Oleg I. Kuzmin¹, Olga H. Melnyk², Olga B. Grom'yak³ CONCEPTUAL FRAMEWORK FOR EXPRESS DIAGNOSTIC ANALYSIS OF INDUSTRIAL ENTERPRISES

The article analyses the conceptual framework for express diagnostics of industrial enterprises, in particular: its principles have been indentified and specified; a list of objects and subjects for express diagnostics has been reasoned; a sequence of actions to deliver the process is offered along with the typology of impact factors related to the implementation of express diagnostics; and the nature of the problems that arise during the application of the express diagnostics is revealed.

Keywords: express diagnostic analysis; conceptual framework; principles; sequence of implementation; impact factors.

Олег Є. Кузьмін, Ольга Г. Мельник, Ольга Б. Гром'як КОНЦЕПТУАЛЬНІ ЗАСАДИ ЗДІЙСНЕННЯ ЕКСПРЕС-ДІАГНОСТИКИ ДІЯЛЬНОСТІ ПРОМИСЛОВИХ ПІДПРИЄМСТВ

У статті розглянуто концептуальні засади здійснення експрес-діагностики діяльності промислових підприємств, зокрема: виокремлено та охарактеризовано принципи, обґрунтовано перелік об'єктів та суб'єктів експрес-діагностики, запропоновано послідовність здійснення експрес-діагностики діяльності підприємств, наведено типологію чинників впливу на процес експрес-діагностики та розкрито зміст проблем, що виникають під час впровадження експрес-діагностики.

Ключові слова: експрес-діагностика, концептуальні засади, принципи, послідовність здійснення, чинники впливу.

Табл. 1. Рис. 2. Літ. 12.

Олег Е. Кузьмин, Ольга Г. Мельник, Ольга Б. Громяк КОНЦЕПТУАЛЬНЫЕ ОСНОВЫ ОСУЩЕСТВЛЕНИЯ ЭКСПРЕСС-ДИАГНОСТИКИ ДЕЯТЕЛЬНОСТИ ПРОМЫШЛЕННЫХ ПРЕДПРИЯТИЙ

В статье рассмотрены концептуальные основы осуществления экспрессдиагностики деятельности промышленных предприятий, в частности: выделены и охарактеризованы принципы, обоснован перечень объектов и субъектов экспрессдиагностики, предложена последовательность осуществления экспресс-диагностики деятельности предприятий, приведена типология факторов влияния на процесс экспрессдиагностики и раскрыто содержание проблем, возникающих при внедрении экспрессдиагностики.

Ключевые слова: экспресс-диагностика, концептуальные основы, принципы, последовательность осуществления, факторы влияния.

Problem setting. Contemporary business environment is characterized by the high level of volatility, increased competition at all types of markets, limitations of financial and investment resources, insufficient forecasts on the prospects of activity. To maintain the position in the market, domestic enterprises should permanently monitor information on the current state of the internal and external environments

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that will allow not only speed up the process of resolving problematic situations, but also provide a timely warning and take advantage of existing benefits and opportunities of the investigated object in such difficult conditions. Based on the above, there is a need to implement the express diagnostic analysis which allows evaluating and identifying the investigated object quickly to generate the necessary information in order to make effective management decisions. The main advantage of using the given methogology is its efficiency, ease of implementation and the relative cheapness. However, despite the effectiveness of this type of diagnostics, the principal conceptual background for its implementation remains not sufficiently defined and substantiated.

Latest research and publications analysis. Significant contribution to the development of the conceptual basis for the implementation of express diagnostics of enterprises has been made by many scientists and researchers, namely: A. Voronkova (2006), T. Zahorna (2007), A. Zubkova (2008), H. Kizim (2007), O. Kovbasa and V. Yefanov (2011), Y. Kopchak (2004), N. Mitsenko and U. Soroka (2005), O. Kuzmun, O. Melnik and O. Mukan (2011), O. Podolyaka (2009), N. Salahakova (2005) and others.

However, the conditions, factors and components of the implementation of the above methodology are not sufficiently exposed in the academic literature. Most of the papers devoted to individual varieties of express diagnostics don't make it possible to form a comprehensive picture of this process. In particular, the consistency of the process of express diagnostics suggested by Y.S. Kopchak (2004: 26), does not reflect the sources of gaining the relevant information, methods of data collection and processing, the choice of indices and indicators on which such diagnostics is implemented. The disadvantage of the express diagnostics technology developed by N.A. Kizim (2007: 256) is that the objects under observation, the so called "crisis field", reveal only financial indicators, taking as a basis only financial accounting at enterprises, which significantly reduces the database of express diagnostics. Inauthenticity of diagnostics is also observed in the use of the standard methods, which are suggested by the authors. Thorough technology of express diagnostics implementation is offered by T.O. Zahorna (2007: 28). In particular, the author provides a list of sequential stages and also carefully describes the sources of data collection and points out the importance of stage grouping indices. The author also believes that the process of express diagnostics involves developing recommendations for the improvement. The performed investigations allow suggesting that the result of the express diagnostics should be the formation of a structured database for making operational management decisions, and the development of specific recommendations being a component of enterprise management.

Incorrect understanding of express diagnostics and its identification with complex diagnostics is observed in the works of O.M. Kovbasa and V.A. Yefanov (2011: 199). The authors point out that the process of express diagnostics should only detect the problems in the functioning of an object, but do not take into account that it is possible to determine strengths and opportunities of an investigated object. In addition, the authors argue that one of the final stages of express diagnostics is to find solutions to the identified problems.

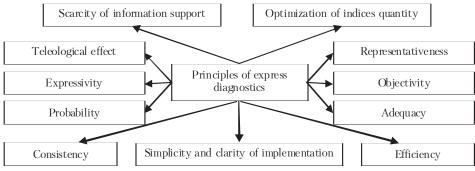
The basic principles of the express diagnostics, which understanding and compliance ensures high efficiency of this process, are not sufficiently exposed in the contemporary academic literature. In particular, A.V. Zubkova (2008: 6) focuses on characteristic peculiarities and principles of indices selection required for the express diagnostics. The author asserts that these indices should be accurate, detailed, specific, scale based and comparable. However, the researcher does not mention principles that would represent the characteristic peculiarities of the above method, including its efficiency, speed, ease of implementation and others. One of the most complex characteristics of the principles of express diagnostics is developed by A.I. Podolyaka (2009: 110), who suggests that methods and techniques for express diagnostics should be universal and modification-adaptive by nature. The author also stresses the necessity to minimize the time lag for the investigation and implementation of the results. But the list of principles proposed by the author is too narrow, it does not disclose the contemporary nature of express diagnostics, the quantity and quality of indices selected for the investigation; informative database, which is used for business activity analysis and a set of data which is obtained in the result and is used for making management decisions.

Unresolved issues. In spite of the large number of papers on the issues of express diagnostics at enterprises, there are inaccuracies in identifying its subject and object, substantiation of its principles, logic in distinguishing stages of the process etc. Taking into consideration the given disadvantages, it is necessary to formulate a comprehensive understanding of the conceptual framework for the implementation of express diagnostics, which will improve the level of its effectiveness.

The research objective is to develop a unified conceptual approach for the implementation of express diagnostics which will allow applying it effectively at any investigated object within the industrial enterprise activity.

Key research findings. Performed investigations allow asserting that the concept of implementation for express-diagnostics reflects science-based system of views on the principles, factors and participants, and the technology of realization of express-diagnostics for enterprise activity.

Carrying out the express diagnostics it is reasonable to follow a number of principles, which will ensure high effectiveness. Under the principles of express diagnostics of enterprises we should understand the basic regulations, initial rules and norms that form the grounds for the implementation of express diagnostics which fulfillment will allow achieving the settled goals.



Developed by Zubkova (2008), Melnyk (2010), Podolyaka (2009).

Figure 1. Principles of implementation of express diagnostics

The research delivered, enabled to identity the following basic principles of implementation of the express diagnostics: the principles of teleology, expressivity, and scarcity of information support, optimization of indices quantity, probability, simplicity and clarity of implementation, representativeness, objectivity, adequacy, consistency and efficiency (Figure 1).

Let us consider each of them in more detail. Especially, the principle of teleology (from the Greek "telos" – the end, goal and "logos" – science, teaching) means that to start the express diagnostics is necessary from the formation of specific goals to be achieved in the result of the implementation process. According to the established goals, participants choose methods, techniques and other parameters. Under the principle of expressivity we understand the necessity for rapid, effective performance of diagnostics, in the result of which information base for management decisions should be formed, which are intended to promptly correct the drawbacks or to use existing possibilities of an investigated object. The principle of scarcity of information support provides incomplete, partial information base to form only a preliminary, but not comprehensive and complete picture of the availability of problems or chances the investigated object has. The principle of optimization of indices quantity aims to limit the quantity of indices (indicators) selected for implementation of express diagnostics, considering the available information and time restrictions. Because the express diagnostics is fast, it is based on a limited range of information data and it uses a small number of indicators and criteria in the process, it should be noted that there are certain risks when making management decisions by the results of such diagnostics. This is the gist of the principle of probability. The principle of simplicity and clarity of implementation is that express diagnostics is carried out with the purpose of making quick reactive management decisions. The results obtained in the process of express diagnostics must be clearly stated and understandable for all its users. Under the principle of representativeness it should be understood that the informative base, chosen for the express diagnostics, indices and results of the process should maximally reflect the data necessary for users. The principle of objectivity provides the expediency of reducing to minimum the human impact on the formation of the express diagnostics results. Of course, in case of permanent or periodic express diagnostics, it is reasonable to introduce automated systems for the realization of this principle. As to the principle of adequacy, the information, used in the process and the results of the express diagnostics should reflect the real state of the investigated object. Another important principle is the principle of consistency, because during the express diagnostics of the enterprise it is necessary to consider all its structural elements. The same principle should be followed during the selection, calculation and analysis of indices needed for the above methodology, we should consider their relationships and influences on each other to get reliable conclusions. The final principle is efficiency. It lies in the fact that the expenses incurred in the process of development, implementation and introduction of the results of the express diagnostic analysis should be compensated by the effect, gained in decision making on the basis of recommendations given.

There principles should be used by the participants of express diagnostics for efficient implementation process to identify the state of the investigated object. As to the subjects (participants) of the express diagnostics, they are the persons concerned, who can set goals, choose methods and means and (or) can use information obtained

in the result of implementation of express diagnostics. That is, the subjects may be the representatives of both the internal (proprietors, leaders at all management levels, leading specialists of the enterprise) and external environment of the enterprise (consumers, competitors, financial and credit institutions, state authorities, investors, suppliers etc.). Groups of subjects of express diagnostics, their representatives and the basic goals and objectives in the express diagnostics process are described in Table 1.

Table 1. Characteristics of basic subjects in express diagnostics

Groups of	-	Basic goals and objectives, aimed to be achieved in the process		
subjects	appropriate groups			
Representatives of internal environment				
Proprietors	- shareholders; - private entrepreneurs; - members of	- formation of an idea about the current state of affairs in the company, including the real economic results of the activities; - identifying the problems related to irrational or uneconomical use of resources at the enterprise (labor,		
	partnership etc.	financial, material, energy, information etc); - search for opportunities for saving costs and the formation of reserve funds;		
		- control of the organization activity in compliance with missions, goals and objectives of the organization etc.		
Leaders at all management	- leaders of institutional management level;	- timely warning about the threats in both internal and external environment, with the purpose of adopting reactive management decisions;		
levels	- leaders of management level;	- monitoring and identifying the necessity in regulation of using the resource potential of individual units;		
	- leaders of technical management level	- determination of weaknesses and threats related to poor financial operation of enterprises, detecting threats of bankruptcy and crisis, as well as the acceptance of reactive management decisions to prevent these problems;		
		- identifying expediency of continuation of the implementation of diagnostics, including the fundamental one, in case of getting information about negative tendencies on the stage of		
Leading	- accountants;	express diagnostics etc identifying drawbacks and bottlenecks within the realization		
specialists of	- economists;	of direct functions and authority;		
the enterprise	- financists; - specialists in logistics; - marketing	- getting information about the opportunities and threats that arise in the process of accomplishment of specific activities, including the possibility to reduce costs and optimize the use of resources in order to obtain greater economic benefits;		
	specialists; - technicians etc.	- preventing the threat of bankruptcy, revealing the crisis in the early stages etc.		
Representatives of external environment				
Consumers	- retail consumers;	- formation of the previous ideas about the quality of		
	- wholesale consumers	technological process, the volume of production etc. for making a decision about buying or rejection the company goods		
Competitors	- physical persons; - legal entities	getting information about the current state of affairs of a company; range, quality, product costs; innovative, technical and technological capacity of its production in order to duplicate (benchmarking); - using the results of express diagnostics for conducting a		
		market research of market conjuncture, particularly with a purpose of developing an optimal strategy against the company competitors etc.		

Continuation of Table 1

Groups of	Representatives of	Basic goals and objectives, aimed to be achieved in the process
subjects	appropriate groups	and in the result of express-diagnostics implementation
Financial	- banks;	- preliminary assessment of the financial condition of an
and credit	- credit unions;	enterprise;
institutions	- credit societies	- forming the idea about the level of creditworthiness,
	etc.	solvency, liquidity, business activity, credit indebtedness and
		debt receivable of an enterprise in order, for example, to make
		a decision on a loan or a deferred payment etc.
State	- Ministry of	- obtaining preliminary information about the financial status
authority	income and taxes	
bodies	of Ukraine;	decision on recognition of the company bankruptcy;
	- State service of	- formation of the previous conception of the volume of
	statistics of	produced and sold products and, accordingly, the amount of
	Ukraine etc.	income and related tax charges;
		- getting additional statistical information about the activity of
		a company etc.
Investors	- physical persons;	- forming an idea of the enterprise resource potential, its
	- legal entities	financial condition, in order to evaluate investment
		attractiveness;
		- investigation of strengths and capabilities of the organization
		and their comparison with weaknesses and threats to identify
		the most promising areas for investments etc.
Suppliers	- physical persons;	- preliminary review of the state of affairs of the company,
	- legal entities	including its financial stability, solvency, liquidity, size of
		credit indebtedness and debt receivables for a decision on the
		election of a reliable contract etc.

Developed by Zahorna (2007), Kopchak (2004), Melnyk (2010).

Participants (subjects) execute direct influence on the objects of express diagnostics through the consideration of all the principles, which we suggest to subdivide into complex (company in general) and individual:

- departments of an enterprise (commercial, finance, foreign trade department etc);
- individual types of activities (manufacturing, financial, innovation, marketing, logistics etc.);
- operations (the process of manufacturing of an item, the development of a budget or a specific schedule etc.);
 - economic indices of performance;
 - employees etc.

Following the basic principles of express diagnostics the subjects should clearly understand which stages should be implemented in the process of its introduction in order to achieve a goal. There is no clarity and consistency in determining the contents and sequence of stages in express diagnostics. Consideration of the drawbacks, identified in the result of investigation, allows us offering the plan for implementation of the express diagnostics of the enterprises activity, as shown in Figure 2.

The first stage shows that with information about the state of affairs of the company, or, conversely, observing the lack of necessary data, the participants should define the objectives and goals they want to achieve and the tasks they set.

The second stage shows that based on the settled goals it is necessary to specity objects which undergo the express diagnostics. These objects can be both individual indicators and specific operations and activities, or the state of the company as a whole.

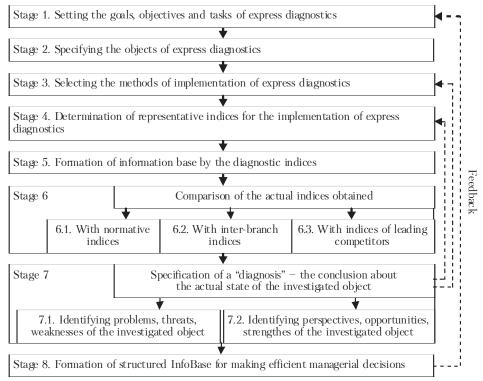


Figure 2. Consistency of implementation of express-diagnostics of enterprise activity, developed by the authors

Next, the third stage shows that considering the chosen targets, the complication and the complexity of the investigated object it is necessary to choose the methods which carry out the information processing files and determine the deviation. Today the range of diagnostic methods is so diverse, that it enables of methods to choose one method or the combinations of methods, which are most expedient to use for a given object of express diagnostics. There may be a variety of factual, documentary, accounting and analytical methods.

For the investigation of each object of express diagnostics it is necessary to sort out a clear and limited number of indices. This is the gist of the fourth stage of express diagnostics of an enterprise.

At the fifth stage it is necessary to form a base of factual data of the diagnostic indices as affectively as possible. Information sources can be data management, financial or tax records, or the information obtained in the result of special investigations.

The sixth stage of express diagnostics involves comparing the indices obtained with the normative ones, as a result, we get a preliminary conclusion about the current state of a company, its disadvantages and opportunities enabling to form a structured database, on which various levels of government managers, owners and other participants of express diagnostics make reactive management decisions. If the settled diagnosis shows that the state of the investigated object is "satisfactory", then it is

completed by this stage and/or a decision on preventive measures is made. If the state of an enterprise or other investigated object is identified as "unsatisfactory", then there exist several possible versions of further actions: to ensure the compliance of the selected methods and representative indices with the settled targets, i.e., to go back to stages 3 and 4, respectively; to carry out a more extended and fundamental diagnostics for the investigation of the causes which led to this situation; make operational management decisions based on structured information base.

Enterprise is an open system, influenced by certain factors, both internal and external. The process of express diagnostics is not an exception, that is why it is desirable to form a typology of factors of impact on the implementation of the express diagnostics of businesses:

- by the duration of impact: short-term (factors that have an impact of less than 1 year), medium-term (factors that have an impact in more than 1 year), long-term (factors that have an impact over 5 years);
 - by the nature of impact: positive, neutral, negative;
 - by the impact environment: internal and external;
- by the stages of the process of express diagnostics: factors of impact on the preparation of express diagnostics, factors that affect the implementation of express diagnostics, and factors affecting the usage of results of express diagnostics;
 - by the direction of impact: direct and indirect;
- by the content: economic and financial, production, marketing and logistics, personnel, technical and technological.

Subjects of express diagnostics have to examine all the possible factors of impact extremely carefully, because the process of express diagnostics of company is effective when it is based on accurate and reliable information upon which operational management decisions will be made.

Performing the express diagnostics is accompanied by a number of problems. We suggest combining them into the following groups: economic, technical, organizational, personnel and informational. Let us consider the content of these problems specifically. The basic economic problem which arises during the implementation of express diagnostics is the growing need for resource provision to prepare and implement the diagnostics.

Technical problems include: lack of automated systems needed for the implementation of express diagnostics at domestic enterprises; the existence of the urgent need for adaptation and harmonization of foreign software products for implementation of express diagnostics at domestic enterprises, in particular, due to difference of Ukrainian accounting standards, managerial and tax accounting from the international ones.

The lack of clear and realistic goals of implementation of express diagnostics; discrepancy of the selected methods and techniques to define the objectives desirable to be achieved; use of excessive or small amount of indices-indicators; inadequate appointment of officials in organizational structure who are engaged in direct implementation of express diagnostics of the enterprise; making of inappropriate management decisions based on recommendations developed in the result of express diagnostics; the complexity of coordination and adjustment of foreign models and methods of implementation of express diagnostics for domestic firms activity should be included to organizational problems.

Personnel problems that arise during the implementation of express diagnostics are also important, namely: low initiative and passivity of employees during the introduction and implementation of express diagnostics caused by their misunderstanding of the goals and values; increase of the amount of work to be done by workers, particularly clerical work, which causes the resistance of the related staff; low level of workers' qualifications who are involved in the process of implementation and decision making on the basis of the recommendations of express diagnostics; low efficiency or total lack of methods of employees' motivation.

In the process of application of express diagnostics the enterprise faces informational problems, caused by insufficiency of the information base, its incompleteness and partiality; absence of the normative regulatory documents, which clearly indicate the general rules and principles according to which certain economic, financial, resource, technical and technological aspects of the implementation of the diagnostic process are defined etc.

Conclusions. Dynamism and acceleration of modern market relations and growth of negative trends in the financial and economic situation of the domestic industry encourages managers permanently monitor the current status of enterprises through their express diagnostics. Considering the lack of logic in forming the conceptual basis for the implementation of express diagnostics of the enterprise, the basic principles of express diagnostics (principle of teleology, expressivity, scarcity of information support, optimization of indices quantity, probability, simplicity and clarity of implementation, representativeness, objectivity, adequacy, consistency and efficiency) have been identified and specified in the article. The analysis of literature enabled to characterize the basic participants (subjects) of express diagnostics, which are the persons concerned who can set goals, choose methods and means and/or be users of information obtained in the result of implementation of express diagnostics. Objects (complex and individual) are also identified; consistency of implementation of express diagnostics of the company is developed and the contents of each stage including previously identified drawbacks are disclosed in the paper. The article offers a typology of impact factors on implementation of express diagnostics and a list of the most common problems which may accompany this process. Application of this theoretical and applied conceptual framework in practice will enable to simplify and improve the efficiency of the process of express diagnostics of the enterprise, including the industrial ones.

Further scientific exploration should be focused on research tools and the analysis of the application process of the express diagnostics of enterprise performance.

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СУЧАСНА ЕКОНОМІЧНА ТА ЮРИДИЧНА ОСВІТА ПРЕСТИЖНИЙ ВИЩИЙ НАВЧАЛЬНИЙ ЗАКЛАД

НАЦІОНАЛЬНА АКАДЕМІЯ УПРАВЛІННЯ

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У навчальному посібнику викладено теоретичні основи виникнення, становлення та розвитку транснаціональних корпорацій, механізм їхнього функціонування та вплив на світову економіку. Розглянуто систему національного і міжнародного регулювання ТНК.

Посібник містить також ситуаційні вправи, що дозволяє закріпити теоретичні знання шляхом виконання практичних завдань та обговорення ситуаційних вправ.

Призначений для студентів та викладачів вузів. Посібник стане корисним всім, хто цікавиться проблемами транснаціоналізації світової економіки.