

MANIFESTATIONS OF ECONOMIC RESILIENCE IN THE CONTEXT OF THE CONFLICT BETWEEN RUSSIA AND UKRAINE. REALITIES AND PERCEPTION

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Abstract: The crisis and implicitly the conflict between Russia and Ukraine is a major disruptive event of contemporaneity, with various hybrid valences and significant political, military and last but not least, economic implications. Beyond the security dimensions of the current international public agenda, a reality brought to attention in this context is societal resilience, with all its factual ramifications and typologies, multisectoral and multilevel. It is too early to talk about the lessons identified and learned in this context, but it is of interest to a wide range of stakeholders to analyze (at least in a 5W2H type methodology), based on primary data sources, economic case studies manifested and felt differently at state, organizational and individual level. The cascading effects produced and perceived and internalized differently from an organizational behavioral point of view, which results in the intensification of activities and actions to ensure the continuity of processes and the functioning of society, generally lead, first of all, to the re-evaluation of how we understand and operationalize the security culture.

Keywords: resilience, crisis, change, management, communication, economic effect

1 INTRODUCTION REGARDING THE TOPICITY OF THE SUBJECT APPROACHED

Among the contemporary events of impact on international security and internal security of

the 21st century is certainly the disruptive potential, the conflict between Ukraine and Russia in 2022. The scale of the humanitarian crisis, the versatility of military action, the complexity of economic sanctions imposed on Russia are major evidence from which lines of

research for future security analysis will be established. In itself, the intensification of the manifestation of latent preconditions and the triggering of a military confrontation, in general, are a clear sign of the weakening of the state of certainty and, implicitly, the truth, which characterizes the existing balance in terms of security at a given time. A major component of any society, driven by such contexts is the economic, dynamic (disturbed) as a way of expression both militarily (an example is the field of preparation of the national economy and territory for defense) and civilian (endangerment of the consumer goods' supply) and both private (market imbalances). In this case, statistics from the world economic geography indicate strengths on both sides, two relevant examples being: Ukraine is the world's second largest exporter of cereals by 2020 (<https://www.investmentmonitor.ai/sectors/agribusiness>); Russia is the world's largest exporter of natural gas in 2021 (<https://www.eia.gov/todayinenergy>). Things get more complicated in the balance of power when at the macro level, existing affiliations, intentions or sympathies in relation to organizations with regional or international, military or economic value are taken into account. From an economic point of view, at national and regional level, the importance and determinations are also given by the overlap (chain) of this crisis with the pandemic one, the recovery efforts (see Romania's National Recovery and Resilience Plan, within the Mechanism of recovery and resilience at EU level) being hampered in terms of creating practical effects. The continuity of economic activities, severely affected in the last two years, is now resized as a chain effect of the imbalances of specific markets, specific to the conflict zone (a concrete example is given by the constructions' crisis).

The subject of the conflict has become central on the public agenda at national and international level (bilateral meetings, reunions, task forces, etc.), one such example being the

symposium entitled "The War in Ukraine – Romania's security and resilience", an event organized at the Aspen Institute in Romania, in partnership with the "German Marshall Fund of the United States" office in Bucharest (<https://www.mapn.ro/cpresa/>). Romania's involvement and contribution in providing support in the crisis of refugees who settled in Romania or just passed through the country was also remarkable, the commissioning of the European Logistics Center for Humanitarian Aid in Suceava being a case of good practice in the field civil protection. The need for accurate information on the development of the crisis, especially at the level of the population, through classical (especially television) and modern means of communication (especially social networks), by public authorities, is also noticeable, in order to properly counteract actions of fake news, propaganda, etc.

Focusing mainly on the majority use of documentary, quantitative and qualitative, primary and compiled secondary data, the research question was asked to identify the main ways in which the conflict between Ukraine and Russia led to economic imbalances, with an impact on associated resilience. Subsequently, the research objectives assumed were: identification of areas of manifestation of economic resilience; determining factors and causal chains that have produced changes at the macro or microeconomic level; establishing the main lines of economic impact at national level, in the context of the respective crisis.

Although it contains a subjective component (given primarily by the profile and objectives of the search engine user), the investigation of short-term interest (the beginning of the crisis) for key concepts (war in Ukraine, economic crisis, security, resilience) of the study, using the platform generated by Google Trends, showed (figure no. 1) a much higher popularity of security, compared to the other three concepts mentioned, a feature manifested both nationally (top of the figure) and internationally (bottom of

the figure). Peak values recorded for security over certain time intervals can be explained causally and by correlating (non-statistically) with moments of intensity of the conflict.

Developing issues related to urban resilience, the research team led by Irani Mazdak (2021) identifies the economic dimension of resilience through indicators on employability,

diversity of occupations and resources, number of economic agents, household income insisting on the characteristic that the effects of a disaster, in generic acceptance of prosperity also materializes economically, through the ability of an economy to cope with the event, to rebuild and to minimize the losses generated.

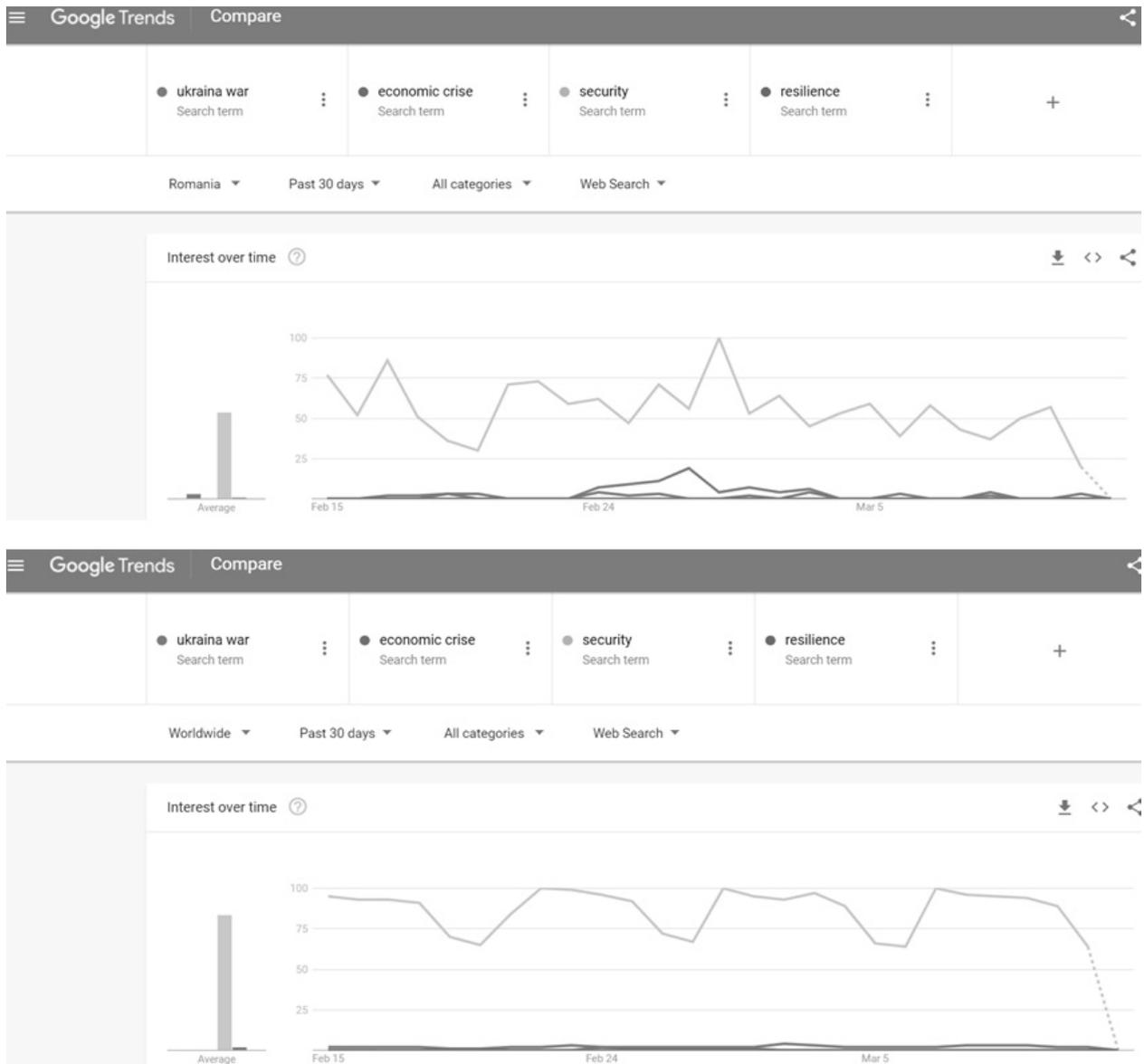


Figure 1. Evolution of interest in topics specific to the security context approached

The topicality of the concept of resilience is a special one, with an increasing importance, correlated of course with the need to increase the organizational or individual ability to react positively to the manifestation of stressful events in various forms. From an academic point of view, since the launch of the term by the C.S. Holling in 1973, numerous elaborations (Ardebili,

A., Padoano, E., 2020; Mottahedi, A. et al., 2021) have been developed that have brought new semantic meanings, an example in supporting the emerging trend mentioned being also the results obtained (figure 2) by specific searches (last ten years) in a scientific database (<https://www.dimensions.ai/products/free>).

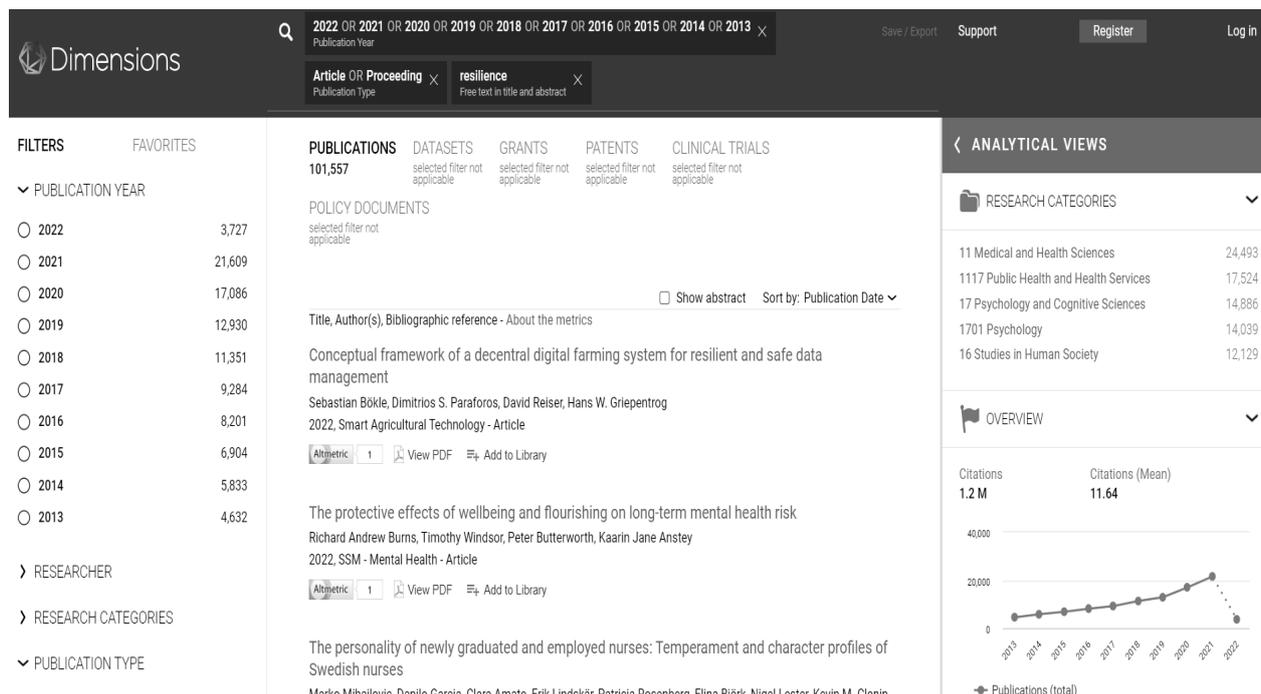


Figure 2. Quantitative developments of scientific developments on the subject of resilience

And in the case of economic resilience, it is not yet possible to talk about a convergence of the meaning of the use of the concept, some representative approaches identified in the literature bringing to attention: efficient use of remaining resources at a specific point in time in order to produce as much as possible" statistically speaking, efficient use of resources over time for investment in repair and reconstruction, including expediting the process and adapting to change, dynamically speaking, respectively (Rose, 2010); the ability of the regional economy to maintain or restore at a level of a pre-existing state (usually assumed to be a balanced state) in the presence

of certain types of exogenous (i.e., externally generated) shocks (Hill, 2012). Stephane Hallegatte (2014) goes into more detail and differentiates between macroeconomic resilience (the ability to mitigate the dimension of the immediate loss of income for a given amount of capital losses coupled with the ability to reconstruct and recover quickly) and microeconomic resilience (at the level of households, concerning direct losses, the existence of basic needs, the ability to smooth the shock across time through savings, borrowing, insurance, and the ability to share these specific included risks through social protection).

2 ECONOMIC IMPLICATIONS OF THE UKRAINIAN CONFLICT IN THE CASE OF ROMANIA. OVERVIEW

The economic crises that have affected mankind have had multiple and various causes. Globalization, one of the pillars of the economic development of nations, can become a catalyst for economic crises. In the wake of the 2008 economic crisis, the globalization of financial and economic systems has led to a rapid spread of recession in many countries with strong economic partnerships. (Zych, 2015)

The succession of disruptive events triggered by the pandemic crisis, soon followed by a security crisis at European level, has had economic consequences with a global impact, with long-term effects still difficult to assess.

The unpredictability of recent events is in line with a high budget deficit of Romania favored by the financial protection policies developed by the state during the two years of the Covid-19 pandemic and a dependence on foreign markets for the supply of various goods.

In the long run another effect with a negative economic impact would be a decrease in the interest of foreign investors due to its proximity to the conflict zone and an intensification of the military presence on NATO's Eastern flank (the case of multinational battle groups), with a focus on Black Sea security.

Europe's efforts to respond to the need for change in the transition to a green future have focused on reducing carbon emissions, investing in renewable energy, replacing coal or increasing energy efficiency, but, at the same time, shifting industrial value chains outside it. This has led to dependencies on Russia with low economic costs, but with high political and social costs.

A consequence of Russia's actions is the reconfiguration of critical value chains and the development of policies to limit the prices of basic commodities, energy and gas.

The severance of trade relations with Russia (although for the time being it is impossible to

give up Russian gas and oil purchases) and partly with Ukraine, which recently resumed the export of maize by rail to Europe (www.wall-street.ro), led to a significant increase in prices and subsequently to the change in the consumption behavior of the population. Savings or excess purchases for food or fuel stocks have had an immediate effect on Russia's trade restrictions.

The military conflict in Ukraine has connected the security architecture of the European Union with security of supply and energy security.

Among the main products imported by Romania from Russia are fuel oil, refinery oils, gas, coke, iron ore, fertilizers, etc., and the main products exported are components for tractors and medicines. (table 1)

Table 1. Russia-Romania trade relations (million Euros)

	IMPORT	EXPORT	DEFICIT
2018	1079	3116	-2037
2019	1018	3102	-2084
2020	820	1813	-993
2021	1028	3090	-2062

The balance of trade relations with Russia in recent years is a negative one, at this moment Romania is in a position to identify suppliers to replace some products, as well as customers to unblock blocked exports.

Ukraine ranks 18th in the top of the countries from which Romania imports, by 2021 the total value of imports amounting to 1.21 billion Euros, and Romania's exports to Ukraine amounted to 645.1 million Euros. (<https://economie.hotnews.ro>)

New medium - and long-term agreements and measures are being worked on to reduce dependence on Russia's resources. The US has pledged to deliver about a third of Russia's gas purchased annually by 2030 through a historic agreement signed with the European Commission on March 25, 2022. (romania.europalibera.org)

A measure adopted by the Romanian state is to reduce the dividends received from the gas producer Romgaz and the energy producer Nuclearelectrica in order to support their investment projects. (www.reuters.com)

Although Romania is the only holder of significant reserves of crude oil in Central and Eastern Europe and the largest reserves of natural gas in the area, about 2 times higher than the proven reserves of Poland (wikipedia.org), our country produces 80% of the gas it consumes, the rest comes from imports, from Russia. The price of gas imported from Russia has increased since November 2021, when paid 245 lei/MWh were paid, reaching 357 lei in January 2022. (observatornews.ro)

However, Romania maintains its status as the most energy-independent state in the EU, with a total energy dependency rate of 28%, compared to an EU average of 57%. (www.zf.ro)

Having the necessary resources to ensure the performance of the energy system, on which the development of the economy as a whole can be based, emphasis must be placed on capitalization, on the transition from a paradigm of expectation to a proactive and courageous development, respecting the principle of sustainability. (Romania's energy strategy 2019-2030, with the perspective of 2050)

Romania is not affected by the grain deficit, being still among the predominantly agricultural countries, with exports of wheat and corn. In 2021, Romania had a record production of cereals, being the leader in terms of wheat exports both in the Black Sea area and in the European Union. (www.dcnnews.ro) The negligence of the food industry has led to situations where raw materials are exported and finished products are imported, so Romania exports wheat and imports flour. (www.wall-street.ro)

From the beginning of the 2021/2022 season until 06.02.2022, Romania was responsible for most of the EU's corn exports, with 2.61 million tons delivered so far, out of a total of 3.48 million tons of corn delivered by EU states. (www.economica.net)

Paradoxically, Romania has the lowest grain reserve in the European Community holding reserves for about four and a half months, in case of a conflict or border closure. (www.bursa.ro)

For the analysis of the main problem that appeared as an effect of the military conflict, in table no. 2 the 5W2H tool was used (Kohl, Herfried, 2020) to highlight relevant issues and potential solutions to ensure economic resilience.

Table 2. Strengthening security of supply by reconfiguring supply chains

Question	Explicit question	Diagnosis / Solution
What?	What will be done?	<ul style="list-style-type: none"> - countries focus on facilitating access to their own resources by supporting investment; - identification of alternative sources for supply, creation of new trading partners, emphasis on negotiation; - stimulating agricultural productivity.
Why?	Why will it be done?	<ul style="list-style-type: none"> - trade restrictions on Russia have the effect of blocking supply chains; - reports of a possible shortage of products have caused panic among the population, who have adopted excessive consumption of staple foods (oil, flour, fuels) and caution when buying real estate or luxury goods.
Where?	Where will it be done?	<ul style="list-style-type: none"> - the existing trade relations were created mainly in the context of globalization, with an emphasis on negotiating the lowest prices; in this context, the reconfiguration of supply chains is taking place globally, with

Question	Explicit question	Diagnosis / Solution
		a focus on the future, which needs to be focused on creating resource independence.
When?	When will it be done?	- the state of insecurity generated by the military conflict in Eastern Europe urges measures to support and accelerate investments in strategic directions, such as reducing the 2030 time horizon to a maximum of 3 years until the achievement of Romania's energy independence goal.
Who?	Who will do it?	- redesigning supply chains is an integrated effort of national, European and global actors. Solidarity in the face of current challenges demonstrates the maintenance of a common vision for the future of Europe and the world.
How?	How will it be done?	- concrete and rapid action has been planned and undertaken recently, such as the approval by the European Commission of a joint gas procurement program. The first steps are already being taken to sign procurement contracts and build up stocks for storage; - another measure is to accelerate investments in renewable energy.
How much?	How much will it cost?	- the effort of the transition from the old security architecture to the new reality regarding the sources of supply involves a considerable financial cost (so far difficult to estimate due to the uncertainties that characterize this period) but also a substantial social cost.

3 AREAS OF MANIFESTATION OF RESILIENCE THAT ARE EMERGING AFTER THE WAR IN UKRAINE

The evolution of the security environment has brought to the fore the concept of resilience, both at NATO and EU level, but also at national level. At Alliance level, the concept is not new, as highlighted in Article 3 of the North Atlantic Treaty. From a military perspective, "allies must maintain and develop the ability to withstand an armed attack, both individually and collectively," by supporting the continuity of government and providing essential services, as well as civilian support for the armed forces (www.nato.int). The success of a military operation depends on, among other things, civilian resources and infrastructure (such as road, rail, sea, air, communications, energy systems), rapid deployment and logistical support, as well as resilience, without which the war effort is unsustainable.

While NATO focuses on military aspects of critical infrastructure, in line with the role of the

alliance, the European Union has a broader vision of critical infrastructure, given the following categories of critical infrastructure (Directive EU COM (2006) 786): energy, communications and information technology, water, food and agriculture, health and public health, financial systems, civil administration, public safety and order, transportation systems, chemical industry, nuclear industry, space, research.

The war in Ukraine highlighted the importance of ensuring resilience in many of these areas, but also the fact that economic resilience was less taken into account, both at the level of the European Union or NATO, but also at the level of the national state. Areas of critical infrastructure identified by the European Union above include financial systems, with reference to the banking system, payment services and budget allocations.

Ensuring economic resilience is as important as the resilience of financial systems, but this is an area that has been less addressed so far due to its complex political, economic and

social implications. Ensuring economic resilience involves, among other things, reducing excessive dependence on imports and exports, a single market, production and supply chains, just-in-time logistics systems or technology transfer. This is difficult to achieve in the contemporary world, which is characterized by globalization and strong interdependencies between the world's economies.

European countries are very vulnerable due to dependence on oil and gas imports from Russia, finding new suppliers is difficult to achieve in the short term and entails additional costs. Ironically, EU countries (such as Germany, Austria or France) are not the only ones affected by dependence on Russia, with Russia's economy also being dependent on exports of raw materials (especially energy) but also on imports of technology. Russia's economy is based mainly on industry (30% of GDP) and services (56.3%), while agriculture contributes only 3.7% to GDP formation (Bajpai, Prableen, *Emerging Markets: The Parts of Russia's GDP*, 24 March 2022). Exports are an important source of income for Russia, contributing 9.16% of the country's GDP in 2020 (www.globaledge.msu.edu). In the composition of exports, the most important share (more than half) has the export of raw materials and materials, of which crude oil (22.5% of total exports), refined oil (14.5%), followed by natural gas (5.98%), gold (5.7%) and coal (4.4%). There are also researchers who point out the high degree of dependence on technology imports, which they consider a great vulnerability (Gnidchenko, Andrey; Mogilat, Anastasia; Mikheeva, Olga; Salnikov, Vladimir, 2016). The conclusion of the above-mentioned article is that the Russian economy is highly dependent on imports of pharmaceuticals and medical equipment, machinery and equipment (excluding nuclear reactors, fuel elements, engines and turbines) and electrical equipment. The sectors with the most imports from countries that can impose sanctions on Russia are the aeronautics, medical and optical

equipment, engines and turbines and pharmaceuticals sectors. Russia is also dependent on imports in the fields of computers and electronic equipment, but this time from China, but considered by the same authors "the key partner for Russia". The analysis of the sectors in which Russia is dependent on technology imports does not generate a very encouraging picture in terms of developing the country's economic resilience, because the reduction of dependence on Western countries can be achieved, in the short and medium term, only in certain sectors, increasing, however, the dependence on China, whose attitude towards Russia is, beyond official rhetoric, transactional.

The conclusions that follow from this analysis are valid for any state that wants to increase economic resilience, leading to a reduction in the dependence of national economies on imports (of raw materials and/or technology), but also on exports of raw materials. However, this requires a medium- and long-term vision, as it requires concrete, correlated measures and substantial investment. Few countries have so far taken such measures, especially in the absence of stringent threats, as the global trend in recent decades has been the opposite, to move towards the globalization of economies.

Modern economies are the result of a complex system of interactions between various interdependent sectors and a return to self-sufficiency is almost impossible for a modern economy, due to the size of today's populations and the economies of developed countries. Globalization and the interconnection of economies have brought many benefits, economic, social, but also in terms of security; let us not forget that one of the purposes for which the European Coal and Steel Community was created, which would eventually become the European Union, was not only economic development but also the creation of close ties between former adversaries (Germany and Italy on the one hand, France and the Benelux on the

other) to prevent a new war in Europe. In addition to the benefits, globalization has also created security vulnerabilities, which have become apparent in the wake of the Covid 19 pandemic and the conflict in Ukraine, through dependence on critical infrastructure, communications and Internet systems, and logistics systems, supply chains of goods and services on the Just in time model. All this is fundamental to the production, trade and delivery of goods and services and, ultimately, to the functioning of modern economies. When one of these systems fails, a chain reaction with potentially catastrophic effects may follow.

The need for increased resilience in the field of logistics and distribution chains is proving to be an important lesson in the conflict in Ukraine, but also in the health crisis caused by the COVID 19 pandemic. If the pandemic has highlighted how the whole world depends on products made in China and has led to rising prices around the world, due to rising transportation costs, the crisis in Ukraine now brings problems related to the supply of fertilizers, cereals, oil, but also semi-conductors and rare metals.

Following the war in Ukraine, the export of cereals (especially wheat), sunflower oil and fertilizers (especially nitrogen) was severely affected, due to the disruption of supply chains, but also the decision of the Ukrainian government to keep for domestic consumption a big part of the production (www.reuters.com), and the economic sanctions imposed on Russia amplify these effects. Given that Ukraine contributed in 2019 with 18% of world vegetable oil production, 13% of corn production, 12% of barley production and 8% of wheat production, the impact on the world economy is significant. (Gittins, William, 2022). For example, in 2020, Egypt imported a total of \$5.2 billion worth of wheat, of which \$3.23 billion was from Russia (62%) and \$1.22 billion from Ukraine (23%), followed by only 332 million dollars from France (6.3), 210 million dollars from Romania (4%) and 83 million dollars from Australia (1.5%).

(www.oec.world) In terms of chemical fertilizers, Russia is the largest exporter in the world (with a market share of 12.1% in 2020), and Ukraine is also a major producer, ranking 28th in the world (0.7 % of total exports in 2020). (www.worldstopexports.com)

The effects of the crisis in Ukraine are not limited to agriculture, as the conflict has the potential to prolong and aggravate the semiconductor crisis. Ukraine is one of the largest producers of neon gas used for semiconductor lasers (supplying 90% of the neon required for US-produced semiconductors), while 35% of palladium, a rare metal used in semiconductor production, comes from Russia (www.nasdaq.com).

From the above, it can be concluded that one of the important areas in which resilience needs to be ensured is that of food security, as economic resilience cannot be separated from this aspect. The crisis in Ukraine exacerbates the already worrying situation in many developing countries caused by rising food prices following the Covid 19 pandemic, especially in countries whose public debt has risen in the years of the pandemic.

The drastic reduction in exports of agricultural products and fertilizers will have global effects. Developed countries will suffer particularly from rising commodity prices and inflation in general, while developing countries (especially the Middle East) will be hardest hit, because rising prices, inflation and declining purchase power will be accompanied by food shortages and extremely serious social problems.

Romania has the advantage of being a cereal-producing country and a major exporter (11th place in the world in wheat exports (www.worldstopexports.com), but other countries, such as the Middle East, are largely dependent on grain imports. Problems caused by Ukraine's grain exports (the world's 5th largest producer of cereals) is not only limited to rising prices globally, but also to problems

caused by rising global inflation and supply problems caused by distance and functioning maritime infrastructure on a just-in-time basis. Apparently, other producers, such as the USA or even India and Brazil, could supply the quantities exported by Ukraine, but a country like India does not have the port loading/unloading facilities on the scale needed to supplement the delivery of large additional quantities. Also, the costs of cereals on the destination markets will also be determined by the costs of transport and storage. Cereals require specific facilities for transport, loading/unloading and storage and these costs increase in proportion to the distance between the port of destination and the port of origin.

Rising global inflation due to rising transport prices following the Covid 19 pandemic will be exacerbated by the crisis in Ukraine. An IMF study (www.maritime-executive.com) estimates that countries whose consumption is heavily dependent on imports will suffer higher inflation increases, as will those that are more integrated into global supply chains. Similarly, countries that typically pay higher transportation costs – countries without access to the sea, low-income countries, or island states will face higher inflation than other countries.

Another area in which a number of lessons identified from the conflict in Ukraine are outlined is the need to ensure resilience in the field of transport.

The continued operation of rail transport in Ukraine, even after the beginning of the conflict and even in areas where fighting took place, meant the evacuation of millions of people to safe areas (at the height of the crisis, 200,000 people a day) and continued supply of humanitarian aid (Walker, Shaun, 2022).

An interesting conclusion from the analysis of the situation in Ukraine is that the country benefited from a combination of reform measures and a number of reminiscences of the Soviet system, in which the railways were

controlled by the state. Although a number of reforms have been initiated to increase the economic efficiency of rail transport (necessary to ensure the sustainability of the system and increase the level of performance), the existence of infrastructure and organization with a strict hierarchy, following the principle of control unit, but corroborated with the decentralization of authority, they have proved their worth, due to the need to make quick decisions and ensure good communication. From an organizational point of view, the existence of a train manager, with the responsibility of ensuring the safety of travel, train and passengers, has proved extremely useful, complementary to the facilities offered by modern technology and the fact that internet access has not been interrupted. Railway employees formed groups on social networks in which they exchanged real-time information about the condition of the rails, danger areas or other events, so that they could take the necessary measures, without going through a long chain of command, but also having the authority to make decisions.

Unfortunately, sea and air transport have proved much more vulnerable in the context of the conflict, with serious economic consequences. Russia's blockade of ports on the Sea of Azov and the fact that part of the Black Sea is no longer accessible to international shipping, given that 70% of Ukraine's exports were made by sea (Weizhen Tan, 2022), has major implications for both the Ukrainian and global economies. Due to the closure of Ukrainian airspace and sanctions on Russia, air transport costs will inevitably increase due to the need to choose longer detours, generating additional fuel costs.

Another effect of the crisis, on a larger scale, is the deterioration of rail trade connections between China and Europe. China made significant investments in rail links with Europe before the COVID 19 pandemic. Rail freight transport between Europe and China has seen a steady increase in the period 2016-2020, since

the inauguration of the network, with a doubling of the volume of freight transited, reaching 1,580,000 tons in 2020, i.e. 70,000 standard containers ([www. ihsmarkit.com](http://www.ihsmarkit.com)). However, these railways pass through the territory of Russia and the impairment of the said trade route (by sanctions imposed on Russia or by retaliatory measures by Russia) can have significant negative effects on world trade.

The war in Ukraine brought to light another important issue in ensuring resilience, the degree of state control and involvement in the various areas that contribute to ensuring resilience.

From a military point of view, the end of the Cold War and the relative stability enjoyed by European states (with the exception of the Balkans) has led to a reduction in the interest of political and public opinion in the field of security and defense, manifested by reduced defense spending and redirection to other issues and risks (global warming, migration, terrorism, societal problems), but also to reprioritization (such as be it economic development, finding new markets or suppliers of raw materials, globalization).

Beyond the most obvious result of declining defense budgets, which has resulted in a reduction in EU military capabilities, another relevant effect has been the outsourcing of many support services, which have been shifted from the armed forces to the civilian field, in the attempt to reduce expenses. As a result, the military has become increasingly dependent on facilities, resources and civilian infrastructure (from food and cleaning services to transportation, maintenance of technical combat systems and even communications), and the resilience of the economy plays an increasingly important role to ensure military success.

In this sense, the figures presented by NATO (www.nato.int) are not encouraging at all: on average, in the member countries, 75% of the host nation support elements for NATO

operations are provided through the infrastructures and services owned/offered by private companies. Worryingly, if we look at the crucial importance of ensuring the continuity of rail transport in Ukraine (for the evacuation of civilians, providing logistical support for the Ukrainian armed forces and the supply of civilians), 90% of NATO military transport is provided by through equipment and facilities rented or requisitioned from private sector companies, with limited possibilities to ensure their availability and quality in case of conflict. Military and civilian communications depend on satellite communications systems and fiber optic networks provided by the civilian side, with about 30% of the Alliance's satellite communications being provided by the private sector. These systems are among the first targets of cyberattacks in the event of a conflict, as evidenced in Ukraine, when sabotage facilitated by a cyberattack deactivated the link with the telecommunications satellite KA-SAT, owned by the American company Visat, on which the armed forces, intelligence services and police units depended (Cattler, David; Black, Daniel, 2022). Of course, few countries can afford to launch their own communications satellites, but ensuring resilience in the field means limiting reliance on a single provider as much as possible. Also, the state authorities and the armed forces have limited authority to control the way in which the private companies on whose services they depend implement strict cyber defense measures, thus creating the premises for the induction of significant vulnerabilities.

In many EU member states, the reduction in military spending was due to the privatization of state-owned assets, creating reliance on private companies to ensure resilience and civilian experts. This can be a problem in case of conflict, for several reasons. First of all, the main motivation of private companies is to make a profit, in a short time horizon. Therefore, they will act to reduce costs and increase business

efficiency (for example, by purchasing raw materials, materials or services from the lowest-priced suppliers, geographically closest ones, etc. or by reducing redundant systems). Short-term costs will take precedence over other considerations, such as increasing dependence on a supplier in a potentially hostile or autocratic country, negative effects on resilience by eliminating backup systems, selling assets to foreign companies such as refineries, agricultural land, port infrastructure, etc.

Developing resilience in the economic field requires time, resources, vision and cost-effective measures now but will have potential benefits in the future in the event of a crisis. Market mechanisms, accentuated by the high share of financial institutions and markets in the economies of developed countries, by definition encourage a short-term, profit-driven orientation. The risks analyzed by private companies are those that directly affect them in the short term, while the risks in the medium and long term (especially those that have major implications for society or security) are often ignored.

Market mechanisms have proved ineffective in managing issues such as climate change, as the costs of negative externalities produced by private companies have been passed on mainly to consumers and society at large. State intervention was needed to impose measures to reduce pollution or to ensure consumer safety because companies have no motivation to spend resources for this purpose, while reducing profits. The same considerations can be applied to the measures needed to ensure economic resilience in the event of a crisis.

Markets are not perfect, they are distorted by various interests (of shareholders, owners, lobbyists, governments), corruption or ideologies. Some private companies such as Deutsche Bank or Renault, as well as various governments (as was the case in Germany) prefer to pursue narrow, short-term interests,

even at the cost of increasing dependence on an insecure oil and gas supplier, in terms of security and defense, such as Russia.

4 CONCLUSIONS

The crisis in Ukraine is the beginning of a process of change on multiple levels, from geopolitical, security, economic and social, whose effects will become apparent over time. The field of resilience is brought to the fore by the events unfolding in Ukraine, marking the exit from the shadow cone into which resilience insurance had entered after the end of the Cold War and during the period of relative stability that followed for the European space.

If during the Cold War there were territorial defense mechanisms and the economic preparation of the territory for defense was a priority area, with procedures, infrastructure and resources ready to be used in case of crisis, they are no longer available at the same level today in many European countries. Transformations related to the fall of the former Soviet empire, the abolition of the Warsaw Pact and the CAER, the transition to a market economy, the effects of globalization, the impact of technological advancement have had and continue to have direct effects on how resilience should be planned and implemented, with emphasis on cooperation between state institutions, private companies and civil society.

An effective approach to resilience in general and economic resilience in particular requires, inter alia, acceptance that its assurance cannot be achieved by the state alone, as it depends on multiple critical resources and infrastructures, as shown above by private companies. Nationalization (bringing these resources and infrastructure back under state control) is not feasible in a democratic society that operates on the basis of market mechanisms. The realistic solution is to increase cooperation and self-interest in the private sector, by taking measures to make private

companies aware of the risks associated with a potential conflict and how they can get involved. Another way to facilitate the development of economic resilience is the use by the state authorities of the legislative and regulatory framework, to encourage and motivate private economic agents to consider ensuring resilience but also to control the degree of implementation of the necessary measures.

The example of how some states treat the environment and reduce pollution can be addressed by increasing costs for companies that produce negative externalities (taxing polluting companies, fines, carbon taxation) or by providing incentives to reduce pollution (tax facilities or even subsidies). The same measures could be taken to encourage private economic operators to take a more comprehensive and long-term approach to their work, in order to help ensure economic resilience.

Economic resilience cannot be separated from the resilience of communications, the resilience of information systems, transport or societal resilience, and most areas of resilience identified by the European Union and mentioned in this article need to be addressed in a systemic, integrated way. For example, a strong and credible monetary policy framework can play a role in mitigating the side effects of import prices and inflation, but it cannot solve the problem of companies' dependence on just-in-time distribution systems, which is an issue that needs to be solved by private companies.

In many European countries, including Romania, state authorities give priority to ensuring resilience through the means under their control, including legislation, but as long as the systems that ensure economic resilience are not tested their proper functioning remains only at the hypothetical planning stage. It starts from the assumption that the companies have in mind to ensure the continuity of their operation in time of crisis, that the distribution chains will continue to operate, that the employees of these companies will remain in the country, etc. As

long as the crisis has not started and the economic systems are working, the states have little direct involvement. Territorial defense preparedness plans may include the possibility of requisitioning the resources and infrastructure needed to ensure the functioning of systems after the onset of the crisis, but focus too little on solving problems in the intermediate zone before an armed attack or other crisis.

Ensuring resilience is achieved gradually, over time and requires a coherent vision, involving all relevant structures and actors, creating a systemically correlated regulatory framework, taking concrete measures that go beyond the timeframe of a fiscal year or even a government. It also involves testing the functioning of resilience mechanisms, identifying problems and correcting them. However, such an approach is difficult to achieve in the absence of a concrete threat, and when this threat materializes, it is usually too late. There are many examples of this: Germany's economic and environmental policy, which has led to an acceptance of dependence on Russian oil and gas, and a large proportion of foreign investment in strategic sectors (airports, ports, energy production and distribution, telecommunications, agriculture) from countries that may pose security risks (Russia through Gazprom, China) etc.

Perhaps the biggest obstacle to ensuring economic resilience is that short-term economic interests (increasing profits for private companies, economic growth for states) are often a priority over ensuring economic resilience, the results of which will become visible only in the event of a crisis and require long-term action. Unfortunately, neither the private economic agents (interested in making a profit and attracting investment by offering dividends or increasing the market value of the shares) nor the state authorities (which must survive the next election cycle) had sufficient motivation to consider ensuring economic resilience is a priority. However, the geo-political,

economic, security and military changes generated by the war in Ukraine may be the trigger for changes in approach and in terms of ensuring economic resilience.

Given the topicality of the subject approached for an ongoing political, military and economic context, the impossibility of achieving a detailed presentation of the literature review, specific (at the level of a narrow meaning) to the conflict in Ukraine, is a limitation of the research undertaken. The sources of documenting the unfolding of events and the analysis of the economic implications, as reality and perception, are based on internet resources, some published as public reactions to what happened. There is a slight trend in the WoS database to increase the number of articles produced, especially for the domains history, political science and area studies.

The available data, selected, presented and analyzed, fully support the statement that "recent research suggests that perceived economic threat constitutes a valid predictor of people's attitudes and behaviors" (Alonso-Ferres et al, 2020). As a critical self-awareness, through a presentation based on multiple economic data from various sources, was made an attempt to avoid biases according to which the prevalence of comparatively exposed economic indicators determines favorable semantic or practical options. The article demonstrates and supports the need for accurate information of the population and organizations and timely self-information in the framework of events or crisis contexts.

Based on the fact that the crisis is ongoing (an emerging context), the design of the research was approached as an exploratory study (hence, the predominance of Internet sources), in order to identify new perspectives, through abduction, around the key concepts stated in the preamble. As an element of research that could have given more scientific robustness to the article we identified, and may be a further direction of study, the possibility of

investigating the perception, on the subject in question, using a questionnaire-based survey, with a sample suitable for a preliminary study.

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