

# Development of a new approach to ensuring the economic security of Uzbekistan agricultural enterprises

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**Abstract.** This article examines the need for new concepts to be considered when creating new methods for ensuring economic security. It also determines the developed criterion of economic security by considering both quantitative and qualitative indicators that reflect the state of economic security and the mechanism that has been developed to ensure the economic security of an industrial enterprise. As previously mentioned, the foundation of this technique is data analysis, which describes the primary trajectories of the business's financial, economic, and social activity over the study period with the aim of anticipating economic enterprise security and assessing the degree of provision.

## 1 Introduction

The safety of their activities and the circumstances in which precautions are taken to assure this security have a considerable impact on the growth of society and the well-being of its members. One particularly important element is economic security, which is closely related to the economic efficiency of the operation of economic entities, economic independence, stability, and general social security.

On the one hand, the state's and society's overall economic security are intimately related to each other. It is necessary to put policies in place to protect the state and its citizens from foreign as well as domestic threats in order to guarantee their economic security. In addition, it is impossible to safeguard the nation and its citizens against all kinds of dangers without also boosting the nation's economy [1].

Threats to an enterprise's ability to operate must be identified and reduced as the first step towards creating and ensuring its strategic economic security. Thus, a necessary precondition for the financial stability of businesses is the detection and neutralization of dangers. The actual or possible likelihood of harmful influences from numerous causes on an enterprise's development manifesting and causing specific economic damage is a danger to the enterprise's strategic economic security.

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## 2 Literature review

Economic security issues receive a great deal of attention in foreign literature. In 1934, F. Roosevelt employed the term "economic security" to describe the internal issues facing the United States of America. The political leadership of the USSR was in charge of making decisions about state security, which included economic security [2].

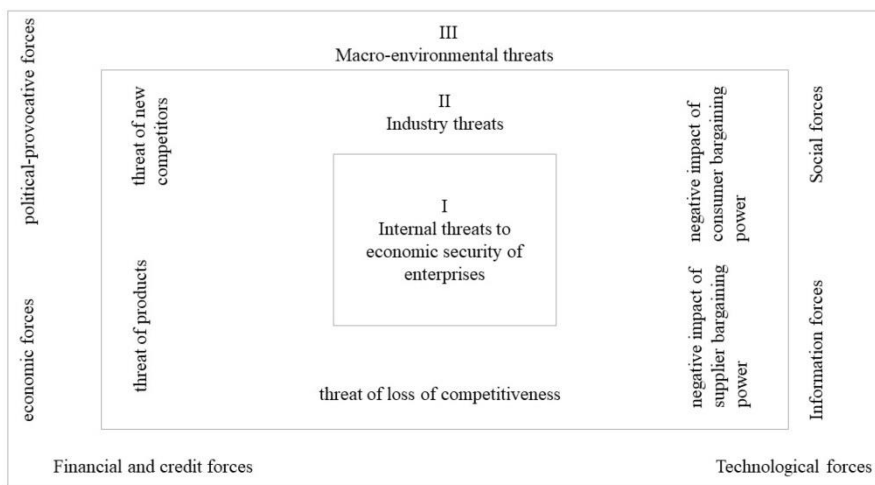
John Maynard Keynes's development of Keynesian economics has affected theories and economic strategies pertaining to firm financial security and stability. Understanding how businesses structure and safeguard their economic activity is aided by Ronald Coase's research on transaction costs and the theory of the firm [3]. Oliver E. Williamson offers valuable insights into the economic security mechanisms utilized by businesses in their interactions with suppliers, customers, and other stakeholders through his study on transaction cost economics and governance structures. An economics Nobel laureate is Gary Becker. The way that businesses invest in human resources to maintain their financial positions is affected by Becker's research on the relationship between economic behavior and human capital.

Understanding business enterprises' economic security is aided by Alfred Chandler's historical study, especially his studies of the managerial revolution and the creation of large-scale firms [4]. The research conducted by Joseph Stiglitz about information asymmetry, market failures, and the role of government in economic affairs holds significance in comprehending the difficulties that businesses confront when it comes to economic security. Hyman Minsky is well-known for his research on financial instability and the dynamics of financial markets. His theories can be used to comprehend how financially secure businesses are when faced with financial crises [5].

The first works on the themes of economic security in Russia arise in 1992–1994 after analytical studies of economic issues have been conducted in international literature from 1988. According to research, most scientists would rather categorize risks to an organization's financial stability according to the occurrences of those threats' sources (internal and external). Internal risks are typically of a real character, while exterior threats are largely considered hypothetical, according to Kabanov A.A. and Bonchuk G.I. [6].

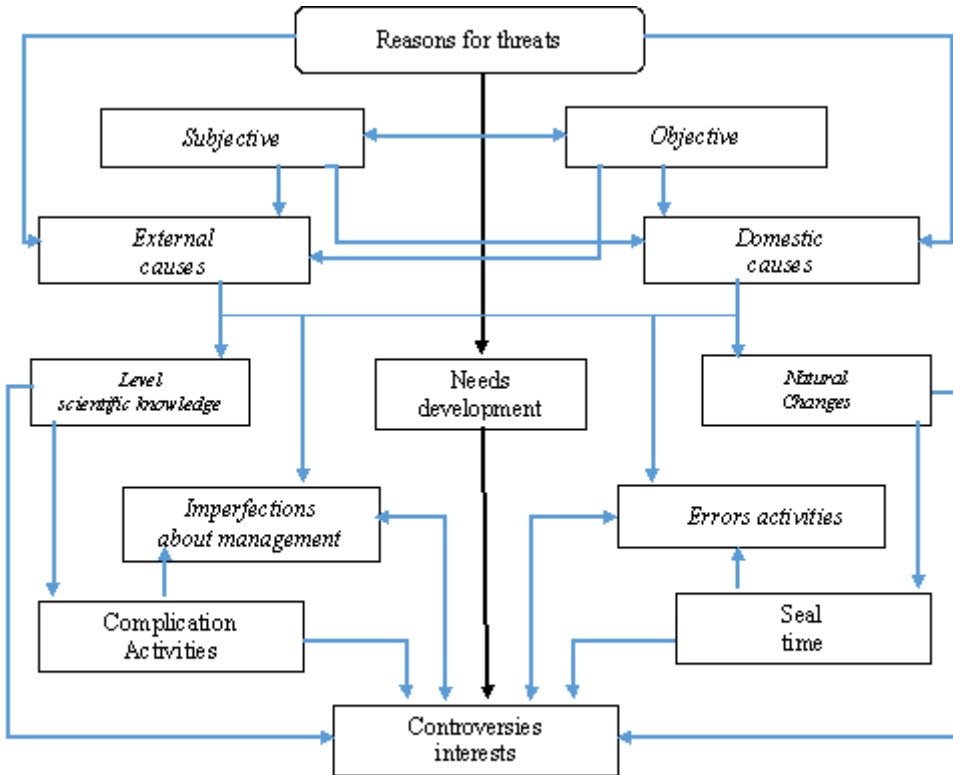
## 3 Data and methodology

A number of definitions required for additional development of problem-solving techniques to guarantee the financial stability of an industrial firm have been determined based on the research that was done (Figure 1). Definitions and basic ideas in the area of company economic security [7].



**Fig. 1.** Analysis of external and internal threats affecting economic security of the enterprise.

The conditions and factors that individually or collectively have the potential to inflict harm are the sources of threats to the financial stability of industrial firms. This threat is the most precise and direct type of economic danger, or a group of circumstances and elements that contribute to danger. The rise of risks to economic security is depicted in Figure 2 [8]. This framework demonstrates the diverse range of both external and internal factors that pose a risk to economic security. The subjective and objective causes of the dangers to the economic security of businesses are as follows; they are complementary to one another.



**Fig. 2.** Reasons for the emergence of economic threats industrial safety.

This estimate serves as a gauge for the efficacy of these efforts and should be used as a starting point for creating and modifying plans to raise the degree of provisional economic security at an industrial firm [9]. Its execution involves the selection and comparative evaluation of a range of economic security indicators for specific components, reflecting the current state of economic security of enterprises while accounting for shifts in the enterprise life cycle stages and shifts in competitive market strategies. A single economic safety criterion was selected and analyzed based on this decision, and it will serve as the foundation for evaluating the degree to which the firm is financially secure.

It is vital to identify the key elements of an industrial enterprise in order to establish the criterion and evaluate the degree of economic safety of the enterprise. These kinds of economic enterprise security elements include [10]:

1. Production
2. Management
3. Planned
4. Financial
5. Market
6. Affiliate
7. Negotiation room
8. Contract
9. Pricing
10. Trading and auction

11. Scientific and technical
12. Technological
13. Advisory
14. The constituent form of a legal and business document, not used by the enterprise
15. Information
16. Power.

It is necessary to take into account that these are enlarged 40 components. For example, the production component consists from the following components [11]:

- On the structure of personnel and production;
- By the nature of the object's production;
- According to production conditions;
- Labor organization;
- Based on information about the production capabilities of the enterprise;
- According to data on the type and placement of equipment;
- By inventory level;
- According to data on raw material reserves at the enterprise;
- According to information about the funds of individual goods allocated for supplies for export.

Changes in life cycle stages and competitive market tactics must also be considered for a particular industrial firm. Expert assessments are another way to accomplish this task for a particular organization. A system of indicators that, among other things, reflect the maximum allowable level of decline in economic activity, production volumes, investment, and financing, within which economic activity is impossible, and further development on a technically modern, competitive basis, maintaining scientific and technical, innovation, investment, personnel and qualification potential, etc., can be used to characterize threshold levels for reducing economic security [12].

It is not the exclusive responsibility of any one department, service, or group of people in an enterprise to ensure the financial security of the business. All levels of the organization's internal hierarchy, from management to regular employees, must support it. That is, a method for internal self-control of the degree of economic enterprise security already exists in the fundamental organizational structure of enterprises [13]. The development of measures to assure the enterprise's financial security and, correspondingly, the value and dynamics of the economic security criterion are significantly impacted by shifting the stages of the enterprise life cycle (creation, growth, maturity, decline) [14].

1.1. The creation stage involves activity planning for the business, the development of its goals and mission, a study of the market the new venture is targeting, the search for funding, the development of a product that the business is about to launch, and the main objective at this point is to get everything ready for market expansion. The primary risks to financial stability faced by startups are primarily related to improper market positioning, np errors, and new product development. They could have disastrous effects on the just established business. Trade secret protection is vital at this point in an enterprise's life cycle.

2. The enterprise launches directly and enters the market with your product during the growth stage. The primary objective of the enterprise is to capture your market at this time. Planned plans are implemented during this phase, taking into account adjustments made by the existing market condition. From the perspective of the enterprise's economic security, this is the most hazardous phase since the business is still fragile and vulnerable to both internal and external attacks. Thus, from the perspective of guaranteeing the enterprise's financial stability at this point. It is advised that the issues of increasing production and enhancing management receive the most focus.

3. The company has already established itself in the market at this point of maturity, and its primary objective is to hold onto the positions it has gained. The business has a great deal of prior experience in fending off threats to economic security. The creation of new products, marketing, the use of new technology, and the enhancement of current manufacturing techniques are fundamental instruments that guarantee a high degree of economic security.

4. The decline stage is linked to the company's perception that it is no longer profitable for them to continue operating. There could be a number of reasons for this, but the company's declining profitability is the most plausible. During this time, a decision is made regarding the enterprise's radical modernization or liquidation, which has the effect of substantially changing the enterprise's profile. A low degree of financial stability is indicative of an enterprise's decline stage. In order to support the enterprise's recovery from the crisis or the development of new production, the majority of emphasis here should be directed toward financial concerns and the conservation of productive areas of activity.

Giant size here becomes a disadvantage rather than an asset, with small and medium-sized businesses benefiting [15]. The most adaptable approach to meeting localized, small-scale market demands is assumed by the commutative strategy. Small businesses that use this tactic typically lack specialized knowledge in a particular industry, efficient equipment, and the newest technologies. As a result, they are frequently referred to as "gray mice," which does not bother them in the slightest because many of them carve out their own market niche. Small, non-specialized businesses are powerful because of their capacity to adapt to the unique needs of individual clients on a small scale. The vast majority of small enterprises serve as the economy's backbone. Only commuters are eager to seize any economic opportunity, whilst other businesses carefully enforce their production schedules.

"Mice" companies easily make drastic changes in the sphere commercial activities - this increased flexibility becomes a source of competitive strength for commuters [16].

Despite their extreme flexibility, switches are one of the the most vulnerable enterprises. Without having any significant financial strength, nor obvious technological and production advantages they cannot resist serious threats to economic security. Therefore, most the real possibility of preserving the enterprise is as long as possible avoid situations where economic security is threatened take on a real character. The main focus when providing the economic security of such enterprises should be given a high level of leadership and management, as well as financial control, because risk of even small financial losses for switchboards is catastrophic.

The exploratory strategy is focused on radical innovations. Firms engaged in this risky pioneering activity business are often called the "first signs". Such a company strives to create a new market and benefit from initial single presence on it.

The experimental strategy is based on venture capital. In mass production, where preparing the release of a product costs a lot expensive, Violent tries to avoid untested projects, giving first mover rights to small firms. Pioneer company always hopes that the implementation of its echnical ideas will turn the market upside down. In 15 cases out of 100, it falls to the shareholder a huge technical and financial success. Observe in its purest form pioneering strategy in the business world is extremely difficult because of its short-term nature, because after the long-awaited breakthrough before the company faces prosaic tasks of maintaining market share, ongoing product improvement, increased profitability, i.e. There is a need to regenerate the operator company and move to a different type of strategy.

Firms using an exploratory strategy have significant differences from all types of enterprises represented higher. On the one hand, these are often young enterprises that do not have sufficient financial resources, on the other hand they have a large technological and research potential. One more the condition is narrow time limits within which it can

such an enterprise exists. These are young enterprises, not having sufficient financial resources, but having a large scientific, technological and research potential.

## 4 Results and discussion

A function of the indicators of the economic security components, which reflect a single criterion of the enterprise's economic security, can be used to characterize the overall strategy for assuring economic security [17]:

$$y=f_1(y_1, y_2, y_3, \dots, y_n)$$

*y<sub>i</sub> here indicators characterizing the components of economic enterprise security.*

It must be emphasized once again that the process of selecting specific indicators for describing the object in question - this is essential an important process, since the result will largely depend on it ongoing research. Selection of economic indicators security is carried out for each specific enterprise separately. In the process of compiling a system of indicators, you should employees of the enterprise who determine its strategic goals and directions of development, as well as the management of the enterprise.

We introduce the coefficients *c* and *s* correspondingly to account for the impact on the enterprise competitive market strategy, enterprise life stage cycle, and level of economic security. Next, a single standard for an organization's financial stability will be defined as follows:

$$y=f_2(c_1 s_1 y_1, c_2 s_2 y_2, \dots, c_n s_n y_n)$$

*here, c<sub>i</sub> - coefficient describing the influence on the economic security indicator component of the industrial enterprise's life cycle stage,*

*s<sub>i</sub> - coefficient characterizing the impact on the indicator component of the economic security of the competitive market strategy of an industrial enterprise.*

Using the expert assessment method. The following values are set for *c* and *s* (Table 1). Coefficients *c* and *s* are introduced as corrections for expert values of indicators components of economic security.

**Table 1.** Values of coefficients *c<sub>ns</sub>* affecting the indicators components of industrial economic security enterprises depending on the stages of its life cycle and implemented competitive market strategies.

Life cycle stages	C	Competitive market strategies	S
<b>Creation</b>	0,25	Violently	1
<b>Height</b>	0,5	Patient	0,5
<b>Maturity</b>	1	Explorant	0,3
<b>Recession</b>	0,1	commutative	0,1

You can obtain an expert evaluation of the current state of economic security enterprises and consider the particular threats to economic security enterprises from the perspective of indicators for economic components enterprise security by using the approach to the support mechanism that is proposed in the work Economic Security of the Enterprise. Expert opinions are employed in economic research at nearly every level [18], despite the fact that their methodological foundations can differ greatly. It is necessary to logically create examination schemes and apply the mathematical equipment for processing the outcomes in order to generate estimates that are adequately dependable.

It is crucial to stress that the optimum level of safety can only be attained if all of the indicators are within the acceptable ranges of their threshold values and if achieving the values of one indicator does not jeopardize the values of the others. Thus, it may be inferred that when an enterprise beyond the threshold indicators, it forfeits its capacity for dynamic self-improvement and competitiveness, ultimately leading to financial insolvency and bankruptcy.

Expert evaluation was used to define the weight factors for the Kashkadarya region, for example [19]:

Product production and sales rate: 0.15;

population social security: 0.25;

demographic stability: 0.25;

economic stability of the region: 0.20;

A system of indicators reflecting, among other things, the maximum allowable level of decline in economic activity, production volumes, investment, and financing, the ranges within which economic activity is impossible, and further development on a technically modern, competitive basis, maintaining scientific and technical innovation, investment, personnel and qualification potential, etc., can be used to characterize threshold levels for reducing economic security.

In this instance, the economic security criterion can be expressed as a collection of real indicators for the enterprise's economic security components. According to expert assessments, the study identified the following primary indicators of the economic safety components, which range from 0 to 1 [19]:

F - indicator characterizing the financial component economic security of the enterprise;

L - indicator characterizing the personnel component economic security of the enterprise;

P - indicator characterizing the production component economic security of the enterprise;

M - indicator characterizing the management component economic security of the enterprise;

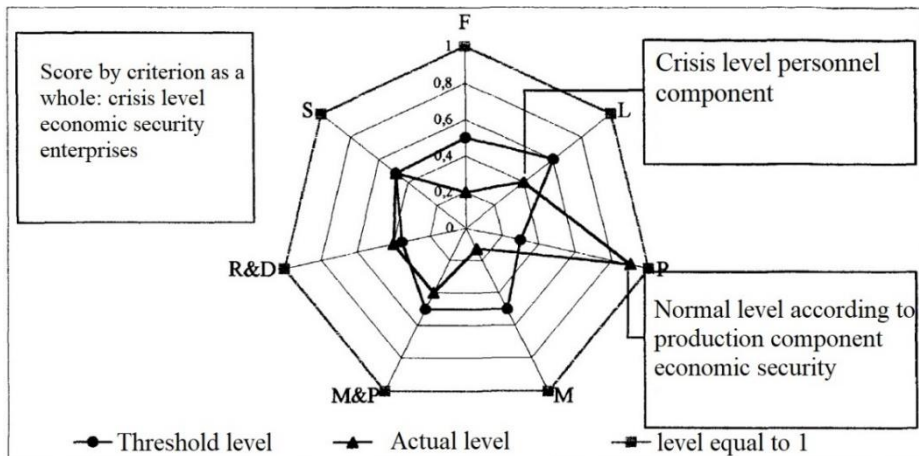
M&P is an indicator characterizing the market component economic security of the enterprise;

R&D is an indicator characterizing scientific and technical component of the economic component of the enterprise;

S - indicator characterizing economic security enterprises according to the activity component of the economic service security at the enterprise.

The values of these indicators can be shown as a diagram (Figure 3) to help an industrial firm monitor its collateral economic security.





**Fig. 3.** Evaluation of economic security levels in businesses based on economic component security indicators.

Simultaneously, a solitary criterion defining the degree of economic security provided by the firm will be contingent upon the subsequent circumstances:

$$S_H \geq S_{nk} \geq S_{kp}$$

where  $S_H$  is the enterprise's typical or pre-crisis level of financial security, represented quantitatively by the area of the associated polygon;

$S_{nk}$  - the area of the related polygon is numerically equal to the crisis level of the economic security enterprise;

$S_{kp}$  - important stage of the economic security enterprise, represented quantitatively by the appropriate polygon's area.

The management of an industrial enterprise can make decisions about the weakest links in the economic security system and forecast how the situation will develop going forward by keeping an eye on the values of indicators of economic components safety and criteria in general over time. One can predict how the situation in the firm will grow and identify the weakest points in the security of the economic system by comparing changes in indicators over time. A five-stage mechanism that ensures the economic security of industrial enterprises has been developed based on research conducted. This mechanism allows you to consider requirements for solving problems related to ensuring the economic safety of industrial enterprises [20-31].

- the enterprise cycle and its competitive market strategy are identified at the first stage of existence. This stage's goal is to prioritize and rank economic security components of industrial enterprise according to importance, together with the coefficients corresponding to these indicators. In the second phase, expert evaluations are used to determine the threshold and actual values of these indicators that are necessary to guarantee the financial stability of a certain firm operating in a particular competitive market at a given point of its life cycle.

- at the third step, a single criterion for guaranteeing this enterprise's economic security is determined by a set of indicators for economic security components as shown in the diagram.

The fourth stage involves assessing the degree to which the enterprise's economic security is ensured, based on the continuous monitoring of a specific criterion.

In the fifth stage, ideas for boosting the enterprise's level are developed together with a conclusion regarding the weakest points in the system that ensures its economic security and a prognosis for the near future.

At the same time, indications of the components are tracked at every step of problem-solving to guarantee the enterprise's financial stability.

## 5 Conclusion

We acquired research expertise in the area of economic security during the study, with a particular emphasis on the financial stability of industrial businesses. The study determined the origins of economic risks to firm security while taking into account the features of Uzbekistan's current economic development stage. A system for assessing the degree of economic security in industrial businesses has been developed using this data. This methodology makes it possible to foresee future changes to the economic security system in addition to allowing inferences to be made about the current condition of economic security in industrial firms. The ability to predict makes it possible to put policies in place that will improve economic security. The following salient features encapsulate the main theoretical and applied conclusions drawn from the study:

- A definition of industrial companies' economic security that includes the application of competitive market strategies, the life cycle of the company at different stages, and the tracking of indicators for the economic security components.

- An method that takes into account several competitive market strategies (aggressive, patient, explorative, commutative) at different stages of the life cycle (creation, growth, maturity, recession) in order to handle the difficulty of maintaining economic security for industrial businesses.

- The creation of an ordered set of indicators, including threshold and actual values, for the components of economic security.

- The creation of a single, consistent standard for economic security for industrial businesses, which will serve as the foundation for determining their current state of economic security (normal, pre-crisis, crisis, and critical).

- A mechanism for assessing an organization's level of economic security that involves tracking indicators for economic security components and enables forecasting is modeled.

- The development of measures to ensure the economic security of particular industrial businesses is facilitated by the provision of both theoretical and practical guidance.

- The main goal of the research has been achieved, according to the study's findings, which also built a system for guaranteeing the financial stability of industrial businesses. This mechanism makes it possible to take into account modifications to competitive market strategies, the condition and kind of business operations, and the evaluation of the degree of economic security.

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