

DOI: 10.5281/zenodo.1304439

UDCClassification: UDC 65.012.122:330.112.2

JEL Classification: M21

JUSTIFICATION OF THE DECISION-MAKING MECHANISM FOR MANAGING THE ECONOMIC RESULTS OF ENTREPRENEURIAL STRUCTURES

ОБҐРУНТУВАННЯ МЕХАНІЗМУ ПРИЙНЯТТЯ РІШЕНЬ ЩОДО УПРАВЛІННЯ ЕКОНОМІЧНИМИ РЕЗУЛЬТАТАМИ ПІДПРИСМНИЦЬКИХ СТРУКТУР

Larisa V. Frolova, Doctor of Economics, Professor
Odessa National Polytechnic University, Odessa, Ukraine
ORCID: 0000-0001-7964-8173
Email: lfrolova.ua@gmail.com

Katerina A. Ivanchuk, PhD in Economics, Associate Professor
Odessa National Polytechnic University, Odessa, Ukraine
ORCID: 0000-0002-4830-7779
Email: kivanchuk.ua@gmail.com
Recieved: 17.02.2018

Фролова Л.В., Іванчук К.О. Обґрунтування механізму прийняття рішень щодо управління економічними результатами підприємницьких структур. Науково-методична стаття.

Для орієнтування підприємницьких структур на ефективне управління економічними результатами в статті обґрунтовано механізм прийняття рішень, який на основі моделювання ситуацій визначає технологію вироблення управляючої дії та структуру процесу управління економічними результатами при зміні внутрішнього і зовнішнього середовища. Важливим компонентом системи управління економічними результатами бізнес-структур є підрозділ, який приймає рішення. Автори подають формальний опис механізму прийняття рішень та графічних моделей для оцінки ефективності прийняття рішень. Запропонована модель прийняття управлінських рішень для забезпечення оптимальних економічних результатів відрізняється від відомих інструментів економічного управління, оскільки для універсальності та створення широкої області інформації готових рішень використовує відносні фактори та критерії економічних результатів.

Ключові слова: підприємницькі структури, економічні результати, механізм, система, прийняття управлінських рішень

Frolova L.V., Ivanchuk K.O. Justification of the decision-making mechanism for managing the economic results of entrepreneurial structures. Scientific and methodical article.

In order to orient business structures on effective management of economic results, the mechanism of decision-making is grounded in the article, which, based on situational modeling, determines the technology of developing control action and the structure of the process of managing economic results when changing the internal and external environment. A significant component of the management system of the economic results of business structures is the decision-making unit. The authors provide a formal description of the decision-making mechanism and graphical models for evaluating the decision-making efficiency. The proposed model of making managerial decisions for providing optimal economic results differs from the known tool of economic management, since for the universality and creation of a wide field of information of the finished decisions, relative factors and benchmarks of economic results must be used.

Keywords: entrepreneurial structure, economic results, mechanism, system, making management decisions

Increasing the efficiency of the business structures' functioning is an important general economic problem of Ukraine, the solution of which requires optimization of the economic results of each subject of market relations as the main factor affecting the efficiency of the activity. At the same time, the unpredictable conditions for the functioning of business structures are characterized by a high degree of uncertainty and dynamism and necessitate the search for new methodological approaches that are consistent with modern realities to ensure the successful development of entrepreneurship. In view of this, in order to make sound decisions in the management of economic results, it is necessary to be able to predict the economic behaviour of business entities throughout the wide information field, to analyze quickly and evaluate the consequences for business structures in such situations, to adopt and implement managerial decisions regarding the effectiveness of management of economic results.

Analysis of recent researches and publications

Problems of improving economic results of business structures' management system are studied by a fairly wide range of scholars such as Nussianov V. Ya. [1], Turilo A. M. [2], Kozak V. E. [3]. In the works of M. I. Ishchenko [4], A. Yu. Mazarchuk [5], L. A. Burkova [6, 7] the question of modeling the dependence of economic results on various factors is considered. However, the problems related to decision-making as well as the management of the economic results of the enterprise are fragmented and require further research.

Unsolved aspects of the problem

The variety of alternative decision making choices makes it difficult to choose precise, timely and well-grounded methods for entrepreneurial structures. Most authors studied the interaction of factors, using different methods for specific business structures. The influence of the method of selection and analysis of economic results on the adoption of operational management decisions of business structures has been investigated fragmentarily.

The aim of the article is to justify the mechanism of decision-making on managing the economic results of business structures on the basis of graphic models.

The main part

Considering the diversity of approaches to managing economic results, interpretation and composition of functions, management should be based on the process-system approach [8], which involves considering the system of economic results management divided into blocks. Each block of the system of management of economic results consists of processes, the interaction of which in the system is provided by managerial technologies that allow implementation of the strategy and tactics of perspective and operational management.

In the system of management of the economic results of business structures, it is proposed to form the following blocks: tools, information provision, planning, control, decision-making, motivation, regulation and analytical block (fig. 1).

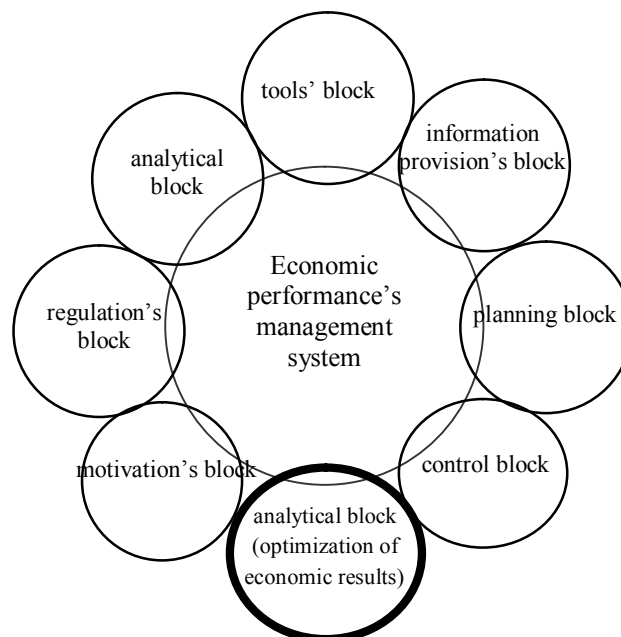


Fig. 1. System of management of business structures' economic results

Source: own elaboration

The development of methodological foundations for the management of the economic results of business structures is based on the following conditions [1, 4, 6, 7]:

- availability of simple and understandable technology for managing economic results;
- application of process-system approach at key stages of economic results' management;
- rationalization of work for the purpose of designing the results of the analysis on the tools for managing the economic results of business structures.

A significant component of the management system of the economic results of business structures is the decision-making unit. Even Herbert Simon [9] called decision-making "the essence of management activity", noting that any practical activity consists of "decisions" and "actions". Therefore, management in terms of process-system approach can be regarded as decision-making processes and processes that contain actions.

The basic principles of the methodology that are the basis for determining the mechanism for managing the economic results of business structures are as follows:

- this mechanism should represent a series of successive interconnected stages, each of which uses the results of the previous stage as a basis for decision-making;
- the first element of the decision-making process is the procedure for determining the mechanism for managing the economic results of business structures, the final one – the receipt of initial data for the organization of the current management;
- management technology involves moving from abstract definitions to specific numerical development criteria;

- the decisions to be taken should reflect the process-system approach, that is to be the result of the analysis and synthesis of indicators of economic results and factors affecting them;
- such activity should be carried out with a certain periodicity, connected with the peculiarities of the markets and the possibilities of business structures.

When people make decisions, both managed and non-managed variable factors are taken into account. Managed factors are at the disposal of the subject of management and characterize ways to use resources to achieve their goals. Non-factored factors characterize the given external and internal conditions, management, which are not an instrument, when people make a decision, but affect the choice of solution.

The mechanism of decision-making on managing the economic results of business structures is proposed to be defined as follows:

$$\langle \text{PS, R|T, H, G, Re, S, C} \rangle, \quad (1)$$

where the characters on the left of the vertical border are located, and on the right are unknown elements of the task:

PS – is a problem situation, which is described in detail and, if not possible, by a set of quantitative characteristics;

R – resources that are necessary for decision making;

T – is the time for decision-making (it may take seconds or hours that are typical for urgent or operational tasks, and a much longer period of time – for immediate or long-term tasks), which significantly affects the possibility of obtaining complete and reliable information about the problem situation and comprehensive justification solutions and consequences of their implementation;

H – (H1...Hn) – a set of hypotheses about the development of the situation in the future, which characterize the uncertainty of many factors, external and internal conditions for the implementation of the decision;

G – (G1...Gm) – the set of goals for which the decision is directed;

Re – (Re1...Rej) – a lot of restrictions (financial, material, personnel, legal, etc.), which should be taken into account when people make a decision in a specific problem situation;

S – (S1...Sp) – a set of alternative solutions, from which the optimal or acceptable solution should be chosen;

C – (C1...Cr) – the set of criteria for choosing the best solution.

The content of the problem of decision-making allows us to formulate statements that characterize the peculiarities of managerial decisions and emphasize the difference in the task of making managerial decisions from a purely mathematical problem of finding an optimal solution:

- unknown elements of the task: goals, limitations, solutions are informative and only partly determined by quantitative characteristics;
- identification of unknown task elements and finding the best solutions can not be formalized, since there are no methods and algorithms that allow formulating goals, criteria, solution options;
- the elements of the task are described by characteristics, the proportion of which can be measured objectively, and for the other part is possible only a subjective dimension;
- the problem of decision-making has to be solved in conditions of uncertainty due to the incomplete description of the problem situation and the impossibility of an accurate assessment of other elements of the solution, the expected consequences of the solution;
- decisions, which is taken may directly affect the interests of business structures and system analysts. Therefore, their interests, motivations of behaviour affect the choice of solution.

The task of finding the best option is divided into two parts. The first problem is how to select acceptable (rational) on the basis of Pareto's rule [10], and the second one is how to choose the best (optimal) from a comparatively small number of admissible options (fig. 2).

It is necessary to note the important feature of the system that manages – its own purpose does not coincide with the purpose of a controlled system. The proper purpose of the system, which manages, is to develop action that controls. The main purpose of the object of management – optimization of economic results, but in the process of management more specific sub-goals may arise. However, the own purpose of the system that manages must not resist the purpose of the control object. The process of elaboration and implementation of control actions is influenced by the external environment. In fact, as the external environment can be the resources allocated to achieve the purpose of management, information on the conditions of operation of the object of management, etc.

The essence of management is finding the operator of the model of the object of management and evaluation of the inconsistency of the outputs of the object of management and the model of the desired result. To ensure the effective management of business structures, continuous improvement of information is required. Without informational support of the retrospective, current and prospective analysis it is virtually impossible to develop optimal managerial decisions, that is, the mechanism of management of economic results should include a developed information system.

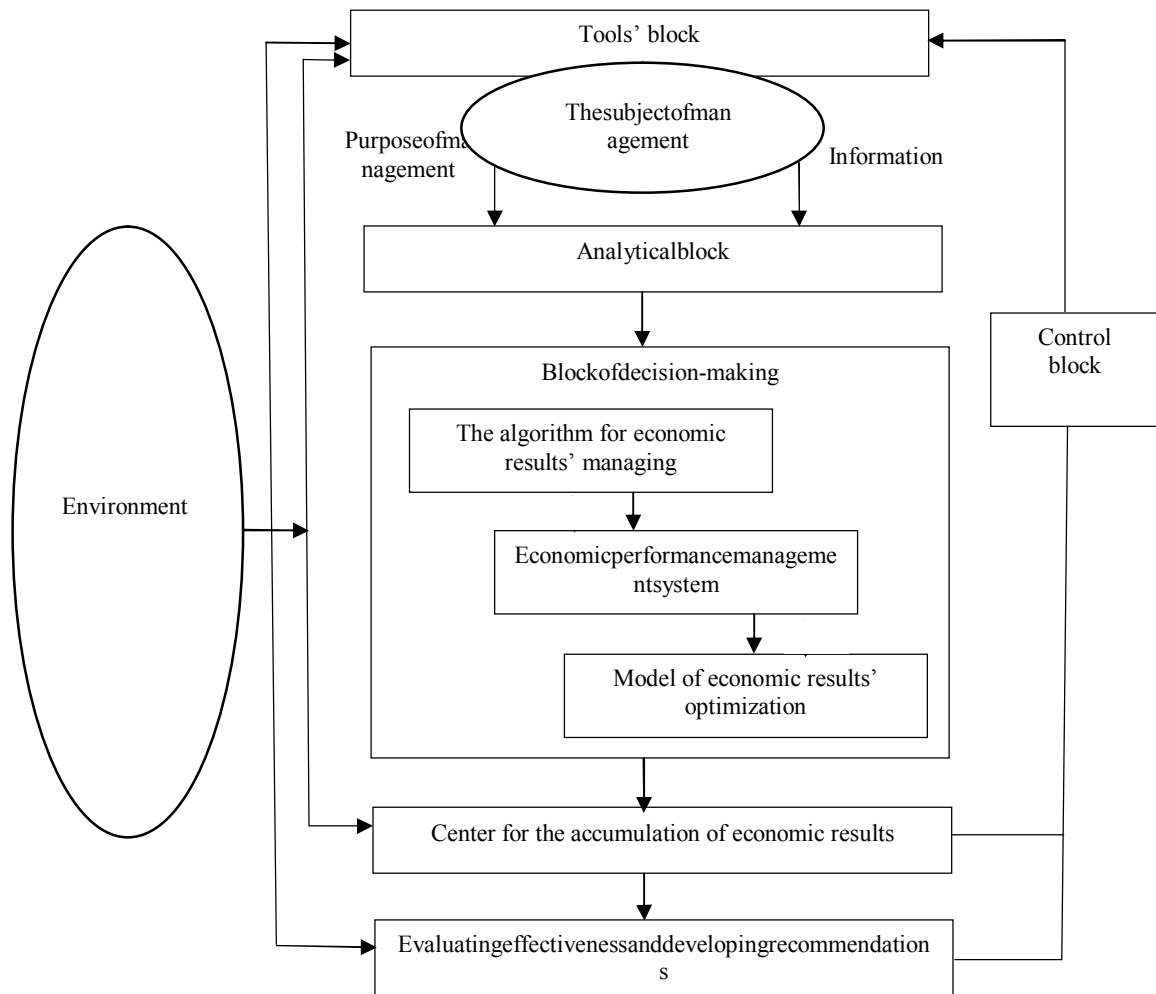


Fig. 2. Scheme of decision making model for economic results' management

Source: own elaboration

The basis of the information support is the accounting data. The necessary and most important information source for the analysis of economic results is financial statements and analytical accounting data. In addition, when people conduct an analysis of economic results, a large array of normative reference information is used: norms, rates, tariffs, etc., which requires automation of management.

The task of managing economic results is multivariate; they are solved on the basis of a large number of interacting, and sometimes contradictory factors, generating many different decisions and control schemes. Solving the optimization tasks of a large information capacity (and the task of managing economic results is information-intensive) requires the use of special economic-mathematical methods, methods of simulation modeling of economic processes.

In order to make sound decisions in managing economic results in dynamic conditions it is necessary to predict the economic behaviour of business structures in the wide field of information (a set of combinations of key economic variables in different possible situations), to analyze quickly and evaluate the consequences for entrepreneurial structures in such situations, to adopt and implement managerial decision to ensure optimization of economic results. To this end, it is proposed to apply methods of forming a broad information field, in which indicators of the effectiveness of economic results will be presented, with any possible in practice, combinations of key economic variables. Such methods can be formalized in the form of typical indicators, in which the levels of efficiency are presented as dependencies on possible combinations of economic variables of entrepreneurial activity.

To ensure the fulfillment of the main requirements of users for the development of special tools, application mechanism for decision-making on managing the economic results of business structures, the following aspects need to be taken into account:

- universality of the use of proposed methods and models for control, evaluation, forecasting of optimization of economic results of business structures;
- the possibility of forming on the basic models of the economic results of a broad information field with a number of combinations of key variables, which achieve fixed levels of efficiency (break-even, profitability,

- loss-making), which allows you to apply these models in all situations and to find completely different solutions that provide one and the same level of efficiency (characteristic of multi-parameter tasks);
- high efficiency for the control, estimation, forecasting of optimization and acceptance of the reasoned decisions;
- ensuring the visual coverage of the information field in the control, evaluation and prediction of efficiency, as well as measurement of deviations from the required values;
- sufficient simplicity and ease of use of the proposed methods and models during creating standard sets of tools for economic management for management staff;
- compliance of the tools of economic management with the basic laws of normal functioning of business structures, causal relationships of dependence of economic results on the main economic variables of entrepreneurial activity;
- ease of automation of the implementation of the toolkit which is developed.

The above-mentioned aspects can be realized in the fullest possible way by developing the technology of economic management based on graphic models. In its practical significance, the proposed graphic model is a "map of the benchmarks of economic results", that is, a map of ready-made solutions that can be used to control, evaluate and predict economic results under specific conditions and to develop proposals for the correct correction of the main controlled economic variables, allows us to create a universal mechanism suitable for solving a wide range of management tasks in all possible conditions of functioning of business structures and trends in the changing market environment.

Compliance with the requirements for the universality of the decision-making model for managing economic results can be ensured if the effectiveness of the economic results is presented in the form of an optimization that actually corresponds to the main objective of economic results' management (fig. 3). On universal graphic models of the standards of economic results' optimization it is immediately visible, to what consequences are deviations from the reference ones and which measures need to be taken, that is, what should be the level corrections related to the controlled parameters. Their use allows to ensure the timely receipt of information about the danger to business structures, the rapid implementation of which allows them to avoid the onset of a crisis state. For this purpose, in graphic models it is expedient to introduce the following efficiency zones: zones of small, large, ultrahigh efficiency, risk, small damage, large damage and especially dangerous zones. The graphical distribution of the zones of the effectiveness of economic results gives an overview of the dependence of the levels of economic results in all possible ranges of combinations of the main variables.

Universal graphic models are a graphic representation (reflection) of the economic behaviour of business structures with certain quantitative combinations of the magnitude of the main variables of their economic mechanism. The technology of their use has certain features:

- the same level of efficiency of economic results depends not only on the absolute values of the values of economic parameters, but on their ratios, that is, the use of these models equally suitable for economic management of business structures, regardless of the scale of their activities;
- graphic lines on the models are a discrete solution to the level of efficiency that will be achieved with certain relationships between the economic parameters that affect the axes of the graphic model;
- multivariate models, which allows you to solve problems with them in completely different formations, that is, the parameters that are specified and determined, can change places.

Problem solving that can be solved can have a number of options depending on the goal. Graphic models allow you to solve tasks quickly, because they have already executed the solutions themselves and only need to find a graphic line corresponding to this statement, taking into account known or unknown inputs on the main axes of the graphic model. This means that the graphic models carried out on them are a ready-made solution to the fixed level of the effectiveness of economic results, and this level can correspond to a huge number of mutual combinations of variables, not arbitrary, but strictly defined.

The specific market conditions and economic parameters of the business structures impose on the economic parameters of the restriction, they become fixed, that is, in these circumstances, business structures can not change them. If the task is to achieve the necessary level of efficiency of economic results, then with some fixed parameters, the graphic model will find the necessary values of those parameters which a certain business structure is able to manage (correct, change their value). With the help of graphic models, the businessman can systematically monitor the level of effectiveness of economic results, determine the moments of transition to hazardous areas, evaluate the use of which changes in parameters can be achieved desired efficiency. In this case, the deviation of economic results from the desired level, and then – changes certain parameters, which a certain entrepreneurial structure is able to regulate in this situation.

The method of estimation using graphic models of the effectiveness of economic results, as well as finding a set of controlled parameters and their required ratio allows you to find quickly the area at which the required level of economic results is achieved. Some solutions that provide the required level of economic outcomes are multidimensional, and therefore, depending on the difficulty of implementing each option, easy to implement solution can be selected.

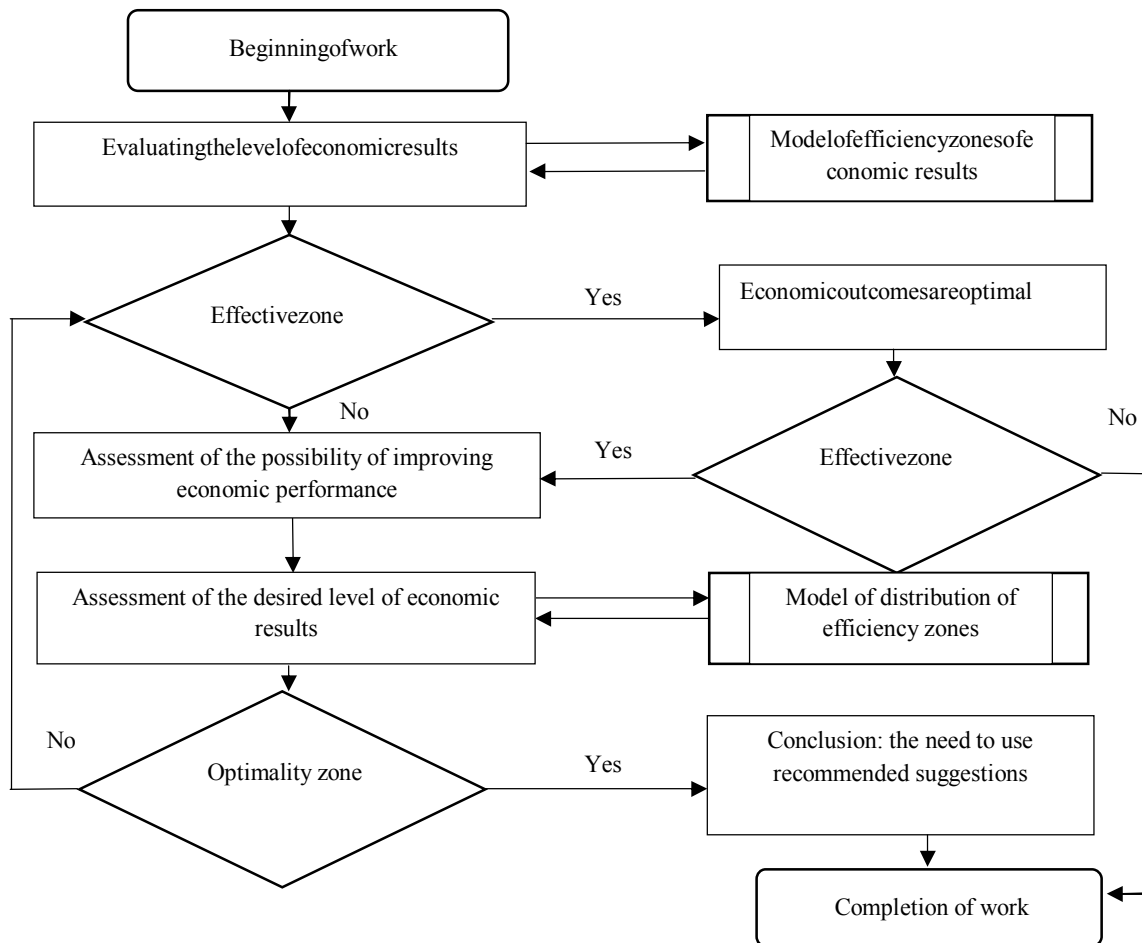


Fig.3. Algorithm for determining the zone of effectiveness of business structures' economic results

Source: own elaboration

Proceeding from the universality of the proposed model of decision-making, it can be applied not only in the technology of making decisions on optimizing economic results, but also for the feasibility study in the organization of new business structures, the reconstruction of existing ones, updating equipment and technology, in the process of implementation of which there is a significant change in economic outcomes. The use of this model allows to justify the system of measures with the help of less labour costs in order to ensure, during planning to enter the zone of sustainable economic results and reduce the probability of risk, that is, to optimize economic results.

Conclusions

The proposed model of making managerial decisions for providing optimal economic results differs from the known tool of economic management, since for the universality and creation of a wide field of information of the finished decisions, relative factors and benchmarks of economic results must be used.

Each of the eight blocks of the management system for the economic performance of business structures is an important part of effective management. Accordingly, in the future it is proposed to implement a methodical approach to the mechanism of managing the economic results of business structures for solving various problems based on the use of universal graphic models. Its application will ensure a high degree of orientation of business structures in changing economic results, taking into account the changing conditions of the external and internal environment.

Abstract

Increasing the efficiency of the functioning of business structures is an important general economic problem of Ukraine, the solution of which requires optimization of the economic results of each subject of market relations as the main factor affecting the efficiency of the activity. The variety of alternative decision making choices makes it difficult to choose precise, timely and well-founded methods for entrepreneurial structures.

The purpose of the article is to substantiate the mechanism of decision-making on managing the economic results of business structures on the basis of graphic models.

The article presents the system of management of economic results of business structures, which consists of the following blocks: instrument, information provision, planning, control, decision making, motivation, regulation and analytical block.

A significant component of the management system of the economic results of business structures is the decision-making unit. The authors provide a formal description of the decision-making mechanism and graphical models for evaluating the decision-making efficiency.

The proposed model of making managerial decisions for providing optimal economic results differs from the known tool of economic management, since for the universality and creation of a wide field of information of the finished decisions, relative factors and benchmarks of economic results must be used.

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Посилання на статтю:

Frolova L. V. Justification of the decision-making mechanism for managing the economic results of entrepreneurial structures / L. V. Frolova, K. A. Ivanchuk// Економічний журнал Одеського політехнічного університету. – 2018. – № 1 (3). – С. 75-82. – Режим доступу до журналу: <http://economics.opu.ua/ejopu/2018/No1/75.pdf>. DOI: 10.5281/zenodo.1304439.

Reference a Journal Article:

Frolova L. V. Justification of the decision-making mechanism for managing the economic results of entrepreneurial structures / L. V. Frolova, K. A. Ivanchuk// Economic journal Odessa polytechnic university. – 2018. – № 1 (3). – P. 75-82. – Retrieved from <http://economics.opu.ua/ejopu/2018/No1/75.pdf>. DOI: 10.5281/zenodo.1304439.

