

ACCOUNTING AND ECONOMIC ASPECTS OF THE CALCULATION OF THE INTEGRATED ASSESSMENT INDEX OF OUTSOURCING COMPANIES



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Abstract. Every day, businesses are increasingly using the services of a third-party firm, earning a profit by reducing the cost of maintaining bookkeeping and obtaining better accounting services. The volume of services that outsourcing firms can provide is limited only by the financial capacity of the customer. The preconditions for the introduction of outsourcing in Ukraine and the problem points while delegating the accounting functions to the outsourcing company, which hinder its rapid development, are determined.

The purpose of the study is to study the conceptual bases of accounting outsourcing, substantiation of accounting and economic aspects of the calculation of the integrated assessment index of outsourcing companies and features of its practical implementation by Ukrainian enterprises.

The framing for theoretical approaches to the implementation of accounting outsourcing to state-sponsored units for increased performance and efficiency of functioning have been outlined; the multiplicative method of calculating the integrated assessment index due to the involvement of the qualification ratio of the outsourcing company in the calculation has been improved; the toolkit of the integrated assessment index of outsourcing companies for the selecting the counterparty when concluding a contract on the accounting outsourcing services has been offered.

Keywords: *outsourcer, accounting outsourcing, economic effects, accounting, integrated assessment index of outsourcing companies, multiplicative technique, customer, financial reporting.*

Introduction

The accounting outsourcing market is growing rapidly. Every day, businesses are increasingly using the services of a third-party firm, earning a profit by reducing the cost of maintaining bookkeeping and obtaining better accounting services. The volume of services that outsourcing firms can provide is limited only by the financial capacity of the customer. The range of services of outsourcing firms is broadened: from the initial fixation of business operations to the complex organization of accounting process, preparation of financial, statistical and tax reporting, as well as the development of internal regulatory documentation of the company (accounting policy, other internal standards). The purpose of this process is to rationally use available resources and prioritize efforts on the main type of financial and economic activity. This gives grounds for stating the relevance of the studied topic under in today's realities.

Formulating the goals of the article. The purpose of the study is to study the conceptual bases of accounting outsourcing, substantiation of accounting and economic aspects of the calculation of the integrated assessment index of outsourcing companies and features of its practical implementation by Ukrainian enterprises.

Research methodology. The study used a set of general and special research methods: abstract-logical method (substantiating the accounting and economic aspects of calculating the integrated valuation of outsourcing companies), induction, deduction, observation method, functional-cost and statistical analysis (through the study of theoretical and methodological

principles of generating and implementation of accounting outsourcing in practice); index method (through the determining the proportion of each of the estimated figures); economic-mathematical (for the practical modeling of performance indicators), graphical (for visual display of the results obtained during the study), hierarchy (for the algorithm development for selecting outsourcers), etc.

Research results. The business activity involves daily solving of current problems: accounting, transportation of goods, use of software, etc. Most entrepreneurs hire specialists to carry out such operations, which involves considerable cash costs. Businesses are reluctant to retain employees not directly related to the main mission of the enterprise. Outsourcing can solve this task (Nazarenko & Surovytska, 2018).

Finding a conscientious outsourcer is extremely important. It is worth identifying three or five most suitable companies out of many. To do this, it is necessary to analyze the companies on the market today, paying special attention to the key factors: reputation, reliability, the experience of successfully implemented projects, positive user feedback, etc.

Another essential feature of the outsourcer is its quick adaptation to the characteristics and specifics of the enterprise.

The professional level of the employees of such a firm should be at a high level, as evidenced by available certificates and intermittent certification, advanced training, etc.

No business can do without an accounting unit. All firms, regardless of the organizational form, must submit timely reports to the supervisory authority. The accounting department must timely reflect business operations; provide senior management with the operational information needed for the decision-making. Only highly qualified, competent specialists who are indisputably good at specifics of the enterprise activity should be hired. If you hire an unskilled employee, the cost of such a decision can be quite high. For these reasons, more and more companies are turning to the possibility of outsourcing accounting services. Using such an opportunity frees the company from having to hire employees, check their professional level and competence.

Under the conditions of aggravating competition and raising demands for production quality, a necessity for more detailed and proficient information support of the management system is emerging. The required level of analyticity and sufficiency of information is ensured by proper organization of management accounting, which is aimed at its timely formation for the managers to make informed decisions in terms of resource conservation; fulfillment of contractual obligations, diagnostics of expediency of production expansion of certain types of products or its re-profiling, evaluation of profitability factors, etc. (Drobyazko, Shapovalova, Bielova, Nazarenko & Yunatskyi, 2019).

Deciding whether to use accounting outsourcing at your business is difficult for the owner or the manager. The latter should understand that, in the case of a positive decision, cooperation with the outsourcing firm should be of a long-term nature. Therefore, such a decision will be strategic.

When making decisions about the use of accounting outsourcing, the management should have a thorough grounding for its appropriateness. Over time, the effectiveness of outsourcing can change to a greater or lesser extent, influenced by external and internal factors. Management needs to determine the cost-effectiveness of accounting outsourcing to determine whether it is possible to benefit and save all resources from such collaboration.

A study of different authors' approaches made it clear that today there is no methodology to enumerate the economic effects of outsourcing. Some techniques are too time-consuming to calculate, others are rather simplified, general and they do not fully reflect all costs, while others do not clearly define the criteria for the calculation. In our opinion, it is advisable to use the equation proposed by L. O. Ligonenko and Yu. Yu. Frolova (2005). This model compares the cost of doing the business process on its own and the possible additional income with the total running costs and losses when buying this service of the outsourcer:

$$CD + PE_a = TC_a + CST_a \quad (1)$$

where CD is the cost of maintaining the business process on its own;

PE_a is potential extra income;

TC_a is total current expenses;

CST_a is the cost of purchasing a service from an outsourcing firm [3].

If the first part of the equation exceeds the second, outsourcing is appropriate for the enterprise.

Outsourcing firms offer consumers many options for collaboration, such as different options for sharing information and documents. It can be the information transfer through computer programs that can be outsourced specifically to each client, actual delivery by a courier, or transfer of information and documents to the outsourcing company via email, social networking, and telephone.

Some outsourcing firms develop their systems for everyday accounting in small and medium-sized businesses. Such developments are usually based on well-known accounting applications (which outsourcers use on a franchise basis) though significantly adapted to the needs of small and medium-sized businesses. In these systems, you can organize HR management, payroll, maintain cash and bank records, handle primary documentation, invoicing, control balances, prepare reports, and more.

Once it has been decided, which accounting areas are expedient to outsource, it is necessary to decide on which accounting outsourcing company to choose.

Under the modern complicated global socioeconomic conditions of enterprise, functioning the peculiar feature of its management is taking into account multicriteria that is realized while developing economic and mathematical models and is provided by these methods' potential. The expediency of this approach is proved by the practice of enterprise management based on the assessment of enterprise activity by means of the Balanced Scorecard system (Malyarets, Babenko, Nazarenko & Ryzhikova, 2019).

Today, several outsourcing selection models provide single or multi-criteria approaches. Accordingly, in single-criteria models, one parameter or metric is selected as the basis of the assessment, such as cash savings. Then the outsourcer is selected, which allows the company to save the maximum amount of money that is its services are the cheapest on the market. One type of single-criteria approach is a fuzzy method of the assessment of economic effects when performance indicators are given as intervals and not by a specific number, but by a certain interval (Liakhovych, 2017).

This method makes it possible to obtain more accurate results, since in actual situations, only the limits of the values of the analyzed indicator are known, therefore, the use of interval indicators can be justified in terms of ease of use.

However, a significant drawback of single-criteria methods is that single-criterion models do not take into account other features of potential outsourcers, such as the availability of specialized equipment and qualified personnel, market experience, a business reputation, and other characteristics that may most often have significant value.

The above-mentioned disadvantage is not typical for multi-criteria methods, where the integrated indicator Q , which is calculated by the additive (most often) or multiplicative method, is used for the evaluation of outsourcers. In the case of additive methods, the following formula is applied [2].

$$Q_j = \sum_{i=1}^n w_i K_{ij}, \text{ when } j \in (1;m), \sum_{i=1}^n w_i = 1, \quad (2)$$

The multiplicative technique is theoretically based on the calculation of the integrated assessment index as the average geometric content of the individual criteria (formula 3).

$$Q_j = \prod_{i=1}^n w_i K_{ij} \quad (3)$$

where n is the number of assessment parameters;

j is the number of outsourcing companies being assessed;

w_i is the specific weight of the i -th parameter;

K_{ij} is the value of the i -th parameter for the j -th outsourcer.

Thus, according to this method, the company that has the maximum value of the index is selected

$$Q_j = Q_{max} \text{ when } K_{ij} \geq K_i^{min}$$

where K_i^{min} is the minimum permissible value of the i -th parameter.

Thus, we propose to use a multiplicative methodology to calculate the Q_j integrated assessment index and to select a counterparty when contracting to provide accounting outsourcing services from five available companies (Formula 3).

When using this technique, the contract should be awarded not only to the outsourcer who has set the minimum price for the services but to the most reliable one (that is, whose probability of refusing to cooperate is minimal) and who is most likely to be able to achieve the tasks he has been given. This approach to the selection of operators is more in line with the essence of outsourcing, which purpose is not to maximize the effect of the firm's cooperation with the outsourcer on a specific outsourced project but to ensure the achievement of planned results by the economic entity as a whole.

According to the study, the integrated assessment index has five components:

- the cost of outsourcing services (determined according to the price lists of outsourcing companies for small business entities that pay value-added tax, use the general tax system, and the number of business transactions per month is not more than 50);
- the quality of outsourcing (average score of service users received through the questionnaire, 1-10 points);
- the qualification of the outsourcing company (proposed by the author (years in the market of outsourced services * number of professional staff / 100));
- recommendations of service customers (pieces);
- compliance with the contract's terms and conditions (% of concluded contracts).

The input indicators for determining the integrated assessment index of the five surveyed outsourcing firms are given in Table. 1.

Table 1.

Input data for the calculation of the integrated assessment index of outsourcing companies

Outsourcing company	Cost of outsourcing services, UAH / month	Outsourcing quality (average score of service users received through the questionnaire, 1-10 points)	Qualification personnel ratio of the outsourcing company (years in the service market * number of professional staff / 100)	Recommendations of service customers, pieces	Compliance with the contract's terms and conditions, % of concluded contracts
1	7500	9,90	15,20	98	96
2	6200	9,30	3,71	85	90
3	5500	8,25	1,76	79	85
4	4250	8,30	1,32	82	83
5	4000	7,85	0,15	10	81

As far as the components such as quality of outsourcing, qualification of the outsourcing company, recommendations of the customers and the percentage of compliance with the contract's terms and conditions are stimulus indicators, their impact on the integrated assessment index is calculated according to formula 4.

$$K_{ij} = \frac{P_{ij}}{1/N \sum^n P_{ij}} \quad (4)$$

The constituent cost of outsourcing services is a disincentive index, and its impact on the integrated assessment index is calculated by formula 5

$$K_{ij} = \frac{1/N \sum^n P_{ij}}{P_{ij}} \quad (5)$$

where P_{ij} is the i-th index of the j-th outsourcer;

$1/N \sum^n P_{ij}$ is the arithmetic mean of simple levels of the row of the i-th indicator for the j-th outsourcer;

N is the total number of outsourcers involved in the research.

The specific gravity of each of the separated parameters (w_i) and the intermediate results of the calculations performed for the studied economic entities ($w_i * K_{ij}$) are presented in Table. 2

Table 2.

Intermediate calculations of the integrated assessment index of outsourcing companies

Assessment parameters	Cost of outsourcing services, UAH / month	Outsourcing quality (average score of service users received through the questionnaire, 1-10 points)	Qualification personnel ratio of the outsourcing company (years in the service market * number of professional staff / 100)	Recommendations of service customers, pieces	Compliance with the contract's terms and conditions, % of concluded contracts
Specific gravity of the parameter	w_1 0,40	w_2 0,15	w_3 0,25	w_4 0,10	w_5 0,10
Outsourcing companies ($w_i * K_{ij}$)					
1	0,293	0,170	0,858	0,138	0,110
2	0,354	0,160	0,209	0,120	0,103
3	0,399	0,142	0,099	0,112	0,098
4	0,517	0,143	0,075	0,116	0,095
5	0,549	0,135	0,008	0,014	0,093

The effective indicators of the calculation of the integrated assessment index of outsourcing companies are presented in Fig. 1.

Business entities' performance in financial statements is expressed in thousands of UAH

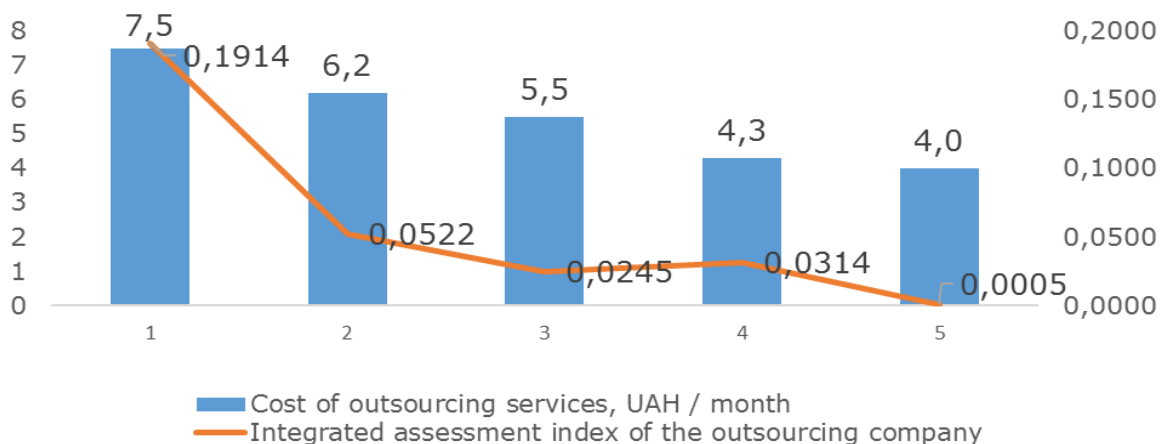


Figure 1 Effective indicators of the calculation of the integrated assessment index of outsourcing companies

To facilitate the informative value of the calculations, it is necessary to adjust the formula 2 (multiply the value of the integrated assessment index for all outsourcing companies by 1000) (formula 6).

$$Q_j = \prod_{i=1}^n w_i K_{ij} * 1000 \quad (6)$$

These calculations give grounds for admitting that the cost of accounting outsourcing services at the largest share of this parameter is not decisive when choosing an outsourcing company.

Thus, companies 1 and 2 have a much higher value of the integrated assessment index (having a high cost of services). Company 4, in its turn, at a lower cost of services has a higher integrated assessment index than company 3.

Thus, the proposed algorithm for selecting outsourcers is better at reflecting the nature of outsourcing and it will allow the client company to get full benefits of cooperation with an external operator of this type of service.

Based on the above-mentioned, the technique allows identifying business processes for outsourcing, to analyze potential outsourcers and to evaluate the efficiency and feasibility of accounting outsourcing, which is not only of academic interest but also of great practical value.

Conclusions

In the course of the study, a substantive interpretation of the actual scientific issue of substantiation of accounting and economic aspects of the calculation of the integrated assessment index of outsourcing companies and features of its practical implementation by Ukrainian enterprises was identified. The framing for theoretical approaches to the implementation of accounting outsourcing to state-sponsored units for increased performance and efficiency of functioning have been outlined; the multiplicative method of calculating the integrated assessment index due to the involvement of the qualification ratio of the outsourcing company in the calculation has been improved; the toolkit of the integrated assessment index of outsourcing companies for the selecting the counterparty when concluding a contract on the accounting outsourcing services has been offered.

The calculations make it possible to recognize that the cost of accounting outsourcing services is not decisive when selecting an outsourcing company.

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