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The COVID-19 pandemic has become a shock to the global economy. This drama has brought economic security to the forefront. The current issue covers some academic points of view regarding the subject.

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OVERCOMING THE ECONOMIC CONSEQUENCES OF COVID-19

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Abstract.

Nowadays COVID-19 pandemic is the most urgent challenge of the global community. Its consequences are significant as for economy, policy, culture, human health and safety. So, the challenge faced by society to reduce the adverse effects of the crisis, caused by pandemic.

In the article, the authors have viewed the issues of managing the risk of the companies. They have proposed the crisis strategy for the national governments.

Keywords: COVID-19 pandemic, economic consequences, risk management, crisis exist strategy.

I. Introduction

Today, the state of preparedness of governments and health systems for the COVID-19 pandemic and the overall level of effectiveness of national health systems are controversial. This discussion is due to the pandemic COVID-19 (2019-2020), which outbreak began in December 2019 in Wuhan (China), and on March 11, 2020, the disease was identified by the WHO as a pandemic.

It has become apparent that most national health systems have failed to respond quickly and effectively to the emergence of the SARS-CoV-2 virus, even those that are identified in the world

ranking on bases of healthcare safety as leaders among other countries. The emergence of the new virus has exposed a number of problems in most national health systems, namely:

- 1) Inability to respond quickly to exceptional force majeure on a large scale;
- 2) Low "capacity" of health care facilities;
- 3) Low level of flexibility in making management decisions (introduction of large-scale quarantine measures, testing, rapid change of treatment protocols, etc.);
- 4) Shortage of medical equipment and medical supplies needed to support the lives of patients and lack of pharmaceuticals to overcome the SARS-CoV-2 virus;
- 5) Shortage of qualified medical staff (doctors, middle medical staff, laboratory workers);
- 6) Lack of mechanisms to solve the problem of psychological and physical stress on medical staff.

The list of problems is not exhaustive and differs from the level of economic and social development of the country, mentality and cultural characteristics that have developed in the countries, etc. However, it is safe to say that most national health systems around the world (with some exceptions where urgent action has been taken and there is no high incidence and mortality from COVID-19) have not been prepared to spread the disease globally.

The key issue today is the effectiveness of government decisions and coping strategies for COVID-19. The coronavirus pandemic has long-term consequences, in addition to the actual spread of the disease and the introduction of quarantine measures, which have already significantly affected the economies of most countries.

Thus, as of 1 June 2020, according to the WHO, globally there have been 6,057,853 confirmed cases of COVID-19, including 371,166 deaths, reported to WHO [7]. The WHO estimates that the worldwide mortality rate from COVID-19 is 3.4% (as of March 3, 2020), compared to the annual mortality rate from influenza, which is below 1% [8]. The virus is now presented in more than 150 countries and territories.

As the SARS-CoV-2 virus has spread around the world, concerns have shifted from the problem of manufacturing the health care system to overcoming the crisis due to the temporary complete or partial suspension of business in many countries around the world [5].

In response to the pandemic, governments have taken drastic measures to reduce the level of infection and protect the population. These measures consist of total (for the entire population of the country) or partial (for risk groups) quarantine and lockdown of enterprises, organizations,

institutions of industrial and non-industrial spheres. However, they have a direct immediate impact on the level of economic activity in certain industries.

Today, the economic consequences of COVID-19 far outweigh the direct impact of the pandemic, namely:

1) Rising unemployment in many countries around the world and lowering wages, which, in turn, reduce the purchasing power of the population, and hence demand;

2) A high level of uncertainty leads to the suspension of investment activities both in the business environment and from households;

3) A decrease in the production capacity of economic entities leads to an increase in the level of bankruptcy.

Analysts say that the crisis caused by the COVID-19 pandemic has no analogues: it has led to the largest global downturn in economic history, with more than a third of the world's population currently in lockdown [4].

II. Risk management during the COVID-19 pandemic

Most countries around the world have introduced national risk assessment scales and established crisis preparedness monitoring processes and systems.

For example, *Schlumberger* proposed a ranking of management risks by levels, which is based on the assessment of geographical risk criteria, effective communication and management of crises and emergencies (force majeure).

Criteria such as the availability and effectiveness of local health authorities to verify cases or provide medical care, compliance with the recommendations of international health organizations (such as the WHO), the effectiveness of health care providers, etc. may also be included. To effectively evaluate risk in a pandemic, countries need to focus on the right metrics and consider all dimensions of risk: severity, likelihood, and velocity.

At the same time, the level of risk of exposure to COVID-19 in the country can be reduced on the basis of the following criteria: reduction of infection, increase of recovery, improvement of mortality per capita, level of achievements in treatment or vaccination, etc.

Thus, *Schlumberger* proposes to identify and implement certain restrictive actions at four levels, which should help minimize health risks and negative impacts on business activities, namely:

1) Schlumberger COVID-19 Level 0: for countries where no human COVID-19 cases have been reported;

2) Schlumberger COVID-19 Level 1: for regions where less than 25 human COVID-19 cases have been reported;

3) Schlumberger COVID-19 Level 2: for a country with limited impact, where 25 to 100 human cases of COVID-19 have been reported;

4) Schlumberger COVID-19 Level 3: for severely affected countries with more than 100 cases of human COVID-19 [1, p. 3].

We can define risks of organization in the following way:

- Internally, those which involves identifying business critical functions, equipment and employees, and determining how, where and by whom critical services are provided. Top management considers suspending non-essential work to reduce risk of exposure, to support social distancing and to reduce unnecessary cash expenditures. Also, they need carefully to monitor employee availability, health and safety.

- Externally, which requires a supply chain analysis and assessment of the possible risks faced by vendors, manufacturers, suppliers, distributors, purchasers and all organizations and stakeholders that you interact with and rely upon.

In [3, p. 4], the long-term economic impact of the COVID-19 pandemic, which is based on the pace of the pandemic and the duration of quarantine measures, was assessed. Extensive quarantine measures are aimed at protecting the population that is most vulnerable to the SARS-CoV-2 virus and at reducing the burden on countries' health systems. Therefore, given these main objectives, the duration of quarantine depends on:

- How quickly it will be possible to build capacity to quickly overcome difficult cases (population testing, staff involvement, technology and treatment protocols, etc.);

- How quickly immunity will be formed in a significant number of the population, which will allow the economically active population to return to work.

But nevertheless, all organizations can use the basic principles of risk management to shape a path through the COVID-19 pandemic and minimize the lasting negative impacts, among which are:

1) *Determining the risk.* Organizations have to use risk management to predict the risks. To that end it is necessary to: (a) consider all kinds of risks, including operational, strategic, financial

and reputational; (b) gather information from all employee levels and from a large cross-section of stakeholders (clients, vendors, etc.), since they might be in a position to identify risks that you would not think of; (c) look at other organizations, domestically and abroad, and consider what they are facing; their risks might be the same or perhaps their risks will create risks for you down the line (think supply chains).

2) *Providing “agile” principle.* It needs the flexibility from the organization in decision-making process and all other business-processes.

3) *Staff is the main resource of the organization.* In the conditions of COVID-19 pandemic organizational risks are associated with mismanaging your employees and could be significant (eg. health and safety, financial, reputational, legal, operational, to name a few). Thus, the top-management of the organization must provide the qualitative communications with its staff, with the feedback (for example, regarding risk plan, a business continuity plan, and a crisis plan).

4) *Providing the business continuity.* So, the main purpose here is to ensure the company is able to survive a critical incident. Top management has to draw up a series of plans implemented over phases to shorten recovery time and mitigate impact. As all people are at risk of being personally impacted by COVID-19, a continuity plan must be developed for all business critical employees that can be easily triggered should they become indisposed. The chain of command must be clearly identified and alternates and designates put in place for all critical functions. Thus, it is important to form internal and external communication plan [2].

Therefore, four basic questions have to be ask during managing the risk:

1. Identify risks: *what can happen?*
2. Determine probability of loss: *how likely is it to happen?*
3. Assess severity of outcome: *what are the consequences if it does happen?*
4. Mitigate risk: *what can be done to manage the consequences?*

Thus, the top management has to determine the holistic approach to identifying, analyzing, evaluating and treating risk.

For organizations it is necessary to develop a pandemic-specific preparedness plan, which purpose is to serve as a reference for a safe and healthy workplace for all employees. It needs next steps: (1) to **overview the policy**; (2) to determine the **essential roles** (Who within the organization will be responsible for implementing the pandemic plan? Such roles include safety, training, technology, inventory, communication, and business decisions. This team of individuals

will be responsible for managing the organization through a pandemic); (3) to **measure employee risk mitigation** (What should the business and employees do to lessen the spread of the virus? Top management must consider measures such as making hand sanitizer and other cleaning products available for daily use by employees, providing sufficient workspace between employees, and encouraging employees to remain home when ill. And also top management must encourage employees to have regular medical check-ups, including appropriate immunizations); (4) to from the **protocol for returning to work after a serious illness** (What mandates should the business impose upon a person returning to work following a serious illness? For example, a signed release from a medical provider could be an appropriate measure); (5) to **train staff on medical and health concerns** (What training will be provided to employees on health issues including the spread of a disease? The training should include initial symptoms, best practices for mitigation of risk, and prevention of spread); (6) to provide the **remote work** (What allowances will be made to support employees working remotely during times of quarantine?); (7) to **train on technology to work remotely** (What technology will the employees need to work remotely? It is very important to instruct them on how to use software for meetings, collaborations, and communication); (8) to provide **emergency communication** (How will the organization communicate with its employees to notify them of important and urgent matters?).

Analysts have identified three main scenarios:

I. Optimistic scenario: SARS-CoV-2 virus control measures are effective, the duration of quarantine measures can be completed in the second quarter of 2020, which allows for a rapid economic and industrial recovery.

II. Intermediate scenario: measures to combat the SARS-CoV-2 virus are characterized by medium efficiency, blocking of the economy is lifted in the third quarter of 2020, when economic recovery may begin.

III. Severe scenario: SARS-CoV-2 virus control measures are less effective and take longer, which could lead to a second wave of the pandemic, so unlocking economic and production activities is possible before an effective vaccine is produced around the beginning of 2021.

Thus, the key task of governments is to determine the way to restore the business cycle as a whole for the economy. As noted earlier, the depth of the economic shock depends on the duration of quarantine measures. Therefore, in [3] is presented economic recovery in accordance with three scenarios (Fig. 1).

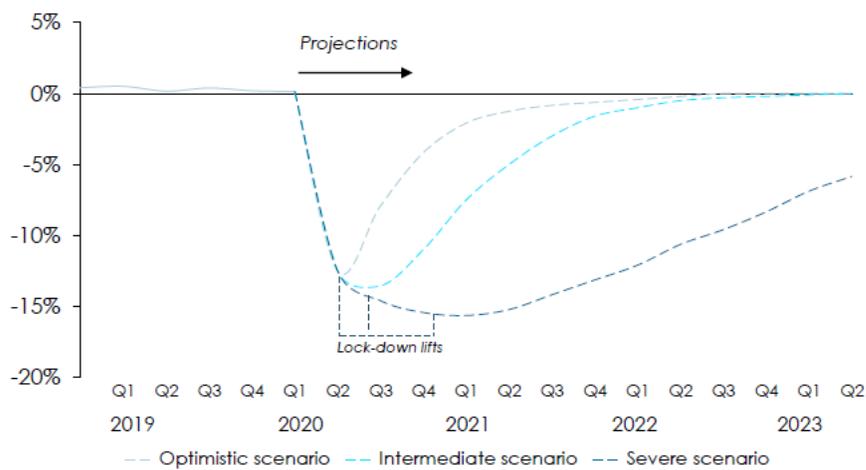


Fig. 1. Illustrative path of recovery in accordance to the three scenarios. Quarterly output gap (% of long-run GDP) (Source: [3, p. 9]).

III. Crisis exist strategies

Thus, the key efforts of governments, local governments and companies of various forms of ownership should be aimed at minimizing the negative impact based on the management of risks arising from the COVID-19 pandemic. To this end, risk management strategies based on the principles of crisis management should be formed. Based on the risk levels defined, for example, above, plans / programs of measures to minimize losses from COVID-19 should be formed and implemented, which requires addressing the following issues, which were identified by WHO as necessary conditions:

- 1) Ensuring the implementation of an effective mechanism to prevent infection with the SARS-CoV-2 virus (communications, distancing, isolation and quarantine, restrictions on transportation, control and monitoring of information on the development of the disease, testing);
- 2) Providing sufficient infrastructure and manpower;
- 3) Ensuring the effectiveness of medical care (medical care planning, medical care, support of the medical system);
- 4) Provision of financial support (financing of medical care, provision of guaranteed medical care and access of all segments of the population to medical care);
- 5) Ensuring an effective management mechanism;
- 6) Ensuring the implementation of an effective communication mechanism;
- 7) Ensuring the implementation of the economic and management mechanism to minimize the effects of COVID-19 on the business activities of regions, countries and organizations;
- 8) application of crisis management tools;

9) Constant control and analysis of the implementation of the above mechanisms in order to coordinate and regulate the activities and development of forecasts and possible plans / programs for overcoming the crisis.

In general, measures to overcome the crisis caused by COVID-19 can be presented as follows:

I. Improving health care efficiency

1.1. Active anti-epidemiological policy in the field of combating COVID-19

1.2. Formation of an extensive national network of institutions that are defined as basic in the fight against COVID-19

1.3. Providing financial and logistical support to health care facilities

1.4. Strengthening measures to ensure occupational safety and health for health workers

1.5. Incentives for medical personnel involved in the fight against COVID-19

II. Stimulating the economy and employment

2.1. Active fiscal policy

2.2. Liberalization of credit policy

2.3. Preferential lending and financial support to specific sectors of the economy, including health care

III. Support for entrepreneurship, business and the labor market

3.1. Providing social protection for the population of the country

3.2. Introduction of measures to maintain the level of employment

3.3. Providing financial / tax and other business support

IV. Protection of workers in the workplace

4.1. Strengthening measures to ensure occupational safety and health

4.2. Providing flexible working conditions

4.3. Prevention of discrimination and social isolation

4.4. Ensuring equal access to health care

4.5. Expanding the availability of paid leave

V. Ensuring communication with the community

5.1. Strengthening the capacity and capacity of trade unions and professional associations

5.2. Strengthening the capacity of authorities

5.3. Strengthening social dialogue, collective agreements and labor relations institutions [6].

In our opinion, the best and most effective way to maintain the security of personnel and the

public worldwide, while maintaining business continuity and minimal disruption, is the constant cooperation of governments and management of large companies, which should be based on effective communication based on mutual information exchange. coordination of approaches to treatment and preventive measures, risk minimization, planning and forecasting of actions.

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<https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---3-march-2020> (accessed 30 April 2020)

**MODERN TECHNOLOGIES IN THE PROCESS OF FORMING EFFECTIVE
INTERACTION IN THE "DOCTOR-PATIENT" SYSTEM**

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Abstract.

The article describes the existing problems in the national system of interaction "doctor-patient", examines the main changes which take place in the field of health care in Ukraine, proves the need for the formation of managerial competencies of modern doctors. The authors disclose the essence of the concept of interaction in the system "doctor-patient" and also

proposed to use virtual technologies in the training of modern doctors, that will allow to form the necessary management skills Things which are noticed before, will help to build the constructive communication process between a doctor and a patient and, as a result, will increase not only the satisfaction with the health care system of Ukraine, but also the level of health of the nation.

Keywords: management, skills, competency, health care system.

Urgency of the research. Nowadays, more and more attention needs to be paid to the health of people in any country all around the world. The challenges facing humanity are first and foremost related to health care. There are different medical problems in the different countries and the factors that lead to them are also different. That are noticed before, leads to the search for effective ways of solving problems not only at the macro level, but also at the micro level, as it is the primary link that has a huge impact on the interaction in the “doctor-patient” system, which is the key to effective implementation of proper medical care.

Actual scientific researches and issues analysis. Management aspects of the health care system were studied by O. Baeva, M. Bilynska, D. Dmitrov, D. Karamishev, I. Chukhno, L. Lihstaba. Research of effective ways of formation the competencies of the modern manager was carried out by N. Bogdan, I. Solonenko, T. Kristopchuk, T. Kurilo, L. Lishtaba, L. Mirabile, J. Stotey, C. Woodruff. The concept of interaction in general and interpersonal interaction in particular is devoted to many works of many scientists: G. Andreeva, R. Konechny, J. Thibaut, G. Kelly, L. Orban-Lembrick, R. Wich, R. Nilson. At the same time, almost no attention was paid to the use of modern technologies in the process of forming effective interaction in the system of "doctor-patient."

The research objective: to study the existing health care system in Ukraine, to identify the main shortcomings in the direction of improving the managerial competencies of a modern doctor, to suggest relevant ways to solve problems.

Methods: empirical research (observation, comparison); theoretical knowledge; general research methods (analysis, induction, deduction, analogy, statistical methods).

The statement of basic materials. For a detailed description of the existing problems in the system of interaction "doctor-patient" it will be advisable to conduct research in the following areas: 1) changes in the health care system in Ukraine after the reforms; 2) the needed skills of a

modern doctor to form effective interaction in the “doctor-patient” system; 3) using modern technology in the system of an education process.

Changes in the health care system in Ukraine after the reforms

Today in Ukraine there are about 10 thousand specialized doctors of family medicine. In order to make the reform work, Ukraine needs more than 30,000 specially trained family doctors. Annually, medical universities graduate 12,000 people with the relevant diploma, but only about 3,5 thousands from them remain in domestic medicine, that is 10% of the required number.

The schedule for reforming the health care funding system and other major changes to take place in the health care industry in 2017-2020 provides for the following [1]: 1) Introduction of a new financing model for the primary care; 2) Establishment of fundamental legal principles for a new health care financing system; 3) Establishment of a sole national health care customer; 4) Establishment of a uniform electronic health information exchange system; 5) Review of unified clinical protocols for a list of the most widespread medical circumstances and simplification of requirements to paper-and-pencil reporting in health care institutions; 6) Introduction of a new financing model for secondary care and tertiary care. Starting from 2018, the new model is to be introduced in all institutions providing hospital care; 7) In the first half of 2017, it is approved the cost analysis methods (cost of health care services) at the health care institutions; 8) Establishment of hospital districts; 9) Introduction of the national medicines reimbursement system for a definite list of medical circumstances; 10) Independence of publicly funded health care institutions.

Following a survey of the population of Ukraine on the quality of health services, the following data were obtained [2]: 20% of Ukrainians believe that the quality of public health services has improved in the last two years; 37% saw worsening; 32% of Ukrainians surveyed believe that nothing has changed in medicine; 12% failed to respond (Figure 1).

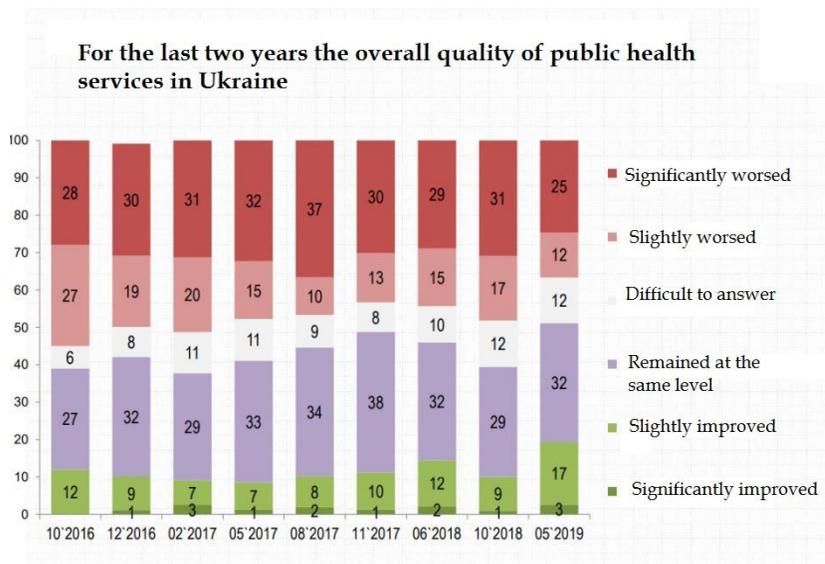


Figure 1 – The result of the survey on the quality of health services in Ukraine [2]

So, the health system performance in Ukraine has not reached the proper level. The large-scale changes that have taken place today have been displaced the not-efficient system but, unfortunately, have not yet get sustained the positive result. On the one hand, this is explained by the lack of time and, on the other, by the ineffective interaction in the doctor-patient system, which influences the indicators of the survey and is provided by the relevant skills of primary care physicians, (which European colleagues have been possessing for the long time). The new generation of medical workers must be taught modern methods of forming appropriate communication with the patient.

The needed skills of a modern doctor to form effective interaction in the “doctor-patient” system

The doctor-patient communication is considered a multidisciplinary, multi-methodological and multi-dimensional phenomenon [3]. It is multidisciplinary because it requires linguistics, psychology and pedagogy; multi-methodological because it needs the use of different styles and approaches to communication according to the patient and the situation in which they are; and multi-dimensional because it covers from verbal, nonverbal, paraverbal, written and media communication.

The concept of interaction in general and interpersonal interaction in particular is devoted to many works of many scientists. Famous American psychologist R.Wich (USA), in 1972, identified the following models of physician-patient interaction [4]: 1) the model of technical type (each party performs its functions, which are defined by a specific code (Hippocratic Oath, etc.). In this case the physician behaves like a scientist who must act impartially without taking

into account the individual characteristics of each situation; 2) the model of sacral type (the authority of the doctor influences the patient). According to R. Nilson, the doctor's office has some aura of holiness for the patient, and the patient perceives the doctor as God; 3) model of collegial type (characterized by the cooperation of the doctor and the patient as two full partners). This model is considered as the most promising and meets the European criteria; 4) the model contract type (built on an agreement between the two parties that specifies which functions, rights and obligations each party is responsible for). The patient is informed of all stages of their treatment.

Taken to consider the limitations of the study, we consider it necessary to highlight this issue separately in future research, but it should be noted that in management science there are two important groups of interpersonal interaction: constructive (facilitates joint activity) and destructive (impedes joint activity).

So, in our view, "doctor-patient" interaction can be understood as the communication process and the subsequent joint activity of the doctor and the patient in the direction of disease prevention or during the treatment process in order to achieve efficiency in the fastest time while the indicator is measure of health of the patient.

The result of the reforms in Ukraine proves that medicine is gradually develops and achieves the new level, based on European standards. Europeans have already understood which methods should be used not only in medicine but also in staff training. In order to cope with the emotions of the patient, the doctor needs considerable professional communication skills. This is necessary to create a therapeutic alliance with the patient and engage him in effective complicity [5]. A medical worker should have not only professional knowledge, but also skillfully use professional communication skills. However, each of us already has certain communication skills that have learned throughout the life. Unfortunately, it is not always perfect. Communication skills are an important part of medical education and the life of the doctor as a whole. So you need to learn to have skillful communication. Studies have shown that social effectiveness and ability to solve interpersonal problems directly depends on the mastery of communication skills [6].

The modern clinical exam used to assess the skills and professionalism of medical workers in most developed countries all around the World is the Objective Structured Clinical Examination (OSCE). The purpose of the exam is to evaluate such important competencies of the future physician as compliance with ethical standards, communication with the patient, involvement of

the patient in the medical process, etc. One of the important tasks of the OSCE is to train medical professionals to deal with complex patients. It is important to learn specific communication techniques to deal with difficult situations in communication with patients in real life.

Physicians must deal with difficult communication situations, so it is convenient to develop workshops to train specific topics such as: bad news, obtain informed consent, handle difficult patients, and conduct conversations with family members regarding life or death decisions of a critically ill patient.

Modern specialists distinguish the main components for the cooperation of a doctor and a patient: support, understanding, respect, sympathy. So, in the work of a modern doctor, “HOW to do”, it is not less important than “WHAT to do”.

The Medical Marketing Agency explored the difference between a doctor's hard skills gained at a medical university and soft skills - a knowledge that can be used in practice to become a successful doctor. Ideally, certain attainment and skills synergize with each another. There are also basic qualities that need to be improved while working out the right communication skills with patients that also affect the financial performance of the doctor:

RI (Return Index), correct communication techniques are extremely important for patient return.

CSI (Customer Satisfaction Index), the purpose of admission is to improve CSI.

The use of communicative techniques (experience + proper communication) helps to improve the quality of the patient's objections and to neutralize the negative. It is important to answer the question of what result should be achieved and how it is expressed. Thus, it is possible to improve the image of both the doctor and the medical institution where he works.

Hit Ratio (Percentage of Success in Dealing with Denialing). Statistic shows that only 30% of cases are able to convince a patient for the first time. After using their own verbal and non-verbal methods for the first time, 60% of patients can be persuaded [7].

It should be noted that in the process of studying the basics of management, you can get the following skills and abilities: motivate to a certain activity yourself and others; use self-management methods; effectively manage individual and team changes; to think systematically; manage stress; manage projects; develop tactics and strategies; build interpersonal relationships; manage the communication process; have skills of listening; give negotiate effectively; use team building; manage conflicts; use verbal and non-verbal communication; provide feedback; do

prioritize; manage time; make a decision; quality management, etc. [8].

All of these skills are necessary for a modern doctor. The activity of a manager is the interaction between people. It follows that an important management system and management process is human behaviour, human resources of communication, including such forms as disputes, tensions and conflicts.

The doctor must have additional knowledge to be a professional. A good doctor has the skills of communication, persuasion, managing time, adaptation, because of constantly changes that are happening and you need to be able to cope with this, as well as have the skills of delegation and team building, and other skills mentioned earlier.

Carrying out adequate teaching of all these areas promotes the development of effective communication, and enriches the training of doctors, and results such as the following can be observed in their professional practice:

- Diminution of anxiety and depression in the patient.
- Increased patient satisfaction.
- Improve adherence to treatment.
- Greater resolution of symptoms.
- Improve the final results of the patient.
- Fewer searches for laboratory studies.
- Reduce the risk of a medical error.
- Reduce the number of claims for a medical arbitration.
- Reduce patient complaints.
- Improve doctor satisfaction.

In Ukraine, the sector of commercial medical services is steadily increasing, but due to the mentality, the population can't accept with the fact of paid medicine. Within medical institutions, the functions of the chief physician are transformed into managerial ones, which force them to look for ways of improving managerial qualification due to the demands of the growing market of medical services.

There is such a term as "medical management" - the application of a set of special principles, approaches, methods and means of management of healthcare organizations of different forms of ownership, which is aimed to meet the following goals: 1) maximizing profits from commercial

medical activity; 2) improving the quality of life of the population; 3) achieving social harmony related to the exercise of the citizen's right to quality medical care; 4) increasing the availability of medical care [9]. But it is only partially relevant to primary care physicians in the doctor-patient system, and more relevant to a head of the healthcare facility.

An effective medical management system based on the separation of powers of the head doctor and the director will increase the availability and quality of care. Implementation of business training of health care management personnel will allow development managerial potential and take clinics management to a new qualitative level. In this context, it should be noted that not only the chief physician but also the primary care physician must possess all of these considered skills.

It also should be noted that as far back as 1998, were made attempts to compare the skills of a doctor and a manager [10], but they rather separated a manager of a hospital and a doctor. Therefore, the implementation of an effective system for the practical acquisition of manager skills by modern physicians concerning interaction in the doctor-patient system is still a problematic issue, which causes the corresponding problems.

The professional lives of senior managers and doctors are usually different. The chief manager is unlikely to remain in the same post for more than five years, while being a highly qualified doctor is a norm sometimes throughout his all career. Therefore, over the years, most physicians have to contact a number of new managers in the departments. Therefore, the information above shows that the best option for a medical worker is to have managerial skills [11].

However, while the idea of developing health care management develops in Europe, Ukraine is looking for someone who will bring it to life. The shortage of medical managers, prepared according to international standards, is still relevant [12].

Using modern technology in the system of an education process

The implementation of modern methods in the system of teaching physicians should be aimed at the formation of management skills, which will allow building effective interaction in the system "doctor-patient". It is also advisable to propose the use of modern virtual technologies for this process. While not reducing the importance of theoretical training for students from different disciplines, it should be noted that the problem of lack of practical knowledge and skills of university graduates is not new. As a rule, practical skills are limited only by one's own

experience. This problem is related to many objective and subjective factors (short-term practice, size of organizations, etc.) [13, 14]. As a result, graduated students are not ready to interact effectively with the patient-doctor system in today's real-world environment. Figure 2 presents the introduction of VR technology into the learning process system.

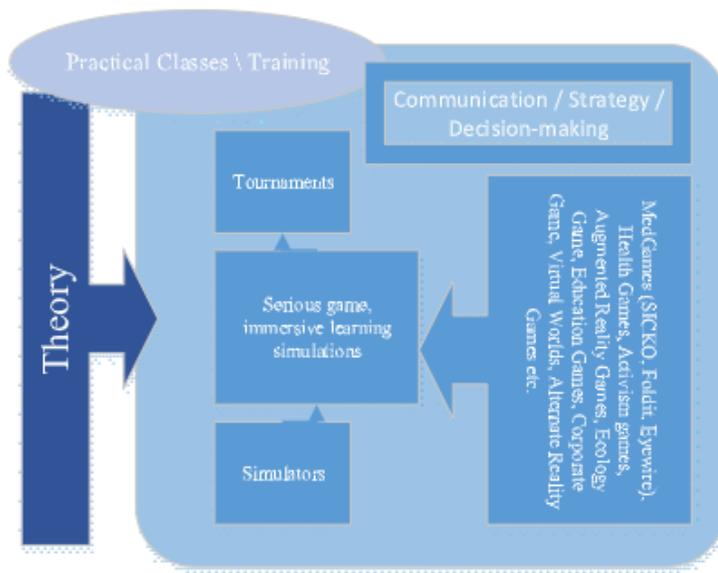


Figure 2. The place of VR technology in the system of an education process

Completed by the authors

This problem should be solved by actively engaging in a variety of training sessions close to the real world. At the same time, the university education process should be both useful and interesting, so we believe that learning through "games and simulators" can solve this problem, because the method is active with the ability to attract a wide range of students. This method is not new, but any simulator should be adapted to the appropriate specialty. There are not many studies about that in Ukraine, and most of them relate only to economic trends (also used mostly in foreign countries). It is important to propose such game in which players (listeners) during the training and study process have the opportunity to manage the appropriate system (interaction, organization), such games and simulations will allow to use as methods of effective management of various establish through the implementation of management functions, and significantly reduce the time to gain the practical skills in the interaction in the "doctor-patient" system (having the right to make mistakes).

Thus, it would be advisable to introduce a course in the process of training modern doctors to develop appropriate competencies in the direction of building effective communication in the "doctor-patient" system. We believe that it makes sense for future health care professionals to

study certain aspects of management basics. The list of disciplines at Ukrainian educational institutions confirms that modern medical universities do not introduce anything similar to OSCE into the teaching process yet.

Conclusions

After a detailed research of the functioning of the health care system of Ukraine and its comparison with the Spanish system, the main problematic issues that need to be resolved were identified, namely: lack of effective interaction in the "doctor-patient" system; lack of necessary skills to improve it; absence of effective teaching methods to acquire the needed competencies.

Using of virtual technologies in the training of modern primary care physicians will allow them to get the necessary management skills. Noticed will help to build a constructive communication process between doctor and patient and increase satisfaction with the health care system of Ukraine and the level of health of the nation.

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SOVEREIGN DEFAULT AND MACROECONOMIC POLICY OF INCREMENTALISM

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Abstract.

The debt issue and repayment problem is strongly correlated with appropriate national macroeconomic policy and strategy instruments. We show, that macroeconomic incrementalism tools in evaluating informative signals to determine the optimal level of sovereign debt helps to understand the nature and possible outcomes of national debt policy. Using of system dynamics modelling helps as minimum to identify the debt problem and to build the mental in its application to the estimation of the economic nature of the sovereign default and the tools of incrementalism. The extended basic model of the sovereign debt influence on the national macroeconomic development indicators was created.

Key words: Sovereign default, balance of payment, incrementalism; private savings; signaling; political fragmentation; system dynamics.

1. INTRODUCTION

The scientific studies confirm that the instability and fragility of the current account balance, total demand for investment resources, uneven economic development and allocation of financial resources, the implementation of socio-economic development programs, restructuring of the banking sector, providing debt on domestic and foreign loans stimulates and develops the spectrum of public administration under financial globalization.

The international movement of capital requires significant changes in the public policy of each country to ensure financial security and economic development, taking into account the degree of pressure from other states. At the same time, there is a risk of changing certain methods of state regulation of financial and economic and social processes, which significantly influences the vectors of the national economy development and social relations.

As a result, the international financial institutions form a rather rigid framework and

requirements for national economic systems, which greatly increases their dependence on the actions and decisions of transnational corporations that are created and strengthened by the movement of world capital.

2. METHODOLOGY

Some theoretical aspects of the influence of the policy of incrementalism on the dynamics of sovereign default are presented in the works of well-known scientists, such as: V.Vlasiuk, S.Gupta, Y.Dror, E. Crivelli E., T.Phan, D.Sandri, C.Lindblom and many others. The works of scientists are aimed at studying the practical and theoretical aspects of the assessment of the sovereign debt problem. The basic source on which this study is based is [6], in particular, the analysis of macroeconomic incrementalism tools in evaluating informative signals to determine the optimal level of sovereign debt. The difference in the position of the author from previous studies, including [6], is in finding ways to achieve a dynamic equilibrium with changing the country's sovereign debt, as opposed to research which asserts that the economy is always in a state of static equilibrium. *The distinction of author point of view from previous research papers, including [6], is to find ways to achieve a dynamic equilibrium when changing sovereign debt of the country, in contrast to scientific research, which believe that the economy is always in a state of static equilibrium.*

3. RESULTS

Globalization processes lead to a decrease in the level of influence of national state institutions both on financial and economic processes and on the overall macroeconomic environment as a whole, as evidenced by the weakening of the system of state regulation of economic, innovation, cultural and social processes, which often requires revision of existing methodological approaches in the system, management of the macroeconomic environment.

The main trends of the world development are reflected in the socio-economic development of Ukraine and are manifested in the aggravation of energy supply and rising energy prices, increasing the openness of the national economy and increasing its participation in the processes of globalization, dollarization of the economy and its financialization, exacerbating the conflict between real and virtual economies, extension of gross external debt and of the possibility of Ukraine trapping into a debt [7].

Financial and economic processes are a set of consistent dynamic changes of individual stages of the development of financial and economic systems, taking into account market laws, general needs of society and the effectiveness of modern financial and economic instruments of influence on the appropriate segments of the micro, meso and macro environment.

Under globalization, when there is a process of increasing the interconnection between financial flows and increasing the level of inter-ethnic cooperation, the need for state regulation of financial and economic processes with the help of a system of methods and corresponding tools is increasing.

Methods of state regulation from the point of view of complexity are distributed: on general (regulatory, administrative, social-psychological (propaganda) and economic) and special - strategic planning and targeted programming, budgeting, informing. In turn, from the point of view of the influence of the subject of management on the object of management: direct influence and indirect influence; preparation and decision-making, planning, organization, control, management support [3].

In the international environment, the global trend is to apply a system-wide process-project approach to state regulation. The modern system process-project approach considers the closest relationship between the functions of state regulation due to the existence of a single object of regulation - a process, which represents a set of interconnected and interacting activities, converting inputs to outputs. Thus, this approach does not contradict the functions to the process or accentuates the process on itself. Analyzing the scientific works of the adherents of the process and project approach, it should be noted that most researchers consider them in isolation or as alternative concepts in the regulatory system. Government process regulation is the methodological basis for the functioning of the macroeconomic environment and the vector of its development. Under globalization, in order to ensure the successful implementation of the development strategy and achievement of the target directions of the macroeconomic environment, taking into account limited material and time resources, the process of state regulation methodology is not always sufficient. Therefore, it is proposed to apply the project management methodology.

Integration of the project management methodology in the process of state regulation provides an opportunity for the subject of the macroeconomic environment to focus on achieving strategic goals, to provide organizational and resource support for the implementation of the

relevant strategy of the national economy. It should be noted that when exploring the project principles of implementing strategic initiatives, we do not consider the problems of such integration. Issues of coordination of the organizational and economic mechanism of state regulation with the regulations and procedures of project management remain outside the sphere of attention. Using the systematic process-project approach and the results of systematic research of the essence and functions of the state in the national economy, we have developed a model of functioning of the national macroeconomic environment with the participation of the state. Strategic state regulation has a distinctly expressed cyclicity: the continuous strategic process consists of relatively closed cycles, in the course of which each of them achieves a certain goal. Each cycle consists of a number of interconnected components. It should be noted that the preceding cycle is a prerequisite for another one. In the most general form, the cycle of state regulation can be represented as the organic unity of certain components: an assessment of the situation as a result of the collection and processing of analytical information; preparation and decision making; organization and motivation of execution; monitoring and diagnostics; control and regulation.

As a result of the deployment of these components, we will form an interconnected algorithm for strategic state regulation of the macroeconomic environment of the country. The initial step by the strategic evaluation is to determine the national goals and objectives; the second - strategic planning is carried out in order to achieve the desired state of the national macroeconomic environment; the next step is the implementation of the mechanism of self-organization of the macroeconomic environment, namely organization and motivation; in the fourth step the strategic monitoring and diagnostics are carried out. It is a methodological tool for the state regulation system that provides objective, impartial and timely strategic analytical information on the changes taking place in the national macroeconomic environment under the influence of many internal and external factors; in the final step - the system of state regulation applies the function of control and regulation to implement a certain strategic development of the national macroeconomic environment.

The financial, economic and social processes in the international environment have shown that there is no single (reference) strategy for all countries, including the absence of a single universal mechanism of strategic management.

It is necessary to confirm the opinion of many researchers that each country is unique,

and the process of forming a financial and economic strategy for each subject of the international environment is individual, because it depends on the position of the subject in the international market, the potential and positive dynamics of its development, competitiveness, quantitative and qualitative orientation of the produced products (works, services), the general state of the national economy, cultural and social environment, etc.

Some aspects emphasize the generalized principles of strategic management for subjects of the international environment. In accordance with the management methodology - the management of socio-economic systems - this adaptation is the process of adaptation to changing environmental conditions under the influence of relevant factors.

It should be noted that the actions of the subject of state regulation cannot be reduced to simply reacting to the changes that take place. There is a need for focused management of change on the basis of a scientifically sound procedure for their prediction, regulation, and adaptation to the objectives of the macrosystem, to changing environmental conditions under the influence of factors of globalization and European benchmark for the development of our country.

A certain reaction of the subjects of the international environment to the processes that take place under the conditions of globalization causes different variants of their behavior in the international market. In the scientific literature there are two basic directions of the state regulation policy: incrementalism and entrepreneurship.

In accordance with [5], incrementalism is a model of the decision-making process by the government, according to which decisions are usually taken with relatively small, gradual adaptations to existing situations.

Honorary Professor of Political Science and Economics at Yale University, Charles Eduard Lindblom, has developed a strategy to expand the application and further development of the notion of incrementalism in the decision making process at both micro and macro levels.

Institutionalism considers state policy as an extension of the actions of the subjects of state regulation, which took place in past periods, only by incremental (incremental) modifications. Institutionalism is a policy of state regulation as a variation based on past experience.

Institutionalism is one of the methods of strategic state regulation, which envisages reviewing and adjusting the development strategies of the macroeconomic environment through relatively short periods of time on the basis of the accumulated experience, and the development of state regulation entities is carried out through small changes and steps that are tentative to solving

current issues.

The method of incrementalism is to compare the objects selected for analysis. The results of several different possible strategies, including comparing each with no change at all are compared [4].

The incrementalism is adhered to the subjects of the international macroeconomic environment, which seek to avoid the relevant changes, restrict or minimize them. But decisive actions or necessary transformations are made only when the need for change is an urgent necessity and the search for alternative solutions is carried out strictly consistently and with due diligence.

A considerable number of subjects of the international macroeconomic environment, which have the status of the developed countries and dynamically successfully support their positions in the international economy, adhere to the fundamentalism. A sufficient number of actors in the international macroeconomic environment seek to effectively develop the national macroeconomic environment, to ensure the rational use of tangible and intangible resources, but at the same time they are showing an appropriate propensity for conservatism, bureaucratization and preservation of the corresponding state of the economy.

The entrepreneurial behavior is characterized by the desire for strategic internal and external changes, caused by the corresponding reaction of the macroeconomic environment adaptation to changing events, to prediction of future dangers or priority opportunities of the national economy respective segments. Entrepreneurial behavior involves a diverse search for alternative managerial decisions in order to identify the best macroeconomic environment for the country.

It should be noted that the entrepreneurial financial, economic and social system is striving for a continuous strategic change chain, since it is linked with the future effectiveness of the country's macroeconomic environment.

In the international economic space, entities are much less likely to resort to entrepreneurial behavior in state regulation than to incremental ones. Entrepreneurial style is used only in the early stages of development of the macroeconomic environment of the country, when the range of tasks is determined, the segmental structure of the national economy is formed, but in the next stage, they tend to move towards incrementalism.

Subjects of the international economy, which adhere to different styles of behavior in regulation, differ significantly in their parameters. Subjects supporting incrementalism see their

goal in optimizing macroeconomic indicators and supporting the emerging international position. It should be noted that the internal political, financial, economic and social structure is relatively stable, existing technological processes are used to use existing tangible and intangible resources, productivity growth is observed etc., but management decisions reflect the response to unplanned issues with a delay in relation to the time of their occurrence. Subjects, who adhere to entrepreneurial behavior, see their goal in optimizing the potential effectiveness of the macroeconomic environment. The organizational structure of the state machinery is flexible enough but varies adequately to the transformational conditions. It should be noted that managerial decisions in this style of regulation are made through an active search for potential opportunities by anticipating problematic issues in the macroeconomic environment.

The international experience of reorganization of the state regulation system shows that the transition from incrementalism to entrepreneurial behavior in the macroeconomic environment is associated with transformational changes, for example, the reorientation of the development of the national economy, military actions and considerable time and resource costs.

It should be noted that for the society this transition is psychologically and extremely unfavorable, because it requires redistribution of authority and appropriate transformations. The redistribution of powers in the macroeconomic environment involves the need for organizational and functional restructuring of the segmental structure of the national economy, including the redistribution of rights and responsibilities to make decisions between different levels of the state regulation system.

International experience shows that the combination of incrementalism and entrepreneurial behavior in the subject of the international environment leads to the emergence of internal political tension. In our view, in each specific case for the subject of the international economic environment, it is necessary to solve the problem of applying incrementalism or entrepreneurial behavior. That is why the strategic planning in the system of state regulation of the national economy provides an optimal set of system and situational approaches to the entrepreneurial style of behavior in the macroeconomic environment.

Thus, the strategic subjectivity of state regulation of the national economy should provide such strategic position that should determine the long-term viability of the national macroeconomic environment under transformation that is characteristic of Ukraine in accordance with the European vector of development of the country and the aggressive behavior of the external

environment.

The anti-crisis nature of the state regulation system manifests itself in the gradual reorientation of the politico-centric strategy from the neoliberal concept of the role of the state regulation system to the concept that activates the regulatory function of the state in the macroeconomic environment. A typical feature of the anti-crisis orientation of the state regulation system can be considered a tendency to strengthen a unified system of state executive power and to improve the interaction of controlling entities of different levels, taking into account the principle of decentralization. Also the typical feature is the revision of the priorities of financial, economic and social policy in terms of actualization of the national economy real sector development problem and state property management, as well as the liberalization of fiscal and tax policies in the macroeconomic environment.

The effectiveness of the functioning of the national macroeconomic environment can be imagined as the extent to which it achieves the result set by the general function of the state regulation system, that is, what is the degree of conformity of the result with that which would have taken place with the full and correct implementation by the national economy of its segmental component functions.

But this is not achieved without the institutionalization of the overall function of the national economy through an effective system of state regulation. The institutional mission of the state regulation system depends on the nature of the public administration organization of the national macroeconomic environment. Its existing paradigm has a vulnerability due to the predominance of its structural-functional approach, which results in the need for a process approach in regulating the segments of the national economy. The general algorithm of strategic state regulation of the national macroeconomic environment is presented as the organic unity of the identified components: assessment of the situation as a result of the collection and processing of analytical information; preparation and decision making; organization and motivation of execution; monitoring and diagnostics; control and regulation.

The necessity of the state regulation system institute is connected with the fact that at a certain stage of development of the macroeconomic environment there is a need for organizationally balanced support. Under relatively dynamic process of reproduction of the national economy, its decisive indicator is the macroeconomic failure-fluctuations that arise in the above mentioned process, which must be eliminated under the influence of internal and external factors. Therefore,

the systematic goal of state regulation of the macroeconomic environment is to reduce its fluctuation, that is, to counteract the challenges and threats from aggressive internal and external environment, to strengthen the stability of the national economic system under globalization and the European vector of national development. This is the institutional mission of the modern system of national economy state regulation. However, the aforementioned mission and attempts to solve the problem may bring unexpected side effects in the form of an inert opposing of the existing economic system.

The debt of Ukraine to Russia for Eurobonds totaling \$ 3 billion ("Yanukovich's debt"), which arose in 2013, was caused by a number of other factors, the difficult economic situation in the country, the limitation on foreign borrowing markets and the political dependence from Russian Federation. The result of the debt was the unexpected dynamics of events, which accelerated the collapse of the old system of public administration. However, the effects of sovereign debt growth have increased the vulnerability of the Ukrainian economy to macroeconomic shocks, which reduces the possibility of using macroeconomic incrementalism instruments. There is a problem of fiscal dominance, in which "the level of debt is high, and the growth of interest rates leads to default and risk aversion, which in turn can lead to devaluation of the exchange rate and inflation" [8].

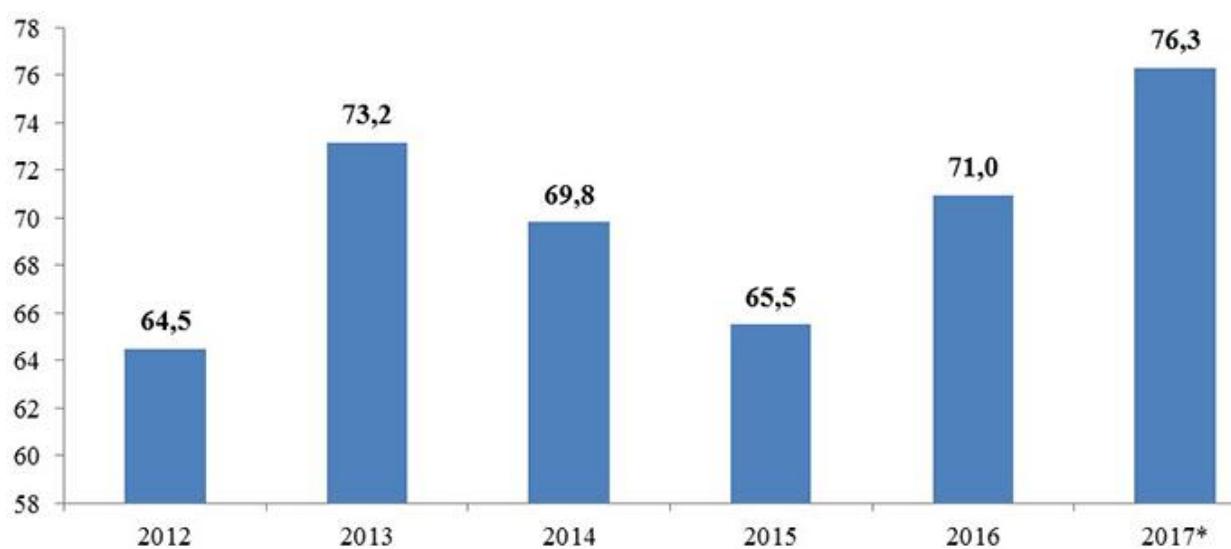


Fig. 1. The total amount of the state and guaranteed by Ukrainian government debt, 2012-2017 years, billion dollars.

Source: [9]

An increase in sovereign debt leads to an increase in domestic consumption. In turn, an

increase in sovereign debt leads to an increase in the interest rate, which in turn can lead to a reduction in consumption and costs. Thus, this model indicates to us the presence of a balancing feedback loop. There is a policy oppose ("policy resistance") to existing economic policies. For example, the growth of a sovereign debt can positively affect the rate of economic growth, since debt is a positive indicator for foreign investors about the credibility of the country's economic policy. At the same time, unjustified rational expectations of foreign investors may increase the depth of the economic downturn in the future. Thus, the positive feedback loop is balanced by a negative, as shown in Fig. 2

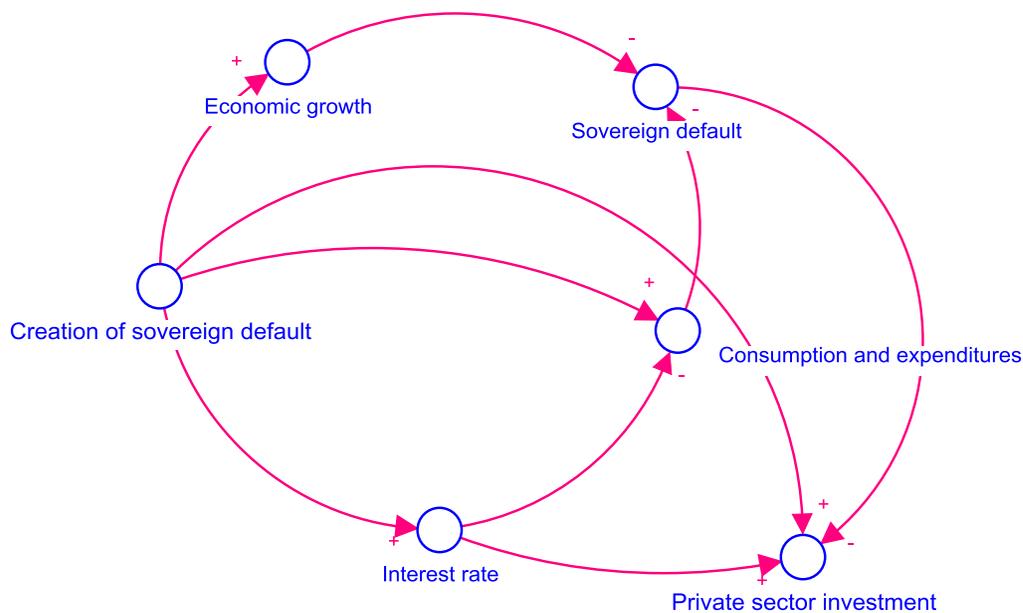


Fig. 2. Construction of the basic model of the sovereign debt impact on the level of consumption and interest rate using the model of system dynamics.

Incrementalism in its applied application can be applied to macroeconomic policies for regulating the level of sovereign debt by the government with the provision of relevant informative signals to international investors. The level of sovereign debt can gradually decrease under the preservation, or even the growth of current consumption. This thesis modifies the statement of the famous scientist Y. Dror, which asserts, that incrementalism can only be used under stable socioeconomic systems and the absence of radical differences in the strategies of political elites [2]. Incremental dynamics can overcome the inertia of the economic system by creating additional macroeconomic regulation tools that can overcome the time lags of decision-making. As an argument, an expanded base model of the sovereign debt impact on macroeconomic indicators of the national development can be presented. The model indicates

adjustment of policy elements in the absence of sufficient quality of human capital for computation and control. Both phenomena neutralize the negative effects of their appearance and application and lead to the emergence of coordinated macroeconomic policy. Coordination or integration of policies can only be achieved through endless minor adjustments of macroeconomic policies to the current situation in the country [4].

4. CONCLUSIONS

The conceptual basis and methodological principles concerning the strategic assessment of the national economy under globalization are envisaged to provide a comprehensive study of the constructive or destructive influence of the factors on the financial and economic situation on the national economy in the long term in order to form a rational strategy of financial and economic processes state regulation taking into account the tasks of ensuring a stable growth of macroeconomic indicators;

- The relationship between the influence of growth (reduction) of personal income on the probability of a sovereign default occurrence with the help of informative signals was revealed;
- A review of incrementalism as an integrated macroeconomic decision making system is presented;
- Y. Dror's statement [2] that incrementalism can only exist if there is a presence of external and internal economic shocks (war, economic crisis) was modified for the process of making managerial decisions;
- The relationship between the use of tools of incrementalism and the likelihood of a sovereign default of the country is revealed;
- The mental model of system dynamics in its application to the estimation of the economic nature of the sovereign default and the tools of incrementalism is presented.

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**MODELING INFORMATION SECURITY MANAGEMENT SYSTEM OF
ENTERPRISE ON THE BASIS OF ORGANIZATIONAL MANAGEMENT CYCLE**

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Abstract.

The article elucidates the issue of the information security management system and its significance for an enterprise. The emphasis is laid on the drivers of the information security management system modeling. The basis for a case study is the world experience and experience of the Ukrainian enterprises. The author suggests a model of an enterprise information security management system formation, designed on the basis of the international standards of information security management systems, the models created in terms of the Deming cycle (a continuous quality improvement model), and taking into account the specifics of an enterprise. Unlike the existing ones, this model provides information security of the enterprise based on a combination of management general functions with the cycle of organizational management support and software, in terms of technical support, hardware and technical tools, and human resources.

Keywords: Deming's organizational management cycle, drivers, enterprise, information security management system, information security model, information security threat, management functions.

INTRODUCTION

The process of modern enterprise successful operation depends on the quality management and timely decision-making, which is based on meticulous selection and analysis of information, coming from the internal and external sources. Due to the development of information technologies, global informatization, and digitalization of business entity economic relations, the importance of information and information resources increases not only for the economy but also for society on the whole. Modern information systems are designed to ensure the efficiency of the information infrastructure of the enterprise, the provision of various types of information services, automation of financial and production activities, including support for business processes. Owing to them, enterprises can reduce both financial and labor costs. The information systems of modern enterprises produce, process, transmit, and store significant amounts of information resources with a varied degree of confidentiality. There arises the need to protect the enterprise information systems and the information environment in general from various threats to its security.

LITERATURE REVIEW

Recent studies conducted by the world and domestic scientific communities and the practice of forming a system of information security of the enterprise and its management, argue the dualism of views on this process. On the one hand, the mandatory requirements of the national authorities (standards, regulations, licensing processes) (The Constitution of Ukraine: Law of Ukraine, 1996; On information protection in information and telecommunication systems: Law of Ukraine, 1194; On personal data protection: Law of Ukraine, 2010; On the adoption of the draft Law of Ukraine on the Concept of state information, 2011; On approval of the Concept of technical protection of information in Ukraine, 1997; Common criteria for information technology security evaluation; Canadian trusted computer product evaluation criteria; Trusted computer system evaluation criteria; Information technology security evaluation criteria; Information security standards: national and international; ISO 17799; ISO/IEC 27000:2014; ISO/IEC 27003:2010), on the other hand, understanding the need to implement information security systems by the owner or senior management of the organization. Therefore, the main problem for management and business owners is how to comply with the established requirements for the information protection, and to solve it, ensuring reliable protection of the

information environment at minimal costs. The difficulty lies in how, despite the impossibility of covering all existing activities and conditions of their implementation, including significant differences in the enterprise goals, to offer a universal set of requirements for the information security systems formation. Mainly, information security was considered as a self-sufficient entity, invariant to the activities, goals, conditions, and its content to achieve universality was significantly narrowed (Andrianov, Zefirov, Golovanov, Golduev, 2011; Gladkikh, Dementiev, 2009; Romaka, Korzh, Garasym, 2013).

Therefore, an important research task of information security management is to substantiate a modern interpretation of the concept of *information security* and prove its significance for the business processes. The analysis allowed us to reveal that the most common is the definition of information security as a certain level of information protection from illegal access, transformation, and destruction, as well as protection of information resources from influences aimed at disrupting their operation. The nature of these influences can be rather diverse: attackers' attempts to penetrate, staff errors, the failures of hardware and software products, natural or environmental disasters, and other factors (Andrianov, Zefirov, Golovanov, Golduev, 2011; D'Arcy, Hovav, Galletta, 2009; Gladkikh, Dementiev, 2009; Moiseev, Zhmurov, 2013; Sokolov, 2015).

Another group of scientists interprets this concept from the standpoint of business safety and defines the enterprise information security as a level to which the organization interests (goals) are protected in the face of the threats to its information sphere. The information sphere is understood as a totality of information, information infrastructure, subjects that collect, generate, disseminate, store, and use information, as well as the systems regulating the relations that occur in this context (Gatchin, Klimova, 2009; Lagun, Kukharska; Romaka, Korzh, Garasym, 2013).

In terms of these approaches and analysis of the indicators of an enterprise information security assessment, the role of information security in the business of a modern company is insignificant, since the owners and management consider information security as a 'standard insurance procedure' against possible problems or difficulties: "... paid money, implemented the regulations, and you can safely focus on the main business activity..." (Perimetrix).

Concurrently, development of the market, the informatization of all spheres of entity's economic activities, an increase in the number of threats and means of security lead to the fundamentally different understanding of the information security role. In the context of global

informatization, it cannot be perceived solely as protection or 'insurance' – it grows into something more significant, namely one of the key business advantages of a modern market player. According to experts from the analytical center of Perimetrix, the introduction of information security technologies can increase the profitability or overall efficiency of the business directly, and not only by minimizing risks (Perimetrix).

According to a study by Ernst & Young, 67% of respondents consider that the main driver of today's information security market is the need to comply with various normative acts. This item has topped the list since 2005 (Ernst & Young). Moreover, most regulations are of a recommendatory nature and regulate information security issues indirectly. For example, the main aim of the SOX law is to ensure transparency of internal control and information correctness in reports, and the task of the Basel II standard is to encourage financial companies to reserve operational risks (ISO 17799; ISO/IEC 27003:2010). Neither of them is directly related to information security, but significantly affect it, and, according to Ernst & Young, 80% of respondents believe that compliance with normative act regulations has a positive effect on information security (Ernst & Young). Experts from the analytical center of Perimetrix believe that this issue is extremely important for Ukrainian enterprises. Until 2005, the technical threats, including classic viruses and network worms, were the leading factors motivating the development of information security. A positive trend in the formation and implementation of information security system at the enterprise is the protection of private and corporate data. Respectively, 43 and 59% of experts believe that it is so (Perimetrix).

The business drivers in modelling the information security system of an enterprise include the minimization of vendors' and business partners' risks, resistance to information crimes, natural and man-made disasters. The study has revealed that, in most cases, they are considered as the least significant drivers.

Ukrainian business entities demonstrate quite diverse driver indicators (Fig. 1).

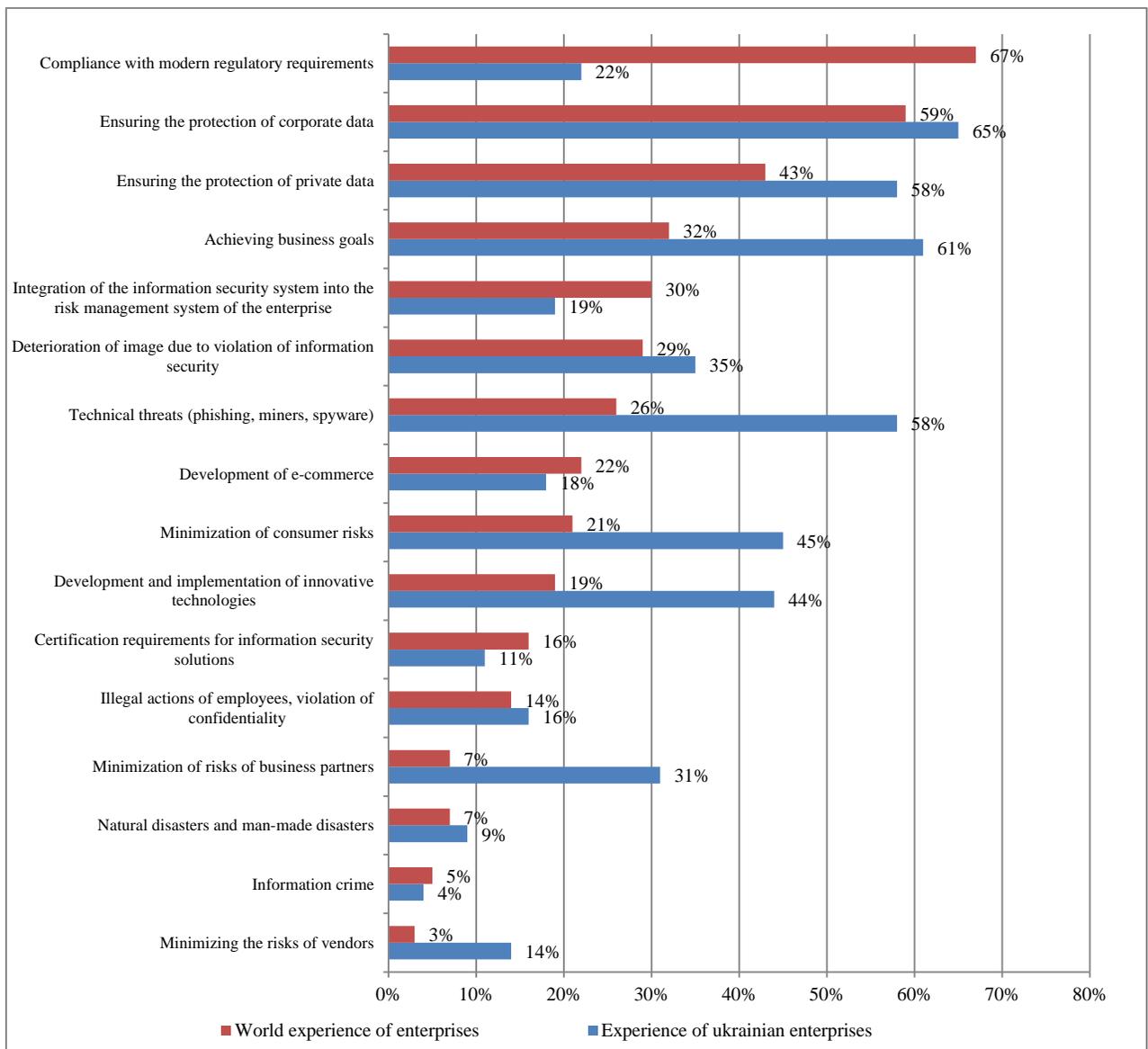


Fig. 1. Drivers of the enterprise information security system formation (world experience and experience of the enterprises of Ukraine) (developed through Atif, Maynard, Park, 2014; Gladkikh, Dementiev, 2009; Lagun, Kukharska; State Service for Special Communications and Information Protection of Ukraine; Ernst & Young; Perimetrix)

Drivers of the information security system formation at the Ukrainian enterprises differ from the world trends due to the specifics of their economic activities. The main aim of introducing information security system at the Ukrainian enterprises is to ensure the protection of corporate data, realize business goals, ensure the protection of private data, counteraction to technical threats to information security (phishing, miners, spyware, etc.), minimizing the risks of business partners and consumers, development, and implementation of innovative technologies, preventing disrepute of the enterprise image due to information security breaches. It underpins the practical orientation of the need to create a system of information security at an enterprise, rather than a nominal or legislative need for its formation and maintenance.

The abovementioned findings of the study determine the purpose of the article, which is to create a new, adaptive model of information security management system of the enterprise.

MATERIALS AND METHODS

The appropriately selected general scientific and special research methods have been used to solve the research tasks of the article and draw reliable conclusions. The basic among them were analysis and synthesis, systematization and generalization, dialectical approach. Carefully selected approaches to the definition of information security and pre-defined drivers of the formation of the information security system of the enterprise justify the feasibility of forming an information security management system based on a risk-oriented approach. The key principles of this approach are based on the assumption that the risk assessment allows a constructive solution to the problems related to an organization's information assets and their protection against, first and foremost, current threats and their sources (the risk factors), possibility and frequency of threats, identification of those information assets (their quantitative analysis), that can be affected the most in case that a threat occurs.

RESULTS

The in-depth analysis of the scientific works in this area argues that a standard information security management system of the enterprise has all the elements, common to management systems. In its turn, the experience of complying with the standardized requirements for the information security management system helps to determine the main directions and aspects of information security at a modern enterprise, in general. They are:

- Development of information security strategy, goals and measures that reflect the business objectives of the entity;
- Updating the information security policy, which implies compliance with the rules and regulations of the enterprise information security;
- Dissemination of instructions (regulations) on information security policies and standards among all managers, employees and other contractors;
- The approach and steps consequence of implementation, support of monitoring and improvement of information security are consistent with the culture of the organization;
- Support and commitment from management at all levels;
- Understanding of information security requirements, risk assessment and availability of risk-management;

- Introducing a system of effective measures for the formation of competence in information security for proper awareness of its significance;
- Providing financial support for information security management activities;
- Providing adequate information literacy, training, and education;
- Establishing an effective management procedure for information security incidents;
- Evaluating the system used to assess the effectiveness of information security management and suggestions for its improvement.

The implementation of the information security management system at the enterprise can be organized as a totality of management measures regarding target (profile) activities, initiated and completed by the criteria adopted for them (by time or event) and based on the Schuhart-Deming cycle (PDCA cycle) (Fig. 2).

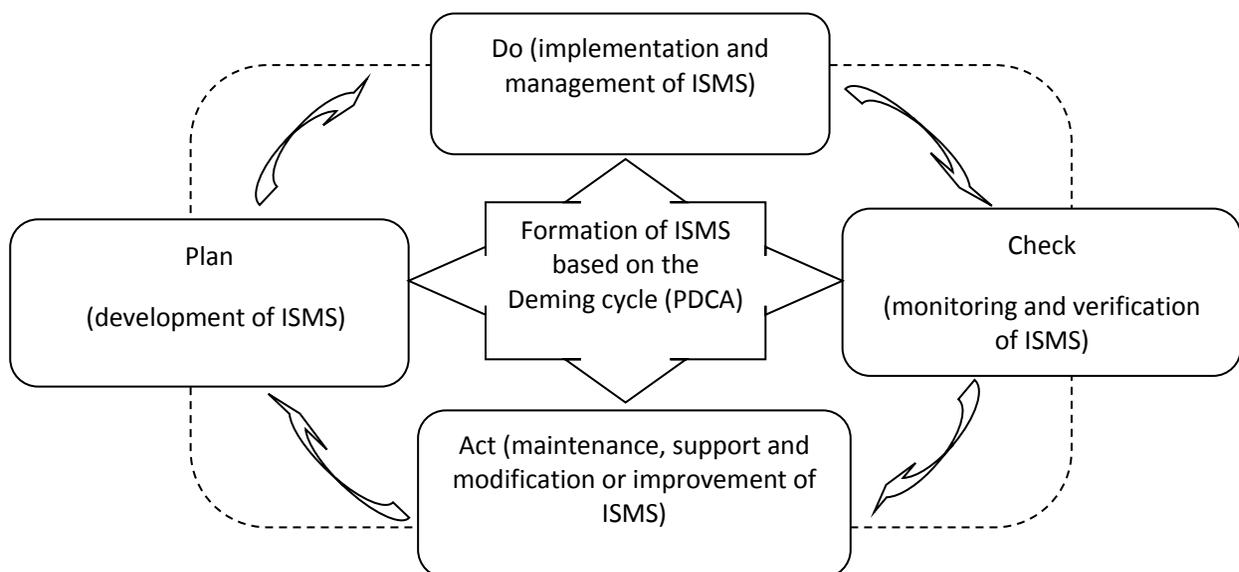


Fig. 2 The concept of building a model of information security management system in terms of the Deming cycle (developed on the basis of Andrianov, Zefirov, Golovanov, Golduev, 2011; Kukanova, 2017; ISO/IEC 27003:2010).

In view of the above mentioned, this study argues that Ukrainian regulations and standards are more declarative by their nature and do not take into account the informatization specifics of the individual businesses. Virtually all international standards of the management system are methodologically compatible, which allows identifying and maintaining unified tasks: work with the organization personnel regarding the use of information and its protection, registration and collection of information, modeling information systems, use of automation tools, etc. In this case, the procedures for the implementation and management of the information security system can be organized as a tree of processes.

We designed a new model of building the information security management system of an

enterprise, which, in contrast to the existing ones, provides the enterprise with information security model based on a combination of general management functions with the Deming organizational management cycle in the plane of organizational software packages, in terms of hardware, providing technical support, as well as human resources. The suggested model allows developing the most optimal information security management system per each business entity. Its basis is a combination of the fundamental principles and international standards of information security management system with the model of building an information security management system of the enterprise in terms of the Deming cycle, taking into account the specifics of an enterprise economic activity. (Fig. 3)

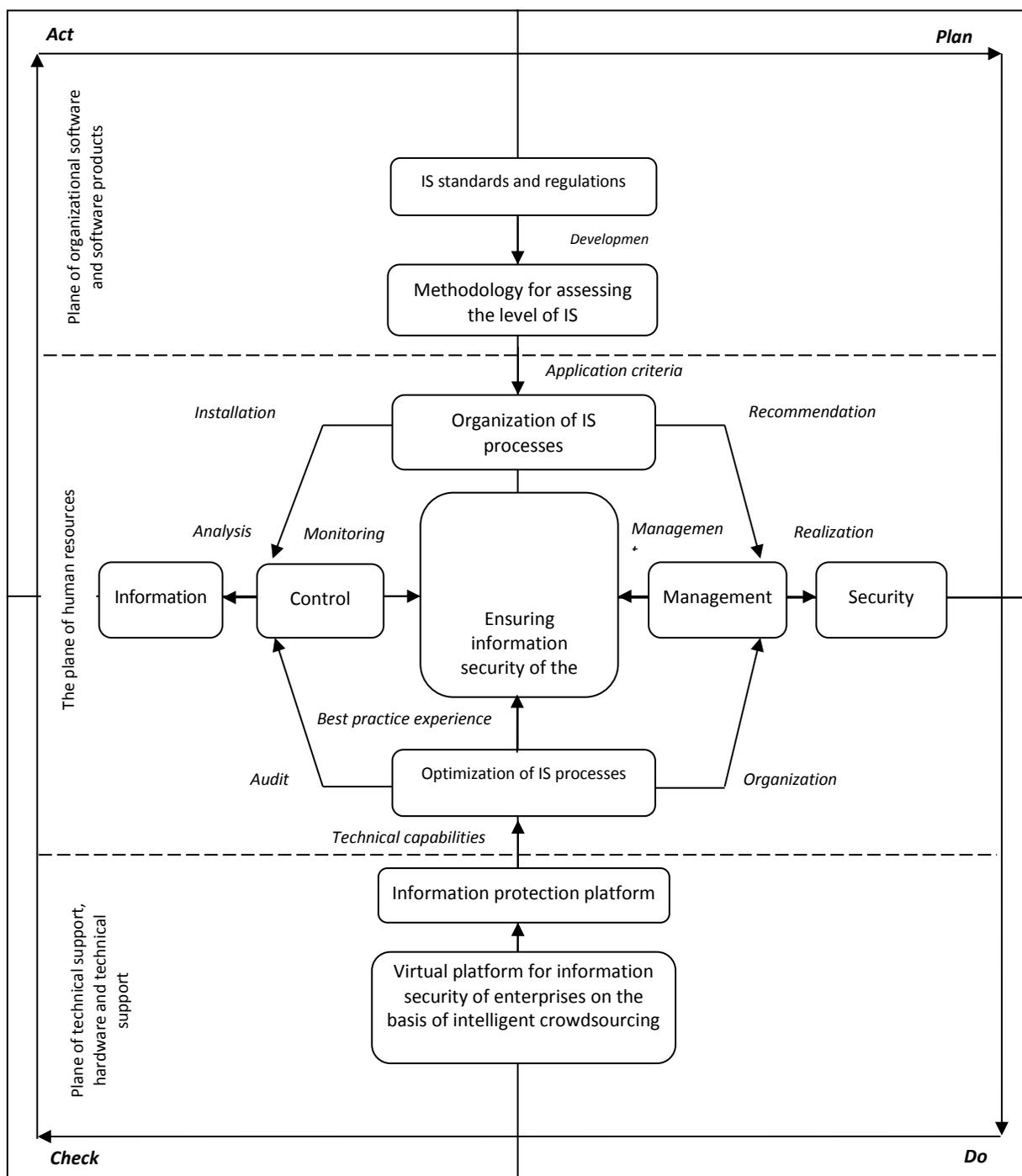


Fig. 3. Model of building an information security management system of the enterprise in terms of the Deming cycle [developed on the basis ISO 17799; ISO/IEC 27000:2014; ISO/IEC 27003:2010; Kukanova, 2017; Kauspadiene, 2019)

In accordance with this model, a methodology for assessing the level of information security is also developed, taking into account international, national, and internal standards for information security. Moreover, the model provides an opportunity to determine the organizational software packages needed for enterprise security management processes. These processes can be realized through an information security platform, which, in combination with a virtual platform on the basis of intelligent crowdsourcing, allows implementing and, if necessary, optimizing the processes of information resource protection. Further, the suggested model envisages auditing the use of the software and hardware to ensure the protection of information processing and the effectiveness of the information security management system of an enterprise, in general. Monitoring and further analysis of the results allow identifying the shortcomings of information resources protection and developing measures to eliminate them. The measures may include optimization of information security standards, modification of the methodology for assessing the level of information security, and software.

The data indicate that the proposed model has a cyclical nature. This feature ensures its flexible adaptation, which, in turn, serves a basis for determining the sequence of stages in the formation of the enterprise information security management system.

CONCLUSION

A model of building an enterprise information security management system has been developed in accordance with the determined drivers of information security system formation, specific features of the business entity activities, taking into account the basic provisions of the international and national standards and regulations for information security management system and the conceptual principles of the Deming cycle. This model, in contrast to the existing ones, provides information security through combining management functions with the cycle of organizational management in the planes: organizational software and software products; hardware and technical support; human resources. Altogether, they allow the formation of the most optimal information security management system per each business entity.

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**EUROPEAN NETWORK OF HEALTH PROMOTION SCHOOLS:
A LOOK INTO THE FUTURE**

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Abstract.

The article describes the formation of the European Network of Health Promotion Schools - Health Schools in Europe. The definition of the European Network of Schools for Health Promotion is given. 12 criteria of activity of Schools of health promotion are described and their important tasks are defined.

It also describes the stages of development of the European Network of Schools for Health Promotion and defines a systematic and structural analysis of the content of the Schools of Health in Europe.

Keywords: network, formation, school of health promotion, the European network of schools of health promotion, School of Health in Europe.

Problem statement

The recognition that today the health of children and youth is one of the main indicators of the qualitative development of the population confirms the need to strengthen health through the direct and joint activities of education and health authorities. Many organizations, including the World Health Organization (WHO), UNICEF, UNESCO, International Union for Health Promotion and Education (IUHPE), are implementing international health programs attracting more teachers to their activities [1, p. 30].

The aim of the study: to analyze the development of the European network of schools promoting health and the stages of its formation.

Presenting main material

The implementation of programs for preserving and strengthening the health of children and youth in educational institutions has become especially relevant. The European Network of Health Promoting Schools in Europe is dedicated to this issue.

In Eastern Europe, the term “health promotion” is interpreted in accordance with its first definition, given in the so-called Ottawa Charter (Ottawa Charter, 1986). The Ottawa Charter is one of the WHO policy documents used in most countries around the world to shape public health policy.

Characterizing the essence of the concept of “health promotion”, blighty scientists define promotion as 1) furtherance; encouragement; 2) preferment; 3) transition (student) to the next class; 4) advertising [18, p. 470].

Thus, promotion is defined as furtherance, encouragement, assistance. Ukrainian researchers led by O. Yaremenko [18] agreed to interpret “health promotion” as “the formation of a healthy lifestyle”.

According to the “Great Explanatory Dictionary of the Modern Ukrainian Language”, to promote is: 1) to positively influence something; create appropriate conditions for implementation, execution, etc. something; to help in something; to be the cause or consequence of the origin, existence, etc. something; to create, to arouse the desire to perform any action; 2) indulge someone [11, p.1181]. Thus, “health promotion” from this position is defined as providing appropriate conditions for the formation, maintenance, and strengthening of health and well-being in general.

Therefore, we consider the concept of “health promotion” as the formation of values for the health of children and youth, their awareness of the value of health, and the creation of the necessary conditions for their involvement in a healthy lifestyle that will preserve and strengthen health and well-being.

Scientists from Poland, the Czech Republic, Hungary, and the Russian Federation also define “health promotion” as a process aimed at shaping, maintaining and strengthening human health.

We believe that the peculiarity of the phenomenon of “health promotion” in Hungary is the focus of health schools in Europe on health care, the development of primary disease prevention by strengthening the activities of local and regional health institutions responsible for maintaining and promoting healthy children and youth, provide treatment and prevention services and support

of students [7, p. 4].

In the world scientific community, “health promotion” is defined as any type of activity aimed at improving and protecting the health of all participants in the educational process (L. Leger, I. Jung, K. Blanchar, M. Perry) [9].

Before defining a “European network of health promotion schools”, it is necessary to refer to the terms “health promotion school” and “network”. In defining the concept of “health promotion school”, we rely on the definition of WHO (2000): it is a school of health management, which is constantly developing all health-oriented conditions for the learning and recreation of children, adolescents, and youth [8]. Health promotion schools focus on four important tasks: providing a healthy environment; development of curricula taking into account the need for the formation of health-promoting competence; interaction with parents and social adaptation of students; implementation of health-oriented activities [8, p. 4].

Thus, it can be argued that both the school of health promotion and the school of health are focused on health-oriented activities in the school, family and society to create a healthy environment based on a healthy public policy. The school of health promotion is the main link in the chain of formation of children’s values of health, the formation of individual and public health [10; 12; 13; 15].

The health school network is an educational network. A. Rusakov expresses a correct opinion, noting that the educational network is not a system, but the overlap of different systems. In each of its nodes, the network grows from a whole kind of “original cells”, which can not and should not be combined into a single logic, one “cell” can not restore the whole [16].

According to N. Kochubey, the network is a super-complex formation, it is procedural (different at every moment), self-referential (exists only with the users present in it) and transgressive (there is a new, allegedly beyond the network) [14].

The most complete, according to A. Sbrueva [17, p. 38], the definition of educational networks belongs to one of the most prominent modern educational theorists - D. Hopkins, who believes that “educational networks are public associations, the leading characteristics of which are the desire for quality, dedication and focus on results”.

In education, the networks contribute to the dissemination of innovative experience, the creation of additional opportunities for professional development of teachers, the development of schools’ ability to change. They become an intermediate link between centralized and

decentralized structures, help in the process of restructuring and reclamation of educational organizations and systems [17, p. 38].

The European network of health promotion schools unites educational institutions of European countries that carry out health-oriented activities, accumulate the most effective mechanisms for preserving, strengthening and shaping the health of children for their further development and implementation, promote innovative experience, create additional opportunities for professional development teachers, interact through educational information centers and national and regional coordinators, resulting in the formation of a valued attitude to the health of all participants in the educational process and their involvement in a healthy lifestyle.

Uncovering the essence of the key concepts allows us to move on to defining the phenomenon of research - the "European Network of Health Promotion Schools".

Note that the European network of health promotion schools should be understood as an organizational association of different levels and types of educational institutions, the main areas of health activities of which are the formation of values to health, health culture, creating a healthy environment. and activities to improve the efficiency and quality of work results, as well as the dissemination of effective innovative experience of such activities in European countries.

An important aspect of the preconditions for the establishment of health promotion schools was the environmental crisis in Eastern Europe in the late 60-80s of the twentieth century and the state of health of the population in European countries.

At the initiative of the WHO / Europe, the European Commission, and the Council of Europe, the first health promotion schools (experimental, pilot schools) were established in Eastern Europe in 1991 - in Hungary, the Czech Republic, Slovakia, and Poland.

As a result of reviewing the experience of experimental schools, the European Network of Health Promotion Schools was established in 1992. The first members of this project in 1992 were seven countries - Poland, the Czech Republic, Hungary, the Kingdom of Belgium, Denmark, Greece, and Ireland.

In 1993, the European Network of Health Promotion Schools included 16 more countries: Albania, Austria, Bulgaria, the United Kingdom, Estonia, Latvia, Lithuania, Luxembourg, Germany, Slovakia, Slovenia, Spain, Norway, Switzerland, Sweden, and Croatia. This necessitated the First Business Meeting of the National Coordinators of the European Network of Health Promotion Schools (Strasbourg, 1993) and the European Conference on Health Safety

(Nurvykerhaus, 1993), which identified the main objectives of health promotion schools [3].

In 1994, several other countries became members of the European Network of Health Promotion Schools, and in 1995, Ukraine became a member of the European Network of Health Promotion Schools.

The network began to develop actively, and in 1997 43 countries participated in the project.

In 2007, at a meeting of representatives of the European Network of Health Promotion Schools in Luxembourg, the name of the European Healthcare Schools Network project was changed to the Schools for Health in Europe (SHE) network. Therefore, starting from 2007, the project is developed under a new name – “Schools of Health in Europe” (CEE) [6, p. 5].

The Health Schools in Europe network is an international network of educational institutions that continues the development of the European Network of Health Promotion Schools with its multifaceted experience and support. Although the name has been changed, in the literature we find two names - the network “Schools for Health in Europe” and “European Network of Health Promoting Schools”, which indicates their equivalence [2, p. 8].

The European School of Health Network builds on the positive experience of the European Network of Health Promotion Schools and is a leader in the development of health promotion schools in Europe

In October 2013, the Fourth European Conference on Equality, Education, and Health were held in Odense, Denmark, which resulted in the Oden Declaration on Improving Cooperation between the Ministries of Education and Health.

Topical issues were: 1) the fight against overweight and obesity; 2) prevention of violence and protection of children's rights; 3) prevention of infectious and non-infectious diseases; 4) promoting the health of school staff; 5) promoting the professional development of teachers; 6) strengthening cooperation between teachers, parents, and students. There are also issues of improving school nutrition, shaping the physical and emotional health of students, and maintaining reproductive health.

Summarizing the review of the development of the European network of schools to promote health, we describe the historical stages of its formation in the European context.

The first stage (1974-1991) is a preparatory one, we consider it as a stage of preconditions and creation of a basis for the activity of experimental (pilot) schools, in which for the first time the ideas of preserving, strengthening and forming, preserving and strengthening children's health

organized, systematic health-oriented activities of the educational institution.

The beginning of the second phase can be considered the establishment of the European Network of Schools for Health Promotion in 1992 by the European Commission, the Council of Europe and the WHO Regional Office for Europe.

The beginning of the third phase of the European Network of Health Promotion Schools in 2008 is the expansion of the network and the evolution of health promotion school ideas, and we consider the introduction of its new name “School of Health in Europe”.

In accordance with the current socio-economic conditions, the SEE Committee approved for the second time the “SEE Strategic Plan for 2012-2016”, which became the guiding document at the current stage of network development. Five strategic goals have been identified for the further development of the network.

1. Exchange of best practices, knowledge and skills in the network of Health Schools in Europe.
2. Supporting the development, implementation and research of health-oriented activities of health promotion schools.
3. Support and further expansion of the international network of Health Schools in Europe.
4. Providing technical support in the member states of the Health Schools Network in Europe.
5. Implementation and support of active cooperation with the Ministries of Education and other relevant ministries (health, youth, social assistance, environment and sustainable development, etc.) at the European level.

The Strategic Plan states that the network of Health Schools in Europe should contribute to the development and implementation of Europe 2020 and Health 2020 strategies.

The Europe 2020 strategy aims to develop ways out of the crisis and create the conditions for sustainable growth and development in European countries, where the Schools of Health in Europe play an important role in achieving its goals.

To reduce the risk of overloading students, the organization of health promotion schools was reviewed and refocused on creating a healthy environment.

WHO’s international health promotion projects involving urban health, Healthy Cities, and health promotion in hospitals, Health Promotion in Hospital, have been involved in the health of the European Network of Health Promotion Schools.

The third stage is the further development of health-oriented activities and the creation of a

website for the School of Health in Europe network (<http://www.schoolsforhealth.eu/>).

The network encourages each of the participating countries to develop and implement national policies in shaping, maintaining, and promoting the health of children and youth.

The main goal of the project of the European Network of Schools for Health Promotion is to develop and develop models of preventive education that would contribute to maintaining and strengthening the health of children and teachers by creating a healthy environment, health-oriented activities to form values to health, health culture, and healthy lifestyle.

The task of the School of Health network is to: clarify and disseminate relevant information about the health of students; promoting research; exchange of innovative successful experiences between countries; supporting programs for the formation, preservation, and promotion of the health of children and youth; stimulating the development and expansion of partnerships in relations between the Ministries of Health and Education and other interested ministries at the European and national levels [2, p. 3].

The network encourages each of the participating countries to develop and implement national policies in shaping, maintaining and strengthening the health of children, adolescents and youth, based not only on their own experience and achievements but also on international achievements [2, p. 3]. Health-oriented activities of health schools in Europe in national networks involve the development of a strategy for the formation of an optimal intra-school health environment, the organization of training to maintain and strengthen the health of students and achieve higher learning success. According to scientists G. Baise and V. Kuchma, the following tasks are solved for this:

- 1) Formation of a team of all “participants in the educational process” (teachers, psychologists, physicians, parents, students, etc.), interacting with governing bodies and organizations (“vertical” connections) and other interested partners - local NGOs, scientific organizations, territorial departments of school and university medicine and health, etc. (“horizontal” connections);
- 2) Determination of the goals of health-oriented activity in a specific educational institution;
- 3) Organization of monitoring, current control and evaluation of results as a tool to improve the quality of their work;

- 4) Creating a healthy environment for the implementation of the educational process in accordance with the age patterns of growth and development of students;
- 5) Introduction of innovative educational health programs and technologies aimed at improving efficiency, ensuring the age rate of growth and development of children, adolescents, and youth;
- 6) Giving priority to physical activity in all areas of educational and extracurricular activities of the educational institution as a necessary condition for the healthy development of students; increasing the preventive and health component of motor modes of students;
- 7) Introduction of innovative health-preserving technologies of physical education and provision of necessary physical culture and sports equipment for improvement and development of motor qualities, endurance, the physical working capacity of pupils;
- 8) Building the educational process on the principles of mutual respect between teachers and students, the development of communicative ties and partnerships aimed at improving the academic performance of students;
- 9) Development of intellectual and creative abilities of students by forming their motivation, in accordance with psychophysiological development;
- 10) Formation of values to the health, the culture of health of students at all stages of their education, ensuring the continuity of educational programs for children's health, the use of modern information technology, integration of preventive education and hygiene education in the school curriculum;
- 11) Improvement of social partnership in the system "teacher-student-parents", the involvement of students in health-oriented activities as equal partners in the implementation of health promotion programs, care for the health and well-being of all school staff;
- 12) Providing an effective system of medical care, monitoring health indicators [19, p. 50–51].

To date, models of Schools of Health Promotion and Health Culture in Ukraine have been developed.

Based on the materials of the international project of the European Network of Health Promotion Schools, the members of the Coordinating Council established 12 criteria for the operation of the Health Promotion School, which guide all countries involved in the project.

1. Promoting the formation of values in health, self-esteem, and self-esteem, beliefs in the ability to positively influence the life of the school, the formation of a sense of responsibility for their health, the health of others.
2. Promoting mutual respect between school staff and students, between students themselves, and between school, family, and society.
3. Applying a holistic approach to the individual health of students.
4. Formation of the necessary theoretical knowledge and practical skills for making rational decisions about their own health and the health of others.
5. Creating a healthy environment through the appropriate arrangement of school premises, playgrounds, canteens, compliance with appropriate safety measures.
6. Development of a comprehensive and consistent health program, which provides for the use of such pedagogical methods that promote the active participation of students.
7. Promoting the health and well-being of school staff.
8. Considering the role of nutrition for planning health programs.
9. Promoting the educational potential of the school health service and supporting health-oriented activities
10. Promoting the intensification of the activities of student self-government bodies to promote a healthy lifestyle within and outside educational institutions.
11. Promoting cooperation with other educational institutions both in the country and abroad in order to learn best practices and transfer and disseminate their own achievements in the field of health promotion.
12. Promoting the development of cooperation between the school, parents, and the public and using the opportunities of local authorities and government agencies in terms of addressing the health of students and school staff [5, p. 13].

Conclusions

In the course of the analysis of the scientific literature on the researched problem the criteria of activity of the European network of schools of health promotion are singled out: 1) existence of normative-legal base; 2) innovative nature of the activity; 3) providing experienced teachers; 4) the existence of groups of educational institutions; 5) the presence of an organizational center; 6) involvement of new national networks.

A systematic and structural analysis of the content of the European network of schools to promote health in Eastern Europe.

Thus, the content components that cover the content of education in the European network of schools to promote health are based on the following blocks: 1) improving the content and methods of health education according to the concept of the educational institution; 2) development and development of health programs; 3) introduction of health-saving technologies in institutions; 4) formation of monitoring of students on health preservation and creation of health passports; 5) creating a healthy environment; 6) ensuring the active participation of parents and the public in the activities; 7) expansion of partnership cooperation with the Ministries of Education and Health, with various business structures, charitable and public organizations.

The School of Health has been transformed and has become a full-fledged project of the School of the Future.

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**PRIORITY DIRECTIONS OF GROWTH OF THE NATIONAL ECONOMY IN
THE CONDITIONS OF GLOBALIZATION**

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Abstract.

Modern processes of growth of the national economy depend on the external and internal factor environment, which influences the formation of a system of priorities that reflect the multivectority and potential of individual segments of the macro- and meso-environment.

Keywords: growth of the national economy, external and internal factor environment, macro- and meso-environment, priority directions of growth, national economy in the conditions of globalization.

Theoretical and applied aspects of the problems of national economic development in the context of globalization are covered in the works of leading domestic and foreign scientists, including such well-known researchers as V. Bazylevych, Z. Brzezinski, O. Bilenky, O. Belarus, A. Galchynsky, N. Grazhevskaya, B. Gubsky, V. Inozemtsev, E. Kochetov, I. Kyrylenko, D. Lukyanenko, Y. Makogon, Y. Melnyk, A. Neklessa, V. Novitsky, M. Porter, R. Robertson, V. Sidenko, S. Sidenko, S. Sokolenko, G. Soros, J. Stiglitz, A. Filipenko, A. Chukhno and others.

Note that most authors emphasize significant changes in the functioning of the macroeconomic environment under the influence of global factors, which have both positive and negative directions. But at the same time it is important to clearly identify the priority areas of growth of the national economy, given the globalization shifts.

The realities of global development determine its dualistic nature, unprecedented (positive and negative) effects on macroeconomic development and the development of conceptual foundations of state policy of economic security of nation states. Economic security is characterized by a balance and resilience to the negative effects of internal and external threats and a set of

conditions under which the protection of national economic interests [1].

Among the priority opportunities for the development of the national economy are those that affect the degree of transparency and openness of the macroeconomic environment, open borders and expand foreign trade relations, which in turn allows:

- With the help of international turnover of resources to increase the amount of national income;
- To transform traditional trade into modern cooperation on the basis of the principles of cooperation, integration and comprehensive digitalization;
- Significantly increase the level of national production, taking into account mobility indicators;
- Update the segmental functioning of the market infrastructure;
- Streamline the use of labor, material and financial resources.

It should be noted that globalization processes also have systemic risks, which are characterized not only by economic factors, but also reflect the state of social relations within the country and abroad. The high level of labor migration, especially inside and outside the EU, on the one hand makes it possible to address unemployment and improve the welfare of the population, but at the same time confirms the emergence of social problems (long-term absence of family members, complications between children and parents) and economic - reducing the level of average wages in certain areas of activity in connection with the involvement of cheap labor.

Interreligious conflicts are global problems that can escalate into hostilities and significantly affect most areas of activity within a single country, which is reflected in internal and external economic relations. Today's rather close socio-economic ties between individual states on the one hand emphasize the priority opportunities for development, but on the other hand, form a range of threats that can bring significant problems to the state and destabilize economic processes, as well as prevent development programs.

The possibility of the country's participation in globalization processes is a priority of public policy, which should take into account current risks and develop a system of tools to reduce or eliminate the negative effects, using the potential benefits of integration processes for transformation and development of national macroeconomic environment.

Today, at the stage of development of the world economy, the economic condition of each

state directly depends on the level of efficiency of its internal resources and the degree of integration of the country into the world economic system. At the same time, the most important factor in Ukraine's integration into the international economy is the sustainable development of exports, which in modern economic conditions depends on the ability of Ukrainian enterprises to produce and sell goods that meet the requirements and needs of the world market. Increasing exports is one of the main drivers of economic growth, as its structure determines the efficiency and competitiveness of the national economy [2].

The process of forming segments of the country's competitiveness depends on the potential, resource provision and vector orientation of public policy, taking into account endogenous and exogenous factors.

It should be emphasized that favorable resource and relevant geographical conditions are taken into account when developing priority areas of growth of the national economy, as well as possible ways to implement them.

Among the achieved non-resource opportunities are technological innovations, a high level of human potential, logistical links between the subjects of macro- and meso-level and other achievements and achievements of the modern state.

It is important to emphasize that the choice of priority for the development of the national economy based on exports of raw materials alone will not ensure an adequate level of growth, given regular price fluctuations, and reduce the chances of the state to become technologically advanced countries.

Priority areas of growth of the national economy in the context of globalization are presented in Fig. 1.1.

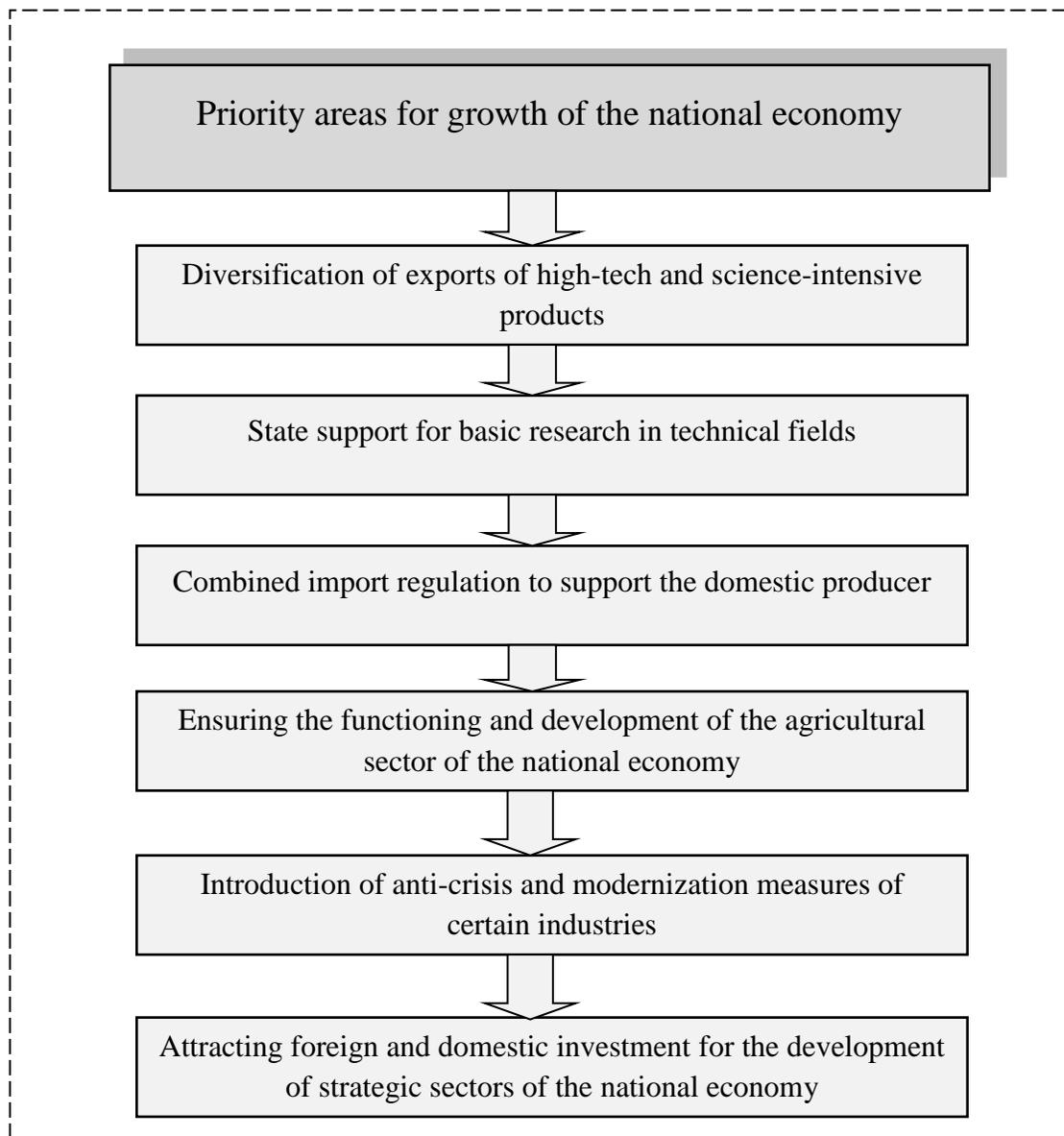


Fig. 1.1. Priority areas of growth of the national economy in the context of globalization

The availability of natural resources in the country, including mineral resources in sufficient quantities, makes it possible to focus on the development of individual industries, which must be reflected and taken into account in the development of priorities for development and growth of the national economy. But it should be remembered that the state's focus only on the use and exploitation of extractive industries, prevents sustainable growth of the national economy through modern technological management methods. The global crisis of today significantly affects the performance of the extractive industry, which, in turn, is reflected in other sectors and areas of the national macroeconomic environment and requires the state to transform not only management methods but also external and internal relations.

The negative impact on the process of production and export of industrial products has fluctuations in world prices for raw materials, which is confirmed by the results of relevant research in the international economic space. Increasing the role and importance of scientific and

technical potential for sustainable growth of the national economy should be taken into account in the transformation of modern public policy, which cannot be based solely on raw materials specialization. This fact confirms the need to form a system of priorities for the development of the national macroeconomic environment, based on the use of human capital, modern technologies, as well as the production and export of knowledge-intensive products with the obligatory gradual growth of its share.

It should be noted that in this regard, public policy in the context of globalization should take into account the following aspects, namely:

- Instrumental, including institutional, support for the export of high-tech and science-intensive products;
- Regulation of the price competitiveness of national exports, as well as the replacement of imported goods;
- The system of providing state support to economic entities whose activities are related to sectoral modernization, which in the future will significantly affect the increase of indicators of competitiveness of the national economy;
- Identification of potential industries that have the ability to implement modern technologies and produce innovative products.
- Public funding, investment attraction and comprehensive support for basic research aimed at obtaining results that are revolutionary in science and technology.

The assessment of modern world trends shows a significant increase and development of intellectual services, which are associated with the development of science, education, information, communications, and reducing the share of industry and agriculture. This emphasizes that the formation of the economy of information resources, based on communication and information, high-tech and knowledge-intensive areas, is an important factor in the modern world, while engineering, fuel and energy industries must become a solid foundation for sustainable growth, which confirms the multifaceted and multifunctional vector direction of public policy.

In modern conditions of functioning of the national economy, it is the rational institutional regulation and state support that have a significant impact on changing the structure of the export component, which is reflected in development programs at the macro- and meso- levels. Involvement of foreign and domestic investors in the implementation of state programs will

provide an opportunity to accelerate the process of transformation and modernization of certain industries (aircraft, engineering), which on the one hand are of strategic importance to the national economy and on the other - characterize priority areas with significant export potential.

Among the important state policy measures aimed at implementing the program of sustainable growth of the national economy within the framework of export development, we can highlight:

- Preferential lending, risk insurance for the export of competitive finished products;
- Introduction of a system of tax benefits for business entities engaged in export operations;
- Flexible regulation of transport tariffs, which will allow to adjust the costs of certain sectors of the national economy;
- Gradual application of tariff and non-tariff methods of regulation;
- Regulatory and legal regulation of exports of high-tech products, information and consulting support of export-import operations;
- Significant strengthening of currency control in foreign trade, as well as state monitoring of the effectiveness of foreign economic relations in their full compliance with national interests.

The construction of the system of state credit support for the export of products of certain industries should be carried out on the principles of long-term, targeted use, benefits and minimization of risks of non-repayment.

The direction of state policy to improve the conditions of access of high-tech goods to foreign markets also focuses on the regulation of foreign economic contractual relations, taking into account the factors of globalization of economies.

The priority direction of growth of the national economy at the present stage is the rational regulation of import operations, which will provide significant support to the national producer in terms of individual industries. One of the important steps in this direction is, first of all, to reduce the volume of imports of products analogous to which are produced by domestic businesses, which in turn will significantly increase the level of economic security. State support programs for agricultural enterprises are a rational solution to modern food problems in the country, taking into account external and internal environmental factors and progressive globalization processes.

It should be noted that the development of light industry provides not only a significant share of GDP, but also provides solutions to certain socio-economic problems in the country, including reducing unemployment, meeting demand and providing the population with vital products, cooperation with domestic suppliers and more.

The interaction of state institutions and economic entities enables the rational implementation of strategic priorities for the growth of the national economy, taking into account national interests, the level of economic security and modern globalization processes. It must be taken into account that it is the activities of large companies, including multinational corporations that make it possible to implement innovative projects that increase environmental friendliness and resource conservation, as well as the production of high-tech products.

It should be noted that the total foreign exchange reserves of transnational corporations (TNCs) are several times greater than the reserves of all national banks. TNCs are large bureaucratic corporations that overcome risks within the corporate structure, control huge cash flows, act as contractors at the state level, and attract world-class technology. Foreign TNCs, which appeared in the early 1990s, operate in Ukraine. First of all, they focused on the main market segments - everyday goods, food, gasoline, tobacco, where the position of domestic producers was the weakest [3].

Due to this fact, it should be emphasized that for the sustainable growth of the national economy is important the functioning of both small and medium-sized businesses and the formation of large business structures that are able to take full advantage of the country's competitive advantages and thus develop successfully in domestic and foreign markets. Public policy should focus on supporting individual corporate structures that are capable of producing products using high technology to enter the world market, as well as to maintain the competitiveness of the national economy.

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ADAPTIVE MODEL OF STRATEGIC MANAGEMENT OF STRUCTURAL-FUNCTIONAL TRANSFORMATIONS IN THE INDUSTRIAL COMPLEX TION

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Abstract.

Transformation processes in the national economy and the external environment permanently affect the functioning and sectoral development, which is directly reflected in the process of shaping the industrial policy of certain actors, which requires systematic research and direction of structural and functional transformations, taking into account influencing factors.

Keywords: adaptive model, the strategic management of structural-functional transformations, the industrial complex, sectoral development.

Modern conditions of the macroeconomic environment emphasize the need to identify and use permanent and segmental changes, which are characterized by certain structural and functional features, which is necessary to ensure the growth and development of the industrial complex.

The use of a systematic approach to the strategic management of structural and functional transformations in the industrial complex allows the effectiveness of building a model that can adapt to changes in the external and internal environment. In turn, transformation processes and transformations should have a positive impact on the functioning and development of the industrial complex through increased productivity, automation and greening of production processes, motivation and appropriate level of social responsibility, increased efficiency and resource efficiency.

Highlighting the essence of structural and functional transformations in the industrial complex, including within the technological structure, scientific level, economic security, makes it possible to identify priority areas for the functioning of the strategic management system, which is characterized by successive stages and tools.

Strategic management of structural and functional transformations is carried out taking into account the formation of industrial policy and the identification of problematic situations that negatively affect the process of adaptation of the management system to the factor environment.

The primary issue of facility management is the separation of relationships between certain entities in the industrial complex, which is based on the assessment of properties and development of tasks to create an effective management system, taking into account the adaptability of certain segments and the availability of rational tools.

The presence of direct communication and feedback in the system of strategic management of structural and functional changes in the industrial complex provides timely adaptation mechanisms of control required achieving goals and tasks.

The transformation of the forming segments of the strategic management system should take into account both permanent and segmental structural and functional transformations, which allows to increase the level of efficiency and perfection of relationships. Start with the assessment of transformations from the micro level, it is possible to realize that it is the significant transformation processes that take place in economic entities that gradually transfer positive development trends to the meso and macro levels, which is reflected in regional and state industrial policy.

In turn, structural and functional transformations are segmental changes in the condition, content and form of certain processes, phenomena at the micro, meso, macro and mega levels, monitoring and evaluation of which ensures the predictability of the management system in the industrial complex.

Modern processes in the national economy require structuring of transformations to formalize management processes in the industrial complex, taking into account external and internal factors of influence and strategic priorities of development of individual entities and the industry as a whole. Among the structural and functional transformations, which must be systemic in nature, the following are distinguished:

- Modernization of production facilities of the industrial complex;
- Greening and material efficiency of production;
- Introduction of technological innovations;
- Ensure export diversification;
- Optimization of production industry proportions;

- Permanent technology transfer;
- Socially centered management system;
- Increasing the motivation of industrial personnel with an impact on productivity.

However, the presence of negative trends, namely: a significant decline in investment activity, tax pressure on certain industries, economic crisis, manufacturing industries that are an integral part of the transformation process requires their timely detection, recognition and neutralization to reduce the impact on the national economy.

All the above factor changes gradually affect the condition of the sectoral environment and the general level of development of the industrial segment of the national economy, reflected in various areas of activity: financial, economic, production, innovation and investment, and so on.

Note that as a result of structural changes in the industrial complex, which are characterized by systemic indicators of qualitative and quantitative nature, the national economy receives an updated sectoral proportionality, which corresponds to current trends in socio-economic processes in globalization and European integration. In addition, structural changes in industry are carried out together with functional transformations, which increases the effect of the transformation of the national economy.

The research confirms that it is structural and functional transformations that have provided individual countries with a transition to a new level of growth and development of the national economy, taking into account the rational use of resources and progress. At the same time, it is possible to make the transformations as effective as possible due to the introduction of a rational system of strategic management, which is supplemented by an adaptive model, which is presented in Fig. 4.1.

The use of modeling methods in strategic management increases the level of forecasting and planning of the strategy of industrial complex development taking into account structural and functional transformations, which provides an opportunity to significantly increase the effectiveness of management decisions by adapting to relevant factors using certain methods and techniques.

The construction of an adaptive model of strategic management of structural and functional transformations in the industrial complex is based on the principles of systemicity, consistency, interconnection, dynamism, autonomy, scientificity, relevance.

The presented model of strategic management of structural and functional transformations in

the industrial complex is formed taking into account the basic principles of strategic management and methods of adaptive modeling, which provides the required level of efficiency from the evaluation of the developed management strategy.

A step-by-step approach to modeling certain processes and situations of strategic management in the industrial complex allows detailed training based on monitoring and evaluation of systemic and discrete transformations at meso-, macro-levels, as well as analysis of strategic directions of development taking into account transformational changes.

It should be noted that the method of constructing network graphs in the management system of structural and functional transformations and the use of rational methods is carried out in the presence of a supporting component, which contains regulatory, resource, organizational, technological, socio-psychological and accounting and analytical segments.

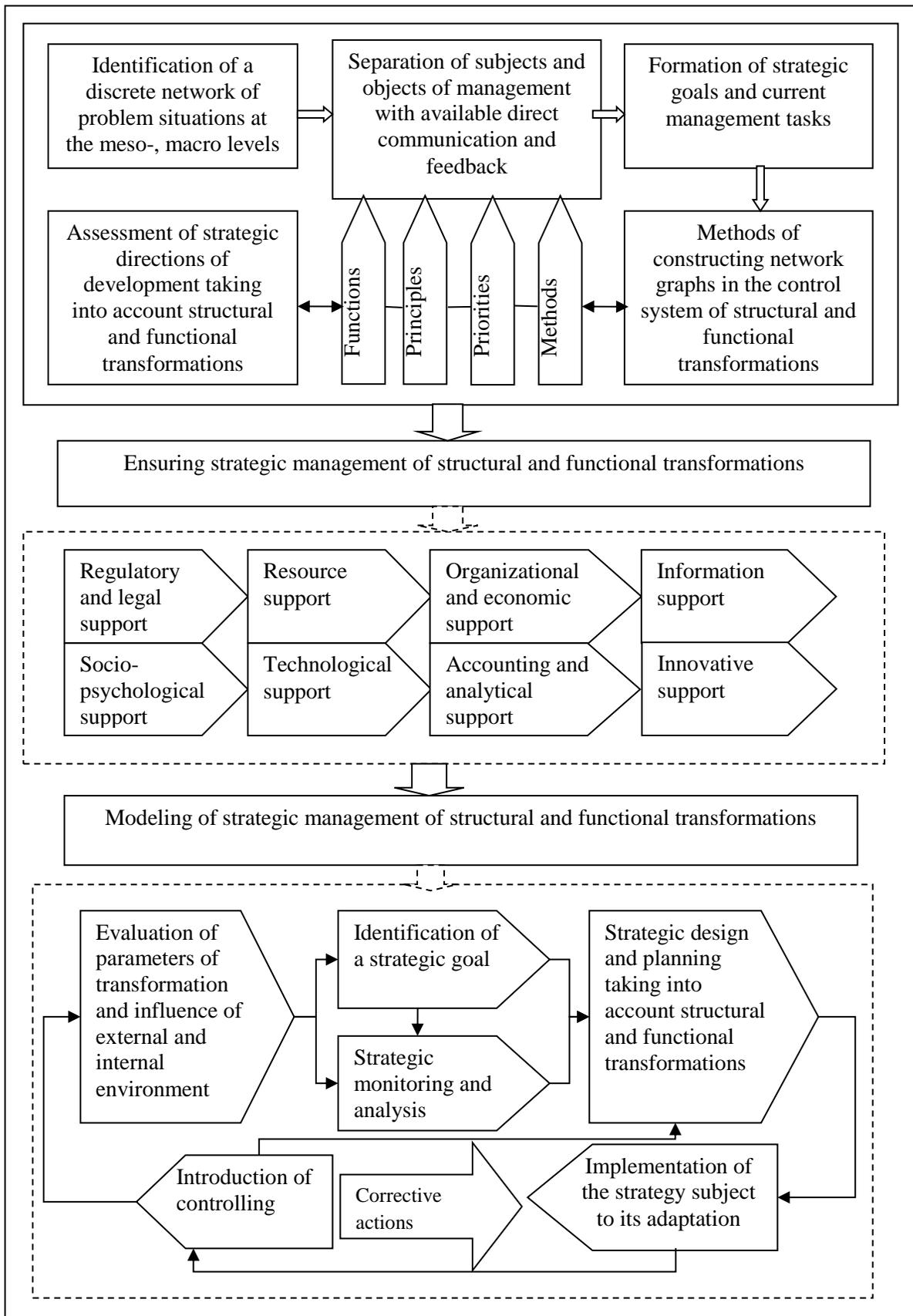


Fig. 4.1 Model of strategic management of structural and functional transformations in the industrial complex

The development of an adaptive model begins with the assessment of the parameters of transformation and influence of the external and internal environment, as well as the identification of strategic goals and objectives, which provides an opportunity to predict and plan appropriate management decisions of a strategic nature. This process modeling provides

detection of weaknesses in the management chain, detection and enhancement, which will significantly increase the effectiveness of strategic management, using a system of controlling.

Strategic modeling of the management system is a process that focuses on the comprehensive formulation, implementation and coordination of general and functional strategies of the entity depending on the performance indicators of all exogenous and endogenous business processes, taking into account the impact of the factor environment [1].

The adaptive model can be a basic segment of state, regional and sectoral policy, solving strategic tasks in priority areas, namely:

- Socio-economic and innovation-technological development;
- Determination of system methodology based on the assessment of the effectiveness of the interaction of the subject and the object of management with the available feedback;
- Application of methods of construction of network schedules of administrative decisions;
- Technologies for managing risks and possible threats of a systemic or discrete nature;
- The process of adaptation of the management system to structural and functional transformations;
- Modernization and greening of production processes, increasing production capacity;
- Development of investment policy of investments in the industrial complex;
- Universalization and optimization of tax policy at all levels of government;
- Increasing the qualitative and quantitative parameters of life of the population,
- Increasing competitive advantages in the market in a transformational environment.

The process of development, formation and implementation of strategic plans at all levels of government is combined with structural and functional transformations, taking into account trends in the relevant industries, the needs of modern society and the requirements of the market environment.

Note that when analyzing the possible outcomes of the future, it is advisable to use system dynamics because scenario planning explores possible changes in the future, but cannot fully assess their consequences. Scenario planning helps manage uncertainty by modeling alternative views of the future against which strategies, tactics, budgets, and opportunities and threats can be tested. Effectively included in the ongoing process of strategic management of a particular object of scenario planning becomes a tool for both risk management and to identify and exploit market opportunities [1].

The need for modern approaches to support the study of the process of managing structural transformations in the industrial complex, taking into account the relationships between subjects and objects, is confirmed by the dynamic influence of factors, including the development of innovative technologies, digitalization of the economy, globalization of socio-economic relations etc.

In turn, the subjects and objects of the management system of structural and functional transformations are characterized by certain features, which include:

- Multilevel: the presence of simple and complex interacting segments;
- Dynamism: vertical and horizontal development;
- The level of determinism of elements in the industrial complex;
- Transparency of certain segments in relation to the external factor environment;
- Integration of constituent or integral objects;
- Permanent ability to adaptability within a changing factor environment;
- Direct communication and feedback between the respective levels.

The obligation to identify problem issues in a timely manner at the forecasting stage provides quality diagnostics on the condition of funding sources, opportunities for investment and innovation, identification and structuring of factors of influence.

To ensure the functioning of the optimal management system of structural and functional transformations in the industrial complex is necessary:

- Definition of priority directions of branch development;
- Gradual detection of imbalance in the use of resource potential;
- Conducting analytical actions at the meso- and macro-level with diagnosing the relationships and consequences of certain processes, including production, social, economic, investment, and integration.

Note the fact that the mechanism of adaptive management of structural and functional transformations in the industrial complex provides rationalization and increase the effectiveness of management decisions within the construction of an appropriate strategy that should take into account permanent and discrete changes in the environment. The effectiveness of this mechanism is confirmed by the results of the implementation of the developed strategy based on the built adaptive model.

The research shows that the identification of certain problems associated with the

implementation of investment activities in the industrial complex, provides an opportunity to optimize regulatory processes and improve the quality of the strategic management system, taking into account external and internal transformations.

Among the negative factors that have a significant impact, we can highlight the following:

- A significant outflow of capital not only outside the industry, but also the country, which is discrete or permanent;

- Adjustment of the level of state regulation and control by strategically important subjects of the industrial complex;

- Systemic obstacles to the transformation and modernization of the industrial complex;

- Low level of competitiveness of domestic industrial enterprises;

- Duplication of functions by different state institutions, lack of coordination of actions and spheres of influence;

- Slow formation of a new trade regime with elements of integration into the world economy;

- Reform of the tax system and the complexity of the interpretation of certain standards by business entities;

- The presence of signs and consequences of socio-economic, political and demographic crisis.

Modern conditions of functioning of the subjects of the industrial complex require a rational system of strategic management to solve the tasks, taking into account the outlined problems that arise primarily in the external environment and affect the industry and segments.

That is why the analysis of the factors of structural and functional transformations provides a systematic basis for the formation of the strategy of development of the industrial complex, taking into account the weight, level of danger and impact on performance.

According to the author, the factors of modern structural and functional transformations in the industrial complex are certain processes, phenomena of extensive and intensive nature, which have a permanent or discrete impact on the functioning and development of the industrial complex, timely detection of which will adapt the management system effects.

The group of intensive factors includes innovations in various spheres of the national economy, the use of the results of scientific and technical process in production and non-production areas, changes in the management structure due to cognitive methods and artificial intelligence and more.

The presence of certain structural and functional transformations in the factor environment

confirms the action of dynamic processes characterized by the synthesis of various vector structural shifts, as well as changes or additions of relevant functions, which can be a driving force and restrain sustainable development of the industrial complex and its segmental components. We emphasize structural and functional transformations should be taken into account when forming a system of strategic, operational and tactical management with the definition of direct communication and feedback between the managed and the control system.

Thus, the formation of the development strategy of the industrial complex depends on an effective management system of structural and functional transformations, which is based on the method of adaptive modeling with the construction of situational mechanism for solving strategic and operational problems taking into account external and internal factors. The use of a systematic approach to the isolation and grouping of factors of structural change allows for timely monitoring and evaluation, which significantly reduces the negative impact on the performance of the industrial complex.

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