



UDC 334:35.072.2

**Kateryna Astafieva**

PhD (Economics), Associate Professor,
Kryvyi Rih National University,
11 Vitaly Matusevych Str.,
Kryvyi Rih, 50027, Ukraine
ksantiy@i.ua
ORCID ID:
<http://orcid.org/0000-0002-3418-7622>

Victoria Adamovska

PhD (Economics), Associate Professor,
Kryvyi Rih National University,
11 Vitaly Matusevych Str.,
Kryvyi Rih, 50027, Ukraine
02vika0211@gmail.com
ORCID ID:
<http://orcid.org/0000-0001-8911-1388>

Volodymyr Ilchenko

PhD (Economics), Associate Professor,
Kryvyi Rih National University,
11 Vitaly Matusevych Str.,
Kryvyi Rih, 50027, Ukraine
ilchenko.va@gmail.com
ORCID ID:
<http://orcid.org/0000-0002-1167-3708>

Methodological approach to evaluate economic effect of outsourcing under public management

Abstract. The purpose of this article is to investigate outsourcing under public management. We studied the essence of the outsourcing and analysed models of its life-cycle. The term «public outsourcing» was introduced as the element of first stage of outsourcing life-cycle. Economic effect of the outsourcing under public management was measured as the difference between growth of the Earnings before interest and tax (EBIT) and expenses on contracting of the outsourcer. The latter includes expenses on government control, represented by public management. The notion of outsourcing is studied, and the notion of public outsourcing is introduced. The model of public outsourcing life-cycle is developed. Authors defined value of contracting the outsourcer, including initial expenses and associated expenses on monthly basis. Specific emphasis was given to expenses to oversee of outsourcer's activities. Proposed methodology for assessment of the economic effect of outsourcing is unique as it applies expenses for organising of public control; this particular feature of methodology is represented by the public outsourcing. An application of such methodology allows to properly answer the question if enterprise under public management should contract an outsourcer. Results presented in the article are valuable to support decision-making while defining advisability of contracting an outsourcer. For example, actual expenditures on the outsourcer contracting for the next planned period could equal zero, which signifies successful cooperation with the outsourcer. We approbated the methodology at the PJSC «Central Mining and Concentration Company», the main activities of which consist of iron ore mining, processing, and production of iron ore concentrate and ore pellets.

Keywords: Outsourcing; Public Outsourcing; Outsourcing Life-cycle Model; EBIT; Expenses; Economic Impact; Public Management

JEL Classification: C13; C52; D61; H11; M21

DOI: <https://doi.org/10.21003/ea.V164-17>

Астаф'єва К. О.

кандидат економічних наук, доцент, факультет економіки та управління бізнесом, Криворізький національний університет

Адамовська В. С.

кандидат економічних наук, доцент, факультет економіки та управління бізнесом, Криворізький національний університет

Ільченко В. О.

кандидат економічних наук, доцент, факультет економіки та управління бізнесом, Криворізький національний університет

Методичні підходи до оцінки економічного ефекту від залучення аутсорсингу за умови врахування публічного управління

Анотація. Метою статті є дослідження сутності аутсорсингу на предмет участі органів державної влади в процесі його залучення. Визначено сутність публічного аутсорсингу та проаналізовано моделі його життєвого циклу. Запропоновано використовувати термін «публічний аутсорсинг» та розглядати публічний аутсорсинг як елемент першого етапу у моделі життєвого циклу. Висунуто пропозицію щодо оцінювання економічного ефекту від залучення аутсорсингу за умови врахування публічного управління як різницю між приростом ЕБІТ та витратами, пов'язаними з процесом залучення аутсорсера. Останні включають у себе втрати на забезпечення урядового контролю, а саме - забезпечення публічного управління. Методи, які було використано в статті: систематизація (для характеристики термінів «аутсорсинг» і «публічний аутсорсинг»), узагальнення (з метою дослідження моделей життєвого циклу аутсорсингу та визначення економічного ефекту від його залучення). Інформаційною базою дослідження є наукові дослідження феномену аутсорсингу та розроблені моделі його життєвого циклу. У статті розглянуто моделі життєвого циклу аутсорсингу, визначено, що жодна наявна модель не враховує складову публічного управління. Досліджено поняття аутсорсинг та надано визначення терміну «публічний аутсорсинг». Охарактеризовано модель життєвого циклу включно з публічним аутсорсингом. Запропоновано визначати вартість залучення аутсорсингу із урахуванням первинних витрат, а також витрат, які накопичуються кожного місяця. Okремо виділено витрати на контроль за діяльністю підприємства-аутсорсера. Наведено методику оцінки економічного ефекту від використання аутсорсингу, яка, на відміну від інших моделей, враховує витрати на організацію державного контролю, вираженого через забезпечення публічного аутсорсингу. Використання зазначеної методики надасть можливість охарактеризувати доцільність залучення аутсорсингу на підприємстві за умови державного контролю. Результати проведеного дослідження дають можливість обґрунтувати прийняття рішення щодо залучення аутсорсингу.

Ключові слова: аутсорсинг; публічний аутсорсинг; моделі життєвого циклу аутсорсингу; ЕБІТ; витрати; економічний ефект; публічне управління.

Астафьева Е. А.

кандидат экономических наук, доцент, факультет экономики и управления бизнесом, Криворожский национальный университет

Адамовская В. С.

кандидат экономических наук, доцент, факультет экономики и управления бизнесом, Криворожский национальный университет

Ильченко В. А.

кандидат экономических наук, доцент, факультет экономики и управления бизнесом, Криворожский национальный университет

Методические подходы к оценке экономического эффекта от привлечения аутсорсинга с учетом публичного управления

Аннотация. Целью статьи является исследование сущности аутсорсинга на предмет участия органов государственной власти в процессе его привлечения. Определить сущность общественного аутсорсинга и проанализировать модели его жизненного цикла; предложить использовать термин «общественный аутсорсинг» и включить его в первый этап модели жизненного цикла; выдвинуть предложение по оценке экономического эффекта от привлечения аутсорсинга при учете публичного управления как разницу между приростом EBIT и расходами, связанными с процессом его привлечения. Последние определяются с учетом затрат на правительственный контроль. Методы, которые были использованы в статье: систематизация - для характеристики срока аутсорсинга и общественный аутсорсинг, обобщения - с целью исследования моделей жизненного цикла аутсорсинга и определения экономического эффекта от его привлечения. Информационной базой исследования являются научные работы в направлении аутсорсинга и моделей его жизненного цикла. В статье рассмотрены модели жизненного цикла аутсорсинга, определено, что ни одна модель не учитывает составляющую публичного управления. Исследовано понятие «аутсорсинг» и дано определение термина «общественный аутсорсинг». Охарактеризованы модели жизненного цикла, принимая во внимание общественный аутсорсинг на его первом этапе. Определены стоимость привлечения аутсорсинга с учетом первичных затрат, а также затрат, которые накапливаются каждый месяц. Отдельно выделены расходы на контроль за деятельностью предприятия аутсорсера. Приведена методика оценки экономического эффекта от привлечения аутсорсинга, которая, в отличие от существующих методик, учитывает расходы на организацию государственного контроля через обеспечение общественного аутсорсинга. Использование указанной методики позволит охарактеризовать целесообразности привлечения аутсорсинга на предприятии при условии государственного контроля. Результаты проведенного исследования дают возможность обосновывать принятия решения о привлечении аутсорсинга.

Ключевые слова: аутсорсинг; общественный аутсорсинг; модели жизненного цикла аутсорсинга; EBIT; расходы; экономический эффект; публичное управление.

1. Introduction

Modern economy precludes modernization of industrial production to ensure its adaptability and flexibility. Outsourcing emerges as a tool to enhance enterprises' competitiveness. Among scholars across the globe the search for tools to increase the profits of business and to decrease expenses remains of particular interest; and specific emphasis is placed on possibility to transfer certain operations or activities to specialised companies with high level of expertise in respective area. To attain this goal it is common practice to revert to the outsourcing, which thus emerges as a tool for optimisation of the expenses and increase of the profits.

To have a precise evaluation of effect of the outsourcing it is important to assess impact of the external factors, especially role by the state control over compliance and legality of business activities and production operations, transferred to another party - so called «public outsourcing».

2. Brief Literature Review

The economic essence of the notion of outsourcing was studied by numerous scholars, including J.-L. Bravard, I. Ansoff, T. Peters. Ukrainian scholars also made substantial contribution to the study of this issue, especially works by R. S. Dubinskii, D. Mikhailov, O. I. Mykalo, V. V. Sherban, S. K. Ramozanova, Yu. G. Lysenko, E. E. Bisyanov. In practical term many consulting agencies, legal and service companies contributed to the development of the outsourcing in Ukraine.

The issue of outsourcing by central and regional governments, theoretical and methodological approaches to outsourcing projects were studied by such scholars as R. Alders, B. A. Anikin, L. A. Vasilenko, S. O. Kalendjan, M. Robson, I. L. Ruda, J. Heywood, A. V. Filatova, L. I. Jacobson and others. It is worth to note that above mentioned studies also approach the issue of contracting outsourcers as a part of optimisation of public sector activities.

Yet contemporary scholarly literature is vague to determine the notion of public outsourcing, as a phenomenon of direct participation by the state in the transfer ring of the processes or activities to the third party, in contracting of the outsourcer in order to optimise expenses and increase profits. Current academic debate also lacks single methodological

approach for introduction of public control mechanism into the outsourcing process.

3. Purpose of the article is to devise the approach to the theory of outsourcing life-cycle for the cases of public management of outsourcing, and to address specific value-related characteristics of the outsourcing and approaches to the assessment of its effectiveness. The latter is defined by relation between increase in profits to the expenses for contracting of the outsourcer.

4. Results

For better understanding of the issue we would start with the brief overview of definitions of outsourcing. Iuriev (2010) defines outsourcing as a way to upgrade effectiveness due to concentration of business activities in major operations while transferring all non-core operations to another parties - companies with specific competencies in those areas [1, p.7-8]. This definition gives perfect insight into phenomenon of outsourcing yet do not define its major goal; the latter is crucial to assess outsourcing effectiveness.

In Nowicki and Sobińska (2003) we found an interesting approach to the issue: outsourcing is depicted as the process of contraction out of some operations and functions of one company to another, to the company ably cope with the task in a better, more efficiently, faster and cheaper [4, p. 120]. While simple and sound, this definition still lacks understanding of main phases of outsourcer's contracting. Heywood (2004) points out that outsourcing is the transfer of internal division or several divisions, as well as all assets associated with them, to the outside service provider, committed to provide certain service in due time for negotiated price. This approach precludes long-term relations between the company and the contracted outsourcer, and throughout this period of time company is committed to pay for specific services. It is worth to note that usually definitions of the outsourcing are lacking any references to the role of government regulation of the process.

After we analysed different approaches to the issue of outsourcing, we may define outsourcing as the process of transfer of certain business activities to the third party capable of carrying them with due expertise and to deliver high quality product. This transfer precludes payment for the services

to the third party and is carried out to ensure optimisation of the expenses and increase of the profits. To refer government control over the process of the outsourcing we are introducing the notion of «public outsourcing», to denote the compliance of the contracting of the outsources to the established legal procedures.

Internationally there are several models of the outsourcing life-cycles in use, based on the adopted standards of the outsourcing: ISO 37500, The LSE, International Association of Outsourcings Professionals, International Data Corp., and National Outsourcing Association.

The most widespread model is ISO 37500. It was first adopted November 1, 2014. Several countries have joined ISO 37500 standardization instruments since, such as Bulgaria, Canada, Finland, France, Germany, India, Malaysia, Russian Federation, Republic of Korea, and others. Eight countries are participating in activities of the ISO 37500 Technical committee as observers, the can participate in discussions, pass their recommendations, but are not the part of the adoption of the documents. Most substantial support to the Technical committee was provided by the representatives of Canada, Denmark, Germany, India, the Netherlands, and Britain.

We also revised existing models of the outsourcing life-cycles. Contemporary approaches provide different sets of elements of the outsourcing process, but, as we already mentioned above, they all are poorly addressing the role by public management in the outsourcing. There is no clear definition of the public outsourcing in the scholarly literature, thus we elaborated our own. Public outsourcing is government control over compliance and legality of the procedure of transferring business activities to the outsourcer, government monitoring to avoid possible monopolization of goods and services markets, and inspection of the transferring agreements to avoid human rights violations.

Both companies planning to contract outsourcers as well as the state will profit from direct participation of the government representatives in the outsourcing process. Companies will get proofs of the compliance of all transactions they are going through, while transferring activities and operations to the outsourcer, which will ensure they will avoid penalties and legal disputes in future. Government's officials, in turn, will get complete and transparent information about activities of the national business entities, about their expenses and profits, position at the market, competitiveness, etc.

To enhance the outsourcing life-cycle model we would start with thorough analysis of the ISO 37500 model. On the Figure 1 we see the outsourcing life-cycle model based on the ISO 37500 standard. This standard was elaborated by the industries, services and standardisation experts, and is aimed to help those who already decide on the outsourcing option, and are considering management-led approach in the basic processes and leading experience.

It is worth noting that the model could be adapted to address specific needs of certain industry, international, national

or regional regulations (including labour law, environment protection requirements, safety and health protection requirements), regardless scale of the outsourcing and specific industries and sectors of the economy.

This model is based on the following principles:

- every stage of the outsourcing life-cycle is included into this model, model provides unified terminology and concept of the outsourcing process, cases of successful application of the model are provided.
- every stage and activity in the model is accompanied with detailed instructions, starting from initial proposal to the completion of the contract with the outsourcer.
- detailed budget of the introduction of the outsourcing should be elaborated. The budget have to take into consideration all expenses related to the future outsourcing, including every aspect of the outsourcer's participation in the process. Recurrent expenses for the outsourcing are permanent throughout whole period of the contract and should be adjusted if necessary.
- interaction between company and outsourcer should be mutually beneficial [2].

ISO 37500 model addresses issues of the outsourcing flexibility and adaptation to the constantly changing business environment. It is vital to analyse risks associated with the outsourcing to ensure beneficial partnership. This model is depicting ideal outsourcing relations with reference to every element of them: from the beginning of cooperation to its prolongation, with one or several services' providers, under service- or result-oriented agreement. Yet this model is lacking the understanding of the necessary government part in the process of contracting the outsourcer by the company. That is why it is necessary to adapt every stage of the outsourcing life-cycle in the model to the situation of government control over the process and to the compliance with the Ukrainian legislation.

To illustrate the abovementioned, we would like to review in details the fourth stage of the outsourcing life-cycle model - cost of its introduction.

To calculate the cost of introduction of the outsourcing, firstly, we need to define its main elements:

1. Expenditures related to the transfer of business process to the outsourcer. This value consists of the cost of search for best services provider in specific area (C_{search}) and spending on the services of economic and legal consultants (C_{el}):

$$C_{out1} = C_{search} + C_{el} \tag{1}$$

where C_{out1} are expenditures related to the transfer of business process to the outsourcer, UAH.

2. Expenditures related to direct payments to the outsourcer. These expenditures are calculated on monthly basis:

$$C_{out2} = C_{ser} * 12, \tag{2}$$

where C_{ser} are expenditures related to direct payments to the outsourcer on monthly basis, UAH, C_{out2} are per year payments to the outsourcer, UAH.

3. Volume of expenditures on control by government bodies over the outsourcing process. They include compensations to the government officials, exercising government control (we might define these expenditures as additional costs):

$$C_{out3} = n * C_{con} \tag{3}$$

where C_{out3} are expenditures on government control, UAH, n is a number of control activities by government officials per year, C_{con} are direct expenditures on exercising of government control activities, UAH.

The total cost of the outsourcing could be calculated using the equation (4). The calculation is made on the basis of results after first year of outsourcing:

$$C_{out} = f(C_{out1}; C_{out2}; C_{out3}). \tag{4}$$

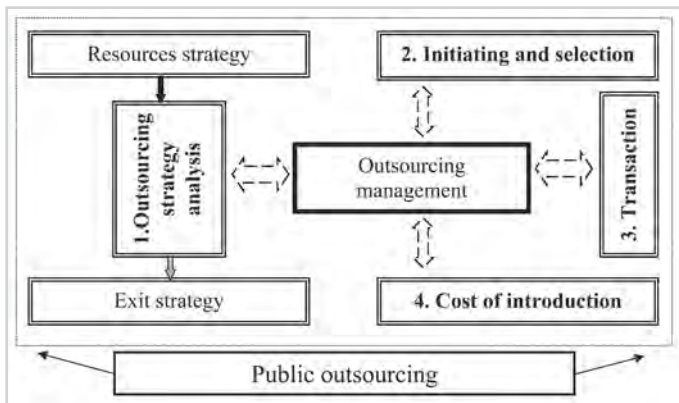


Fig. 1: The improved outsourcing life-cycle model for basic Standard ISO 37500, taking into account the public administration
Source: Improved by the authors, based on ISO 37500

Actual expenditures on the contracting of the outsourcer for the next year could equal zero. If such a situation occurs, it will manifest successful cooperation with the outsourcer.

Expenditures on introduction of the outsourcing are calculated on per year basis. The model presented underlines the importance, and at same time support the possibility, to ground decision on the outsourcing at its estimated economic effectiveness.

As soon as profit is the major performance indicator, we should define profitability as a criterion of effectiveness of the outsourcing. We see the latter as financial result before taxes, thus, here profit is represented by the Earnings before interest and tax (*EBIT*). That allows us to define the outsourcing effectiveness without income tax and local taxes [6].

We propose the following equation to calculate economic effect of the outsourcing:

$$E_{out} = \sum_{t=1}^n \frac{\Delta EBIT}{(1+i)^t} - (C_{overh} + C_{st} + n * C_{com}), \quad (5)$$

where $\Delta EBIT$ is increase in profits before interests and taxes, UAH, i is a discount rate expressed in decimals, t is an evaluation period, years.

Increase in profits before interests and taxes is defined as the difference between *EBIT* after contracting of the outsourcer and before contracting of the outsourcer. While defining the latter, we include per year expenditures on payments to the outsourcer. If $E_{out} > 0$, contracting of the outsourcer is appropriate. If $E_{out} < 0$, contracting of the outsourcer will not provide any economic effect and thus it is inadvisable.

We will illustrate presented methodology by the performance of the PJSC «Central Mining and Concentration Company». Company's main activities consist of iron ore mining, processing, and production of raw material: iron ore concentrate and ore pellets.

During 2015, company received *EBIT* of UAH 854,166 thousand, while administrative expenditures amounted UAH 80,310 thousand, 29.08% increase over the previous year. Contracting of third party - a specialised company to run human resources operations - may help to optimise the administrative expenditures.

To define prospective payments to the outsourcer, company must review every function ran by internal human resources: issuing of orders, processing of applications and letters by employees, keeping of employment record book, processing of personal records, production of job descriptions etc. Having examined proposals at the market by specialised companies, we defined that average monthly fee for services on per employee basis is at UAH 300 level.

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Received 20.04.2017

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