The mechanism of ensuring economic security of strategic interests of machine-building enterprises of Ukraine

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Abstract: - The purpose of this article is to improve the mechanism of economic security of enterprise`s strategic interests on example of machine-building enterprises of Ukraine. It is substantiated in article that existing and described in the literature mechanisms for ensuring strategic economic security have omissions. It is related with retrospective analysis of hazards (threats) and focus on resource provision. The article relations nonlinearity between level / state of economic security and results of its provision and management, provoked by influence of business environment factors beyond control of enterprise, is determined. It is proposed, in contrast to the approaches existing in the literature, to define mechanism of economic security of strategic interests as vision of dangers / threats and opportunities in future flow of events, which forms information basis for developing and implementing integrated set of management actions aimed at achieving and maintaining desired level (state) of economic security in long run. Developed mechanism is considered on example of machine-building enterprises of Ukraine. Influence of modern engineering technologies is taken into account. Analytical basis for realization of mechanism of maintenance of economic security of strategic interests of machine-building enterprises of Ukraine is developed. Its practical application will be useful for management personnel in the development and decision-making process to ensure the economic security of enterprises.

Key-Words: economic security, strategic interests, digitization technologies, business environment opportunities.

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1 Introduction

Mechanical engineering remains the leading industrial economic sector and one of the most high-tech industries. It has a key role in the innovative economic development ensuring. However, in recent years the machine-building sector of Ukraine has weakened its position, as evidenced by the production and exports indicators. Thus, value of machine-building products exports for 2010-2018 decreased from 9.1 bln US dollars to 5.4 bln US dollars in 2018 (it is 60% to the level of 2010 and 41% to the level of 2012). At the same time, there have been a structural change in Ukrainian exports: finished products (investment and consumer goods) had predominated until 2014, and intermediate goods (parts and components for machine-building products) have been dominating since 2014. This is primarily due to the loss by the Ukrainian machine-building enterprises of traditional markets in the Russian Federation and CIS countries, the occupation and annexation of industrial-intensive regions of Donbass and Crimea and significant reduction in production [1]. This has led to the critically low level of economic security for these enterprises. Keeping the trends that have emerged in the long term can lead to the decline of all machinery in Ukraine. Therefore, it is extremely important to develop a mechanism for implementing economic security of strategic interests of the enterprises, which would minimize the degree of non-compliance of business internal system characteristics to the requirements of the dynamic business environment and key groups of stakeholders.

It should indicate that in relation to engineering companies the vast majority of works dedicated security technology [2] and insurance against accidents [3]. In addition, common area of research are principles, systems and risk criteria in engineering [4]. Some relevant studies can be found in [5] and [6]. In the western scientific opinion has almost no research about economic security of engineering enterprises. This area of research is typical for scientists in Eastern Europe. However, as shown in [7; 8] and many others works, the protection against threats is prevailing view on ensuring and managing of economic security. Thus, the mechanism of economic security management of these enterprises at the theoretical level, which is covered in [8], focuses only on dynamics of dangers and threats in retrospect and does not take into account the strategic aspect and opportunities provided by the business environment. A similar approach is used in many other works, including [9; 10] of ones. At [10] work the security ensuring of the machine-building enterprises is associated with a set of measures to forecast and identify real dangers and threats, the interaction of the enterprise with law enforcement and regulatory authorities and the creation of a security service. However, as noted earlier, this approach takes into account only the current state and does not provide an opportunity to take into account the capabilities of the external environment of the enterprise.

Thus, in the literature, the issue of developing such a mechanism for ensuring the economic security of the strategic interests of machine-building enterprises, which would take into account the capabilities of the business environment, remains almost unexplored.

The purpose of this article is to improve the mechanism of economic security of enterprise`s strategic interests on example of machine-building enterprises of Ukraine.

2 Problem Formulation

Most researchers consider the mechanisms of ensuring of strategic economic security through the prism of its current level / state. However, such approaches have omissions. First, they are purely retrospective. Second, they make it impossible to assess objectively due to the nonlinearity of the links between the economic security level / state and the results of its provision and management that are provoked by the influence of factors beyond the control of the business environment.

Evaluation of the results of ensuring and economic security managing is mostly based on formation and efficient traditional resources use indicators. This approach duplicates a set of analytical indicators to determine the enterprise`s economic security current level. In addition,

different sets of indicators do not take into account the industry specifics of enterprises, in the practice of which the certain methodological approach implementation is carried out.

It should be considered that modern technology is an important component of the economic security mechanism of enterprises strategic interests. Their role is dualistic. On the one hand, the degree of modern technology implementation into all enterprises' business processes significantly improves the security of its current and strategic economic interests. On the other hand, the technologies by themselves play the key role in mechanism of enterprise`s overall economic security ensuring.

In Ukraine, there are examples of transition of machine-building enterprises to modern technologies (key among of which are the latest management technologies, 4.0 technologies and "green technologies" of production process). In particular, these enterprises are PJSC "FED", CB "Southern", CB "Zorya-Mashproekt", LLC "Aeropract", LLC "Aerocopter", LLC "Fundelender Wind Technology", LLC "Softex Aero", "Red Wave" company. But even in these enterprises, the use of these technologies is fragmentary, rather than systematic in the long-term strategy.

Based on today's sense of strategy as awareness of place and role of the company in future stream of hard predictable events, substantial fullness economic security of strategic interests is proposed to define a vision dangers / threats and opportunities in the future flow of events, which forms an information basis for the development and implementation of an integrated set of management actions aimed at achieving and maintaining the desired level (state) of economic security in the long run. Since the occurrence of dangers and threats in current environment is dynamic conditions immanent condition for the functioning of enterprises, we do not deny the appropriateness of management focus on them, but extends its capabilities to ensure compliance with business environments.

The triad of the space of objective reality (danger / threat / opportunity) is complemented by our proposed stakeholder aspect of economic security. It should be noted that the diversity, inconsistency and multi-vectors of stakeholders wide range economic interests makes it impossible to fully satisfy them. In view of this, we believe that provision and management of economic security should be focused on that part of the interests that are mandatory and acquire the status of categorical imperatives, that are the requirements (environmental requirements, product quality requirements, return on investment, etc.). Failure to meet such requirements poses a threat to the economic security of the enterprise.

It should be noted that the past tense, first, determines the dependence of the business entity on the previous development (path dependence); secondly, it allows to analyze the experience of realized or missed opportunities in the past. Management actions implemented in the past either create preconditions for increasing / maintaining the level of economic security, or limit the ability to achieve it. Accordingly, we should agree with the existing opinion among scientists that the targets of the enterprise depend not only on what parameters they are characterized today, but also on the parameters of the past. At the same time, cardinal changes (especially technological ones) are impossible due to the amount of costs that must be made simultaneously. But the growing return from successful management actions in the past leads to stereotyping and routine thinking. This aspect determines the inexpediency and lack of prospects for use in the current period of successful management practices in the past, which leads to their limited rationality and determines the objective need to recombine existing knowledge and actions in new forms. We share the views of scholars that approaches to management in the chain from the past to the future affect the unproductiveness of managerial rationalism and need to be transformed in the direction of "from future to the modern".

Therefore, the need to eliminate the above omissions, and need to take into account the specifics of enterprises determines the relevance of this study.

3 Problem Solution

In the existing approaches to the mechanisms of economic security of strategic interests of the enterprise events and future trends are determined on the basis of forecasts, the peculiarity of which is the specification of judgments about the possible state of the enterprise, timing and ways to achieve it. Forecasting is only an element of future vision and allows you to structure reality in such a way as to obtain sufficient information about the dynamics of a particular process. The longer the time horizons of the forecast, the less accurate the forecast. Developed tools for economic forecasting and modeling of environmental factors today are less and less justified.

Accordingly, management "work" with future images should be based on the same vision of future

that is not identified with anticipation and is a view of current level (state) economic security and means of achieving / hold of its desired value from the standpoint of the future. This creates a new context for the perception of the present and allows us to determine what needs to be done today to ensure the desired level and state of economic security in the future. This creates a new context for the perception of the present and allows us to determine what needs to be done today to ensure the desired level and state of economic security in the future. It is in this setting that the value of forecasts grows, which are a reflection of reality, but only in combination with mental constructions form a vision of the future and serve as a parametric basis for building strategic plans of the enterprise. This unity creates a qualitative understanding of set and sequence of actions to address strategic gaps between the demands of business and environmental parameters based on the internal logic of retrospective future.

With regard to the present, it should be noted that it is on this period the set strategic tasks, which are formed to the context of the future and those arising from the past, are concretized and realized. Strategic decisions are currently implemented in the form of specific projects and programs.

The target orientation of management actions set for formation of resource portfolio and its effective use should be based primarily on the nature of resources, which is determined not only by their form (materialized, immaterialized), but also important in ensuring the desired level of economic security in long run. According to these criteria, modern scientists divide the resources and traditional (mineral, logistical, labor, financial) and strategic (intellectual, informational, communication, organizational, partnership, etc.). Last of one`s not spent in the business processes of the company and they create conditions for rapid search and rational use of traditional

Existing approaches to resource security are still focused on the adequacy and balance of the resource portfolio. Instead, the basic provisions of modern resource theories determine the priority of its uniqueness and asymmetry, which is based on specific combination of traditional and strategic resources for each business entity and is prerequisite for achieving the desired results in dynamic business environment.

The existing management focus considers resources as costs that need to be minimized in order to increase cash flow and achieve the desired financial results. Its expansion provides a focus on the resources accumulation with a high level of strategic status. Modern foreign and Ukrainian scientists call the features of such resources as: immateriality of form, the impossibility of instant involvement in further long-term use; the difficulty of copying by competitors; uniqueness and value; ability to capitalize, self-grow and form a stable competitive advantage of the company.

Traditional approaches to resource provision consider resources as a means of production and achievement of goals. Without denying this aspect, we note that it reflects only the operational level of ensuring and managing economic security. The essence of resources at the strategic level is defined by us in accordance with the periods of management and modern expanded understanding of their essence as a conscious and assessed capabilities of enterprise`s internal and external environment for its qualitative changes.

The managerial target orientation of resource provision at the operational and strategic level is organically complementary in form and essence. Thus, nowadays the uniqueness of the formed resource portfolio, which provides a leading position in particular industry market and allows to generate the desired financial results, is of exceptional importance. At the same time, maintaining / increasing the level of economic security is possible only for short time, the duration of which is determined by stability of the business environment. The timeliness of reconfiguration of resource base to the parameters of future is of exceptional importance.

Modern business environment conditions determine the objective need to change business thinking and actualize the issues of top management`s cognitive abilities in theory of security and in practice of companies: the first, economic security today requires the destruction of stereotypes, established strategies, transformation of existing business models; secondly, in order to maintain the desired level of security in an era of unprecedented change, it is no longer enough to respond to threats, it is necessary to anticipate future transformations of business environment parameters and become their co-creator.

Researchers have proven the difficulty of making decisions in a dynamically changing environment. They explain this by an increase in nonlinear processes characteristic of such an environment and the presence of time lag effects between cause and effect [11; 12]. In addition, Herbert Simon was one of the first to prove that simplifications in decision-making are widespread. In his opinion, even relatively simple situations can go beyond the rather limited analytical capabilities of management personnel [13]. The limited perception of objective

reality is due to inertia of management staff to understand the signals of the business environment and their confidence in full control over situations of various kinds, which makes it impossible to adequately assess changes in reality. Excessive rationality of economic entities is determined by the focus solely on achieving economic results, which limits the creative approach to economic security management as a basis for generating new ideas for countering dangers and individual solutions to specific problem situations. The untimely change of managerial stereotypes is due to the fact that stereotypes formed and effective for a certain period of time make it impossible to achieve the desired level of economic security when changing the business environment, and their untimely transformation provokes a crisis of thinking in the economic system. The above determines the objective need to separate the mental and cognitive processes of economic security management of the enterprise, by which we mean a set of mental operations for recognizing, identifying and assessing threats (dangers) and business opportunities based on the system of organizational knowledge and value orientations of economic entities.

Schematically, the mechanism for economic security ensuring of enterprise`s strategic interests is presented in Fig. 1.

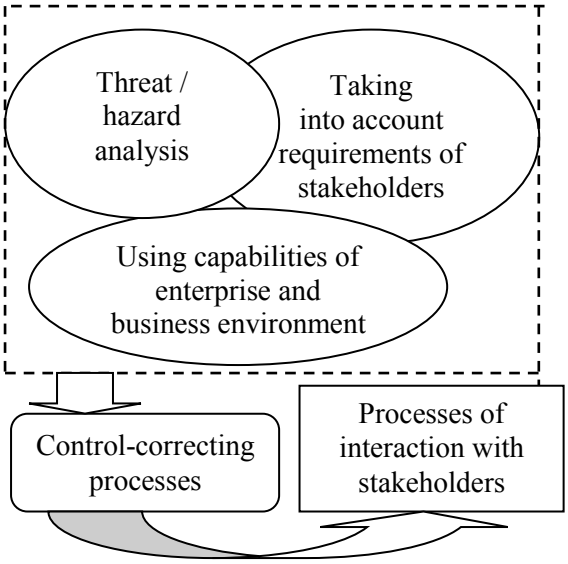

Fig. 1. The mechanism of strategic interests economic security of enterprise (developed by the author)

Thus, in the context of ensuring the security of enterprise`s strategic economic interests, the mental and cognitive processes act as certain perceptual prism, through which the dangers and opportunities of objective reality are identified and the "signals" of business environment are evaluated. Mental-cognitive processes determine the ways of cognition of reality, and organic combination of creative-intuitive and rational thinking allows to eliminate stereotype of perception of threats and opportunities of business environment and eliminate information asymmetry between the real and the conscious.

Therefore, consider the formation of analytical tools for assessing the economic security of strategic interests on the example of 4.0 technology [14; 15]. In particular, in economic security assessment, top management of enterprises should take into account the most popular areas, among of which, according to the Softline analysts are following: the software and hardware solutions for interaction between the management and employees, big data analysis based on combining information space of all information enterprise systems, simulation (modeling) of technological processes and products, including creation of "digital duplicates" of real production. The future level and state of economic security of enterprises will depend on degree of implementation of these areas in their activities. Therefore, the following indicators should be evaluated in the current period:

1) the indicators of level of software and hardware interaction between the management and employees on autonomous robots basis that are able to learn without human intervention:

- the 1.1 indicator - is ratio of number of managers of different management units who are actively involved in software and hardware solutions of interaction with subordinates to the total number of managers of different enterprise`s management units;
- the 1.2 indicator – is ratio of the number of employees who are actively involved in software and hardware solutions of interaction with management to the total number of employees of the enterprise;
- others.

Recommended threshold value of the first and second indicators is unit.

2) Performance indicators with Big Data:

- the 2.1 indicator is the ratio of information processed on basis of Big Data technologies to the information total amount generated by the enterprise (input and output); recommended thresholds of the indicator is one;
- the 2.2 indicator is the speed indicator of information processing; it is proposed to define as the ratio of information processing results per unit time generated in t period to similar results in t-1period; the recommended trend of the indicator`s values are growth;

- others.

3) Indicators of simulation degree of technological operations, processes and products:

- 3.1 indicator – is the ratio of business processes number that have digital counterparts to total number of enterprise business processes;
- indicator of 3.2 - is the ratio of number of technological operations that have digital counterparts to the total number of technological operations of enterprise;
- indicator of 3.3 – is the ratio of number of technological processes that have digital counterparts to the total number of technological processes of the enterprise;
- others.

The recommended threshold value for this group is unit.

It should be noted that the list of these indicators will take on different meanings depending on the specifics of enterprise operating activities, the type of technological operations and so on.

Approbation of the proposed approach to ensuring the economic security of strategic interests will be performed on example of machine-building enterprises in Ukraine.

Mechanical engineering belongs to the group of complex technological production, so for him the presence of innovations is equivalent to economic security. The total expenditures of Ukrainian machine-building enterprises on innovative activities during 2010-2018 in nominal terms increased by 28%, respectively, from UAH 2.44 billion. up to UAH 3.11 billion. However, the share of expenditures on innovation in the structure of sales of engineering products decreased from 2.43% in 2010 to 1.89% in 2017.

According to the Eurostat classification of industrial production by the level of manufacturability is divided into 4 groups: the high-tech, the medium-high-tech, the medium-low-tech and the low-tech [16]. The productions classification was carried out according to two criteria: by the level of technological intensity (determined by the ratio of research and development costs to value added) and by the share of staff with higher education. The branches of mechanical engineering belong to the first 3 groups. The high-tech industries include the production of aerospace, computers, electronics and optical products. The medium-high-tech – is the automotive industry, production of machinery and equipment, as well as electrical equipment. Medium-low-tech industries include shipbuilding. The main indicator by which the each industry belongs to certain group is the intensity of research and development. The share of high-tech industries in the value added of mechanical engineering in Ukraine in 2018 was about of 29%, the medium-high-tech – is approximately of 69.5%. The technological structure of Ukrainian exports is dominated by medium-high-tech products (USD 4,296 million), which forms 70-80% of industry exports. The share of high-tech products increased from 15.7 to 17.2 during the study period. However, this increase is primarily due to a slower decline in exports of high-tech products (on average by 5.1% per year), compared with a reduction in the supply of medium-high-tech products (on average by 6.7% per year) (Table 1).

Table 1: The structure of Ukrainian exports of engineering products in 2010-2018 by the manufacturability level, million dollars of the USA

Industry	2010	2018	CAGR in 2010-2018 years, %
High-tech products	1427	935	-5,1
Products of medium-high-technology	7481	4296	-6,7
Medium-low-tech products	195	217	1,4
Total	9102	5448	-6,2

Source: [1; 17]

The largest segments of Ukrainian exports of high-tech engineering products are communications equipment (339 million USD in 2018, which are mostly parts for mobile phones), air and space aircraft, related equipment (it is 315 million USD), measuring instruments and equipment, research (it is 119 million USD). Significant reduction in exports of high-tech products due to reduced supplies of computers and peripherals (it is -340 million USD), aircraft and spacecraft and their parts (it is -281 million USD), instruments and equipment for measurement, research (it is -115 million USD). At the same time, the supply of communication equipment increased significantly (+278 million USD). The largest segments of Ukrainian exports of medium-high-tech engineering products are electrical equipment for automobiles (USD 1,380 million), electrical household appliances (USD 398 million), railway rolling stock (USD 248 million), and other electrical equipment. (USD 227 million), pumps and compressors (USD 172 million), electric motors, generators, transformers (USD 170 million), bearings, gears (USD 158 million), motors and turbines (USD 136 million). Significant reduction in exports of medium-high-tech products due to lower supplies of railway rolling stock (-2 145 million US

dollars), vehicles (-335 million US dollars), electric motors, generators, transformers (-314 million US dollars), pumps and compressors (-277 million USD), engines and turbines (-244 million USD), batteries and accumulators (-124 million USD), machinery for mining and construction (-114 million USD), machinery and equipment for metallurgy (-100 million USD). The main segment of Ukrainian exports of medium-low-tech machine-building products are ships and floating structures (184 million US dollars in 2018). The growth of exports in this technological segment is due to increase in the supply of pleasure and sports boats (+20 million US dollars).

It should be noted that total number of machine-building enterprises that have invested in innovation has almost halved from 278 units. in 2010 to 149 units. in 2018. The share of such enterprises in the total number of machine-building enterprises in Ukraine during this period decreased from 7% to 3.5%, and in almost all segments there is a negative trend. This means that the dominant part of Ukrainian machine-building enterprises has not invested in innovation. Given the affiliation of mechanical engineering to the group of complex technological production, the existing level of costs for innovation is critically low in all segments of mechanical engineering. The main source of investment in innovation is the own funds of machine-building enterprises, with share of 96%.

The share of the state budget is catastrophically low (UAH 15-16 million / year for the entire machine-building industry, or it is less than 1%), and the amount of state payments (grants) per enterprise did not exceed UAH 200,000 (equivalent to 7.5 thousand US dollars). This level of budget expenditures is only formally related to innovation, as such low costs do not affect the innovation activity of enterprises. Separately, it should be noted the very low degree of use by domestic machine-building enterprises of the opportunities provided by the "digitalization" of physical processes in Industry 4.0 [14; 15].

The main consumer regions of Ukrainian machine-building products on the world market are the EU-28 countries (USD 3,071 million), the Russian Federation (USD 935 million) and other CIS countries (excluding Russia) (USD 472 million), which together form almost 82% of exports. Exports to most regions have declined since 2010, with the exception of the EU-28, Oceania and the Americas. The highest average annual rates (estimated) of exports decreased in deliveries to Russia (-19.3% per year), other CIS countries (-15.2% per year) and other European countries (-11.2% per year) (Table 2).

Table 2: Regional structure of exports of products of machine-building enterprises of Ukraine, million USD

Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	CAGR in 2010-2018, %
EU-28	1846	2099	2547	2153	2212	1997	2126	2682	3071	6.6
The Russian Federation	4884	7158	6842	5410	3173	1353	1012	1086	935	-19.3
Other of the CIS countries (excluding Russia)	1195	1453	2272	1462	829	430	312	378	472	-15.2
Asia	591	586	772	617	418	474	459	307	336	-8.9
China	169	71	86	288	177	103	82	163	223	-0.5
America	122	198	303	277	171	135	106	127	177	0.6
Africa	141	78	157	166	165	132	115	74	142	-8.8
Other European countries	141	125	160	103	71	61	55	62	70	-11.2
Australia and Oceania	12	15	23	17	7	6	10	50	19	22.8
Other states	2	2	2	1	1	2	2	4	3	14.0
Total	9102	11786	13164	10495	7224	4692	4279	4932	5448	-8.4

Source: [1]

In the regional structure of Ukrainian exports of machine-building products during 2010-2018 there was a reorientation of markets from Russia to the European Union. This was due to an increase in export deliveries to the EU (+ 66% to USD 3,071 million in 2018) and a drop in supplies to the Russian Federation (-81% to USD 935 million) and the CIS countries (-61%). up to USD 472 million).

As a result, the share of the EU has increased significantly (from 20.3% in 2010 to 56.4% in 2018) against the background of falling weight of Russia (from 53.7% to 17.2%) and other CIS countries (with 13.1% to 8.7%). The geographical structure of Ukrainian exports in terms of buyer countries indicates a high level of concentration - the 15 largest countries-buyers of machine-building products (with annual exports of more than $ 60

million / year) in 2018 accounted for almost 82% of exports. Among them, the largest exporters are the Russian Federation ($ 935 million), Hungary ($ 875 million), Germany ($ 551 million) and Poland ($ 480 million). The largest segments of Ukrainian exports of machine-building products in the EU countries are electrical equipment for cars (USD 1,377 million), electrical appliances (USD 351 million), communication equipment (USD 274 million) and others electrical equipment (USD 98 million), which in 2018 accounted for about 2/3 of exports. The increase in exports in 2010-2018 is due to an increase in the supply of electrical equipment for cars (+741 million US dollars), electrical appliances (+266 million US dollars), communication equipment (+261 million US dollars).

Based on a retrospective analysis of threats / dangers and using predictive expectations of the business environment and the requirements of stakeholders of machine-building enterprises of Ukraine, we will compile a table. At the same time, opportunities have a dual nature - these are the internal reserves of enterprises, as well as favorable conditions provided by the business environment (Table 3).

Table 3: Analytical basis for the mechanism implementation of economic security of strategic interests of the machine-building enterprises of Ukraine

Threats / Dangers	Requirements of stakeholders	Opportunities
High credit rates, lack of funding. Economic downturn due to the coronavirus pandemic.	Owners, top management - requirements for high profitability of the enterprise.	Use of international partnership and financing mechanisms (loans, grants): HORIZON; European network of enterprises; EBRD and others.
Low level of integration into global value chains.	Owners, top management - requirements for increasing the value of enterprises.	Geographical proximity to EU countries. Increasing exports of finished products to EU countries. Reorientation of imports from finished products to raw materials and components for the production of mechanical engineering products in Ukraine. Participation in specialized fairs: Hannover Fair, World Manufacturing Forum, China International Import Expo and others.
Low quality (absence) of cluster machine-building associations.	Owners, top management - requirements for improving the enterprise efficiency.	The presence of specializations in the regions of Ukraine in the production of certain types of machine-building products creates preconditions for the development of clusters.
Low productivity. In-sufficient use of 4.0 technologies. Low level of innovation of enterprises.	Owners, top management - requirements for efficiency improving of enterprise; staff - requirements for creating conditions for development, training and raising wages; consumers - high-tech products.	Intensification of cooperation with the IT sector in Ukraine. Development of digitalization strategy and its implementation in the enterprise. Increased costs for staff training in competencies 4.0.
Staff shortage. Adequate retention strategies lack, develop-ment of specia-lists.	Staff - requirements for creating conditions for development, training and raising wages.	Increase in job seekers due to border closures due to the COVID-19 pandemic. Attracting young people, increasing the cost of training and payment.
High costs for imported products.	Top management - requirements to minimize operating costs.	Minimize dependence on imported supplies. Strengthening relationships with local suppliers.
Low domestic demand and high competition with foreign manufacturers with different support tools and free access to the	Owners, top management – requirements to increase exports of finished products; state institutions – strengthening entrepreneurship in the field of mechanical engineering.	Certification of products according to the EU standards. Defining a list of benefits and preferences for investors in high-tech sectors of mechanical engineering. Use of VAT refund procedures that are in line with the EU procedures.

Ukrainian market.		
Low level of greening of production and its individual technologies. Rising environ-mental tax rates.	State, society, consumers: reducing emissions of pollutants into the atmosphere, increasing the requirements for environ-mental friendliness of products and business in general.	Introduction of resource-saving technologies, financing of ecological protection measures on permanent basis.

Source: formed by the author according to [1] and his own research

Therefore, the technological and business enterprise processes should be further assessed in terms of their impact on the strategic economic interests security of the enterprise.

Thus, the main provisions of the proposed methodological approach to the implementation of the mechanism of security ensuring of strategic economic interests of the enterprise are as follows:

- the analysis complexity is provided by analytical projections, which together reflect the internal properties of the system for the production of value added (operational excellence) and external forms of their manifestation (market stability), as well as temporal aspects of evaluation: retrospective and perspective;
- retrospective aspect of evaluation reflects the consequences of past management decisions;
- a promising aspect of evaluation reflects the current degree of compliance of the enterprises state with the future parameters of business environment;
- integration of temporal aspects of evaluation allows to unite the subjects of management by objective awareness of reality and allows to form an adequate information base for adjusting the integrated set of management actions.

4 Conclusion

Thus, the proposed mechanism for implementing the economic security of strategic interests of the enterprise, in contrast to those described in the literature, involves the integration of such components and elements as:

- the management levels: operational - strategic;
- management time horizons: past - present - future; - components of resource provision: traditional resources - resources with a high level of strategic status;
- conditions of objective reality: dangers (threats) - requirements of stakeholders - opportunities of business environment;
- management processes: mental-cognitive - control-correcting processes - processes of resource provision - processes of interaction with stakeholders - processes of value added formation.

Regarding the latter, we note that such a set most fully and comprehensively reflects the diversity of economic security management. Mental-cognitive processes determine the ways of cognition of reality, and organic combination of creative-intuitive and rational thinking allows to eliminate stereotype of perception of threats and opportunities of business environment and eliminate information asymmetry between the real and the conscious. Mental-cognitive and control-corrective processes form an information basis for determining the priority areas of maintaining / increasing the level of economic security in both the current and future periods. Resource support processes cannot be considered in isolation from the processes of interaction with stakeholders who are their owners (financial, logistical resources, etc.) or carriers (intellectual, organizational resources, etc.). The efficiency of using the formed resource base as prerequisite for achieving the desired financial results requires exclusive attention to the processes of formation of value added flows (value chain).

The offered approach to realization of the mechanism of maintenance of economic security of strategic interests of the enterprise actualizes problems of development of methodical tools for:

1) determining the results of economic security management;
2) formation of an information base for adjusting the integrated set of management actions.

The application of this approach will be useful not only for Ukrainian machine-building enterprises, but also for enterprises of other sectors of the economy of different countries. Its practical implementation will be useful for management personnel in the development and decision-making process to ensure the economic security of enterprises.

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Author Contributions:

Mishchuk Ievgeniia developed ideas, including realization mechanism of economic strategic security of enterprise by integrating certain components and elements and also offered analytical indicators of economic security estimation;

Dergaliuk Bogdan has analyzed structure of exports of machine-building enterprises of Ukraine by the level of manufacturability;

Ilchenko Volodymyr analyzed regional structure of Ukraine's machinery industry export;

Polishchuk Irina has investigated examples of transition of machine-building enterprises to modern technologies;

Rtyshchev Sergii reviewed the literature, organized and visualized the presented data.

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