

Economic Security in Post-Soviet Countries: Level of Ensuring and Development Trends

Ganna Kozachenko ¹, Igor Andrushchenko ¹⁺, Yuriy Pogorelov ², Larysa Gerasymenko ¹ and Yuliia Romanovska ³

¹ National Academy of Internal Affairs, 1 Solomjanska Square, 03035, Kyiv, Ukraine

² The Accounting Chamber, 7 Kotsiubynskoho Str., 01601, Kyiv, Ukraine

³ Vinnytsia Institute of Trade and Economics of Kyiv National University of Trade and Economics, 87 Soborna Str., 19104, Vinnytsia, Ukraine

Abstract. *At the national level of economic security studies, a special place has always belonged to the estimating side of the issue. Estimations of state economic security serve as input data for the determination of directions and ways of further security provision. At the same time, such estimations should be considered not only as a result of a certain methodology application in a certain country but also in the context of comparing the economic security estimations across a set of countries. The aim of the article is to determine the level of ensuring economic security in post-Soviet countries and recognize patterns, risks, and threats that affect the future development of state economic security. For comparative analysis of economic security, Ukraine, Azerbaijan, Kazakhstan, Moldova, Georgia, and period 2016-2020 have been selected. The methodological basis of the study included the following methods: comparative economic studies, methods of summation, arithmetic mean, weighted arithmetic, geometric mean, rating; international index systems were used as a basis for comparative analysis. Using the suggested methodology of estimation allowed obtaining results that characterize level real economic security, is lower than average. None of the analyzed countries has managed to maintain an acceptable level of economic security. The determined levels allow us to state that the economic systems of the analyzed post-Soviet countries demonstrate high perceptiveness to the actualization of various threats. And this perceptiveness, in its turn, leads to various negative changes in the economic systems of these countries. The high perceptiveness of the economic systems in the analyzed post-Soviet countries to the actualization of various threats can be explained by the changing quality of their economic potential, low levels of their innovativeness, and also the lack of proper conditions to apply the innovations.*

Keywords: comparative studies, economic security, economic security dynamics, international index systems, level of economic security

JEL Codes: E61, T65, F52

1. Introduction

Nowadays, under the conditions of ongoing globalization and further complications of international relations (trade wars, military actions), deepening of the problems related to economic development at the national level and its stabilization despite the influence of global factors (world crises, COVID-19 pandemic, etc.), the economic security of a state has become the top priority in policies of all countries without exception. This is because state economic security serves as a fundamental of national sovereignty and the basis of national security; it also makes it real to maintain other types of security at the state level. That's why

⁺ Corresponding author. Tel.: + 380685975072
E-mail address: andrushchenko.ig@i.ua

the economic security of a state, with its facilitation in the provision of a trustworthy and well-equipped economic system, is always in the center of attention at the governments' level and is also one underlying the formation of state economic policy and its legal provision.

At the national level of economic security studies, a special place has always belonged to the estimating side of the problem: it covers the methodology (regularities, principles, the very logic, and various approaches) of economic security estimation (at the levels of a state, region, and enterprise) as well as the algorithms required to make its fundamentals fully operational, that is, the algorithms which allow for the practical application of this methodology. And these estimations of state economic security later serve as input data for the determination of directions and ways of further security provision. That's why the quality of state economic security estimations is a prerequisite of vital importance. At the same time, such estimations should be considered not only as a result of a certain methodology application in a certain country but also in the context of comparing the economic security estimates across a range of countries.

The subject matter of state economic security (its state, threats, estimations and analysis, determination of approaches to its strengthening, development of the corresponding mechanisms, etc.) has attracted some scientific attention in all developed countries around the world. These issues are also relevant for the post-Soviet researchers, as is confirmed by the annual numbers of new studies in this direction (see, for example, (Ianioglo & Polajeva, 2017; Munteanu, 2018; Ene, 2018; Shamsutdinova, Tereshina & Mansurov, 2019; Zhylynska & Salayev, 2019; Gryshova, Kyzym, Hubarieva, et al., 2020; Dzhabarova, Shevchuk, Kalinovskaya, et al., 2019; Usenko et al., 2019; Kozlovskiy, Grynyuk, Baidala, et al., 2019; Kasradze & Zarnadze, 2019). Post-Soviet research in this field covers the issues of economic security on its national level primarily. Comparing economic security estimates across the post-Soviet countries is a challenging task due to the fact that the countries in question are using very different methodologies for such estimations. Besides, applied studies comparing economic security status across different countries are very limited in number (again, primarily due to differences in estimation methodologies).

In this regard, the aim of the article is to determine the level of ensuring economic security in post-Soviet countries, as well as to recognize patterns, risks, and threats that affect the future development of state economic security.

The object of the research is the estimetological aspect of macro-level economic security studies. There is a methodology of estimating the economic security of the state and algorithms that operationalize its main concepts suggested in such estimetological aspects of macro-level economic security studies. The subject of research is indicators of the economic security of the state for several post-Soviet countries.

2. Research Elaboration

To compare the state of economic security in several post-Soviet countries, we have used the method of comparative analysis. In this particular case, it has been used to compare the same phenomenon as applied to different objects (countries). Contemporary comparative studies in Economics allow us to compare not only alternative economic systems but also the results of various economic processes, to which belong, inter alia, the economic security provision at the state level.

For this comparative analysis of economic security, the following post-Soviet countries have been selected: Ukraine, Azerbaijan, Kazakhstan, Moldova, and Georgia. At the time of getting their national sovereignty status, all five countries had a solid economic potential and all necessary resources. Moreover, they were relatively well integrated into the world economic system, and the population of these countries had an overall very high level of education. All of the above assumed the availability of the initially similar preconditions for further achieving a certain level of economic security.

For the purpose to conduct a comparative analysis of economic security in the selected post-Soviet countries, we have used the data from the international index systems that emerged internationally back in the 1970s as the systems for collection and presentation of qualitative indicators on national economies (the major international index systems are well known) (Dallago, 2004).

Our selection of the international index systems as the information basis for further comparative analysis

of economic security in the post-Soviet countries has been preconditioned by the following: indices and subindices of the international index systems cover very different aspects of various processes taking place inside states and the results of these processes either strengthen or weaken economic security of these states; indices of the international index systems are covering long-terms periods of time; the selected countries are actually covered by the international index systems; indices of the international index systems are ratable (since they are calculated in scores).

While using the international index systems for the purposes of our comparative analysis of economic security in the post-Soviet countries, we have been taking into account the following limitations of these systems: no unity in the methodological approaches to indices' calculations within separate international index systems; specificity of each rating methodology and their differences (different number of countries and different choice of countries for comparison; very different number of indices and subindices); changes in the calculation methodologies. Sometimes these changes were profound, with both positive and negative consequences. In the first place, these changes concerned the contents of the indicators on which the index was based (introduction of new indicators, removal of older ones, indicators' migration between their groups, merging or splitting of indicators).

However, in the end, overall adequacy of indices and subindices of the international index system for the purpose of our comparative analysis of economic security in the selected post-Soviet countries can be treated as a sufficient one, since this adequacy has been achieved mathematically, using the criteria of the ranking models' validity.

3. Results and Discussions

3.1. International index systems selected for the comparative analysis of economic security in the post-Soviet countries

After analyzing the available international index systems, for the purpose of our comparative analysis of economic security in the post-Soviet countries, we have selected those that could comply with our evaluation methodology, namely: Corruption Perception Index (CPI), available since 1996; the Index of Economic Freedom (IEF), available since 1995; subindices of the Global Innovation Index (GI), available since 2007; the International Property Rights Index (IPRI), available since 2010; Fragile States Index (FSI), available since 2005 (before 2014 known as the Failed States Index).

The popular Doing Business index system was not selected for further analysis primarily due to the World Bank announcement that it suspends the Doing Business publications because of a number of irregularities in Doing Business 2018 and Doing Business 2020 reports. Statistical data in these reports did not match the ranking methodology.

It is considered that indices and subindices of the selected international index systems: reveal the role of business in the contemporary economy (as it not only predetermines a country's competitiveness at the international markets but also forms countries' economic potential overall); provide a clear picture on the overall state of the national economy, describing the economic potential of a country along with various aspects of ongoing economic processes within its economic system, the results of which are either strengthening or weakening the economic security of the state.

The national business sector would be able to perform its vitally important role within the country's economic system in case of well-developed, high-quality institutions that are primarily oriented on property rights protection and corruption prevention, as well as economic freedom in a country.

The indicators well describe the availability of these preconditions under the Index of Economic Freedom. The so-called "pillars of economic freedom" (Rule of Law, Government Size, Regulatory Efficiency, and Open Markets) are important indicators for describing the degree of freedom for business and entrepreneurship within a national economy. In our comparative analysis of economic security in the post-Soviet countries, we have used the overall IEF scores of the countries in question.

Freedom of entrepreneurship and competition in a country should be accompanied by the proper

protection of entrepreneurial rights (first and foremost, the right for physical property and the one for intellectual property), supported by systemic legal provision and a well-functioning court system. Proper protection of entrepreneurial rights is also one of the sources of economic security provision in a state. That's why in our comparative analysis of economic security in the post-Soviet countries, we have used the data from the International Property Right Index, which provides a comprehensive assessment of countries' efficiency in the protection of property rights.

One of the most damaging factors of negative influence on the economic security of a state which, inter alia, hinders the strengthening of its economic potential, its innovative development, and business creativity in a country is corruption. Herein, we understand corruption as the substitution of state interests by the private interests of persons representing the state officially. Corruption is probably the most notorious and the most widely spread problem of the contemporary states as it constantly follows the development of authorities and that of the goods-money exchange development, being also one of the major threats to national economies. For this reason, in our comparative analysis of economic security in the post-Soviet states, we have also used the data of the Corruption Perception Index (CPI).

Innovative activities of a state (synthesis of scientific and technical knowledge, state support to innovative activities and further commercialization of their results, intellectualization of the production processes, availability of information & communication technologies, various intangible assets, production clusters, business efficiency) nowadays become not only one of the most decisive factors for economic growth of a state but also the basis of economic sustainability and the capacity to overcome negative changes taking places due to actualization of various threats. The results of all these processes are well revealed in the subindices of the Global Innovation Index, namely: the Innovation Input subindex of the GII describe the availability of various preconditions within a national economy (institutional and infrastructural environment, the intellectual capital of a country, topicality of research on the most relevant subjects, market's and business capacity to absorb innovations); the Innovation Output subindex of the GII is essentially the estimate of innovative activeness and of the state innovation policy. That is, it assesses how well are the available innovative preconditions used in the course of innovative processes.

Formation and strengthening of the economic potential of a state is never a goal in itself. Economic potential serves as the basis for a country's capacity overall. It reduces its fragility, and this, in turn, decreases the level of the national economy's perceptiveness to negative consequences of various threats actualization. Finally, it helps the economy to restore itself. That's why in our comparative analysis of the economic security in the post-Soviet countries, we have also used the data of the Fragile States Index. This ranking system describes countries' capacity to control the intactness of their territories along with the political, demographic, economic, and social situation on these territories (The Fund for Peace, 2016).

The key specific feature of countries' ranking by fragility is its reverse order: the most successful countries get the lowest scores in it and thus are ranked the lowest ones, while the least performing countries get the highest scores and thus are ranked at the very top of this ranking. We have taken this peculiarity into account while calculating the quantitative indicators of economic security in the selected countries.

Scores of the countries in question, extracted from the selected international index systems, are presented in Table 1 and have been used in our comparative analysis accordingly.

Table 1: Scores as per indices and subindices of the international index systems, extracted for comparative analysis of economic security in the selected post-Soviet countries

the Index of Economic Freedom					
Countries	2016 (0 ÷ 100)	2017 (0 ÷ 100)	2018 (0 ÷ 100)	2019 (0 ÷ 100)	2020 (0 ÷ 100)
Ukraine	46,8	48,1	51,9	52,3	54,9
Kazakhstan	63,6	69	69,1	65,4	69,6
Moldova	57,4	58	58,4	59,1	62
Georgia	72,6	76	76,2	75,9	77,1

Azerbaijan	60,2	63,6	64,3	65,4	69,3
Global Innovation Index					
Innovation Input Subindex					
Country	2016 (0 ÷ 100)	2017 (0 ÷ 100)	2018 (0 ÷ 100)	2019 (0 ÷ 100)	2020 (0 ÷ 100)
Ukraine	38,9	41,05	40,45	40,73	40,14
Kazakhstan	41,7	43,15	43,56	43,73	42,78
Moldova	39,6	41,35	39,85	40,77	39,18
Georgia	41	42,16	44,44	48,19	43,89
Azerbaijan	38,4	40,7	40,39	41,59	39,17
Innovation Output Subindex					
Ukraine	32,5	34,19	36,59	34,07	32,49
Kazakhstan	21,3	19,85	19,28	18,32	14,34
Moldova	37,2	32,33	35,41	30,26	26,79
Georgia	26,7	26,61	25,65	25,76	19,66
Azerbaijan	20,9	20,46	20,0	18,83	15,29
The International Property Rights Index					

Country	2016 (0 ÷ 10)	2017 (0 ÷ 10)	2018 (0 ÷ 10)	2019 (0 ÷ 10)	2020 (0 ÷ 10)
Ukraine	3,93/39,3	3,42/34,2	4,28/42,8	4,43/44,3	4,47/44,7
Kazakhstan	4,76/47,6	4,43/44,3	4,84/48,4	4,85/48,5	5,01/50,1
Moldova	3,72/37,2	3,18/31,8	4,00/40,0	4,22/42,2	4,33/43,3
Georgia	4,6/46	4,71/47,1	5,15/51,5	5,25/52,5	5,24/52,4
Azerbaijan	4,08/40,8	3,95/39,5	5,04/50,4	5,12/51,2	5,35/53,5
Corruption Perception Index					
Country	2016 (0 ÷ 100)	2017 (0 ÷ 100)	2018 (0 ÷ 100)	2019 (0 ÷ 100)	2020 (0 ÷ 100)
Ukraine	29	30	32	30	33
Kazakhstan	29	31	31	34	38
Moldova	30	31	33	32	34
Georgia	57	56	58	56	56
Azerbaijan	30	31	25	30	30
Fragile States Index					
Country	2016	2017	2018	2019	2020
Ukraine	75,5/40,44	74/41,91	72,6/42,72	71/44,0	69/44,38
Kazakhstan	66,5/49,89	65,9/50,42	63,4/52,36	61,6/53,73	59,8/53,78
Moldova	73,2/42,86	72/44,01	69,5/45,97	67,1/48,03	66/47,44
Georgia	78,9/36,87	76,5/39,29	74/41,26	72/42,96	71,2/42,13
Azerbaijan	76,3/39,60	76,3/39,5	74,6/40,63	73,2/41,72	71,3/42,02

(Source: Data for Table 1 was obtained from the following sources: Miller, T., et al. (2016-2021); Dutta, S. et al. (2016-2020), Levy-Carciente, Sary (2016-2020); Transparency International (2016-2020); Messner, J.J. (2016-2020)

3.2. Methodology for evaluation of economic security in the selected countries

Our methodology of economic security evaluation in the selected countries assumes that there are certain scores assigned as per each index and subindex, the maximal and the minimal values of which are interpreted in the most clearcut way: scores increase in the interval (0 ÷ 100) means improvement in the

phenomenon/process/result in question. Most of the indices selected for our analysis follow this logic. However, scores under the International Property Right Index and the Fragile States Index required some adjustment, from their scoring system into 100-score scale. The adjusted scores of these two indices are presented in Table 1 with an / sign.

Adjustment of the countries' scores as per the International Property Right Index was easy; we simply had to move from the 10-point scale to the 100-point one. Adjustment of the Fragile States Index scores was more complicated since the scale of this index is not 0 to 100. Instead, the scores under this index, in various years, fluctuated from 17-18 to 113-114. For example:

back in 2016, the minimum value under this index (178 countries included) was 18.8, and the maximal value was 114;

in 2020 the minimal value (again, among 178 countries) was 14.6 already, and the maximal value was 112.4.

Therefore, for the purposes of our comparative analysis, we had to "narrow down" the scale of the Fragile States index so that it fits into the 0-100 framework. Besides, unlike other indices, the original Fragile States Index has essentially stimulating values; that is, growth of this index values means higher fragility of a state that leads to worsening of the overall situation in a country. Thus, in order to use the scores under the Fragile States Index along with other indices and subindices under consideration, first, we would need to not only adjust its scores to the 0-100 scale but also to maintain the linear character of such an adjustment (and the scale density), turning stimulating values into the stimulating ones. This adjustment has been carried out according to the following formula (1):

$$I_t = 100 - \left(\frac{I_o - I_{min}}{I_{max} - I_{min}} * 100 \right), \quad (1)$$

where I_t – the adjusted value of the Fragile States index for a state (stimulating value already, on the 0-100 scale);

I_{max} – the maximal value of the Fragile State Index among all Fragile State Indices for all the countries in a certain year;

I_{min} – the minimal value of the Fragile State Index among all Fragile State Indices for all countries in a certain year;

I_o – the original (initial) value of the Fragile State Index among all Fragile State Indices for all countries in a certain year, calculated according to the original FSI methodology.

For example, the adjusted value of the Fragile State Index of some of the selected from Table 1 countries will be:

for Ukraine as of 2016 — 40,44 ($100 - ((75,5 - 18,8) / (114 - 18,8) * 100)$);

for Kazakhstan as of 2020 — 53,78 ($100 - ((59,8 - 14,6) / (112,4 - 14,6) * 100)$).

Calculations of the adjusted values of the Fragile State Index for the selected countries in the period from 2016 to 2020 have been carried out in MS Excel.

The methodology of economic security evaluation in the selected countries assumes summing up the scores of all used index systems. For this matter, we have applied the generalization method. Traditionally, for generalization within a certain combination of indicators, the following methods can be applied: sum-of-the-estimates method, the average arithmetic method, the weighted arithmetic, the geometric average. To generalize the scores under indices and subindices of the selected for our analysis countries, we have used the sum-of-the-estimates method. This method has been chosen due to the following motivations: this method is simple, intuitive in the application, and easy when it comes to results interpreting; it ranks all indices and subindices equally (as per the implicit assumption on which this method rests); it uses the same scale: scores of all the indices and subindices of the selected countries range from 0 to 100 (either from the beginning or after the adjustments have been made); all indices and subindices used are comparable in their dimensions.

The results of countries' scores summing up as per all used index systems are presented in Table 2.

Table 2: Total sum of all scores of the selected countries under the used index systems

Countries	Scores				
	Years				
	2016	2017	2018	2019	2020
Ukraine	226,9	229,5	246,5	245,4	249,6
Kazakhstan	253,1	257,7	263,7	263,7	268,6
Moldova	244,3	238,5	252,6	252,4	252,9
Georgia	280,2	287,2	297,0	301,3	291,2
Azerbaijan	229,9	234,8	240,7	248,7	249,3

3.3. Results of the comparative analysis of economic security in the selected post-Soviet countries

As data in Table 2 shows, there have been no significant changes in the total scores of the selected countries throughout the analyzed period of time. The scores have been demonstrating some overall improvement; however, not a significant one. The largest improvements in the total sum of scores (as compared to the first year under analysis – 2016) are observed in the cases of Georgia, Ukraine, and Azerbaijan.

There are the dynamics of economic security of the selected post-Soviet countries shown in figure 1.

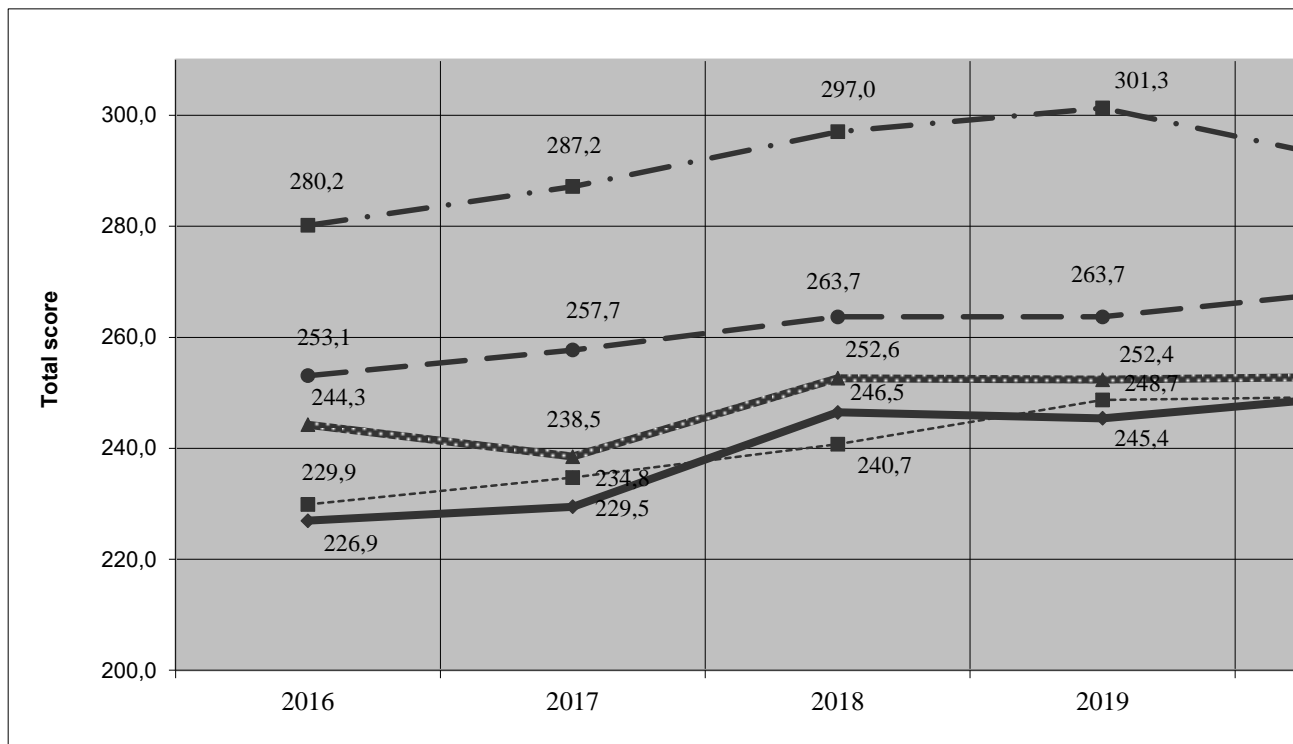


Fig. 1: Dynamics of economic security of the selected post-Soviet countries

The carried out calculations confirm there is a stable variation in the total sum of index scores between the countries: the ratio between the maximal and the minimal sums of scores, and also between the minimal sum of scores in each year. Throughout the whole analyzed period, this variation was in the range of 0.23 - 0.25, and it did not experience a lot of changes (the differences were only in the third decimal). Such an insignificant change in variation confirms, first of all, the unidirectionality of trends described by the selected indices in the selected countries. Secondly, it also confirms that there is a great deal of similarity in the dynamics of changes that have an impact on economic security in the analyzed countries.

The total sums of scores (see Table 2) singled out from the selected index systems for the countries under analysis are essentially only a set of absolute values. Taken alone, they would not allow carrying out the comparative evaluation of economic security in the selected countries. For this, we would also need to select an approach to the description of the total sum of scores of the selected countries on a 0-100 scale. This approach must cover the determination of the intervals and their threshold values, between which the scores of the selected countries will be assigned. To determine the medians that divide the total sum of scores of the selected countries into smaller shares, we have applied one of the most frequently used methods - the method of quintiles, as it divides the total of 100 scores into five parts.

In theory, the maximal possible total sum of scores for all the indices used here would be 600 (since in our comparative analysis, we have used the data on six indices and subindices), and the absolute minimum score is 0. Obviously, none of the countries in question could get such scores. The assumption regarding these scores has been accepted in order to simplify the division of scale for further evaluation of economic security in the analyzed countries.

Following the same assumption, the division of the total scores by quintiles is presented in Table 3.

Table 3: Distribution of total scores by quintiles

Quintile	Total score	Economic security status in a country	
		Qualitative	In decimals
1	0-120	low	0-0,2
2	121-240	lower than average	0,21-0,40
3	241-360	average	0-41-0,6
4	361-480	above average	0,61-0,08
5	481-600	high	0,81-1

Then, following the logic of such a distribution of scores by quintiles, we have assigned the analyzed countries to specific quintiles by year (see Table 4).

Table 4: Analyzed countries distribution by quintiles

Countries	Quintiles				
	years				
	2016	2017	2018	2019	2020
Ukraine	2	2	3	3	3
Kazakhstan	3	3	3	3	3
Moldova	3	2	3	3	3
Georgia	3	3	3	3	3
Azerbaijan	2	2	2	3	3

As data presented in Table 4 demonstrate, by their total sum of scores in the selected index systems, the studied countries, throughout the analyzed period, have been partially in the 2nd and primarily in the 3rd quintiles. Some of the countries in question (Ukraine, Azerbaijan) have shifted from the 2nd quintile to the 3rd one; others have never left the third quintile during the whole period in question. However, even within the 3rd quintile, the countries were mostly at their bottom, that is, they hardly passed the median of 240 scores. Only Georgia has managed to move further from the score of 241.

Generally speaking, in qualitative terms, the situation in the analyzed countries did not change significantly over time: their evaluation status of economic security has moved from "below average" to "average". That is, in quantitative terms, it has been within the interval of 0.41-0.45 (more precise quantitative evaluation would require additional calculations; however, their results would not significantly impact the overall evaluation of economic security in the analyzed countries).

Data presented in Table 4 allows us to formulate the following conclusions.

The analyzed post-Soviet countries, due to a range of reasons, failed to maintain an acceptable level of economic security throughout the analyzed period of time. Their perceptiveness to the actualization of various threats remains to be rather high. Also, we need to mention here that the direction of institutional changes in the analyzed countries, to some extent, has strengthened their economic security, even though this strengthening has been not that significant and rather slow.

Moreover, from the obtained data, we do not see any reason to confirm there is a correlation between the level of economic security in the selected countries and the dynamics of their macroeconomic indicators (see Table 5).

Table 5: Macroeconomic indicators of the studied post-Soviet countries

Country	GDP growth during 1991-2019, in %	Dynamics of GDP per capita during 1990-2016, in %	Gross external debt, in % of GDP	The annual inflation rate, in % as of (date in brackets)
Ukraine (united territories)	- 28,17	25,66	76 (31.03.2020)	3,8 (November 2020)
Kazakhstan	152,89	314,98	83 (31.03.2020)	5,5 (October 2020)
Moldova	1,87	106,18	66,1 (30.06.2020)	0,93 (November 2020)
Georgia	33,84	149,0	55 (30.06.2020)	3,8 (November 2020)
Azerbaijan	158,7	328,14	22,4 (30.06.2020)	2,8 (November 2020)

(Source: *Macroeconomic Research*. (n.d.); *Interfax-Ukraine*. (June 23, 2020); *Kazakhstan Today*. (September 9, 2020); *InfoMarketMedia*. (October 2, 2020); *Trend News Agency*. (September 22, 2020); *Azizov, A.* (July 31, 2020); *Ukrinform.ua*. (December 10, 2020); *National Bank of Moldova*. (February 2021); *Infopolis*. (November 17, 2020); *Take-profit.org*. (February, 2021); *Take-profit.org*. (January, 2021).

Data in Table 5 confirms there are differences in socioeconomic development rates of the analyzed countries. Some of them managed to not only restore the volume of their gross domestic product but also to guarantee its significant growth per capita (Kazakhstan, Azerbaijan). The economic results of Moldova and Georgia are much more modest yet still positive. At the same time, just like Moldova, with its lowest dynamics of macroeconomic indicators, Azerbaijan and Kazakhstan, with their high dynamics of macroeconomic indicators, still remain to be in the same third quintile when it comes to the level of economic security (see Table 4).

We can assume that for a proper interpretation of the comparable estimates of economic security in the analyzed countries, one also needs to take into account the complexity of the economy, which is often described using the ECI — the Economic Complexity Index, also known as the Harvard Index (see Table 6).

Economic complexity is a qualitative property of the economy, which describes the diversity of the commodity structure of the national industry (Hidalgo, 2009; Hausmann, 2011).

Table 6: The Economic Complexity Index (ECI) of the analyzed post-Soviet countries

Country	2016	2017	2018
Ukraine	0,25	0,36	0,37
Kazakhstan	- 0,41	- 0,44	- 0,59
Moldova	- 0,2	- 0,1	- 0,18
Georgia	- 0,23	- 0,28	- 0,04
Azerbaijan	- 1,1	- 1,61	- 1,37
Max	2,49	2,44	2,43

(Source: *Country & Product Complexity Rankings*: <https://atlas.cid.harvard.edu/rankings>)

In recent years, a low level of economic complexity (as compared to its maximal value) has been

observed only in Ukraine. This indicates there is some diversity in the commodity exports and that there are some complex products in its structure. In other analyzed countries, the ECI has negative values. However, it would be difficult to determine a correlation here: Ukraine, with its positive value of economic complexity, still has the lowest values when it comes to economic security.

This lack of an obvious correlation between the level of a country's economic security, its dynamics of macroeconomic indicators, and the level of its economic complexity allows us to put forward the following assumptions: high positive rates of macroeconomic indicators are not always determined by economic complexity, and they are still possible when economic security in a country is at low levels; dynamics of macroeconomic indicators are not always predetermined by the high level of economic security in a country. Other factors can also be meaningful (for example, stability, permanency of political authorities in a country, rational actions taken by a government, situation at the international markets where national products are widely present, etc.).

Searching for the causes behind the low levels of economic security in the analyzed countries, it would be feasible to consider the dynamics of scores as per separate indices and subindices.

The Fragile State scores of almost all analyzed post-Soviet countries are below average (the median on the 100-point scale). Only Kazakhstan has its Fragile State index somewhat above the median value. Generally speaking, the Fragile State rankings of Ukraine, Moldova, and Georgia come as no surprise. All three countries, in different years after gaining independence, have experienced infringements upon their territorial integrity. Till now, some areas of these countries have been occupied. At the same time, we need to note here that throughout the period in question, all analyzed countries have also demonstrated a stable (even though insignificant) growth in their Fragile State indices. This confirms there are positive, even though slow, institutional and public reforms in these countries.

All analyzed countries have rather high scores under the Index of Economic Freedom, all above the median on the scale. Moreover, the IEF scores of all the analyzed countries are stably growing from year to year. Georgia has even moved to the third quartile with its IEF values. All efforts taken by the countries in question to maintain their economic freedoms in the last five years have produced some results. However, we need to mention that Ukraine's economic freedom indicators remain to be the lowest in the studied group of countries, and there are some serious reasons for that. Firstly, we need to consider the low capacity of institutions, the largest share of which has been either borrowed as foreign experience or formed with direct participation of the experts representing international organizations or governments of the developed nations. Actual conditions of these institutions' implementation in real practice turned out to be very different from those forecasted initially. Another reason is the widespread of various gray schemes used for tax evasion (including, inter alia, "manual" administration of tax payments), non-disclosure of overseas incomes, which resulted in over 700 mln euro of tax underpayments annually. Other serious reasons include the massive size of the shadow economy and the high level of corruption.

Another common problem of all the analyzed post-Soviet countries is their relatively low level of economic innovativeness: in all these countries, the innovativeness scores are below the median, and in some of these countries, they are even lower than the scores of the first quartile. In terms of spending on innovations, Ukraine goes slightly behind Kazakhstan and Georgia, but it has more scores than Moldova and Azerbaijan. In terms of innovative results, Ukraine has the highest score in the analyzed group of countries. On first reading, this can be due to not as much institutional basis of Ukraine's economic functioning (since Ukraine is lagging behind other analyzed countries by this parameter) but rather due to the safety margin of Ukraine's economic potential, formed in the previous decades.

In terms of the International Property Rights Index, the analyzed countries demonstrate stable, even though insignificant positive dynamics of change: all the countries in question have improved their protection of property rights. Back in 2016, Ukraine and Moldova were lagging behind other analyzed countries in the IPR ranking. Despite some positive shifts in the years after, the situation remained unchanged: in 2020, Ukraine is still behind Kazakhstan, Georgia, and Azerbaijan in its IPR rank. Till now, Ukraine did not fully solve the problem of legitimate property status. Moreover, in the public consciousness, property as such is still not yet fully legit and morally explained. Protection of both private and corporate

property rights is still not adequate. All of the above often serves to justify raiding. Legislation regulating property relations in the country urgently requires significant revisions and improvement.

The situation with the Corruption Perception Index in all the analyzed countries raise many concerns: the overall rankings of the analyzed countries are rather low (the only exception is Georgia since this country had significant anti-corruption reforms carried out during the times when M. Saakashvili was the president); the very dynamics of the analyzed countries' indices is extremely low, only Kazakhstan has managed to somewhat improved its standing.

In Ukraine, the ongoing development of economic corruption is confirmed by the strongly manifested signs that the country has moved to a qualitatively new state: corruption has not only grown in volume but has also penetrated into all economic fields more deeply. Moreover, a range of additional threatening trends has emerged. Among these trends, first of all, we need to mention the institutionalization of economic corruption: substitution of previously spontaneous/periodical deviant (corrupted) behavior demonstrated by separate public officers by regular corrupted actions carried out by groups of public officers accompanied with the use of certain informal but already mandatory ways of actions (standards and samples of behavior). Another trend is the collective nature of economic corruption: there emerge hierarchical or heterarchical groups of public officers that are performing organized and well-coordinated actions, forming connections and mutual dependencies between public officers in various institutions and organizations. This process takes place both vertically and horizontally, involving different levels of the existing socio-economic system. One more threatening trend is the constructive motivation of economic corruption: integrating corruption schemes and networks into the very system of the national economy, making shadow corrupted unions valuable for the stability of the national economy. It may sound surprising, but the destruction of such corrupted elements within the system of the national economy might actually have serious economic consequences.

Nowadays, Ukraine has already accumulated significant volumes of empirical materials on the issues around corruption. Now, this accumulated empirical evidence requires structuring and further determination/explanation of the ongoing processes and key trends. This would require the availability of certain theoretical constructs. This leads us to the necessity to study the corruption in Ukraine, applying general scientific and specialized research principles in the most systematic manner and within the framework of the latest system of knowledge about economic corruption in economic relations — also known as corruption studies. Since today economic corruption is one of the most serious threats to national economies, corruption studies need to be treated as one of the research directions within economic security studies.

4. Conclusions

The level of economic security in the analyzed post-Soviet countries, measured as per the authors' methodology, is lower than average. In most cases, this level has barely passed the scoreline between "low" and "lower than average." None of the analyzed countries has managed to maintain an acceptable level of economic security, despite the fact that it was moving up, however extremely slowly. Throughout the analyzed period of time, the economic systems of the countries in question have been experiencing some positive institutional changes, among which we need to mention the lower fragility of the states, as well as maintenance of economic freedom and property rights protection.

We also need to note here that Georgia somewhat differs from other analyzed countries in terms of its economic security dynamics. This country seems to be more developed institutionally, and this fact, we assume, is the immediate consequence of the anti-corruption reforms carried out. These reforms have obviously influenced Georgia's economic security in the most obvious way.

The determined levels of economic security allow us to state that the economic systems of the analyzed post-Soviet countries demonstrate high perceptiveness to the actualization of various threats. And this perceptiveness, in its turn, leads to various negative changes in the economic systems of these countries.

Restoring a country's economic system at its previous level is not always possible since, under such conditions, its development is often very slow and not systemic.

The high perceptiveness of the economic systems in the analyzed post-Soviet countries to the actualization of various threats can be explained by the changing quality of their economic potential, low levels of their innovativeness, and also by the lack of proper conditions to apply the innovations. Moreover, the fight against corruption in these countries has had very poor results (scores under the Corruption Perception Index in all the countries in question remain to be almost unchanged). From the institutional standpoint, Ukraine demonstrates other weaknesses, too, since this country is lagging behind others by both separate indices and also by the sum of all scores. This situation has been preconditioned not by some standalone phenomena but rather by the state of affairs overall: throughout the analyzed period of time, Ukraine has always scored the lowest and has hardly improved its rankings.

The use of the methodology suggested here for evaluation of economic security in the analyzed post-Soviet countries has allowed obtaining the results that reveal the actual level of economic security in these countries. The most peculiar feature of the methodology suggested here is that it does not rest on the use of macroeconomic indicators as such, as opposed to the methodology of economic security evaluation officially approved for use in Ukraine back in 2013. Focusing on macroeconomic indicators (some of which are presented in Table 5) would have presented economic security in the analyzed countries as being (at least) stably average, and this does not reflect the reality.

Comparing the total scores of the analyzed countries as per the selected index systems during 2016-2020 with the dynamics of their macroeconomic indicators during 1990-2019 allows us to put forward the assumption that would be considered in our future research: the capacity of institutions and the changeability of political powers together influence the results of a country's socioeconomic development. In countries with strong institutions, frequent changes of political powers have a positive influence on socioeconomic development and on population welfare. This assumption, to some extent, has been proved empirically on our sample of countries since the level of their institutionalization is, sadly, rather low. However, in two of the countries in question (Kazakhstan and Azerbaijan), the changeability of political powers is low, and these very countries, throughout the whole period from 1991 to 2019, demonstrated significantly higher economic results (measured through GDP and GDP per capita rates) as compared to other countries, where political powers changeability was high (Moldova, Georgia, Ukraine). Obviously, for now, this dependence should be treated as just an assumption, not as a proven correlation, even though it has been partially grounded empirically. Also noteworthy, the changeability of political power is only one of those factors that are influencing economic growth and countries' welfare.

Using the suggested methodology of evaluating countries' economic security may be helpful not only for comparative analysis but also for evaluating the economic security of a state. Obtained estimations of the state economic security are the basis for identifying directions and ways of providing such economic security; making the policy of support of the state security; identifying the threats to a national economy; forming the national system of stability to provide the high level of readiness of society and state to react on a wide range of threats and making the Strategy of economic security that is declared by the Strategy of national security of Ukraine "Security of a person – security of the State".

5. References

- [1] Azizov, A. (July 31, 2020). *State debt of Azerbaijan as of June, 01, is 24.5% of its GDP, reducing during the first half of the year by 1.1%*. Interfax-Azerbaijan. Available at: <http://interfax.az/view/809272> [Accessed 03 September 2021].
- [2] Cornell University, INSEAD, and WIPO. (2016). *The Global Innovation Index 2016: Winning with Global Innovation*. [Ed. by Dutta, S., Lanvin, B., Wunsch-Vincent, S.]. Ithaca, Fontainebleau, and Geneva. Available at: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2016.pdf [Accessed 03 September 2021].
- [3] Dallago, B. (2004). Comparative economic systems and the new comparative economics. *The European Journal of Comparative Economics*, 1(1): 59–86.

-
- [4] Dutta, S., Lanvin, B., Wunsch-Vincent, S. (Eds.). (2016). *The Global Innovation Index 2016. Winning with Global Innovation*. Cornell University, INSEAD, and WIPO: The Global Innovation Index 2016: Winning with Global Innovation, Ithaca, Fontainebleau, and Geneva. 422 p. Available at: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2016.pdf [Accessed 03 September 2021].
- [5] Dutta, S., Lanvin, B., Wunsch-Vincent, S. (Eds.). (2017). *The Global Innovation Index 2017. Innovation Feeding the World*. [10th ed.]. Cornell University, INSEAD, and WIPO: The Global Innovation Index 2017: Innovation Feeding the World, Ithaca, Fontainebleau, and Geneva. 432 p. Available at: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2017.pdf [Accessed 03 September 2021].
- [6] Dutta, S., Lanvin, B., Wunsch-Vincent, S. (Eds.). (2018). *The Global Innovation Index 2018. Energizing the World with Innovation*. [11th ed.]. Cornell University, INSEAD, and WIPO: The Global Innovation Index 2018: Innovation Feeding the World, Ithaca, Fontainebleau, and Geneva. 384 p. Available at: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2018.pdf [Accessed 03 September 2021].
- [7] Dutta, S., Lanvin, B., Wunsch-Vincent, S. (Eds.). (2019). *The Global Innovation Index 2019. Creating Healthy Lives – The Future of Medical Innovation*. [12th ed.]. Cornell University, INSEAD, and WIPO (2019); The Global Innovation Index 2019: Creating Healthy Lives-The Future of Medical Innovation, Ithaca, Fontainebleau, and Geneva. 399 p. Available at: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2019.pdf [Accessed 03 September 2021].
- [8] Dutta, S., Lanvin, B., Wunsch-Vincent, S. (Eds.). (2020). *The Global Innovation Index 2020. Who Will Finance Innovation?* [12th ed.]. Cornell University, INSEAD, and WIPO (2020). The Global Innovation Index 2020: Who Will Finance Innovation? Ithaca, Fontainebleau, and Geneva. 398 p. Available at: https://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2020.pdf [Accessed 03 September 2021].
- [9] Dzhafarova, M. V., Shevchuk, T. A., Kalinovskaya, Ya. O., Stashchak, A. Yu. (2019). Economic security of Ukraine: economic and legal aspects. *Financial and credit activity: problems of theory and practice*, 3(30): 70-77.
- [10] Ene, A. M. (2018). *EU economic security from the perspective of the economic association agreements signed by the Republic of Moldova, Ukraine and Georgia with the EU*. Paper presented at the Danubius International Conferences “On European Integration – Realities and Perspectives”, 13: 280-285.
- [11] Gryshova, I., Kyzym, M., Hubarieva, I., Khaustova, V., Livinskyi, A., Khoroshenko, M. (2020). Assessment of the EU and Ukraine economic security and its influence on their sustainable economic development. *Sustainability*, 12(18): 7692-7696.
- [12] Hausmann, R., Hidalgo, C., Bustos, S., Coscia, M., Simoes, A., Yildirim, M. A. (2011). *The atlas of economic complexity: mapping paths to prosperity*. Cambridge: Center for International Development, Harvard University, MIT, 108-358.
- [13] Hidalgo, C.A., Hausmann, R. (2009). The building blocks of economic complexity. *Proceedings of the National Academy of Sciences*, 106(26): 10570-10575.
- [14] Ianioglo, A., Polajeva, T. (2017). Innovative component of economic security of enterprises: a case of the Republic of Moldova. *Journal of Business Economics and Management*, 18(6): 1228-1242.
- [15] InfoMarket Media. (October 2, 2020). Gross external debt of Moldova during the first half of 2020 increased by \$369,3 mln (+5%), reaching \$7 bln 785,38 mln at the end of June. Available at: https://www.infomarket.md/ru/banks/obschiy_vneshniy_dolg_moldovyi_v_I_polugodii_2020_g_uvelic_hilsya_na_3693_mln_5_sostaviv_7_mlrd_78538_mln_na_konets_iyunya#: [Accessed 03 September 2021].

- [16] Infopolis. (November 17, 2020). The highest in the EAEU inflation rate has been recorded in Kazakhstan since the beginning of this year. Available at: <https://informburo.kz/novosti/v-kazahstane-zafiksirovan-samyy-vysokiy-uroven-inflyacii-s-nachala-goda-sredi-stran-eaes--114199.html#:> [Accessed 03 September 2021].
- [17] Interfax-Ukraine. (June 23, 2020). Gross external debt of Ukraine during the first quarter went down by 1.2% Available at: <https://interfax.com.ua/news/economic/670643.html#> [Accessed 03 September 2021].
- [18] Kasradze, T., Zamadze, N. (2019). Challenges of economics of georgia: good and bad economic growth. *European Journal of Economics and Business Studies*, 5(1): 178-186.
- [19] Kazakhstan Today. (September 9, 2020). *External debt of Kazakhstan is \$152.7 bln, of which over 80% are the liabilities of the private sector.* Available at: https://www.kt.kz/rus/economy/vneshniy_dolg_kazahstana_sostavlyayet_152_7_mlrd_iz_1377904359.html#: [Accessed 03 September 2021].
- [20] Kozlovskiy, S., Grynyuk, R., Baidala, V., Burdiak, V. and Bakun, Y. (2019). Economic security management of Ukraine in conditions of european integration. *Montenegrin Journal of Economics*, 15(3): 137-153.
- [21] Levy-Carciente, S., (2020). *International Property Rights Index 2020*. Property Rights Alliance. Available at: <https://www.internationalpropertyrightsindex.org/> [Accessed 03 September 2021].
- [22] Levy-Carciente, S., Montanari, L. (Ed.). (2018). *International Property Right Index 2018*. [Full Report]. Property Rights Alliance. 66 p. Available at: https://ueff.org/images/UEFF/content/indices/alliance/IPRI2018_full.pdf [Accessed 03 September 2021].
- [23] Levy-Carciente, S., Montanari, L. (Ed.). (2019). *International Property Right Index 2019*. [Full Report]. Property Rights Alliance. 76 p. Available at: https://atr-ipri2017.s3.amazonaws.com/uploads/IPRI_2019_FullReport.pdf [Accessed 03 September 2021].
- [24] Levy-Carciente, Sary. (2016). *International Property Right Index 2016*. 66 p. Available at: <https://s3.amazonaws.com/ipri2016/IPRI+2016+Full+Report.pdf> [Accessed 03 September 2021].
- [25] Levy-Carciente, Sary. (2017). *International Property Right Index 2017*. [Report]. Property Rights Alliance. 71 p. Available at: https://ueff.org/images/UEFF/content/indices/alliance/IPRI2017_full.pdf [Accessed 03 September 2021].
- [26] Levy-Carciente, Sary. (Ed.). (2016). *2016 Property Rights Index International. Executive Summary*. Property Rights Alliance. 12 p. Available at: https://ueff.org/images/UEFF/content/indices/alliance/IPRI2016_es.pdf [Accessed 03 September 2021].
- [27] Macroeconomic Research. (n.d.). *GDP growth in the post-Soviet countries*. Available at: <https://be5.biz/makroekonomika/index.html> [Accessed 03 September 2021].
- [28] Messner, J.J. (Ed.). (2016). *Fragile States Index 2016*. Washington D.C: The Fund for Peace. 23 p. Available at: <https://fundforpeace.org/wp-content/uploads/2018/08/fragilestatesindex-2016.pdf> [Accessed 03 September 2021].
- [29] Messner, J.J. (Ed.). (2017). *Fragile States Index 2017*. Washington D.C: The Fund for Peace. 44 p. Available at: <https://reliefweb.int/sites/reliefweb.int/files/resources/951171705-Fragile-States-Index-Annual-Report-2017.pdf> [Accessed 03 September 2021].
- [30] Messner, J.J. (Ed.). (2018). *Fragile States Index. Annual Report 2018*. Washington D.C: The Fund for Peace. 48 p. Available at: <https://fragilestatesindex.org/wp-content/uploads/2018/04/951181805-Fragile-States-Index-Annual-Report-2018.pdf> [Accessed 03 September 2021].
- [31] Messner, J.J. (Ed.). (2019). *Fragile States Index. Annual Report 2019*. Washington D.C: The Fund for Peace. 44 p. Available at: <https://fundforpeace.org/wp-content/uploads/2019/04/9511904-fragilestatesindex.pdf> [Accessed 03 September 2021].

- [32] Messner, J.J. (Ed.). (2020). *Fragile States Index. Annual Report 2020*. Washington D.C: The Fund for Peace. 52 p. Available at: <https://fragilestatesindex.org/wp-content/uploads/2020/05/fsi2020-report.pdf> [Accessed 03 September 2021].
- [33] Miller, T. (Ed.). (2021). *Index of Economic Freedom 2021*. – The Heritage Foundation. Centre for Human Technologies. Available at: <https://gtmarket.ru/ratings/index-of-economic-freedom> [Accessed 03 September 2021].
- [34] Miller, T., Kim, Anthony B. (Eds.). (2016). *2016 Index of Economic Freedom. Promoting Economic Opportunity and Prosperity*. – Heritage Foundation and Dow Jones & Company, Inc., Washington DC; The Wall Street Journal Dow Jones & Company, Inc., New York. 484 p. Available at: https://ueff.org/images/UEFF/content/indices/heritage/heritage_index_2016.pdf [Accessed 03 September 2021].
- [35] Miller, T., Kim, Anthony B. (Eds.). (2017). *2017 Index of Economic Freedom. Institute for Economic Freedom*. – The Heritage Foundation, Washington DC. 474 p. Available at: https://ueff.org/images/UEFF/content/indices/heritage/heritage_index_2017.pdf [Accessed 03 September 2021].
- [36] Miller, T., Kim, Anthony B., Roberts, James M. (Eds.). (2018). *2018 Index of Economic Freedom*. – The Heritage Foundation, Washington DC. 470 p. Available at: https://ueff.org/images/UEFF/content/indices/heritage/heritage_index_2018.pdf [Accessed 03 September 2021].
- [37] Miller, T., Kim, Anthony B., Roberts, James M. (Eds.). (2019). *2019 Index of Economic Freedom*. – The Heritage Foundation, Washington DC. 474 p. Available at: https://ueff.org/images/UEFF/content/indices/heritage/heritage_index_2019.pdf [Accessed 03 September 2021].
- [38] Munteanu, C. (2018). Evaluation of the level of Moldova’s economic security in the process of European integration. *EURINT*, 5: 182-198.
- [39] National Bank of Moldova. (February 2021). *Annual inflation. The National Bank of Moldova*. Available at: <https://www.bnm.md/ru/content/inflyaciya> [Accessed 03 September 2021].
- [40] Shamsutdinova, A. G., Tereshina, E. A., Mansurov, T. Z. (2019). Problems of Economic Security of Kazakhstan and Kyrgyzstan in the System of Integration Processes in Eurasia. *Journal of Environmental Treatment Techniques, Special Issue on Environment, Management and Economy*, 7: 1078-1081.
- [41] Take-profit.org. (February, 2021). *Inflation indicators for Georgia*. Stock Exchange Portal No. 1; Macroeconomic Statistics. Available at: <https://take-profit.org/statistics/inflation-rate/georgia/> [Accessed 03 September 2021].
- [42] Take-profit.org. (January, 2021). *Inflation indicators for Kazakhstan*. Stock Exchange Portal No. 1; Macroeconomic Statistics. Available at: <https://take-profit.org/statistics/inflation-rate/azerbaijan/> [Accessed 03 September 2021].
- [43] The Fund for Peace. (2016). *Fragile States Index 2016*, [Report Edited by J. J. Messner]. Available at: <https://fundforpeace.org/wp-content/uploads/2018/08/fragilestatesindex-2016.pdf> [Accessed 03 September 2021].
- [44] Transparency International. (2016). *Corruption perception index 2016*. 12 p. Available at: https://images.transparencycdn.org/images/2016_CPIReport_EN.pdf [Accessed 03 September 2021].
- [45] Transparency International. (2017). *Corruption perception index 2017*. 12 p. Available at: https://images.transparencycdn.org/images/2017_CPI_Brochure_EN.pdf [Accessed 03 September 2021].
- [46] Transparency International. (2018). *Corruption perception index 2018*. 16 p. Available at: https://images.transparencycdn.org/images/2018_CPI_Executive_Summary.pdf [Accessed 03 September 2021].
- [47] Transparency International. (2019). *Corruption perception index 2019*. 34 p. Available at: https://images.transparencycdn.org/images/2019_CPI_Report_EN.pdf [Accessed 03 September 2021].

- [48] Transparency International. (2020). *Corruption perception index 2020*. Available at: <http://cpi.ti-ukraine.org/#/> [Accessed 03 September 2021].
- [49] Trend News Agency. (September 22, 2020). *During the last eight years the external debt of Georgia grew threefold*. Available at: <https://www.trend.az/scaucasus/georgia/3303061.html> [Accessed 03 September 2021].
- [50] Ukrinform.ua. (December 10, 2020). *In November, the prices went higher than the National Bank was expecting*. Available at: <https://www.ukrinform.ua/rubric-economy/3152232-u-listopadi-cini-z-roslu-bilse-niz-ociku-vav-nacbank.html> [Accessed 03 September 2021].
- [51] Usenko, A., Iurynets, J., Pyvovar, Y., Belkin, L. (2019). Food safety management in Ukraine in the context of the international standard ISO 22000:2005. *International Journal of Recent Technology and Engineering (IJRTE)*, 8(2), 187-190.
- [52] Zhylinska, O. I., Salayev, K. H. (2019). The conceptual model of strengthening the economic security of Azerbaijan. *BusinessInform*, 1: 50-59.

Manuscript received: 17.09.2021

Manuscript received in revised form: 17.10.2021

Manuscript accepted: 18.10.2021