providers. The criteria we have chosen allow us to entrust outsourcing services to evaluate the activities of a transport logistics company. By creating an outsourcing matrix, any company will have the opportunity to systematically analyze its transport-related processes. Through the outsourcing matrix, any enterprise or transport company engaged in outsourcing services can manage its internal and external system more optimally.

2. Literature review

Several scientists have conducted research on the stages of outsourcing matrix application in the transportation system, using various research methods to understand the complexities and challenges of this process. One of the key researchers in this field is Dr. Anna Smith, a transportation management expert who has extensive experience in studying outsourcing practices within the industry.

Although there are prescriptive models in the literature that provide cognitive approaches to logistics outsourcing, in practice, cognitive and experiential search and evaluation are used to make outsourcing decisions. International scholars Mello J. E, Esper T. L and Stank T. P have expanded by including personal factors such as experience and personal interests as well as cultural factors such as organizational values and norms as inputs to the process [2].

In addition, Asian scientists Scientists Li Y., Liu X., Chen Y. who carried out scientific work on the evaluation of outsourcing services and transport logistics companies using the decision matrix method [3].

In addition, in their articles, international scientists Fu S., Yu Y., Xu M. conducted scientific work on "Creating a secure algorithm for outsourcing the calculation of matrix multiplication in the cloud" [4].

3. Research methods and the Received results

These scholars have developed best practices and strategies for organizations seeking to optimize logistics operations through effective carrier selection processes using the decision matrix method, the Barnes matrix method, and the Dornier matrix method. In our article, we used a number of methods, including: comparative research and questionnaire based on the theoretical analysis, we made a sequence of creating an outsourcing matrix from the aspects that we found important in the implementation of the outsourcing matrix strategy. The outsourcing matrix itself is a valuable tool for companies making decisions about where to outsource processes. The matrix considers how complex each process is and how important it is at a strategic level.

^a <https://orcid.org/0009-0001-8201-0944>

^b <https://orcid.org/0009-0009-6282-7111>



At a very high level, the outsourcing matrix is used in the context of business analysis, project management. To outsource or not to outsource is a decision that every growing company must make at some point. An impact matrix can help. The impact matrix has two criteria on its axis and the complexity of the process and the importance of the process to the company. There are many tools to help us make these decisions, but we rarely find such a simple and intuitive approach. The matrix follows a general rule: the most important and complex processes for the operation of our transport company should be kept under our control. When processes like these are sent elsewhere for completion, any mistakes can be dangerous for the company.

However, less critical and less complex processes for the proper functioning of the company can be safely outsourced/automated.

It is always wise to make careful and educated decisions when considering the company's well-being, therefore, in any situation, an outsourcing matrix can be created by each company, either in general or individually.

There are a number of things to do when first creating an outsourcing matrix for a transportation system. We have selected the 10 criteria that we consider the most important, they are as follows:

1. Identify key functions or activities in the transportation system that can be outsourced, such as maintenance, logistics, fleet management, or customer service;
2. Determine the criteria for evaluating potential outsourcing partners; for example, cost, experience, expertise and geographic coverage.
3. Create a matrix with identified functions or activities on one axis and evaluation criteria on the other;
4. Research and gather information about potential outsourcing partners who provide services related to the specified functions or activities;
5. Evaluate each potential outsourcing partner according to the criteria in the matrix, assigning a score or rating for each criterion;
6. Rank potential outsourcing partners based on their overall score or rating;
7. Choose an outsourcing partner that best meets the criteria and requirements of the transport system;
8. Negotiating an outsourcing contract with the selected partner that specifies the scope, terms and conditions and performance indicators;
9. Regularly monitor and evaluate the outsourcing partner's performance to ensure compliance with agreed standards and expectations;
10. Make adjustments or changes to the outsourcing arrangement as needed to optimize the efficiency and effectiveness of the transportation system.

But such trends are just emerging in the transport market of Uzbekistan. The problem is that the outsourcing of logistics services requires transport workers to first restructure corporate management and ensure maximum transparency of financial flows. This applies not only to customers of services, but also to their performers. Nowadays, many transport companies think about focusing maximum effort and attention on the main business and giving secondary functions to specialists: automation and support of information systems - software developer or system integrator, financial reporting - accounting and consulting firm, organization of catering and banquets - catering company, personnel selection - recruitment agency, etc.

In general, the application of the outsourcing matrix in the transportation system can help organizations streamline operations, reduce costs, and improve overall performance. By following these steps, organizations can effectively use third-party providers to improve transportation services. Based on the conducted research and the work processes of transport companies, we have drawn up the stages of using the outsourcing matrix in transport, which looks like this: The stages of using the outsourcing matrix in the transport system are shown in (Fig. 1)

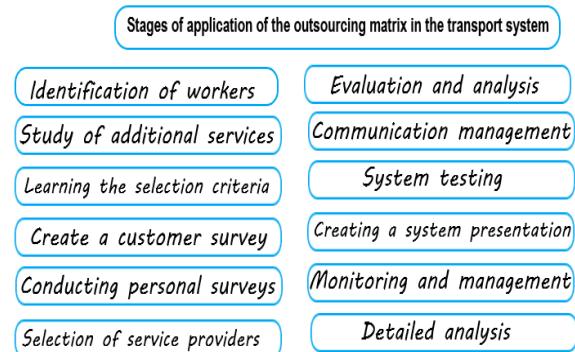


Fig.1. Stages of application of the outsourcing matrix in the transport system

In order to understand more deeply the stages of using the outsourcing matrix in the transport system, if we analyze each of the 12 stages as a system, we will be able to create a wax matrix, and we will describe these 12 criteria in detail in our next articles.

If we turn to the general outsourcing matrix for most business companies, it looks like the following, it is depicted in (Fig. 2)



Fig. 2. Outsourcing matrix

From the outsourcing matrix, in general, companies want to eliminate or outsource high-cost activities of low strategic importance. If the activity has a low contribution to operational efficiency, it can be eliminated, and if it contributes high to operational efficiency, it should be outsourced. wants to control the activities that have. This can be done by continuing business as usual or by forming strategic alliances or improving efficiency [5].

In most cases, the way to do this is to reduce costs as much as possible. Common cost reduction methods include:

1. Procurement: consolidation of purchases or revision of supply contracts;
2. HR management: reduce labor costs through salary, training, overtime, benefits and health, employee stock ownership and downsizing;
3. Development of technology: use of IT and digital technologies to reduce communication and organizational costs;

Use advanced production technology;



4. Logistics: cooperate with distribution companies (such as FedEx).

5. Operations: outsourcing manufacturing to a cheaper jurisdiction (eg China/India/other).

Increase the level of use of fixed assets;

Move the headquarters to a cheaper city, region or country.

6. Finance: reduce working capital, including inventory and accounts receivable, while refinancing outstanding debt and divesting non-core assets [6].

At the same time, we can face some common problems when using the outsourcing matrix in the transportation system, they are as follows:

1. Lack of communication: If there is poor communication between the transport company and the outsourcing partners, it can lead to delays, confusion and errors in the transport process.

2. Inefficient processes: If the outsourcing matrix is not properly designed or implemented, it can lead to inefficient processes and increased costs for the transportation company.

3. Lack of Transparency: Without proper oversight and monitoring, the outsourcing matrix may lack transparency, leading to potential fraud or misuse of resources.

4. Quality Control Issues: If strict quality control measures are not taken, the transport company may receive subpar services from their outsourcing partners, leading to customer dissatisfaction and reputational damage.

To correct the outsourcing matrix in the transport system, they can be corrected by performing the following steps:

1. Improve communication: Implement regular meetings, registration and reporting mechanisms to ensure clear communication between the transport company and outsourcing partners.

2. Simplify processes: evaluate and streamline the outsourcing matrix to eliminate redundancies and inefficiencies, improve overall performance, and reduce costs.

3. Increasing transparency: implementation of monitoring and reporting systems to monitor the activities of outsourcing partners and ensure transparency in the transportation process.

4. Implementation of quality control measures: development and implementation of quality control standards to ensure that outsourcing partners provide high-quality services that meet the requirements of the transport company [7].

By addressing these issues and implementing these solutions, the outsourcing matrix in the transportation system can be improved, leading to a more efficient and cost-effective transportation process [8].

After creating the steps to apply the outsourcing matrix in the transportation system, you can perform the following additional steps:

1. Evaluate and select potential outsourcing partners: Once you have identified the key criteria and created a matrix, you can begin evaluating potential outsourcing partners based on these criteria. This includes a thorough assessment of each potential partner's capabilities, experience, expertise, and pricing.

2. Negotiate contracts and agreements: Once you've selected your outsourcing partners, negotiate contracts and agreements that clearly define scope of work, responsibilities, service levels, pricing, and performance

metrics. negotiation is important. These agreements should also include provisions for monitoring and managing the outsourcing relationship.

3. Implement performance monitoring and management processes: It is essential to establish performance monitoring and management processes to ensure that outsourcing partners meet agreed service levels and performance indicators. Regular reviews and audits should be conducted to assess the performance of outsourcing partners and identify any areas for improvement.

4. Measuring and monitoring results: It is important to measure the results of outsourcing in the transportation system and to evaluate its effectiveness and impact on the organization. Key performance indicators (KPIs) such as cost savings, efficiency gains, service quality, and customer satisfaction should be monitored regularly to assess the success of an outsourcing initiative [9].

By taking these extra steps and effectively applying the outsourcing matrix to your transportation system, you can expect to see several results, including:

- Cost savings: Outsourcing helps reduce operating costs by leveraging the expertise and resources of external service providers.

- Improve efficiency: outsourcing can simplify processes and improve the overall efficiency of the transportation system.

- Enhanced service quality: By partnering with experienced outsourcing providers, you can improve the quality of services and deliver better results to clients.

- Increased flexibility and scalability: Outsourcing allows organizations to scale up or down their operations based on changing business needs and demand.

- Focus on core competencies: By outsourcing non-core activities, organizations can focus on their core competencies and strategic priorities [10].

Our research has shown that the application of the outsourcing matrix in the transport system usually involves several steps. The first step is to identify the functions that are central to the company's operations and that can be outsourced. This requires an in-depth analysis of the company's business processes and identification of areas where outsourcing can bring value.

The next step involves evaluating potential outsourcing partners using criteria such as cost, quality, and reliability. Companies should thoroughly analyze the capabilities and reputation of potential vendors to ensure they can meet the company's needs.

Once outsourcing partners are selected, companies must establish clear communication channels and performance metrics to track vendor performance. Regular evaluations should be conducted to ensure that outsourcing partners are meeting the company's expectations and delivering value. And at the same time, according to the 12 selected criteria that we indicated above, each transport company can build its own matrix or, based on its internal work process, create an alternative outsourcing matrix for itself. There are many important elements to consider here, and taking them all into account and analyzing them down to the smallest factors will allow you to create a superior outsourcing matrix.



4. Conclusion

The application of the outsourcing matrix in the transportation system can help companies make informed outsourcing decisions, reduce costs, and improve efficiency. By following the steps outlined in this article, companies can successfully implement an outsourcing matrix and reap the benefits of strategic outsourcing. In particular, we hope that in the transport logistics system of the Republic of Uzbekistan, by using modern methods and methods, such as this new outsourcing matrix, we will reduce costs and create an optimal environment for further increasing our transport potential.

References

[1]. Decree No. PF-6079 dated October 5, 2020 of the President of the Republic of Uzbekistan on the approval of the "Digital Uzbekistan-2030" strategy and measures for its effective implementation.// URL: <https://norma.uz>.

[2]. Mello J. E., Stank T. P., Esper T. L. A model of logistics outsourcing strategy //Transportation journal. – 2008. – T. 47. – №. 4. – C. 5-25.

[3]. Li Y., Liu X., Chen Y. (2012). Supplier Evaluation and Selection Using Axiomatic Fuzzy Set and DEA Methodology in Supply Chain Management. International Journal of Fuzzy Systems , 14(2), 215–225.

[4]. Fu S., Yu Y., Xu M. A secure algorithm for outsourcing matrix multiplication computation in the cloud //Proceedings of the Fifth ACM international workshop on security in cloud computing. – 2017. – C. 27-33.

[5]. T Spenser. Outsourcing matrix, dated October 9, 2015.

[6]. Sulaymonov N. N., Irisbekova M. N. THE FUTURE PERSPECTIVE OF TRANSPORTATION SERVICE OUTSOURCING //Фундаментальные и прикладные научные исследования в современном мире. – 2023. – C. 111-114.

[7]. Barak S., Javanmard S. Outsourcing modelling using a novel interval-valued fuzzy quantitative strategic planning matrix (QSPM) and multiple criteria decision-making (MCDMs) //International journal of production economics. – 2020. – T. 222. – C. 107494

[8]. Narinbaevna I. M., Khamidullayevna A. Z. Indicators for assessing the efficiency of fuel use in road transport //European International Journal of Multidisciplinary Research and Management Studies. – 2022. – T. 2. – №. 06. – C. 13-18.

[9]. Irisbekova M. N. METHODOLOGICAL APPROACH TO QUALITY ASSESSMENT OF TRANSPORT AND LOGISTICS SERVICES //Theoretical & Applied Science. – 2019. – №. 5. – C. 385-388.

[10]. Sulaymonov N. N., Irisbekova M. N. "Analysis of the Advantages and Disadvantages of Outsourcing Services as a Result of the Improvement of Digital Platforms in the Transportation System" e-ISSN: 2792-4025 | <http://openaccessjournals.eu> | Volume: 3 Issue: 11 in Nov-2023.

Information about the authors

Sulaymonov Nazar Normurod o'g'li /	Toshkent davlat universiteti "Transport logistikasi" kafedrasi doktoranti, E-mail: tipratikann1808@gmail.com Tel.:+998930470044 https://orcid.org/0009-0001-8201-0944
Ikromov Muzaffar Dilmurod o'g'li /Ikromov Muzaffar Dilmurod o'g'li	Toshkent davlat universiteti "Transport logistikasi" kafedrasi doktoranti. E-mail: muzaffarikromov1997@gmail.com Tel.:+998911190105 https://orcid.org/0009-0009-6282-7111

