

**NATIONAL ACADEMY OF SCIENCES OF UKRAINE  
STATE ORGANIZATION "INSTITUTE FOR ECONOMICS AND  
FORECASTING OF THE NAS OF UKRAINE"  
Sector of International Financial Research**

**THE ITALIAN INSTITUTE FOR THE FUTURE**

# **FUNDAMENTAL SHIFTS IN GEO-ECONOMIC SYSTEMS OF THE WORLD**

**International collection of scientific works**



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**F 97**

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The scientific collection presents the views of researchers from different countries regarding the solution of topical issues related to the fundamental shifts in the world' geo-economic system in recent years. Scientific articles provide a comprehensive overview of research results of key factors and potential financial and economic, social, demographic and environmental consequences of global transformations. In particular, the influence on the dynamics of the current geopolitical and geoeconomic fragmentation of such factors as COVID-19, digitalization, climate change, the war in Ukraine and the formation of the new world order is highlighted. Ways of reducing economic uncertainty, volatility in financial markets, solving the problems of "green" and digital transitions, overcoming the destructive consequences of Russian military aggression and ensuring the reconstructive recovery of Ukraine in the post-war period are proposed.

The collection of scientific papers is of interest to scientists, experts, policy makers, lecturers and students, as well as everyone who is interested in the issues of current international economic relations.

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## **ВІТАЛЬНЕ СЛОВО**

### **учасникам міжнародної науково-практичної конференції "Фундаментальні зсуви в гео економічній системі світу"**

**Дорогі друзі та колеги!**

Я з великим задоволенням вітаю всіх учасників і дякую зарубіжним гостям за ту підтримку, яку ви, ваші народи та ваші уряди надають Україні в ці важкі часи. Незважаючи на продовження повномасштабної агресії Росії проти України, ми віримо у нашу спільну перемогу.

Щорічно наш Інститут проводить традиційну міжнародну конференцію, присвячену оцінці гео економічних зав'язків у світовій економіці. Цього року вона проводиться Інститутом економіки та прогнозування НАН України спільно з Італійським інститутом майбутнього та іншими нашими партнерами по міжнародному аналітичному Консорціуму щодо повоєнного відродження України.

Тематика цьогорічної конференції орієнтована на оцінку сучасного стану глобальної економіки з метою заглянути за часовий горизонт і зрозуміти сутність гео економічних та геополітичних змін епох. Україна зможе посісти нове, помітне місце в новій структурі глобальної економіки та політики.

Саме тому для нас важлива думка та погляди міжнародних експертів із різних країн, навіть різних сторін світу – від Нової Зеландії, Австралії до Азії, Африки, Європи та Америки, – які погодилися взяти участь у нашій конференції.

Масштаб конференції орієнтує на серйозну розмову, висновки якої, без сумніву, відіграють помітну роль у підготовці Програми повоєнного економічного відродження України. Маю сподівання, що конференція дасть

можливість більш глибоко зрозуміти, в якому напрямі рухається глобальна економіка, що важливо для всіх нас.

Ще раз вітаю усіх учасників і дякую за вашу підтримку!

**V. HEYETS,**  
*Dr. habil. (Economics), Professor,  
Academician of the NAS of Ukraine,  
Director of the SO "Institute for Economics and Forecasting  
of the NAS of Ukraine"*

### **WELCOMING SPEECH**

**to the Participants of the International Scientific and Practical Conference  
"FUNDAMENTAL SHIFTS IN GEO-ECONOMIC SYSTEM  
OF THE WORLD"**

**Dear friends and colleagues!**

It is great pleasure for me to welcome all of you and pay a gratitude for the support that you personally, your nations and your governments provide to Ukraine in these difficult times. Despite the continuation of Russia's full-scale aggression against Ukraine, we believe in *Our Common Victory*.

Every year, our Institute holds a traditional International Conference on the Geoeconomic Processes in the World Economy. This year, it is being held by the Institute of Economics and Forecasting of the NAS of Ukraine together with the Italian Institute for the Future and our other partners in the International Analytical Consortium on Ukraine's Post-War Economic Recovery.

The aim of this year's Conference is focused on assessing the current state of the Global Economy in order to look beyond the time horizon and understand the essence of the Geoeconomic and Geopolitical changes of the Epochs (*Zeitenwender*). Ukraine will be able to take a new, prominent place in the new Post-War structure of the Global Economy and Politics.

That is why the opinion and views of international experts from different countries, even different parts of the world – from New Zealand, Australia to Asia,

Africa, Europe and America – who agreed to participate in our conference, – are important to us.

The scale of the Conference leads to a serious conversation, the conclusions of which, without a doubt, will play a significant role in the preparation of the Program for the Post-War Economic Recovery of Ukraine.

I hope that the Conference will provide an opportunity to better understanding of the direction which the Global Economy is moving in. What is important for all of us.

Once again, I welcome all participants and thank you for your support.

**Dr. R. PAURA,**  
*PhD (Physics),*  
*President of the Italian Institute for the Future*

### **WELCOMING SPEECH**

#### **to the Participants of the International Scientific and Practical Conference "FUNDAMENTAL SHIFTS IN GEO-ECONOMIC SYSTEM OF THE WORLD"**

Good morning to all! Yesterday I attended with great pleasure and interest the first day of conference, and let me congratulate not only for the high quality of talks and debates but even for the organization is such a dramatic circumstance. Let me express the warm solidarity of the Italian Institute for the Future: we Italians are with the Ukrainian people, with democracy and freedom.

I like to mention that our participation in this conference is part of a memorandum of understanding signed last May between the Italian Institute for the Future and the Institute for Economics and Forecasting of the NAS of Ukraine, which also includes research exchanges between the respective journals of the two institutes. The director of our Center for European Futures, Mr. Adriano Cozzolino, will hold later a speech on the future of the international system after the war in Ukraine.



In this very brief welcome speech, I would like to express a concept that I consider important for our discussion and that also emerged during the talks and debates yesterday. When Prof. Sharov discussed the consequences in the geo-economic order of the three major crises of our time, respectively the pandemic, climate change and the war in Ukraine, at first glance, one is tempted to consider the third crisis different from the previous two. Indeed, we are tempted to consider the pandemic and global warming as "acts of God", to use an English expression typical of legal language that indicates those phenomena beyond human control. But on further consideration, this idea seems wrong for two reasons.

The first is that, of course, we know perfectly well that the pandemic is due to anthropogenic pressure on the biosphere and the vulnerability of the international system, while climate change is due to industrial civilisation's climate-changing emissions from the intensive exploitation of fossil fuels. Thus, all three crises that we want to address here in a systemic way depend on human will, they are not "acts of God" at all.

The second reason is that there is a will to argue that these three crises are the natural outcome of inevitable phenomena. This is the aim of the ones who try to convince us that even the Russian aggression of Ukraine can be explained in terms of geopolitical necessity and that it was in the order of things, as such perfectly predictable and inevitable. This historical determinism is obviously a lie, just as the determinism of those who deny the anthropogenic role in climate change and the pandemic is a lie, considering them to be caused by laws of nature. There are no laws of nature behind these crises, but the folly of human beings.

To realize this simple truth must be the basis of our discussion over these two days. I say this because both of our institutes deal in one way or another with predicting the future, and always those who work in this field suffer the seduction of deterministic explanations, which try to persuade us that things can only go like this, that the future cannot be changed. Instead, if we want to imagine a new system of the world emerging from these major crises, we need to change the human dynamics that

produced them. We need to imagine a completely different global order, where there is no advantage in territorial conquest or in the use of force against a free and democratic nation in general, just as there must be no advantage in delaying the ecological conversion that we urgently need to save human civilisation. In other words, we must devise a series of measures that make what is possible today impossible. A system, preferably not coercive but persuasive, that changes our way of thinking in the long term.

This may sound like a utopian goal. But I believe that, in introducing this conference, we need to raise the bar of ambition. I therefore wish you all the best in these two days ahead, in the hope that new ideas and solutions will emerge from your discussions to change the future and bring it closer to our hopes and aspirations of peace.

Thank you!

**O. BORZENKO,**  
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**THE WAR IN UKRAINE, CLIMATE CHANGE AND VIRAL INFECTIONS:  
IMPACT ON GEO-ECONOMIC SHIFTS  
IN THE GLOBAL ECONOMY**

Changes are constantly taking place on earth, local wars are being waged, diseases are being modified and climate changes are taking place. The earth does not stop revolving around the sun.

The war in Ukraine, the global warming that has been talked about for the past five years, the COVID-19 pandemic, have a special effect and shift the processes of the world economy.

Russia's military invasion of Ukraine on February 24, 2022 has complicated an already unstable geopolitical situation, and its consequences in terms of human losses

and impact on the world economy, which has also been affected by the sanctions imposed against Russia and the worsening of the energy crisis, cannot yet be assessed in full. Growth forecasts for major economies have been revised downwards, given that the turmoil in financial and commodity markets stemming from the war in Ukraine could persist for years. It is difficult to predict the impact of the consequences of the war and the sharp increase in the level of prices on the world market [1].

Global issues of world development have two main areas. The first is conceptually significant problems that require the study of social certainty and solution (conceptual uncertainty of the role and value of resources, lack of a global model of relations between countries, destruction in international relations, imbalance of the volume of resources in countries), and the second is practically threatening problems, which require the maximum limitation and the fastest future solution (asymmetries in the quality of life in countries, the destruction of human resources and man-made human influence).

With the emergence of the COVID-19 pandemic around the world, countries were left with no choice but to temporarily stop their trading activities with each other, which negatively affected the supply of goods and caused disruptions in the supply chain. Moreover, countries around the world have imposed nationwide shutdowns of nearly all retail outlets for non-perishable consumer goods, including clothing, electronics and fashion accessories [2].

This eliminated the need to transport these goods, thus causing a huge blow to the logistics industry worldwide. The food and beverage industry has also faced the effects of the global pandemic, as restaurants and cafes have been closed and even online food orders have seen declining volumes. The following are the most significant global trends in the transformation of the logistics services market: an increase in quality indicators of the logistics market, the use of logistics outsourcing, the strengthening of takeover and merger processes, as well as restructuring in world logistics, further globalization of logistics.

Long-term development trends can be conditionally divided into three large groups: technological, economic and political. The following global trends can be distinguished:

- Changing the era of high-tech by the era of high-Hume. The development of high technologies will gradually, but naturally, be replaced by the development of high humanitarian technologies aimed at revealing individual talents and collective capabilities of people. Man is moving to the center of the economic process, it is he who increases the price and value of intellectual capital, it is talent that will be the subject of competition in the near future. However, this trend provokes a risk – loss of individual consciousness, oppression of the individual by mass consciousness;

- Integration of integrations. This trend, of course, remains very controversial in connection with the growth of protectionism in the short and medium term. However, the forms of interaction of global unions are already being implemented quite actively today and will gain momentum;

- Digitization of the economy. This trend is currently perceived by most research centers as the main source of economic growth. According to some data, the potential economic effect of digitalization of the economy is from 19 to 34% of the total expected GDP growth. The risks provoked by this trend are related to the transformation of the labor market, the growth of the income gap and social stratification, the growth of the influence of individual personalities (not even structures) on the processes of digital transformation of the economy in the world, the increase in cyber dependence, the increase in the number and complexity of cyber-attacks, the use of technology blockchain for the "cryptocurrency race" and illegal operations, insufficient protection of personal ("transparency" of private life) and corporate data, increased demand for renewable energy sources, increased fluctuations in the global commodity and financial markets, etc. However, it is digital transformation that will change most industries: industry, trade, digital capital,

transport and logistics, agriculture, digital media, energy, new market models (economy of shared consumption, crowdsourcing, etc.) [3];

- Increasing anthropogenic load on the environment. The trend refers to the increase in the effects of human activities on the environment, for example, the reduction of access to natural resources, the development of industries based on renewable energy sources and nanotechnology and, accordingly, the increase in inequality in the distribution of income from the ownership of new energy production technologies, the economic consequences of pollution of the world's oceans, unforeseen adverse consequences of technological advances, etc. [4].

The outlined trends are certainly not exhaustive. But they raise a huge number of questions: both from the point of view of changing the economic structure of the world, and from the point of view of the risks that these changes provoke. In addition, social and ethical tasks and challenges are becoming increasingly acute. Countries live in a very dynamic time with very complex challenges, which is demonstrated by the increased attention to the problem of global development. At the level of an individual, global trends are reflected, perhaps, even faster than at the level of a country. As a result, a person, being in the center of development as an object that is influenced by political decisions and for which world businesses compete [5].

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## **THE GEOECONOMIC SIGNIFICANCE OF THE UKRAINE WAR**

***Abstract.** This article examines in-depth the Ukraine War as a conflict that involves a geoeconomic confrontation between the West and Russia. In this unconventional chessboard, all sorts of economic instruments, assets, resources and capabilities are being weaponised – on an unprecedented scale – as vectors of power projection. In this regard, it starts by clarifying what makes Ukraine worth fighting for as a coveted geoeconomic prize. Subsequently, it dissects the geoeconomic measures implemented by the West against Russia as a response to the invasion of Ukraine, as well as Moscow's countermeasures. Furthermore, it offers some meaningful lessons that can be drawn from this episode about the increasing complexity and importance of contemporary geoeconomic dynamics. As a corollary, it argues that the fate of a post-war Ukraine might be, to a certain extent, shaped by geoeconomic realities.*

### **Introduction**

In the early post-Cold War era, it was widely believed that –as a result of the rise of globalisation– traditional geopolitical rivalries would be replaced with peaceful collaboration and harmonious economic competition under the umbrella of a "rules-based order". Such assumption, anchored to the worldview of classical liberalism and its intellectual iterations, held that the end of the 20th century would give birth to an era of unparalleled prosperity, everlasting peace and institutionalised collaborative governance. According to this reasoning, conflict would no longer make sense in a world in which everybody could profit on a mutually beneficial basis. The rewards of trade would perpetually discourage the scourge of war. In a

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world of thriving global markets, bullets would become little more than an outdated anachronism, a relic from a bygone era. The anthropologically optimistic promise of "Whig historiography" about an inevitable march towards "progress" would finally be fulfilled. The end of history had been declared by the likes of Francis Fukuyama and his intellectual disciples.

However, such viewpoint – usually championed by orthodox neoclassical economists, technocratic policymakers, idealistic scholars and some transnational business interests – overlooks the weight of history, the propensity for confrontation as an unavoidable feature of human nature, the recurrence of irreconcilable interests and the structure of the international system as an anarchic arena in which danger and uncertainty are commonplace. These realities can be ignored for ideological preferences, but states cannot afford to ignore their consequential problematic ramifications. They cannot neglect the possibility that hostile forces might target them. Considering such threats is a must in terms of national security, foreign policy and grand strategy. After all, the quintessential concept of the political entails the deadly collective distinction between friends and enemies made by politics in a ruthless metaphorical jungle where struggles can potentially turn vicious and nasty (*Schmitt, 2007*). Hence, thinking permanently about conflict and developing an appropriate preparedness is a matter of life and death, as Sun Tzu (2014) observed many centuries ago.

However, conflict is a kaleidoscopic phenomenon whose permutations are constantly evolving, like ancient and contemporary theorists of war have explained (*Van Creveld, 2017*). In this respect, the ascent of complex interdependence has not invalidated the logic of conflict, but its structural impact has not been irrelevant either. Specifically, it has increased the sophistication of warfare and reshuffled its grammar in the arenas in which new expressions of strategic competition are flourishing. In this respect, in an environment of interconnectedness, exchanges, links and interactional conduits can be weaponised. Hence, the economic sphere of markets, commerce, industry, finance and money has become a fierce battlespace in

which threats of disruption, manipulation, control, conquest and subordination are present. Hence, hybrid neo-mercantilist paradigms – which combine strategic, political and economic contents – like geoeconomics (*Luttwak, 1990*), economic statecraft (*Baldwin, 2020*) and mercantile realism (*Heginbotham and Samuels, 1996*) have been formulated to approach these phenomena.

In this regard, the 2022 ongoing Russian invasion of Ukraine dissipated remaining doubts about the extinction of inter-state war as a forceful way to settle unresolved geopolitical disputes in the 21st century. Although other precedents pointed in the same direction, the large scale of this conflict and the far-reaching tectonic resonance of its shockwaves demonstrate that hard power is an instrumental tool that states can resort to in order to advance their interests, even if that entails the fateful decision to open Pandora's box. Nevertheless, this conflict is not just being fought through purely military means. In fact, this confrontation is also reflected in the domains of cyberspace, the clash of contrasting civilisational worldviews, and the circulation of propaganda throughout the info-sphere. Plus, the belligerents are also engaging each other in the geoeconomic operational theatre, and Ukraine itself is worth fighting for from a geoeconomic perspective.

### **Ukraine as Geoeconomic Prize**

Ukraine's relevance goes beyond its role as a perpetual battleground, contested borderland, buffer state and geopolitical pivot that great powers constantly seek to control for their own imperial pursuits. This Eastern European state is relevant from a geoeconomic viewpoint as well. It contains infrastructure that connects Russia with the European peninsula, including vast networks of natural gas pipelines and motorways. Therefore, it can operate as a corridor of trade and energy flows. Additionally, the Dnieper River – a navigable waterway – and Ukraine's access to the Black Sea through the port of Odessa means that Ukraine's geography offers an optimal gateway to participate in international trade and, through the development of economic exchanges with the wider world, harness the resulting benefits for fostering



growth, development and prosperity. It must be noted that, unlike several landlocked post-Soviet states, Ukraine has access to warm waters.

Likewise, Ukraine was one of the most developed republics of the Soviet Union and its GDP is the third largest in the post-Soviet space, after the Russian Federation and Kazakhstan. Furthermore, despite prolonged economic hardship, Ukraine retains important industrial capabilities in the fields of steelmaking, aerospace, shipbuilding, chemicals and the manufacture of military equipment. Moreover, thanks to a well-educated human capital and foreign investments, Ukraine has nurtured a dynamic high-tech sector with comparative advantages in the production of software, IT services and research and development activities. Thus, far from being a peripheral backwater, Ukraine has the profile of an emerging economy with a substantial potential.

Finally, regarding natural resources, Ukraine contains deposits of both coal and metallic minerals such as iron, titanium, manganese and uranium, all of which are needed for various industrial applications. This country is also an important source of neon, a gaseous chemical element that is crucial for the production of chips and lasers. Another remarkable aspect is that Ukraine possesses fertile land (known as *chernozem* or "black soil") that is suitable for growing cereals – such as wheat, corn and barley – as well as cash crops like potatoes, sunflowers, pumpkins and sugar beets. Tellingly, Ukraine's role as a breadbasket is even depicted in the colours of its national flag: it represents a landscape of a bright yellow wheat field below a blue sky. Notably, the profits earned through exports of Ukrainian grains provided funding for Stalin's ambitious plans to hasten Soviet industrialisation in order to close a gap that placed the URRS in a disadvantageous position vis-à-vis advanced Western capitalist power. Plus, one of the reasons why the Third Reich's strategists were strongly interested in conquering Ukraine was because Nazi Germany was not self-sufficient in the production of food. (*Frankopan, 2017*).

Therefore, considering its geoeconomic profile, Ukraine constitutes a highly desirable prize. As such, great powers are willing to go to great lengths to determine

its orientation and, if possible, to control it in accordance with their interests. For Russia, the successful completion of the Eurasian Economic Union – a geoeconomic bloc under Moscow's leadership – requires the integration of Ukraine into said framework. This project, conceived to encourage reintegration in the post-Soviet space through the conformation of a single economic space, contemplates the removal of trade restrictions, the establishment of transnational industrial structures, the circulation of investments, the generation of synergic complementariness and even monetary and financial unification in the long run. Thus, Ukraine would be the crown jewel of this Russian project, as well as a pivot to deepen ties to the rest of Europe. Nevertheless, as a result of the 2004 Orange Revolution and the Euromaidan protests that broke out a decade later, Kiev has assumed a pro-Western orientation instead. This realignment is reflected in the quest for membership in the European Union, the bloc headed by Germany. For the EU, Ukraine could be a convenient junior partner as a source of both cheap labour and raw materials, a magnet for profitable investments and as an attractive consumer market that could absorb exports from EU core countries. In turn, Kiev prefers to directly attach itself to Brussels' geoeconomic orbit for both business opportunities and political reasons related to an interest in not returning to the Kremlin's sphere of influence.

Nonetheless, formal membership is doubtful for several reasons, despite the Europhile views held by many Ukrainians. The country has a fairly large population (more than 40 million people) and its GDP per capita is substantially below the average EU members, let alone the wealthiest. Furthermore, a hard currency like the euro would hardly operate in a functional manner in Ukraine. Likewise, Ukraine's rising inflation levels represent a problem which fuels instability. Addressing these imbalances would be challenging in a context in which the EU is already struggling with its own internal problems, disagreements and shortcomings. Moreover, Ukraine's political conditions are chaotic due to factors like its compromised territorial integrity, geopolitical volatility and bitter internal rivalries, not to mention the presence of Russian troops. Likewise, there are also political obstacles that would

have to be faced, such as corruption or democratic standards. As a response to the recent invasion launched by the Kremlin and as an act of solidarity, Poland has proposed that Ukraine be admitted to the EU but good will alone will not suffice to overcome these issues or cover reconstruction costs once the ongoing war is over. Much more than benevolence and friendship would be needed to make it happen in the near future.

### **Western Punitive Sanctions**

The Russian invasion of Ukraine sparked outrage and heightened strategic anxieties in Washington and Brussels. Nevertheless, a military intervention by NATO forces was unthinkable. Such course of action could rapidly escalate to dangerous proportions, especially considering that both sides have large nuclear arsenals. Therefore, along with material and diplomatic support for Ukrainian forces, the West resorted to coercive financial sanctions – by now a staple of economic statecraft – in order to punish Russia. Such measure was chosen because it is much less risky than a direct kinetic engagement. This is a powerful reminder that the role of the American dollar as the world's dominant reserve currency and Western control over the nerve centres of international financial circuits confer strategic advantages that can be readily weaponised. Plus, as American statesman Juan Zarate (2013) has argued, there is a close connection between the SWIFT network – a private cooperative – and the US intelligence community.

The first sanctions announced by the Biden administration were rather symbolic and they only targeted Russian elites. However, after a transatlantic consensus was reached (not without the initial reluctance of several European states), much stronger sanctions were implemented. In fact, the decision to exclude multiple Russian banking entities from the SWIFT network – an option that has been referred to as "the financial equivalent of a nuclear strike" – represents a heavy blow because it restricts the ability of the Russian economy to engage in international transactions. Nevertheless, this strategy sought to minimise the impact for some of Russia's European trade partners. Hence, exceptions were made for the supply of Russian

energy to European consumer markets, the purchase of Russian diamonds by jewelleries headquartered in Antwerp and the exports of Italian luxury items. A key consideration was that a significant disruption in the flow of fossil fuels would make prices skyrocket all over the world and paralyse several European economies, something that could deepen the global economic downturn provoked by the COVID-19 pandemic.

Moreover, in order to increase the projection of Western economic firepower, the holdings of Russia's Central Bank were also hit. Specifically, the US, the UK, the EU and even Switzerland decided to freeze its assets held in their jurisdictions, which constitute the majority of Russia's reserves of 630 billion USD. Although seizing an enemy's wealth is not uncommon in war, the purpose of this move is to bring down the exchange rate of the Russian rouble and to undermine Moscow's ability to implement a monetary policy that operates as an effective anchor of macroeconomic stability. The expectation is to unleash a destruction of wealth through bank runs, hyperinflation, the bankruptcy of Russian businesses, a massive credit crunch, the evaporation of savings, the rapid depletion of remaining foreign currency reserves and perhaps even the implosion of the entire Russian financial system. Needless to say, these effects would be detrimental for Russia's war effort and for other components of national power. As French Finance Minister Bruno Le Maire explained, the West is "waging a total economic and financial war against Russia". Yet, the Russian ownership of that money has not been revoked, likely because Western powers need to keep some sort of upper hand worth leveraging in eventual negotiations with Moscow and also because said measure can backfire since it would encourage non-Western states to redouble their efforts to design alternative financial and monetary systems.

In addition, the White House decided to restrict the exports of high-tech items and semiconductors to Russia. The point is to hamper the strategic modernisation of Russia's military-industrial complex and the upgrade of Russian aerospace and robotics capabilities. Without such components, it will be difficult for Russia to

develop comparative advantages which could harness the promising potential derived from the wave of innovation known as the "Fourth Industrial Revolution". In turn, Germany refused to greenlight the Nord Stream 2 natural gas pipeline. In a truly unprecedented move that signals a ground-breaking departure from its position of strategic neutrality, Switzerland agreed to adopt the full package of EU sanctions. Even Western private companies joined this campaign. Particularly, hundreds of large Western companies from many sectors – including car-making, food and beverages, industrial manufacturing, energy, finance, aerospace, high-tech, telecom, logistics, digital services, social media, tourism, fashion, luxury items and sports, amongst others – have abandoned their business operations in the Russian market either totally or partially. In addition, heavyweight rating agencies have downgraded Russian credit to the speculative status of "junk", which means that Moscow's ability to borrow money in international markets has been substantially diminished.

From a long-range perspective, this combined counteroffensive of economic *Blitzkrieg* demonstrated the cohesiveness of the Western bloc and a strong resolve to face a rival great power seen as increasingly aggressive and unpredictable. Nevertheless, the reach of this campaign could go much further than simply trying to evict Russian forces from Ukrainian soil. In fact, since it would inflict a considerable damage, its objective is to unleash the outright collapse of the Russian economy as a whole, a development that could trigger civil unrest, widespread turmoil, a destabilising power struggle in Moscow or even regime change as a result of either a "colour revolution" or a coup d'état launched by the *siloviki* clan or senior military commanders that are not satisfied with the counterproductive results of Vladimir Putin's dangerous strategic gamble. Indeed, Germany's Foreign Minister Annalena Baerbock – one of the most outspoken advocates of a hard-line Atlanticist approach – openly acknowledges that the endgame is to "ruin Russia". Similarly, the Canadian Foreign Minister Melanie Joly has confirmed that the ultimate goal of the transatlantic bloc is "to suffocate the Russian regime".

Concerning the viability of said outcome, finishing off Russia as a functional national state might sound far-fetched, but the idea of provoking its demise is not unconceivable. Actually, the dissolution of the Soviet Union was strongly conditioned by factors such as:(1) the inability to sustain a prolonged and costly arms race against a rival great power that was economically and technologically superior; (2) the lethargic stagnancy of the Soviet economy, unable to reform, modernise or revitalise itself;(3) the depletion of resources as a result of the Soviet military intervention in Afghanistan against the Mujahideen and the control of Warsaw Pact satellites, increasingly engulfed by socio-political agitation and (4) the intentional fall of oil prices, engineered by Washington and Riyadh. Moreover, the Russian economy is vulnerable due to its limited re-industrialisation and its overreliance on the exports of raw materials – whose prices in international markets cannot be controlled by Moscow –as a source of hard currency.

Then again, it is important to highlight that sanctions are no silver bullets. In other words, the deliberate infliction of economic hardship can fail to achieve its intended outcome. After all, "rogue states" like Iran, North Korea and Venezuela – much smaller than Russia by all accounts – have been under sanctions for a while and their external aggressiveness and internal stability have not been undermined in any meaningful way. Despite their status as pariahs in much of the Western world, the three countries are still ruled by hardliners whose ironclad regimes still behave boldly. In the particular case of Russia, it is pertinent to emphasise that historical record shows that great powers are willing to sacrifice economic benefits if they believe that their national security or strategic national interests are at stake. Such states are often willing to endure economic pressure if they believe it is the cost that has to be paid to preserve their survival, sovereignty or to engage in defiant attitudes in the pursuit of victory.

### **Russian Asymmetric Countermeasures**

It is unclear if Russia was strategically prepared to deal with the impact of the retaliatory onslaught that is coming as a result of its attempt to conquer Ukraine

through hard power. Especially considering the reaction to their takeover of Crimea, the Kremlin must have anticipated the imposition of sanctions as an expected Western response, but it is unknown if their full extent was foreseen. As an initial reaction to restore short-term stability, the Kremlin introduced monetary restrictions, higher interest rates and the internationalisation of the Financial Message Transfer System (SPFS), a structure launched more than five years ago as a domestic alternative to SWIFT that, with a current membership of nearly 400 entities (mostly Russian banks and a handful of banks from countries like Belarus, China, Cuba, Kazakhstan and Tajikistan), has been used mostly to process domestic electronic payments. From now on, the SPFS will be much more open as a conduit for the settlement of international transactions so that foreign partners can continue doing business with Russian counterparts (*Srinivas, 2022*).

Yet, in order to achieve long-term resilience as a defensive shield that substantially mitigates the damage, Russia would likely have no choice but to implement a wide range of import substitution policies to compensate for the loss of access to Western manufactured goods –the so-called "Fortress Russia" economic plan, – enhance the productiveness and sophistication of its own producers of advanced technologies to overcome the so-called "tech blockade" and to deepen ties to China as a trade partner, source of investment and provider of credit. It is important to emphasise that, considering its deficits and problems, access to international capital markets and foreign advanced technologies is an essential priority in terms of national security for the Russians (*Reach, 2022*). Without such ingredients, Russian national power will likely diminish further, which is why Moscow needs to do everything in its power to sanctions-proof its economy. Likewise, Russian control over Ukraine could provide substantial geoeconomic benefits. For example, controlling the Ukrainian network of gas pipelines would render the cancellation of Nord Stream–2 inconsequential. However, there is no guarantee that the invasion will go as the Kremlin originally intended. On the other hand, the pursuit of autarky is a no-brainer under the circumstances but there are

reasonable doubts about whether Beijing will provide a helpful lifeline for Moscow. From China's perspective, there are strong reasons to argue both for and against this course of action.

Nevertheless, the Kremlin can also respond with asymmetric geoeconomic countermeasures. In fact, Russian space agency *Roskosmos* has already interrupted the supply of rocket engines to the United States. In the near future, the Russian state could also nationalise the assets of Western companies which left the Russian market, including their infrastructure, patents, business models and intellectual property. Furthermore, considering Russia's role as a "full-spectrum commodity superpower" which supplies lots of minerals on a global scale, it can restrict the sales of titanium, palladium, neon and uranium to Western consumer markets (*Evans-Pritchard, 2022*). These raw materials are needed for applications related to aerospace, chipmaking, lasers, nuclear power, electronics and weaponry. Hence, disrupting their global supply chains would unleash substantial economic fallout. Another offensive possibility would be for Moscow to launch cyberattacks against geoeconomically significant corporate Western targets such as investment banks, hedge funds, stock exchanges, big tech firms and transnational corporations involved in large-scale business operations related to agriculture, energy, high-tech, logistics, telecom and the production of military hardware. Hubs like Wall Street or the City and offshore financial centres aligned with the West can also find themselves in the crosshairs. Considering that the actions undertaken by Washington and Brussels intend to set in motion a chain of events that could lead to the downfall of the Russian government, the Kremlin could possibly reach the ominous and dangerous conclusion that there is no incentive to show restraint. A cornered Russian Behemoth might conceivably believe that desperate circumstances require desperate measures.

In addition, increasing the volume of Russian natural gas supplied to China – a rising great power that is seen by several Western states as a strategic competitor – is another response. Indeed, in an effort to avoid a disproportionate reliance on European consumer markets (eager to decouple from Russian hydrocarbons in the



near future anyway), the state-owned energy firm Gazprom has announced an agreement to design the Soyuz-Vostok pipeline, a project that will deliver Russian gas to China via Mongolia. Said deal, described as one of the biggest ever, could carry as much as 50 billion cubic meters of gas per year to the "Middle Kingdom". This plan would strengthen Beijing's energy security (potentially at the expense of European nations) and generate a reliable source of cash for Russian coffers.

Finally, Russia could resort to its gold holdings, the borderless structures of decentralised stateless cryptocurrencies (such as Bitcoin, Ethereum and even Dogecoin) clandestine networks of financial intermediaries and the emerging financial platforms organically associated with the Chinese yuan – like the Cross-Border International Payments System, operated by Beijing – in an attempt to bypass the dominant international arteries controlled by Western states and dollar-denominated transactions. Perhaps this could not compensate the full loss of access to international finance but at least the partial usefulness of these conduits offers alternatives worth exploring. It must be borne in mind that Russia has been one of the leading instigators of a global campaign that seeks to challenge the supremacy of the US dollar as the world's top reserve currency, so it makes sense to orchestrate schemes whose purpose is to target the greenback and reduce the influence of Western finance. After all, this Russian experience can convince other states with revisionist geopolitical aspirations that the financial and monetary strength of the West needs to be curtailed and maybe even challenged. Indeed, some financial analysts believe that the unprecedented use of financial weapons by the Western bloc against a great power might prompt the development of a parallel financial system.

### **Lessons Learned**

The current Ukraine crisis indicates that warfare is an increasingly complex phenomenon whose expressions transcend the purely military sphere. Although the war is being fought with bullets and projectiles on Ukrainian soil, the projection of its geoeconomic shadow has already reached a transnational scale. This conflict illustrates how the realm of geoeconomics is a confrontational chessboard whose

players rely on unconventional weapons and shields. Hence, it has become a key battlespace in Cold War 2.0. Nevertheless, although less lethal than nuclear weapons, economic warfare is dangerous because it can generate devastating consequences, bring unintended impacts, and even exacerbate tensions beyond a critical boiling point.

Predicting with precision the outcome of this chapter is hard, but it is relevant to bear in mind that heavy collateral damage to European economies, an increasingly resentful and ostracised Russian bear, a growing strategic confrontation in the monetary domain and a revanchist urge to abruptly reshuffle the structure of the global financial ecosystem could give birth to an environment that is more uncertain, chaotic and perilous. Under these conditions, national power, conflict and hegemony are being redefined in accordance with the parameters of geoeconomic criteria. Therefore, the reality of an escalating geoeconomic arms race has game-changing implications for the reassessment of grand strategy, national security, foreign policy, intelligence and statecraft. Paraphrasing the Prussian military philosopher Carl Von Clausewitz, the deadly art of geoeconomics has become the continuation of warfare by other means.

**Corollary: Searching for the Geoeconomic Place of a Post-War Ukraine**

As a major systemic turning point, the trouble ignited by the Ukraine War cannot be properly understood without its heavy geoeconomic overtones. Similarly, the geoeconomic field can offer solutions for what comes next once fighting stops. Specifically, the eventual reconstruction of a post-war Ukraine poses meaningful geoeconomic challenges – related to the availability of financial resources, the involvement of heterogenous stakeholders, growing domestic economic instability and the need to overcome the disruptions unleashed by the Russian invasion – but it also presents valuable opportunities. If the Ukrainian state manages to survive and preserve much of its territorial integrity, it will have to harness geoeconomic forces to achieve a strategic position which strengthens its national security, hedge its bets through the diversification of its partnerships and increase its national power as an

assertive state that is capable of determining its own fate, rather than being a mere satellite, bargaining chip or a junior partner. Such pursuits are vital in an environment in which key geoeconomic phenomena are driving the behaviour of contemporary international relations.

Concerning potential courses of action, as the gravitational weight of the Russian economy recedes, Ukraine is uniquely positioned to act as a pragmatic bridge that facilitates interconnectedness between the European Union and the ambitious geoeconomic Chinese projects that seek to cover the whole Eurasian landmass. Likewise, Ukraine could leverage both its assets and favourable systemic circumstances to do so. As the scrutiny of its geoeconomic profile reveals, it has several cards to play, including its pivotal location, infrastructure, comparative advantages in strategic industrial sectors, deposits of natural resources, arable land and human capital. Furthermore, Ukrainian statecraft and scholarship can learn from the experience and best practice of states like Israel, China, Singapore, South Korea, Brazil, India, Turkey and New Zealand, all of which have been successful in the long-term incremental upgrade of their geoeconomic position. Therefore, a better and deeper knowledge of the geoeconomic domain can represent a navigational compass that can help Ukraine make wise decisions and mastermind plans that lead to convenient trajectories in the coming decades. Otherwise, its future will be decided by external interests.

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**Note:** this paper is an academic and updated version of an earlier analytical article written by the author for the Canadian intelligence platform Geopolitical Monitor. It can be read here: <https://www.geopoliticalmonitor.com/the-geo-economic-front-of-the-ukraine-war/>

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### **GEO-ECONOMIC STRUCTURE OF THE GLOBAL MARKET: POST-WAR TRANSFORMATION**

The Geo-Economic structure of the Global Economy is more briefly described by a **planetary heliocentric model**.

The US economy is at the Center of the System, as it became the dominant force after the two World Wars. But at the beginning of a new history, part of the United States fell down to 23 % of the World GDP demonstrating the relative "*compression*" almost doubled during half a century, which gives reason to compare this process with the rapid "*cooling*" of a *Supergiant Star*.

And this process creates a danger for the entire "Planetary System", since the unsurpassed dependence of the World Economy on the fading "Center of Power" can lead to a global catastrophic collapse ("The Great Crisis") and the "disappearing" economy of the United States, like a cosmic "*Black Hole*" will absorb the economies of many other countries ...

So, NOW nobody of serious and influential actors is really interested (really wants) that the USA economy collapsed and the US economic dominance fully disappear.

Especially, because the US Economy important and dominance is provided not by great GDP only but –

- by US Dollar role as international reserve currency,
- by the US influence in major international economic organizations (which were created by the US's designs),
- by wide-spread US trans-national, global banks and corporations,
- by the US Technology Innovations etc.

Rather some actors are interested to compete with the US and finally to share dominance between the US and themselves. (May be looking for own dominance somewhere in far long times only).

But NOW US still stays in the center of the Global System as the Sun with a few planets on its orbits.

In previous years one could see process of merger by US Market two other markets (Canada and Mexico) and establishment of the Single North-American market or Conglomerate. In Donald Trump Presidency this process was slow down but I suppose it will continue and such Conglomerate will be established.

The biggest planetary economic system (and closest to the NAC) is the **European Union** with its own satellites – related economies – first of all but only – EU Candidate Countries and Associated Partners (not in Europe only – like Norway, Iceland or Switzerland) but in North Africa etc.

Actually, *Ukraine is on this orbit as well.*

As for the **UK** – it moves by its own orbit between US and EU and may be will establish its own small system within the Commonwealth countries.

As one could see during last decades **China** does well to establish its separate system. In cosmogonic terms it is not just planet. It aims to be a second independent center of the Global System. So we can name it *Red Dwarf Star* – it still moves around Global Centre but is enough far situated and already has a lot of satellites.

*Japan*, as I think, has lost capacity to be independent center of the power in Asia but still makes balance for China as well as *India*. Both still not ready to be only Chinese satellites and doesn't loose hope to be regional leaders as US Economic Proxy.

Finally, *Russia* with its project of the *Eurasia Union* moves to a disintegration on a *belt of minor planets and asteroids* which would be pulled into orbit of other big actors – most likely, by China or *Turkey*.

So, to make some conclusion one could say:

- At the End of the Second Decade of the 2000s, the Global Economy was a system with three main "Centers of Power" – the USA, the EU, and the People's Republic of China.

- At the same time, there was a tendency towards the growing role of "Emerging Markets" (including East Asia and, to some extent, Africa), which gave reason to talk about a return over time to the historical "Asian leadership" in the World Economy (primarily China and India) – which existed until the 18th century.

- So, *the West faced the need to respond to a new global challenge*.

There are three main reasons for current transformation:

- Root (Civilization) Causes;
- Pandemic Causes;
- Military and Political Causes.

The **Root** causes are determined by the internal values of civilizations, which include individual countries.

The appeal to European values by the countries of other civilizations immediately gave appropriate economic results (in Japan, Korea, later – in China, India and Brazil).

The attempts to abandon "Western values" and return to "traditional views" (systemically – in the PRC, episodically – in India) immediately responded by slowing down economic growth. Similar processes can be seen in Latin America.

- **Pandemic** causes, i.e., the negative impact of the COVID-19 pandemic:

- additional budgetary costs for medical services, reduction of labor costs, etc.,

- and even more so – the effect of restrictions on movement of people, working hours of various institutions, complications of trade logistics, etc.

Such way, not so much the impact of the pandemic, but mostly *number of "anti-pandemic measures"* have become a completely unexpected factor in Geo-Economic changes.

The global COVID-19 pandemic has become a "generation-defining event" (Ward, 2020:13). Unlike 2008–2009, this global economic crisis was not due to market reasons, but to the cessation of economic activity in accordance with government decisions. The "Great Quarantine" caused simultaneous negative shocks on both supply and demand sides, which suppressed economic processes quite quickly, hitting the service sector the hardest.

**Military and political causes** – first of all, Russia's War against Ukraine, which is ultimately a war against the existing Global Geopolitical and Geo-economic Order and became a kind of watershed in Global Development.

It is connected not only with the problems of Ukraine's relations with Russia, but also with previous Geo-Economic transformations, in particular those caused by the Global Financial Crisis of 2008–2009.

Observing the serious financial and economic problems of the West, China decided that the Western model capitalism and liberal democratic governance is not necessarily the optimal model. The rise of China, which favours authoritarian capitalism, has become a point of friction, especially as the Asian giant has expressed its intentions to become a hegemonic global power, or at least push the international system toward a more multipolar order.

Speaking on the War Scenarios we could use that one's mentioned in the presentation by Jose-Miguel Alonso-Trabanco. There are few of them. But under any

scenario, the Geo-Economic position of Russia will not just change, but will undergo a devastating collapse. Removed from globalization processes and deprived of access to the latest technologies, it will inevitably turn from a contender for the role of a global actor into a regional satellite of China, or, in general, into a great autarky of the "patriarchal economy".

And this, first of all, will radically change the geo-economic layouts in the post-Soviet space, which will be economically occupied by China and Turkey (perhaps with the consent of the USA and the EU).

However, Asian economic expansion in Western markets, if not stopped, will significantly lose momentum. As a result, the "economic rollback" of the USA will stop, and the international role of the dollar will relatively strengthen.

The question of the struggle for the *second place* in the global economy between the EU and China remains open: in the post-war era, the outcome of the competition will depend on the scenario of the end of the war, that is, on China's ability to increase its economic potential at the expense of Russia and the ability of European countries to get rid of dependence on the Russian market.

Post-war changes in **Ukraine** will also have a political, economic and security dimension. Economic consequences, first of all, will be manifested in the form of material and financial losses caused by the war. In this regard, in the short term, it is necessary to talk about the simple restoration (reconstruction) of certain objects of transport, communal and industrial infrastructure. At the same time, the main attention in the medium and long term should be focused on new development priorities (which must be determined based on both global trends and domestic potential). Such reforms should be preceded by de-oligarchization, demonopolization and the development of a competitive environment.

At the same time, it is necessary to decide on such fundamental conditions of further economic development as the new role of the state in managing the economy; Ukraine's new place in the global economy – as a candidate country for EU membership, as an EU member country and Ukraine's participation in other



international regional structures: "Mizmorye"/ *Inter-MarineArea* (Baltic-Black Sea Union), etc. It is, in particular, about the fact that the basis of Ukraine's European integration tactics can become a real deepening of relations with the countries of the "Visegrad Four" and the Baltic-Black Sea arc (in the latter case, Romania, Bulgaria and, possibly Turkey). This way of integration into the European Union can be fixed even in a separate agreement with the European Union. All this creates additional problems, but at the same time, it also gives Ukraine real chances to take a worthy place in the global economic system.

### **Resume**

Taking into account geopolitical and geo-economics factors, Post-War *Ukraine could confidently claim a prominent place in the modern system of the global economy*, which is characterized by three main components of its economic development strategy, namely:

1. The European vector of integration into the World Economy,
2. The status of a regional Maritime State and
3. The presence of a politically and economically influential Ukrainian community abroad.

This "triad" is not the result of only "cabinet studies" or purely "academic reflections", but reflects an approach that has crystallized over almost a third of a century of the practice of economic development of the state and, in principle, finds its embodiment in the actions of the modern government.

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### **REGIONAL SOLUTIONS FOR GLOBAL PROBLEMS**

In discussions about the current global system, three major issues are usually mentioned: health, the environment and climate change, and, of course, the war in Ukraine. Usually, experts say that it is necessary to find global solutions to solve such

problems. But I advocate a slightly different approach. Global problems cannot be addressed with a one-size-fits-all strategy.

In fact, many problems require a local solution. It is necessary to find a balance between centralization and decentralization. From my point of view, decentralization is more effective than centralization in many cases.

Generally, decentralized governance systems are more efficient and transparent than centralized ones. The subsidiarity principle makes states more successful; this is the secret of the Swiss success story.

If changes are to be carried out democratically, then we must give preference to decision-making at the level of local authorities, which are closer to the citizens. In Switzerland, the central government cannot make major decisions unless they are approved by the cantons.

Global institutions are useful to define and monitor issues, but do not work so well for implementing solutions.

Let us look at the COVID-19 pandemic. At the beginning, the World Health Organization wanted to introduce a global solution, and its president advocated the widespread implementation of China's harsh zero-COVID approach. This would have been a disaster.

In some countries where the healthcare system is more decentralized than in China – for example Switzerland or Germany – the fight against the coronavirus has been more successful.

The same is true of environmental issues. Here too the best solutions are local. Climate Change affects different regions in different ways and blanket requirements to reduce emissions can backfire. We need global awareness but regional solutions. There are relevant international organizations that point out the polluting practices of certain countries. But these organizations offer universal solutions that do not take into account local specifics and therefore cannot be effective.

It must be understood that citizens have their own interests and needs, and governments must always take them into account. In general, the role of the state is not to tell people what to do, but to protect well-being and security. And this is very

difficult to accomplish with a highly centralized government. A decentralized state can act much more efficiently.

When it comes to geo-economics and geopolitics, regional cooperation is crucial since smaller countries cannot fight the agenda of larger countries. Small countries are forced to follow along with the plans of large states. We see this in different areas, for example in finance.

If we look at Central Europe, including Ukraine, it is obvious that more collaboration is necessary. The small and medium-sized countries of the Black Sea, Adriatic Sea and Baltic Sea have similar geographic and cultural features, and similar interests. They connect the East with the West, and for centuries they have been involved in armed conflicts between both sides.

We can see the same thing with respect to the economy. The Baltic countries are close to Scandinavia, while Ukraine is close to Georgia and Turkey, and shares interest with them. Therefore, regional cooperation in Central Europe is extremely important. I also see strong support for Ukraine from Central European countries, especially Poland.

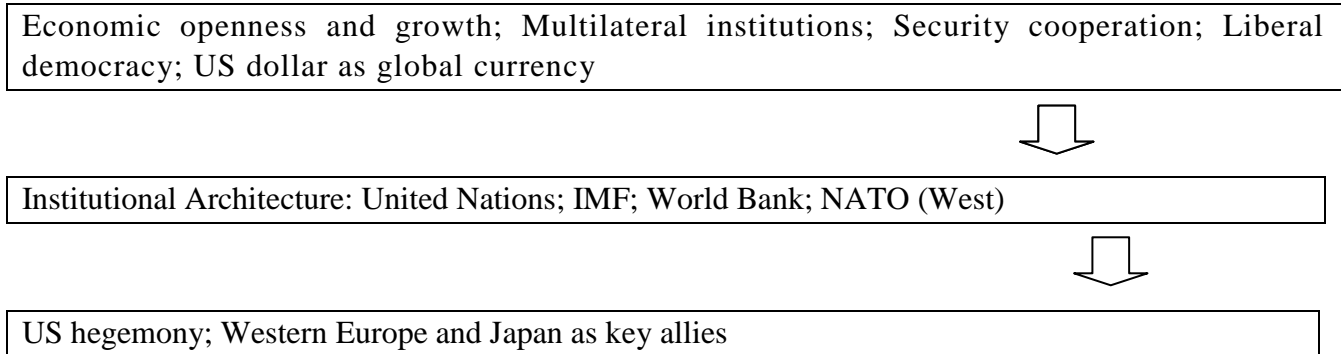
Regional solutions are essential for Central Europe, including Ukraine. By standing together, the region will be stronger. And from a geopolitical point of view, this must be done for the sake of common security. We can see this in the example of Benelux, which was secured after the Second World War by regional cooperation. This enabled the three smaller countries to become a driving force in European integration. For Ukraine, this process will have to involve both Central Europe and the Black Sea area.

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**FOUNDATIONS OF THE LIBERAL INTERNATIONAL WORLD ORDER  
AS ESTABLISHED AFTER WWII**

Let me start from main elements of the International World Order. I suppose that last events reflect the crisis of the Liberal model of the IWO and War in Ukraine is a

crucial point of it. These elements are looking as following ones (Figure 1).



*Figure 1. Main elements of the International World Order*

A big change has started after collapse of the Soviet Union and the NATO extension. For better understanding of this process, we have to look on major dimensions of the IWO how it was presented by G. John Ikenberry (2018, January, p. 15–17).

***Five dimensions of the IWO***

1. Trade and exchange (win-win approach);
2. Rules and institutions;
3. Security cooperation;
4. International society as "corrigible";
5. Liberal democracy as "faith" of the world;

It includes international trade with common interest and mutual gains.

Then we have a network of international rules and institutions as core elements of so called "embedded liberalism" (as J.G. Ruggie(1982) coined it).

For security element the NATO play a very important role, of course.

But the same time there was an optimistic view that the war will be aborted by the Law and International Institutions. And, of course, the Diplomacy will be on a way. And last point reflects Kantian view of history.

It was expected the Unipolar World and the "end of history".

However, the World Order faced a crisis, the steps towards which were the following events:

***Steps of the crisis of the IWO***

- (1). 9/11 and the discovery of US vulnerability;
- (2). Afghanistan (2001) and Iraq (2003): overstretching of US Military power;
- (3). The crisis of global financial system (2007-08): the crisis of globalization and financialisation;
- (4). European sovereign debt crisis (2010–2011): the crisis of, and distrust towards, European integration;
- (5). COVID-19: de-globalization and production reshoring?
- (6). War in Ukraine (as possible redefinition of the International System) – results of which are important for all IWO.

These events determine dimensions of the IWO crises? Such as:

- ***The economic and financial dimension:*** secular stagnation and low productivity;
- ***The political dimension:*** 2010s – Trumpism and Brexit (trade protectionism),; rise of populist and xenophobic forces; crisis of European integration and "sovereignism";
- ***The social dimension:*** rise of global inequalities; increase of poverty levels; wage stagnation and working poor; inflation wave;
- ***The democratic crisis:*** elite-people polarization, the emptying of political representation, and the crisis of authority.

Taking into account events and reasons mentioned above we one could ask the question: is it possible reversing the IWO? Such Reversing could include:

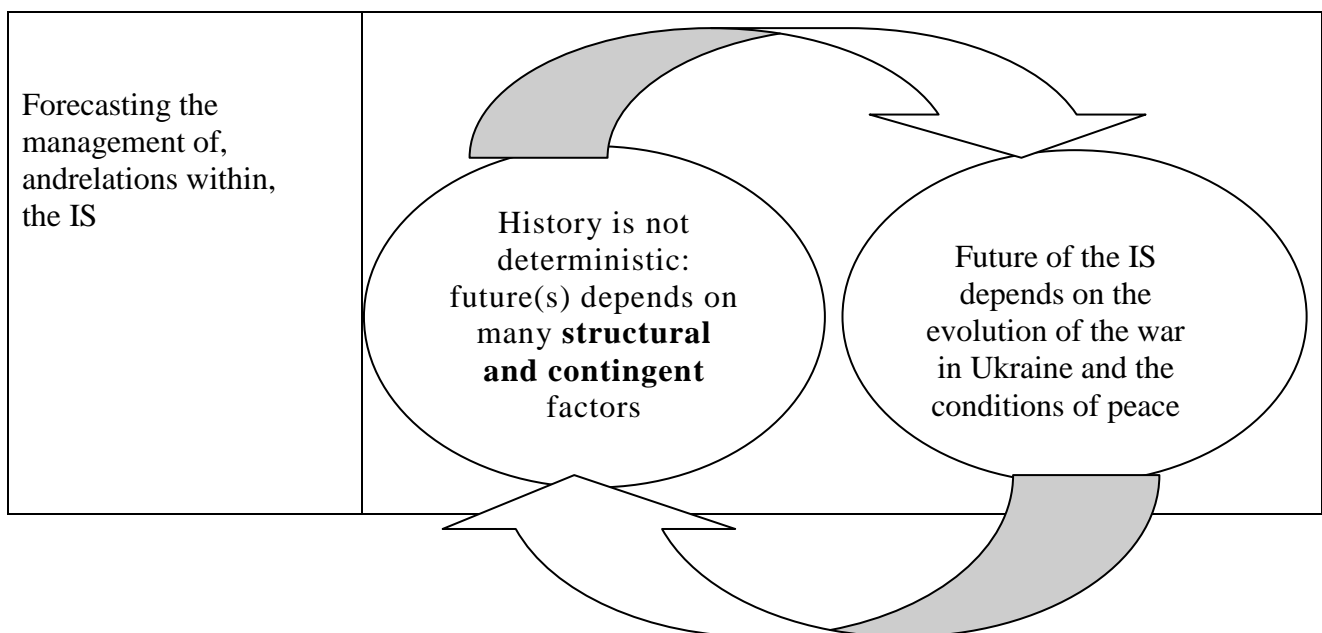
- (a) on side of "Rules and institutions" – disembedding of markets from (national) institutions;
- (b) on side of "International society" – after the war in Ukraine the problem of war & peace has strongly resurfaced;
- (c) on side of "Democracy" – de-democratization processes in the West, rise of old and new autocracies, decline in the faith of democracies to deliver prosperity and security.

Last events as COVID-19 and the War in Ukraine are an especially important and could lead transitions in the international system.

For example, global production interdependencies have increased the effects of the production shocks triggered by COVID-19 (over-dependence on global value chains). In these circumstances, the IMF calls for a "return of the State" (in the West) in terms of fiscal expansion to crowd-in (lacking) private investments. But the EU calls for re-shoring of production, especially technology components.

As for the War in Ukraine, it is a "point" of a broader patterns of redefinition of the IS.

With reference to all mentioned above let do forecasting the management of, and relations within, the IS. In our view it will look as following (Figure 2).



*Figure 2. Forecasting the management of, and relations within, the IS*

So, in 5–10 years' time horizon there are few possible scenarios.

***Scenario 1: probable but not desirable***

Multipolar system based on latent to revert conflict:

- Large regional blocs (intra-regional trade plus regional or national protectionism);

- Decline of International institutions, the rule of law, and of diplomacy;
- Military power relations as the way of conflict resolution.

***Scenario 2: desirable but how probable?***

Multipolar inclusive system:

- Restoring the rule of law and diplomacy → "democratizing" the IS;
- Regulated globalization and strengthening the social dimension of democracy (tackling intra-State inequalities).

***Scenario 3. Fragmentation and regionalisation***

Multiplex World (Acharya):

- Increased fragmentation through regional lines (trade and finance);
- Insulation of regional blocs from each – other (with parallel currencies);
- Limited diplomatic relations and limited scope for international institutions.

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**FUNDAMENTAL GEO-ECONOMIC SHIFTS  
IN THE LOGIC OF SOCIAL DEVELOPMENT**

To understand the fundamental geo-economic shifts, it is necessary to consider them as a logical result of the previous historical development and especially the processes of globalization. The era of globalization is experiencing a crisis. Despite the large number of studies examining this problem from various angles, the deep causes of modern crisis phenomena have not yet been clarified [1]. This is due to the

dominance of functional approaches and the corresponding methodology, which, on the basis of relatively balanced and dynamic development after the Second World War, became mainstream and now, despite thorough criticism, possesses the minds of many researchers.

Globalization is studied as an independent phenomenon regardless of its opposite – localization, or in external fragmentary connection with it. In fact, globalization and localization are opposites that, mutually denying and mutually conditioning each other, go through regular historical stages of their development and reach their apogee in modern times.

The regular logical stages of the development of the contradiction between globalization and localization are the movement from identity (which includes internal difference) through external difference (where globalization and localization become relatively independent processes), and opposition (in which they mutually negate each other) to the processual contradiction as the unity of opposites (where globalization and localization, mutually excluding and conditioning each other, deepen into the basis, thus creating a form of movement and resolution of this contradiction).

The cell, from which the development of globalization and localization begins, is jointly-divided labor. In the process of historical development, jointness reaches its highest result in globalization, and dividness– in localization.

Initially, before the development of the international division of labor and the economic development of the world space, the contradiction between globalization and localization developed in an implicit form, and only the era of great geographical discoveries and the formation of the world market turned this contradiction into an open and very intensive process.

The development of explicit globalization goes through three most important stages:

1<sup>st</sup> stage: globalization, based on nationally localized production, occurs at the expense of foreign trade and migration of human resources;



2<sup>nd</sup> stage: the migration of capital came to the fore, which, moving in the financial and economic space, finds the localized resources it needs, or moves them;

3<sup>rd</sup> stage: with the formation of the information-network economy and the gradual transformation of information into the main resource and product of production, globalization moves into the virtual sphere, where spatially localized and distant resources in physical space and time can be combined into one production process, which in the virtual space is happening here and now [2, p.22–23].

The main contradiction of modernity is the contradiction between the globalization that is developing due to information and financial technologies and the localization of material and labor resources that are not able to move in space at the speed of information and financial flows.

"Removal" (simultaneous disappearance and preservation) of the spatial and temporal characteristics of physical objects in virtual space-time, on the one hand, opens up unprecedented opportunities for synergistic interaction between the past and the present, accumulated and actual wealth, between all local components of the global world, on the other hand, it creates unprecedented risks of destructive processes, which are also acquiring a global character (global terrorism, the globalization of military conflicts, destructive psychological, ideological and other processes create not only development risks, but also threats to the very existence of mankind).

In the first phase of explicit globalization, the developed countries benefit predominantly, while the less developed countries suffer the negative consequences. At the second stage, developed countries begin to suffer from globalization. At the third stage, the contradiction between globalization and localization, covering the entire space (economy, social life, public consciousness, culture, ideology, etc.), reaches its highest point and inevitably acquires the character of a global hybrid war, in which armed conflicts are interspersed with economic, informational, civilizational, ideological and other wars woven into the fabric of public life. On this basis, a hybrid "peace-war" system is being formed [3, p. 9–24].

The contradictions of globalization and localization move and are resolved in various forms and by various methods (method of mediation of opposites, balancing, compromise, complication by deepening the contradiction into the basis, etc.). But the most fundamental and systemic opposites are resolved by changing the structure and mechanisms of functioning of systems (changes in world order, wars, reconstruction, etc.).

The reformatting of the world orders takes place at different levels. Technological leadership provides advantages in areas that were decisive in international relations:

- ✓ *seafaring* during the period of intensive development of *trade and commercial capital*,

- ✓ *industrial development* during the period of the establishment of the dominance of *industrial capital*,

- ✓ development of the *monetary-credit* sphere during the transition to the dominance of *financial capital*,

- ✓ the formation of the *information-network economy* leads to the dominance of *information-network capital* (such companies as Meta (Facebook), Alphabet (Google), Amazon, Apple and Microsoft are already leading).

The leader of the era of *merchant capital* was **Holland** (second half of the 16th century – first half of the 17th century). With the development of *industrial capital*, leadership passed to **England** (second half of the 17th century – beginning of the 20th century). The formation of *financial capital* led to the leadership of the **USA** (the first half of the 20th century – until now) [4]. The formation of *information-network capital* puts forward new leaders. Now there is a struggle mainly between the US and China.

Change of world order usually starts with wars and ends with peace agreements. At the level of the formation of new international orders concerning the territorial division and regulation of relations between leading countries, one can single out:

- *Peace of Westphalia* (1648), which, after the end of the Thirty Years' War, which affected almost all countries of the European continent, formed a new order in Europe and a corresponding system of international relations based on the concept of state sovereignty [5];

- *The Congress of Vienna* (September 1814 – June 1815), which was attended by more than two hundred diplomats from almost all countries of the European continent and redrawn the political map of Europe and turned it into a community of legitimate monarchies and provided peace and tranquillity for a while [6];

- *The Treaty of Versailles* (1919), which formalized the results of the First World War and after the separate agreement between the USA and Germany (1921), which practically repeated the Treaty of Versailles, but did not contain articles on the League of Nations and Germany's responsibility for starting the war, became a shaky basis for interstate relations, which is associated with significant contradictions between countries, the revolution in Russia and the general instability of the situation [7];

- *The Yalta and Potsdam conferences* (1945), which summed up the Second World War and formed the post-war world order, including changes in state borders, denazification, demilitarization, democratization and decartelization of Germany, decisions on the principles of formation and activities of the UN [8].

The collapse of the USSR marked the beginning of a change in the post-war world order [2]. This process has already gone through a number of stages, and general trends of reformatting the modern world order have been outlined and will continue to grow in the future. Among the most important:

- ✓ a decrease in the share of the United States in world production and the aggravation of internal economic and social contradictions in this country;
- ✓ increasing internal problems in the EU;
- ✓ the economic strengthening of China and the growth of its role in the global world;
- ✓ increasing the share and role of the countries of the East in the world economy;

- ✓ redistribution of real power in the world space between national governments and international corporations in favour of the latter;
- ✓ growing role of digital technologies in all spheres of society's life;
- ✓ changes in the structure of the spatial localization of productions associated with the introduction of digital technologies and geopolitical factors;
- ✓ increase in social stratification in developed countries as a result of the introduction of new technologies that simplify work and displace workers from production;
- ✓ the development of the network character of social relations and the formation of a networked person, whose subjectivity is blurred, and his consciousness and motivation of behaviour increasingly begin to form in networks, which creates ample opportunities for mass manipulation of public attitudes;
- ✓ the growing alienation of elites from the interests of the broad masses of the population and the consequent tendency to change the patterns of political power;
- ✓ reduction of the role of international law and strengthening of force components in international relations;
- ✓ reformatting of international organizations as a component of the formation of a new world order.

The war on the territory of Ukraine is also a form of movement and resolution of the contradiction between globalization and localization. It physically takes place in the local space of Ukraine, but in fact, thanks to the supply of weapons, diplomatic, economic, financial and informational support from the US and the EU, it has a global hybrid character. This is a local embodiment of a global conflict.

Understanding the war in Ukraine also has different levels:

- (1) – simple description of this war as a conflict between two countries, the cause of which is Russia's invasion of Ukraine;
- (2) – the understanding of the reasons associated with NATO expansion and Ukraine's desire to join NATO;

(3) – the understanding of the war in Ukraine as a global conflict between East and West, localized in the space of Ukraine;

(4) – the understanding of this situation as a manifestation of the main contradiction of the modern era: the contradiction between globalization, which is developing thanks to information and financial technologies, and the localization of material and labor resources that are not able to move at the speed of information and financial flows;

(5) – the comprehension of the main contradiction of modernity and its manifestation in the local space of Ukraine as a historical deployment of the internal contradiction of jointly-divided labor, in which jointness has reached the level of globalization, and dividness – the level of localization.

In Ukraine, spatially localized: its internal contradictions, accumulated since independence; the contradictions between the US and Russia as the two main, most powerful military forces capable of guaranteed destruction of each other and the world as a whole; contradictions of Russia with Ukraine and the EU regarding the entry of Ukraine into the EU.

The post-war reconstruction of the Ukrainian economy will also be a form of resolving the contradiction between globalization and localization, in which Ukraine must find its own identity and its place in the global world. In the process of reconstructive restoration, it is important to understand and practically implement Ukraine's own interest, taking into account all its geographical, geopolitical, historical, mental and other characteristics, and to find ways to realize one's own interest in the changing conditions of the formation of a new world order.

The reconstructive nature of the recovery of the Ukrainian economy does not involve the reproduction of the old structure, but the building of a new one based on the use of modern technologies and modern approaches to the spatial localization of production. The reconstruction of the socio-economic system should be aimed at creating conditions for effective employment, ensuring the growth of incomes of the population, overcoming poverty, reducing social stratification and creating favorable

conditions for business and investment. It should be aimed at creating a nationally rooted socio-economic development based primarily on the use of national material and labor resources and the creation of the largest number of raw material processing links within the country.

Among the most important areas of objective changes that determine the conditions for reconstruction, one can single out the following: the development of an information-network economy, including the spread of information-digital and neural network technologies, causes significant changes in property relations, forms of labor and distribution of production results (changes in the forms of implementation intellectual property, development of joint use, cluster-district type of organization of living space, remote work, unconditional and rental-premium types of income, etc.); focus on energy efficiency, environmentally friendly production, "green" economy.

In the conditions of Ukraine, there is a need to use non-traditional mechanisms of financial support for solving such problems. The structural policy aimed at creating an economic architectonics capable of providing a modern design of socio-economic development should become the center of application of the country's forces. All other types of policies, primarily fiscal, monetary and investment, should be linked to structural policy.

Structural policy based on a strategy of nationally rooted socio-economic development should be based on a combination of strategic planning and market self-organization. It is based on the definition, on the one hand, of the leading end products: (1) products that ensure human life (food, housing, medicines, consumer durables); (2) products resulting from the formation of a new technological order (electronic devices, information and digital technologies, etc.), on the other hand, the available resources (including natural) necessary for the production of these products, and their use for creation of as many links as possible for the production of these products in Ukraine.

Financial and credit support for investments in new types of production is carried out through a combination of state targeted lending and attraction of private

capital (general rule: if there are resources for production, there can be no problems with financing). Targeted long-term lending can be made: at the expense of emission funds through a state credit institution at a low interest rate (with the involvement of commercial banks only as operators that receive a normal profit on their expenses, and not on the loan amount); from budget funds. Considering that issue money is issued for the creation and movement of new value, this will not lead to an excessive increase in inflation.

The methodological imperative for structuring the tasks of restoring and post-war reconstruction of the Ukrainian economy should be an understanding of the spatio-temporal unity and sequence of processes for solving urgent tasks of a direct exit from martial law, medium-term tasks of ensuring sustainable development and the long-term process of forming a new information-network economy.

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**INTERNATIONAL FINANCIAL ORGANIZATIONS AS AN  
INSTITUTIONAL FORM OF MULTILATERAL ECONOMIC DIPLOMACY**

Diplomacy has always been and remains the main instrument by which the state protects its national interests in the international arena. Since the beginning of the existence of a person in modern understanding, peaceful contacts between independent political formulas have required representativeness. This phenomenon is now known as "diplomacy".

Modern diplomacy extends its activities to many areas, but today it faces unprecedented influences and limitations. An example of its diversified influence is reflected in the expansion of the framework and directions of traditional multilateral diplomacy.

The relevance of the development of multilateral diplomacy within the framework of cooperation and activities of international and regional organizations was highlighted in the address of UN Secretary General António Guterres on April 24, 2022, in honor of the International Day of Multilateralism and Diplomacy for Peace. It was stated that "we need to transform this moment of crisis into a moment for multilateralism" [1]. "The recommendations in my report on Our Common Agenda aim to protect and strengthen the foundations of global cooperation and create a networked, inclusive multilateralism that is fit for the future", UN Secretary General said [1].

International economic diplomacy aims at ensuring stable and predictable conditions of world economic development, protecting the domestic market from crisis influences in the world economy, too harsh foreign competition, sharp increase in imports and other unfavourable conditions for the development of the national economy, as well as protection of rights and economic interests, domestic enterprises and other economic entities abroad. This definition makes it clear that economic



diplomacy appears as a separate type of diplomacy, together with the development of interstate economic contacts.

After the end of the Cold War, the idea that capitalism in its liberal form is the most applied form of economy in human life was established in the world. The collapse of the USSR provided an opportunity for the formation of global international institutions – the World Trade Organization was established in 1995. International financial institutions such as the World Bank, the International Bank for Reconstruction and Development, the International Finance Corporation, the Organization for Economic Cooperation and Development (OECD), etc., have actively developed and promoted the idea of the liberal market. In 1990 the so-called Washington consensus was formed in the world – a common vector of economic development of all countries in the spirit of the liberal market, which was promoted by institutions with a location in the city Washington. In the modern world, the liberal economic development model, which is fully characteristic of modern international economic relations, is still being used, and economic diplomacy is often aimed at liberalization of international trade rules and investment.

Based on the above text, the actors of modern economic diplomacy are not only the state. Numerous international organizations established by governments are engaged in diplomatic activities in the economic sphere: WTO, OECD, World Bank, etc. International economic organizations are associations of states or their separate governing bodies, the main purpose of which is strengthening business relations in the field of trade, finance and economic activity. These organizations directly coordinate the policies of the states in the economic sphere, provide interstate cooperation, and apply diplomatic means to overcome economic disputes between states.

The central multilateral structure is the UN, an organization that sets the "rules of the game" of economic diplomacy of all countries. Chapter IX of the UN Charter "International Economic and Social Cooperation" defines what the UN promotes: (1) higher standards of living, full employment, and conditions of economic and social

progress and development; (2) solutions of international economic, social, health, and related problems; and international cultural and educational cooperation; and (3) universal respect for, and observance of, human rights and fundamental freedoms for all without distinction as to race, sex, language, or religion. The following articles of the Charter refer to other organizations created in accordance with the founding documents, such as the Economic and Social Council [2]. The above provisions are the standard that modern politics and diplomacy must meet.

The current development of multilateral economic diplomacy is formed under the influence of the following trends: (1) expansion of the mandate of leading multilateral organizations and forums beyond the traditionally discussed issues (the OECD in recent years has discussed non-traditional aspects such as environmental and food security, population aging, combating corruption, etc.); (2) the increase in the number of participants in the global economy and the expansion of regulation within the framework of international organizations will make it necessary to reform the institutions of multilateral economic diplomacy (the WTO has developed a document "The Future of the WTO" containing proposals for organizational reform); (3) multilateral economic diplomacy has gained an open, global-public character (many developed countries of the world often make proposals addressed to the entire world community (especially on global problems of economic, social, environmental development)); (4) interaction between different organizations and forums is increasing (the WTO interacts with the IMF, the World Bank, UN, UNCTAD, etc.); (5) the level of publicity and transparency of multilateral diplomacy is increasing (openness for mass media, prompt placement of information on the official websites of international organizations).

Summing up all the above, it is possible to note that economic organizations are very important and integral link in the system of international relations. The importance of international organizations in the economic and financial activities of the countries is great. They promote the rapprochement of countries, their mutual integration, also allow to increase the pace of their economic growth. International

organizations, carrying out their activities, try to eliminate customs borders between countries, which are undoubtedly beneficial in trade processes. International organizations contribute to improving the indicators of the world economy, develop the financial sectors of the participating countries in the form of direct investments. Thus, multilateral economic diplomacy forms an effective mechanism for managing global economic processes in the interests of individual countries and the entire world community as a whole.

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**BIRTH OR TRANSFORMATION OF A NEW INTERNATIONAL  
MONETARY ORDER? THE CASE OF THE UKRAINE WAR**

**Introduction**




As a regular conflict, the ongoing Ukraine war is being fought with kinetic weapons and traditional power projection platforms in conventional operational battlefields.

However, this unfolding confrontation must also be understood as a major clash in the rising strategic competition to determine the future architecture of the global financial and monetary system.


On this chessboard, currencies, monetary assets and financial vehicles are being weaponized as instruments of coercion, manipulation, disruption, subordination and conquest.

The Second Cold War, in which the Western bloc – under US leadership – and the Eurasian powers – headed by Russia and China – are struggling with each other to advance their corresponding views of what the world order should be like.

Historical background

	<p>Several scholars and specialists have noted, that political and strategic factors have influenced trends related to the configuration of global monetary systems.</p>
	<p>Therefore, this analysis embraces the premise that there is a deep overlap between the economic sphere of money, markets, finance, trade, and wealth, and the political sphere of power, control, conflict, and states.</p>
	<p>In this regard, the monetary universe is a domain whose behaviour are heavily interwoven with political realities associated with diplomatic alignments, war, consensual agreements, the structure of polarity, hard power, institutional frameworks of multilateral governance, the evolution of global hegemony, security environments, imperial pursuits, asymmetric power dynamics, geopolitical phenomena, and reputational prestige.</p>

There are instructive examples; both historical and contemporary

	<p>The rise of the pound sterling as the world's leading reserve currency and the ascent of London as the globe's top financial hub in the era of "Pax Britannica," after Britain emerged victorious from the Napoleonic Wars.</p>
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The conformation of the Bretton Woods international monetary regime with the US dollar –backed by gold – as its cornerstone, as a result of a managed hegemonic transition towards the end of World War Two.

### Contemporary examples

These include the ISIS project to launch a tri-metallic currency system in order to challenge Western money; the accumulation of gold holdings (by states like China, Russia, India and Turkey) because it represents a hard asset with intrinsic value that is beyond the direct control of the West.



On the other hand, it is also relevant to understand how natural resources can bolster the strength of a currency. Infact, the value of the US dollar has been tacitly backed by oil.



### Contemporary examples



At said turning point, the greenback nominally became a fiat currency in an environment of floating exchange rates determined by market forces.

Washington made a deal with the Kingdom of Saudi Arabia, the world's largest oil producer.

## Fundamental shifts in geo-economic systems of the world



The US would provide direct military support against the House of Saud's internal and external enemies.

In return, Riyadh would price its oil exports exclusively in dollars.

### Crimea, a clash of modern currency wars



In retaliation for Russia's annexation of Crimea, the Americans implemented financial sanctions against Russia with the aim of causing the ruble's exchange rate to collapse.

In early 2014, the US implemented punitive economic and financial sanctions against Russia as a reprisal. Their effect was magnified by force multipliers such as falling oil prices and the downgrading of Russia's credit ratings.




Former MI6 spook Alastair Crooke argued that the instrumental use of finance as a strategic spearhead in a strike against a geopolitical rival indicated a growing financialization of conflict.

**Crimea, a clash of modern currency wars**

<p>In that episode, the ruble's exchange rate against the dollar went from around 35 rubles per dollar in February 2014 to 69 a year later (i.e., it lost half of its value).</p>	<p>Russia responded with an andefensive strategy. Specifically, the Eurasian state took advantage of temporarily declining gold prices in order to increase its physical holdings of said precious metal, which is a hard asset with intrinsic value that is beyond the direct control of Western powers.</p>	<p>Russian gold reserves became the world's sixth largest. Likewise, China's financial assistance was helpful to stabilize the ruble's value. This event prompted the Russian crusade masterminded by Sergei Glazyev, one of the Kremlin's leading economic advisers, to instigate a global revolt against the US dollar's uncontested monetary hegemony.</p>
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**Crimea, a clash of modern currency wars**

<p>Glazyev even suggested that the Russian state should purchase every single ounce of gold mined in Russian territory in prices denominated in rubles in order to:</p>	
<p>1) increase national gold holdings; 2) avoid direct exposure to international financial markets; and 3) bypass transactions involving the circuits organically connected to the dollar, identified as a linchpin of US national power and also a center of gravity that could be targeted one day.</p>	

### Crimea, a clash of modern currency wars



The role of the dollar as the globe's hegemonic currency gives Washington the chance to do many strategic financial actions.

Therefore, the dollar is a formidable pillar of US national strength, but also an Achilles heel whose downfall would unravel the unipolarity coveted by the US in the post-Cold War period.



In hindsight, this original clash over Crimea foreshadowed some of the most tectonic developing trends that are being witnessed today. Indeed, the first shots of a very unconventional conflict had already been fired.

### Ukrainian war, Cold War 2.0 / currency war



As one of the main Western responses to the 2022 Russian invasion of Ukraine, the assets of the Russian Central Bank held abroad were frozen.

This measure was intended to diminish Moscow's ability to fund its campaign in Ukraine, bring down the ruble's value, undermine the ability to implement monetary policy, trigger hyperinflation, provoke a credit crunch, prompt the collapse of the Russian banking system.



When the Russian "special military operation" was launched on February 24, the exchange rate was 81.31 rubles per dollar and, by March 7, one dollar was worth 142.78 rubles.



Ukrainian war, Cold War 2.0 / currency war

	<p>Russia first reacted defensively with measures of damage control like the introduction of monetary restrictions and the increase of interest rates in order to prevent the utter collapse of the Russian ruble.</p>	
<p>Stateless cryptocurrencies can also offer conduits worth exploring in order to undertake stealth international transactions with partners willing to do business with Russia.</p>		<p>The most striking development was the Russian threat to halt the flow of natural gas through its network of pipelines to "hostile countries" unless payments are denominated in rubles instead of euros or dollars.</p>

Ukrainian war, Cold War 2.0 / currency war

	<p>Although the corresponding contracts were originally denominated in euros and dollars, there is little incentive for Russia to employ Western currencies seen as "toxic" because trading in them entails a dangerous degree of exposure to sanctions, confiscations and/or predation.</p>
	<p>One must bear in mind that, as Kindleberger points out, the exchange rate of a currency is not just a number, it is a symbol of the issuer's hierarchical status in the world.</p>



Without a strong currency, the credibility of states that intend to reposition themselves as great powers is substantially diminished. Plus, a factor that encourages domestic confidence and national pride.

**Ukrainian war, Cold War 2.0 / currency war**

This is a reminder of Europe depends of supplies of Russia natural gas.



With this counterintuitive masterstroke, the Russian ruble is now tacitly a currency backed by a hard asset with intrinsic value and whose continuous demand is steady in international markets.

Natural gas is not just an ordinary commodity that can bring wealth to those who sell it. Above all, it is essential for the energy security of European consumer markets.



**Ukrainian war, Cold War 2.0 / currency war**



The value of the Russian ruble has been pegged to energy in a way under Moscow's control.

Another remarkable issue is the Kremlin's warning that the alchemical gas-ruble financial association is merely a "prototype". but that gradual process could include various commodities such as metallic minerals, oil, neon, uranium, gemstones, cereals, and timber.



It is unclear if this is purely a bluff or a real threat that seeks to bury the remnants of Bretton Woods.

Moscow has brought the gold standard back to life.

The new organic connection of the Russian ruble with energy and gold represents a strategic and paradigmatic challenge for Western fiat currencies.

## **Conclusions**

Tellingly, none other than Goldman Sachs is warning that the weaponization of the dollar against Russia is an incentive that will encourage many countries to move away from the greenback, accelerate diversification, and explore potential alternatives.

Similarly, the IMF claims that the emergence of a new world order that remakes the global correlation of geopolitical forces could also reshuffle the structure of international payment networks and the nature of reserve holdings.

More than ever before, the domain of money has become a fierce arena of global strategic competition in which currencies, monetary assets and financial vehicles can act as weapons, shields and targets, a puzzling and exceedingly complex reality that needs to be grasped by contemporary statesmen, warriors, and strategists.

With the direct offensive involvement of money in conflict, a dangerous genie is out of the bottle and there is no way to put it back. Therefore, analysts are assessing if, as a powerful catalyst of structural change, the current period of increasing upheaval can eventually lead to 'currency multipolarity' and/or the bifurcation or fragmentation of international finance.

In one way or another, the ultimate fate of the international monetary system will mirror the future configuration of the global order.

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## **WAR IN UKRAINE AS A FACTOR OF GEOECONOMIC RESTRUCTURING**

The two World wars of the first half of the 20th century initiated the mechanism for redistribution of the world, in particular the colonies, economically and politically dependent countries. It was expected that the second half of last century will finalize the process of breakup of the world colonial system, but instead it became the beginning of economic neo-colonialism, which over the time outgrew its limits and acquired a global, geo-economic character. Neo-colonialism, relying on economic, political and cultural roots, has retained the main features that today characterize the policy of dominant countries – the will to power and the desire to suppress the weaker ones (described by F. Nietzsche), the desire for spatial expansion – "expansion of wide fields", allowing attract other people's resources for their own economic development (described by F. List and O. Spengler), aggressiveness (described by N.Ya. Danilevsky).

Globalization has transformed neo-colonialism, creating a new phenomenon, when its features were not so obvious and in many cases, they mimic equal international economic cooperation. In fact, the metropolises provided such a state with the mandate to manage their national economies, but at the same time they created mechanisms that ensure free access to the resources as well as the opportunity to reformat national economic spaces of these states to suit their needs.

The modern process of globalization is strengthening global economic neo-colonialism and this is strictly in accordance with the major concept of globalization based on liberal principles, the main of which is free competition without recognition of national borders. Thanks to these principles – open borders and free competition – a smaller number of countries in the global world, due to their natural and previously acquired advantages, could win in such competitive confrontation. In fact, they

became to play the role of colonialists trying to control other countries by using various instruments of interference in their internal affairs.

This is a completely new type of international economic relations, when direct political subordination is not required, and management is carried out through international financial and economic levers. And it transforms national economies to such an extent that they voluntarily give their unique resources into submission to foreign countries.

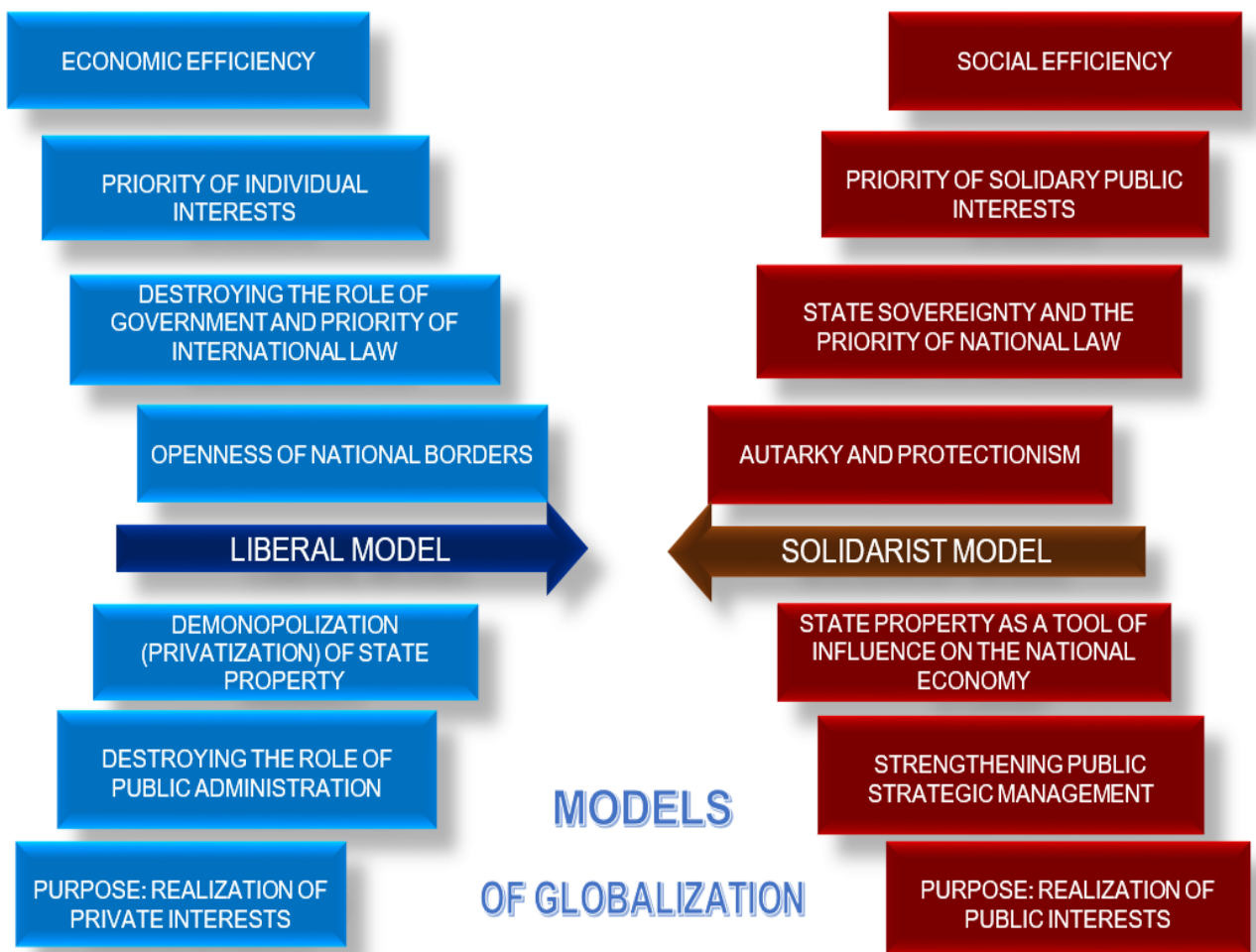
Credits and loans have become important elements of the policy of economic globalism; artificially created and managed financial crises; state supported policy of getting access to national markets by the establishing branches and subsidiaries of the large companies and joint ventures; active export of natural resources and capital, including human capital; investment expansion aimed at creating the infrastructure necessary for foreign business and other methods that only dominant countries can afford. This new economic management, which is extremely effective in its essence, is supplemented by management at the supranational level by international institutions that guard the liberal concept of globalization, and institutions of integration formations designed to decorate aggressive economic globalization with weak sprouts of solidarism within their borders.

Countries claiming economic (and political) dominance, professing imperial ambitions, whose policies J. Habermas called "hegemonic worldview", "liberal nationalism", "imperial aspirations" [1, p.37], never stop before the rules that they themselves formulated for everything else as fundamental: if compliance with these rules prevents them from getting additional economic space at their disposal (additional resources, access to critical infrastructure, etc.), then on the way to achieving this goal, all the mechanisms of economic war are first activated, and then a military conflict is unleashed, which can be seen today on the example of Ukraine and Russia.

Any war pursues some economic goals and is an extreme form of competition in order to ensure free access to someone else's economic potential, and the

"expansion of wide fields" implies the continuity of this process. In particular, the war unleashed by Russia is not limited to the latter's claims to the economic potential of Ukraine. In this war Russia is acting as imperialist and neo-globalist country – it aims to gain competitive advantages in confrontation with the Western world, to form and expand the platform of geo-economic dominance. In this context, Ukraine's resistance is a response to the challenges of the process of reformatting the geo-economic space.

Obviously, after this war, the question of the need to change the concept of globalization in the direction from the old liberal paradigm to a new one – solidarity, which will be based on the principles of obtaining equal benefits from international economic cooperation for all countries, will arise with renewed vigor.



*Figure 1. Components of the liberal and solidarist models of globalization*

Actually, the confrontation of these two concepts (Figure 1) and the victory of the liberal one has brought today an obvious result, long predicted not only from the point of view of conflictology, but also absolutely natural from the point of view of economic competition, when a stronger state, having reached a certain level, absorbs a less competitive state and becomes even stronger at its expense, or when a conglomerate of dominant states determine the configuration and development mechanisms of the world economy. And no supranational institutions created to weaken this antagonistic contradiction of globalization, which is liberal in nature, imitating a resemblance of a solidary world development, are unable to fulfil this task.

The starting point in the solidarity model of globalization is already today becoming the nation state. In the context of the globalization of trade and production relations, public institutions and the state, provided that they are guided by national economic interests, remain the last "bastion" for maintaining internal stability and the effective development of national economic systems as elements of the world economic space.

The solidarity concept of building international economic relations is designed to protect their equality and interaction, and not subordination. And this means recognizing their sovereignty and recognizing their constructive contribution to the global economic treasury, regardless of the size and quality of this contribution. This means that the modern revival of geo-economics will require serious structural changes in the very logic and tactics of foreign policy and a revision of the model of interaction between the state and national capital. This also means that solidarity economic assistance should preferably be in a productive form, for example, in the form of common infrastructure projects, and not in the form of handouts to the hungry, to work for the common good. In a multipolar world, mutual reinforcement is possible only if there is no ground and reason for distrust, rejection, and only when there is an actual, quite tangible will to unite the efforts of states.

As for the doom of the liberal construction of globalization, it was assumed that a new round of globalization would unfold in the face of increased global competition, the formation of local clusters, further concentration and centralization of capital at one pole, and deepening asymmetry. But the first signs that the world economy can no longer withstand asymmetric development were modern economic wars that refute any logic, develop into local armed conflicts, and are quite capable of escalating into a new world war, as it was before. In addition, the emergence of regional integration associations and the increased closeness of individual national economies, moreover, the dominant ones, are beyond the logic of globalization, these are also signs of fencing off the costs of its liberal nature, which in turn, as the well-known political scientist A. Ermolaev correctly notes, only increases the conflict nature of the global capital that comes into conflict with national governments, interstate alliances and international structures and destroys the world economy [2, p.68].

The solidaristic model of globalization can enable countries to build their own sovereign economy at their own discretion and form the rules for interaction with the outside world, based on national economic interests. These relations within the framework of the solidaristic model will be built not on the principle of the totalitarian dictate of the strongglobal economic neo-colonialism, but on the corporate scenario, when each country is entrusted with effectively performing its function, and the levelling of development will take place due to the extension of the principle of solidarism to international economic relations.

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## **POST-COVID AND SUSTAINABLE DEVELOPMENT OF THE REGION**

***Abstract.** The period of the pandemic clearly showed us the important problems that are acute in the regions of Georgia. An important resource for sustainable development is human capital, which creates a competitive product and provides the development of competitive advantages in an innovative way.*

*This resource turned out to be vulnerable and in great danger during the pandemic. Regions were not ready to provide proper assistance to people. When we talk about the sustainable development of the region, first of all, the focus is on the priority areas of the region, their material and technical potential, etc. But. the social issue moves to the background, which, as the pandemic has shown us, is very important and first-rate.*

*It is the issue of social security that has become an important aspect of our research. The health sector in the regions was not ready to deal with the strong wave of diseases caused by the pandemic, which itself affected the economic potential of the region.*

*The issue of sustainable development of the healthcare sector of the region is brought forward in the paper. For the study, we selected the Kakheti region, whose socio-economic sustainable development is highly dependent on human resources.*

The concept of a cluster mainly includes the interaction of such economic entities as state and private sector industries. The word "cluster" is of English origin and means a connecting link of industries. The theoretical foundations of modern cluster formations were established by the American scientist Michael Porter.

He analyzed the development of individual companies under the competitiveness in the world market. It is the competitive advantages of the presented

business entities that create a synergic effect. The formation of this system was called "cluster" in the history of economics. M. Porter considered that the quality and character of the relationship between the entities in the cluster leads to competitive relationships and to the formation of an effective cluster as a whole.

Geographical proximity of economic entities is the main factor in the formation of a cluster. Michael Porter characterized a cluster as a geographic localization of interrelated industries operating in related fields that compete with each other.

The strategy for the formation of health care clusters in the Kakheti region should be based on long-term target programs of health care development in the region.

Professor L. Chagelishvili, proposes in his work: "Methodological issues of clusters formation in the field of health care of Georgia", the methodology of clusters formation and the principles that should be considered when forming a cluster.

The formation of health care clusters in the Kakheti region is greatly influenced by environmental factors that allow to expand the range of services provided to maximize customer satisfaction and the number of medical market participants involved in cluster construction.

The functioning, composition and structure of the Kakheti region healthcare cluster is greatly influenced by external factors, the main tool used for analyzing the factors, was the widely known PEST analysis in economics. With the help of this method, four groups of factors influencing the formation of Kakheti health care cluster have been determined.

The following Belongs to the socio-political environment of the health care cluster of the Kakheti region.

- Administrative system and regulatory framework;
- Participation in the international health organization;
- Ensuring the safety of health care services;
- Compliance with appropriate sanitary and epidemiological conditions;

The legal actions in Georgia, make provision for protecting the privity relations of objects included in health care clusters; make acceptable the high-level service providers for the population through improvement of the legal framework. The implementation of activities in the field of health care in Georgia is based on the law "On Health Care" adopted in 1997, which does not cover the modern trends and innovative approaches, including the cluster development.

For the sustainable functioning of the health care cluster in the Kakheti region, it is important to provide safety guarantees for services.

Sanitary and epidemiological provision of healthcare facilities is an important factor for the sustainable functioning of the healthcare cluster.

An important factor in the sustainable development of health care clusters is the involvement of Georgia in the world health structures, which significantly ensures coordinated actions for the formation of a unified health care space. A clear example of this is the integration of the health care sector of the Kakheti region into the overall medical space of the country.

The economic environment of the healthcare cluster covers the economic events and processes that arise resulted from the activities of the economic subjects of the medical market. For example, the health care cluster of the region should have complete information concerning the following macroeconomic parameters:

- The volume of gross domestic product and the share of the region's medical industry in it;
- unemployment rate and its share in the medical industry;
- The size and share of tax rates for all levels of taxes;
- Interest rates on credit markets and availability of credit resources, considering the regional medical market;
- Education level – the level of intellectual abilities of the region's population creates additional opportunities and incentives for solving healthcare problems.

- The level of awareness – has a direct proportional effect on the development of the healthcare cluster in the region, the higher is the income of the population, the higher is the consumption of medical products.

- Lifestyle and fashion – The direction of medical products is significantly influenced by current trends in society.

The formation of a regional health care cluster and its positioning in the medical market are influenced by the factors of the second subgroup:

- Culture and traditions of ethnic groups of Kakheti region;
- Religious beliefs of the population;
- Approaches to education and forming a healthy generation;
- High mentality of different classes of society.

The technological environment plays an important role within the regional health care cluster. The technological environment of healthcare includes the following factors:

- Emergence of new innovative medical technologies in the field of medical activity;
- Development and modeling of an emergency system.
- Introduction of innovative technologies in the management of the health care cluster using the capabilities of modern information systems;
- Updating the material and technical base of the medical infrastructure using modern technologies;
- Development of electronic communication to ensure sustainable feedback between users of health care cluster services and its internal structure.

The influence of the above-mentioned factors on the process of formation the health care cluster in the Kakheti region was evaluated by us using the qualitative method of cluster assessment, where we applied the score (point) - rating methodology.

The degree of maximum influence of the factor was estimated by us with 10 points. and the minimum influence of the factor with 1 point. The score rating scale has been developed by us are:

- High level influence of factors 10–9;
- Level of significant influence of factors 8–7;
- Neutral level of influence of factors 6–5;
- Low level of influence of factor 4–3;
- Insignificant level of influence of factor 2–1.

On the bases of our research, we can conclude that the presentability with 80 points, out of 120 possibilities implies the existence of the average quality of the proposed influence groups, where the associated socio-political factors play the most important role.

The biodiversity of the Kakheti region is a unique recreational resource for the development of the health care industry. The formation of the Kakheti health care cluster requires combining the efforts of the state, municipal and private sectors. On the basis of the current reality, we think it is appropriate to use a mixed cluster structure, which will ultimately ensure the growth of the competitiveness of the health care cluster of the Kakheti region.

To manage effectively the healthcare cluster of the region, the partnership between the state and the private sector is very important. Partnership means institutional and organized cooperation between the state and business in order to implement important projects for the Kakheti region in the health care industry.

The state, municipal and private entities under the scope of partnership should undertake the guiding recommendations for conducting marketing events in the field of management of health care in Kakheti region, its agreement with private structures and monitoring its realization. The state should encourage the healthcare industry (pharmaceutical enterprises, pharmacy network, private clinics, ambulatory clinics, laboratories, medical technologies) in order to enter the international markets.

In the process of partnership of public and private sector of the health care industry, interests should be balanced, great attention should be paid to ensuring problems of health care management, perfecting methods and using modern Internet technologies.

In the modern changing world, where along with strong competition, management in conditions of uncertainty is common, the cluster approach to the development of the country and regions is becoming more and more active. In the process of clustering, for a correct and complete analysis, we should take into account that the objects in each cluster should be as similar as possible and at the same time should be different from the objects of other clusters.

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**UKRAINE IN THE SYSTEM OF PRODUCTION NETWORKS:  
GEOECONOMICS AND CLIMATIC CONTEXTS**

***Abstract.*** *The article studies the prospects of Ukraine on the world market for grains that arise from the use of global production networks (GPNs). The authors highlight two main propositions: (1) that the use of the GPN system assures the*

*achievement of highly competitive positions for Ukrainian producers and (2) that the transition to the network approach, which integrates production, trade, marketing, logistics, and product innovations, needs to be modernized based on the unity of global-local methodology.*

## **Introduction**

The current geo-economic and geo-political situation intensifies the urgency of the food security problem at an accelerated pace, making it an important goal of the United Nations Organization for 2030 (*United Nations*, 2015; *Rockström et al.*, 2020). Globalization expands the opportunities for achieving this goal. At the same time, the threat of aggravating environmental and climatic problems can increase (*Bilali et al.*, 2021).

## **Literature review and problem statement**

Globalization of agriculture is a process that has demonstrated a tendency over the last three decades to concentrate the focus of research on the issues of forming and enhancing the coordination of local producer-consumer relations. This is reflected in the development of globalized networks and regulation of trade, which connects socially and spatially distant production and consumption locations (*Raynolds*, 2004). Some researchers develop the concept of national power in the modernization of network production systems (*Wengle*, 2018). However, more persuasive seems to be the perspective advocating a passive role of the state in creating a favourable environment for agriculture (*Horner & Alford*, 2019). Nonetheless, the state acts as an active cross-scale intermediary in order to perform regulation within global production networks and to create local assets that are necessary for strategic coupling (*Mcgrath*, 2013; *Giessen et al.*, 2016; *Hsu et al.*, 2018).

The Ukrainian researchers mostly focus on the national aspects of production network formation. However, despite the lack of theoretical concepts, the practice in many industries has already surpassed the limits of territorial borders of the country. To a large extent, this is true for agriculture as well, in particular the grain production

industry. Ukraine has become one of the TOP-10 grain exporters, but it hardly ever trades in processed products. This creates the need for using the modern global production systems that would be adapted to conditions in Ukraine. It would be feasible to start their development in wheat production, as Ukraine is the leading exporter of wheat on the world market.

### **The purpose of the article**

The goal of this study is to develop a conceptual framework for the formation of the global networks for wheat production, its processing and distribution of ready-to-eat products, taking into account the competitive advantages of Ukraine as a world industry leader.

### **Research results**

The world economy has accumulated different models of national economy globalization. Ukraine's economy is characterized by the low speed and 'unsophisticated' mode of entry into international markets. This is manifested in mostly commodity-oriented exports and limited processing of the products of natural origin. This was the case until the full-fledged military invasion of Russia into Ukraine started on February 24, 2022. The war has become the turning point in the development of integration processes in Ukraine, as in order to assure the country's statehood, it has become necessary to join the EuroAtlantic networks of companies that are economic leaders. Moreover, all these processes need to be urgently accelerated regardless of the war, meaning that for Ukraine, the war will end not only when it regains all the occupied Ukrainian territories, but also when it becomes a member of the integrated component of the EuroAtlantic alliance.

A precondition for the development of a GPN for wheat in Ukraine would be to take into consideration that, according to the UN Food and Agriculture Organization (FAO), 80 countries in the world are producers of wheat. Ukraine ranks fifth in the world production of grains, ceding only to the Russian Federation, Canada, the United States, and France (Table 1). At that, Ukraine has large potential for increasing the production of wheat within the limits of the existing farming areas



based on production intensification. According to rankings of the U. S. Department of Agriculture, Ukraine holds 25<sup>th</sup> position in the world in terms of wheat yield indicator (USDA, as cited in *Index Mundi*, 2022).

*Table 1*

**Top 20 largest wheat exporters in the world**

Total Top 20 Countries		183,825,390	
Rank	Countries	Tonnes	% of Top 20
1.	Russia	43,965,626	23.92
2.	Canada	22,874,184	12.44
3.	United States	22,499,006	12.24
4.	France	18,940,343	10.30
5.	Ukraine	16,373,389	8.91
6.	Australia	12,352,837	6.72
7.	Argentina	11,724,765	6.38
8.	Kazakhstan	6,198,354	3.37
9.	Romania	5,880,518	3.20
10.	Germany	5,228,857	2.84
11.	Bulgaria	4,170,662	2.27
12.	Hungary	2,156,619	1.17
13.	Czechia	1,884,966	1.03
14.	Poland	1,790,319	0.97
15.	Lithuania	1,689,997	0.92
16.	Pakistan	1,650,824	0.90
17.	Latvia	1,570,806	0.85
18.	Serbia	1,107,384	0.60
19.	Slovakia	926,978	0.50
20.	Mexico	838,956	0.46

*Source:* Cook (2023).

*Note:* The indicators are for the year 2018 and do not reflect the impacts of the pandemic and full-scale military invasion of the Russian Federation into Ukraine.

The conceptual framework for global grain processing network should contain the interconnected and mutually beneficial nodes in the unified value creation process based on principles of mutual benefit and fair distribution of profits. At that, the chain should branch into both national and global spaces. Every participant makes a particular, specialization-related contribution into the finished product value and its recognition by the customer.

When developing GPNs in the field of wheat production, it is important to use the natural-climatic factor. In this context, a significant impact on crop yields is produced by soil moisture. In order to ensure the sufficient level of moisture, not only

regional water sources should be used. A promising direction would be to apply the improved methods of weather forecasting tied up to systems of wheat production planning, especially scheduling of sowing and harvesting campaigns.

The consumption of water with the aim of increasing the crop yields should be considered in conjunction with building a water-secure world. Estimates show that every dollar invested in agriculture generates more than 5 dollars in returns (*Malpass & Sall, 2022*). Out of all climatic events, 90% are connected with water, which is why better management of water resources is the key to adaptability and sustainability of the wheat growing processes.

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### **PRIORITIES OF KAZAKH ECONOMY: REDUCING INFLATION AND DEVELOPING RESPONSIBLE FISCAL POLICY**

Kazakhstan, as an oil-producing country, is facing serious challenges in managing oil revenues, which are unstable due to global uncertainty. Rapid income growth due to record oil prices ensured GDP growth per capita from \$1,200 in 2000 to \$14,000 in 2013, turning Kazakhstan into a middle-income country. However, in 2014–2015, the national currency underwent a two-fold devaluation, and GDP per capita in dollars fell almost twice. In 2022, GDP per capita exceeded \$11,000 but did not reach the level of 2013.

Kazakhstan extracting around 85 million tons of oil annually, from which more than 60 million tons exported. Oil revenues provides about half of the consolidated budget revenues. All taxes and payment from oil sector distributed between the national budget (i.e., budget of the central government), National Fund, and local budgets. National Fund was established in 2000 with purpose to reduce the impact of price volatility on the budget. The National Fund accumulates the oil revenues while the price favourable in order to save it for the future generations, on the one hand, and to sustain the required level of government expenditure if the prices drop, on the other hand [1].

Oil is an exhaustible resource, therefore, by extracting oil, the authorities must convert physical assets into financial assets that will generate income in the future [2]. The exhaustibility of natural resources requires a fair distribution of oil income between generations. Oil revenues are highly volatile, so producing countries, in order to reduce the dependence of budget expenditures on price fluctuations, use only

a part of oil revenues to current expenditures and accumulate the rest in the stabilization fund. The question "what share of oil revenues to save and how much to spend" is a key one for countries dependent on natural resource extraction [3]. It all depends on how significant the country's natural resource reserves are.

If a country has negligible proven oil reserves, then oil revenues will be short-lived. Saving most of the current oil revenues will reduce volatility and preserve some of the oil wealth for future generations. The best approach to achieve both goals would be to limit the spending of oil revenues to a level that can be sustained indefinitely by saving/paying off debt in high income years and spending savings in low-income years, in line with the permanent income approach.

Fiscal policy has focused on the overall fiscal balance rather than on the soaring non-oil deficit. The growth of the non-oil deficit was facilitated by pro-cyclical fiscal policy, which intensified the boom, the constant pressure to spend oil revenues, which created serious threats to the sustainability of fiscal policy. In 2015–2016 the National Fund's annual spending was twice the corresponding oil revenue. This means the unfair distribution of oil revenues between current and future generations.

Improving the efficiency of managing oil revenues is becoming a major challenge for Kazakhstan. In this regard, a number of critical issues of fiscal policy and the management of oil revenues have to be considered. How to evaluate the weaknesses of the current fiscal policy? How to protect public spending and the non-oil part of the economy from the high volatility (and uncertainty) of oil revenues? How to ensure sustainability of government revenues and a fair distribution of oil revenues between current and future generations?

Fiscal sustainability involves assessment whereas country can maintain its current fiscal policy without experiencing solvency problems or default – this requires forecasting future revenues, expenditures and contingent liabilities.

The National Fund is the main tool for managing oil revenues. Fiscal rules represent restrictions (numerical limits on the total amount) on such key indicators as the budget deficit, the volume of government borrowing, the growth of budget

expenditures, and the use of the National Fund. The OECD, based on the budgetary practice of member countries, recommends to correlate fiscal rules with medium-term fiscal policy, and to disclose in which cases the rules may not work. Fiscal rules provide transparency, increase confidence in fiscal policy and promote fiscal sustainability [4].

The definition of the budget deficit has a specific context for Kazakhstan as an oil-producing country. The Concept for the Formation and Use of the Funds of the National Fund of the Republic of Kazakhstan adopted in 2016 predicts to reduce non-oil deficit from 17% of GDP in 2017 to 6.5% in 2022 [5].

Russia invasion of Ukraine resulted in worsening external conditions and lead to slower growth, 2022 GDP forecast was reduced from 3.9% to 3%. The Caspian Pipeline Consortium (CPC) is the main route for oil exports from Kazakhstan to Europe. In 2022, Russia interrupted Kazakh exports through the CPC four times, citing accidents and environmental regulations. Due to global uncertainty updated budget in 2022 led to the growth of the non-oil deficit from projected by the Concept of the National Fund 6.5 % of GDP to 10.2 % of GDP.

The inflation exceeded 20% in 2022, it is a record level since the 90th. The reasons are growing fiscal stimulus with intensive spending of National Fund, weakening of Tenge exchange rate to Russian ruble, and growth of consumer demand fuelled by large- scale migration from Russia after the Russia invasion of Ukraine and mobilization. Increased prices hit the poor population.

The Kazakh economy faces an uncertain global environment, and the focus of its adjustment challenges is shifting to fiscal and financial sector restructuring. Opportunities arose to cut non-oil deficit, which requires improving the competitiveness of the non-oil sector.

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## **ANALYSIS OF FACTORS AFFECTING THE SUSTAINABLE DEVELOPMENT OF THE REPUBLIC OF KAZAKHSTAN**

**Abstract.** *This article comprehensively reveals and analyzes the factors influencing the sustainable development of Kazakhstan. The strengths and weaknesses of the internal environment of the republic, as well as the external environment in the context of development opportunities and threats, are analyzed, and ways to improve are proposed. The material gives a complete description of the country's macroeconomic indicators. Using statistics, a complete picture of the topic is given. The article focuses on ways to improve in this area. A fundamental approach to the term sustainable development is outlined. Indicators are traced for a more complete picture of the topic. The topic under consideration will be of interest to economists and accountants, students of students majoring in economics and accounting and auditing.*

Sustainable development is a process of change in which the exploitation of natural resources, the direction of investment, the orientation of scientific and technological development, the development of the individual and institutional changes are coordinated with each other and strengthen the current and future ability to meet human needs and aspirations. The term "sustainable development" was first

used in 1972 at the First World Conference on the Environment in Stockholm. In 1992, at the UN Conference on Environment and Development in Rio de Janeiro, this term was used as the name of a new concept of the existence of all mankind.

From the first days of independence, Kazakhstan embarked on the path of building a market economy. This rather painful and complex process was accompanied by various problems and social upheavals. It is known that, as in the case of other CIS countries, in the early 1990s, the level of economic development in Kazakhstan was low. To achieve these goals, a significant number of strategic policy documents have been adopted, such as the strategies "Kazakhstan–2030" and "Kazakhstan–2050", the strategy "Twenty steps towards a universal working society" and the development of the infrastructure of the state program "NurlyZhol" and the Strategic Development Plan of the Republic of Kazakhstan. Directions of Kazakhstan for the most effective sustainable development are presented in Figure 1.



*Figure 1. Directions of sustainable development of Kazakhstan*

*Source:* compiled by the author on the basis of the study.

The political situation in Kazakhstan demonstrates to the whole world a unique example of stability, interfaith harmony, the development of democracy and public institutions in the interests of all citizens of the country. At the same time, Kazakhstan faces significant barriers to its development that pose a threat to the country's national security [1].

The increase in gross domestic product is accompanied by high emissions into the environment. According to available estimates, about 75% of the country's territory is at increased risk of environmental destabilization. The problem of its desertification is acute. "Historical pollution", waste bins, increased emissions of toxic substances from stationary and mobile sources threaten the state of the natural environment and public health [2].

Potential threats to the stability of the country's economy include significant dependence on the commodity sector, the weak readiness of certain sectors to join the World Trade Organization (WTO), the growth of external debt and the problems of the "shadow" economy. There is a significant gap in the economic and social situation of the regions of Kazakhstan. Problems persist in the demographic situation and the state of health of the country's population, and there remains an insufficient level of legal, economic and environmental knowledge. The main social, economic, environmental indicators are presented in Table 1.

*Table 1*

**Social, environmental, environmental performance**

<i>Indicators</i>	<i>2020</i>	<i>2021</i>
Population, thousand people	18879,6	19122,4
Fertility rate (per 1000 people)	22,76	23,50
Mortality rate (per 1000 people)	8,60	9,61
Unemployment rate, in percent	4,9	4,9
Average monthly nominal wage per employee, in tenge	213003	248791
GDP, million tenge	70 649 033,2	83 951 587,9
Volume of industrial production (goods, services), million tenge	27 028 506	37 606 243
Trade turnover in foreign currency (export)	47 540,8	60 321,0
Trade turnover in foreign currency (import)	38 929,1	41 415,4
Income, million tenge	14 521 190,8	15 847 431,1
Costs, million tenge	16 725 096,7	17 951 888,4
Oil and gas condensate production, million tons	85,7	85,7
Emissions of pollutants into the atmosphere, thousand tons	2 441	2 407,5
Emissions of solid pollutants, thousand tons	498,7	500,4

*Source:* compiled by the author on the basis of the study.

Also, in terms of the quality of life, which is the main criterion for sustainable development, the Republic of Kazakhstan lags behind the most developed countries of the world. In the modern world, the quality of life is determined by the main



components: life expectancy, well-being, education and the state of the environment [3].

To achieve this goal, it is necessary to implement the following tasks in the field of sustainable development.

1. Increase EPS to 53% by 2024.

2. Increase the average life expectancy of the population to 73 years by 2024, while maintaining the birth rate at a level of at least 18-22 births per 1,000 inhabitants.

3. Increase the environmental sustainability index by 25% by 2024.

Now Kazakhstan is implementing the second stage of the implementation of the strategy of industrial and innovative development. This stage provides for the activation of the scientific and industrial spheres, more efficient use of scientific potential and the introduction of new technologies. To change the situation, the time has come for large-scale actions in the manufacturing industry in favor of products of medium high science [4].

The successful economic development of most Western countries is largely due to deep structural transformations that ensure the overall growth of production and other qualitative changes. The rapid growth of production in a number of newly industrialized countries of Southeast Asia occurred mainly due to the formation of non-standard industries for these countries, i.e., due to a sharp change in the structure of the economy [5].

Prosperity and rapid economic growth are based on the country's ability to achieve high rates of growth in production efficiency and at the same time produce a range of products that are in growing demand in the world market.

In order to improve your own model of economic growth, you need to:

1. Improvement of legislation in the field of protection of property rights.
2. Improving government efficiency.
3. Improving the efficiency of development institutions.

4. State support for large businesses and the creation of industrial conglomerates in industries with high added value.
5. Restoration and modernization of existing industries.
6. Creation of high-tech and knowledge-intensive industries.
7. Creation of economic and industrial zones with a special tax regime.
8. Modification of the structure of investments in favor of increasing the share of the manufacturing industry.

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**FRAGMENTATION OF THE WORLD ECONOMY AND RISK ISSUES**

The actual fragmentation of the world economy exacerbates the existing risks of global development. Last but not least, we are talking about distracting attention from solving precisely the risks that arise from traditional global problems of humanity. All this makes it necessary to study both the realities of today and the prospects for development.

The development of modern economies of the world creates appropriate conditions for their general characteristics. Globalization is the result of the development of productive forces, the internationalization of all spheres of public

life, the establishment of direct stable links between subjects of different countries, as a result of which the production process in one country becomes an integral part of the process that takes place on an international and global scale. The world economy is becoming a single market and a production zone with national and regional sectors, and not just a set of national economies that develop mutual economic cooperation.

In the process of globalization of the world economy, problems are traditionally identified that occupy a significant place and can be characterized as global problems of humanity. The criteria for global problems of humanity include: the planetary nature of problems, their impact on all countries; the need for joint efforts of all states to solve them; the impact of the problem on determining the development of economic and social life in all regions of the world; and the fact that the unresolved problem leads to further degradation of the living conditions of the entire civilization [1, p.50].

Traditionally, a special place among the global problems of humanity is occupied by economic problems. Such trends as liberalization, transnationalization, progress in information technology, integration, and the growth in the scale and speed of capital movement have created conditions for the globalization of the world economy. At the same time, globalization affects not only the economic sphere, but also the social, political, legal and cultural spheres of public life.

The goal of the international community should be to coordinate and synchronize actions aimed at neutralizing various negative trends that undermine the stability of the global economy and world trade. The challenges facing global economic entities today are to set up a global balanced system combined with maintaining the complex and contradictory dynamics of relations within its regional segments.

The economic development of Ukraine, as well as the development of comparable countries, is explained by a combination of three factors. These countries, first of all, were negatively affected by economic crises, which was reflected in the reduction of access to external sources of financing for the banking

and corporate sectors, with all the corresponding consequences. Secondly, global crisis processes as a result of the coronavirus pandemic have led to a reduction in demand from developed countries for goods and services traditionally exported by these countries. Third (and most importantly for Ukraine) is a large – scale armed aggression that has been taking place since February 2022 [2, p. 42–47].

Now we are increasingly talking about theoretical and practical fragmentation. In fact, there are processes of increasing economic fragmentation in the world, which acts as a counterweight to traditional globalization processes [3]. Fragmentation is one of the significant consequences of Russia's armed aggression against Ukraine and has prospects of dividing the world into geopolitical blocs with their own technical standards, reserve currencies and payment systems.

The International Monetary Fund warns countries of the world against economic fragmentation, because the abolition of decades of integration will make the world poorer and more dangerous [4]. In this direction, countries should diversify their imports to secure supply chains and reduce production losses due to interruptions.

As the IMF leaders emphasize, in the current conditions of the global economy, you can face a potential merger of cataclysms. This leads to the fact that the ability to take appropriate measures is limited due to another consequence of the war in Ukraine – a sharp increase in the risk of economic fragmentation [5].

In their opinion, to solve the problems of fragmentation of the world economy, it is necessary to solve four interrelated tasks: first, strengthening trade to increase its sustainability; second, strengthening joint actions to resolve the debt problem; third, modernizing cross-border payments; and, fourth, combating climate change-an existential threat that dominates all others.

From our point of view, the fragmentation of the world economy determines the development and new content of the main risks of the world economy at the global level, which cover both climate issues and risks derived from them [6].

The main risks include:

- \* Global warming risks;
- \* Food and water security risks;
- \* Natural disaster risks;
- \* Risks of social conflicts.

The main risks are intensifying due to the war in Ukraine, which began in February 2022. In this case: a) military aggression distracts efforts from countering climate change, b) the consequences of war for the world economy in the short and medium term are more negative than the consequences of climate change.

The International Monetary Fund warns the countries of the world against economic fragmentation after Russia's invasion of Ukraine, because the abolition of decades of integration will make the world poorer and more dangerous [4].

From the point of view of the IMF leadership, countries should diversify imports in order to secure supply chains and reduce production losses due to the interruption. The price of further disintegration in different countries will be huge. And people with any income level will suffer – from high-paid professionals and middle-income factory workers who provide exports, to low-paid workers who depend on food imports to survive.

Earlier, Bloomberg modelled the accelerated reversal of globalization in the long term. This will lead to an increase in poverty and a drop in productivity, and trade will be at the level it was before China joined the WTO. On top of that, inflation is likely to be higher and more volatile. Due to the coronavirus, severe droughts and the war in Ukraine, food prices around the world have increased by a third and are at record levels.

The World Food Program estimates that 300 million people in the world suffer from hunger, and these estimates are constantly being adjusted upwards. This could lead to the worst famine since the Second World War and millions of victims. According to United Nations estimates, the number of hungry people in the world may grow by 8-13 million people in the next two years. This is due to the fact that many countries depend on Russian and Ukrainian agricultural products.

According to the Food and Agriculture Organization of the United Nations (FAO), in March 2022, world food prices reached the highest level in the entire history of observations due to the impact of the conflict in Ukraine on the markets of basic grain and vegetable oils. The trend of rising food prices began due to the coronavirus pandemic back in 2020 and continued for almost the whole of 2021 with a short break in the summer. However, the current sharp increase has been observed since February in connection with the events around Ukraine.

The war in the Black Sea region provoked a number of shocks in the main markets of grain crops and vegetable oils. In the last three years, Russia and Ukraine accounted for about 30% of world wheat exports and 20% of world corn exports. World wheat prices soared by 19.7% during the month.

Against this background, the World Bank, the International Monetary Fund, the World Trade Organization and the UN World Food Program in mid-April 2022 demanded that the world community immediately take measures to prevent hunger. The joint statement of these organizations emphasizes that the military conflict in Ukraine has complicated the situation with food security.

The war in Ukraine has aggravated the consequences of the pandemic, which has been going on for the third year, the text says. Moreover, this conflict may lead to hunger riots in the poorest countries of the world, the WTO believes.

The organizations also urged not to impose an embargo on the supply of food and fertilizers, as well as to support the regions in need: it is necessary to provide emergency food supplies and financial assistance. The world community needs to increase agricultural production and the volume of open trade, follows from the statement.

The rise in food prices is exacerbated by a sharp rise in the price of natural gas, which is a key element in the production of nitrogen fertilizers. Organizations believe that rising prices for fertilizers and a reduction in global supplies will lead to consequences for food production in the world. The World Bank estimates that a one

percentage point increase in food prices will send about 10 million people around the world below the poverty line.

First of all, the poorest countries, which are heavily dependent on food imports, will suffer. However, the risks are also increasing for middle-income countries, where the majority of the world's poor live.

As for the impact of the war in Ukraine on the current economic situation, such important positions can be highlighted here: rising inflation in the US and Europe, caused mainly by rising food and fuel prices. In the US, the inflation rate is the highest since 1981, and now this is the number one problem for the Biden administration; as a result of inflation – the growth of central bank rates and the end of the period of "cheap money" in the world, which lasted for almost 20 years. Now the impact of the rate hike will be more noticeable than in previous years; the increase in rates actualizes debt problems both in developed countries and in poor and developing countries. The prerequisites for a potential debt crisis are being created. And the possibility of a recession in Europe and the United States will also negatively affect the processes in these regions; until recently, China was the only country that demonstrated zero tolerance for the COVID-19. This had a negative impact on the economy. If China abandons this policy now, it will improve the prospects of its economy, but at the same time increase the demand for energy resources, the price of which will rise again; it should also be remembered that the COVID-19 pandemic has not disappeared. The virus has a significant negative impact on interrupting value chains, which greatly increases supply risks and increases prices. And the world is also concerned about the views that the global health system is not ready for the next pandemic.

The study of the risk aspect of fragmentation of the world economy allows us to draw the following conclusions.

1. Fragmentation is a process that is developing now and that significantly replaces the globalization that the world was used to in previous years. In fact, there are processes of increasing economic fragmentation in the world, which acts as a

counterweight to traditional globalization processes. Fragmentation is one of the consequences of Russia's armed aggression against Ukraine and has prospects of dividing the world into geopolitical blocs with their own technical standards, reserve currencies and payment systems.

2. The fragmentation of the global economy is increasing due to Russia's large-scale aggression against Ukraine. In this case: a) military aggression distracts efforts from solving global economic issues; b) the consequences of war for the global economy in the short and medium term are more negative than the problems of coronavirus shocks. The combination of these two factors increases the destructive impact of fragmentation and makes it extremely problematic to return the world economy to the level of globalization development of the previous decade. In addition, the factor of large-scale aggression against Ukraine leaves open a number of additional issues related to the end of military operations, the post-war restoration of the national economy, the alignment of political and economic forces in the world after that, and so on.

3. Fragmentation negatively affects the risks of the global economy, which cover both climate issues and their derived risks. The main direction of the impact of fragmentation on the risks of the world economy is that the reversal of globalization processes itself distracts attention from solving global processes of humanity. If we add to this the sources of fragmentation itself (the coronavirus pandemic and the war in Ukraine), then the further fragmentation develops, the further the main risks of the global economy will be beyond an adequate response. This fully addresses the risks of global warming, food and water security, natural disasters, and the risks of social conflict.

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### **METHODS OF ASSESSING THE LEVEL OF DIGITALIZATION OF THE EU LABOR MARKET INTEGRATION (EULMI)**

In modern conditions, the global digitization of social life is one of the leading signs of the civilizational development of mankind. In particular, the issue of digital transformation was highlighted at the G20 summit held in Indonesia on November 15–16, 2022, where it was recognized that digital transformation, in general, cannot be imagined without its complex components, namely: computer networks, communications communication, internet, electricity, etc. Against the background of these components, it was recognized that it is the specialists of the Ukrainian IT army who are very successful in protecting our information space from the enemy's digital attacks [1]. Instead, the "Digital Europe" program, which is valid until 2027, aims to speed up the recovery and digital transformation of the economy, which for Ukraine

means getting closer to the single digital market of the European Union [2]. Therefore, relying on the legal support of the digitalization of the economy of Ukraine, which is at the initial stage of development, and focusing on the main strategic documents of the national level, which include laws, regulations, strategies containing the conceptual foundations of the digitalization of labor markets, respectively, the issue of the implementation of digital transformation of various spheres the life of society is very relevant.

The problems of applying digitization technologies in such subsystems of the world economy as global, regional, national and integration labor markets show that the evaluation of the effectiveness of their functioning can be substantiated by using a synthetic indicator of the measurement of the scientific and technical development of the relevant economic entities. In this context, it is proposed, as an example, to consider the labor market under the influence of global digitalization within the limits of the application of relevant indices. The expediency of using synthetic and segmental indices of digitalization of the labor market is meant.

The meaning of the synthetic index is to determine the most receptive value of the synthetic parameter of the digitization of the labor market with the possibility of its optimal implementation in practice with concrete justification of measures for the accelerated use of digital technologies in the further development of the labor market. To solve this economic-mathematical task, which is based on the calculation of the appropriate general, synthetic index of digitization of the labor market, it is necessary to determine the effectiveness of the specified structural links of the labor market system. At the same time, it is necessary to determine the specific statistical significance of digitization of the components of the labor market, which should be targeted. These can be quantitative parameters of the scale, dynamics or factual data that characterize certain basic structural links inherent in the labor market, which can include the volume of the workforce, regional division, industry components, professional, demographic, educational, innovative components, the sphere of information and communication services etc. This synthetic index of digitization of

the labor market is calculated using the multivariate average method, which allows you to rank objects by dividing them into groups. The synthetic index of digitalization of the labor market can be determined by using the following formula, the value of which is a multidimensional average value as a result of the ratio of statistical values of the structural elements of the labor market:

$$SLDMI = \frac{\sum_m^n se_j^i}{n} \quad (1)$$

where  $SLDMI$  – synthetic index of digitalization of the labor market, the content of which is a multidimensional average value;

$se_j^i$  – multivariate average;

$\sum_m^n se_j^i$  – the sum of structural elements of the labor market;

$n$  – the number of structural elements of the labor market.

Having arranged the structural elements  $se_j^i$  for the highest indicator in the group, the synthetic labor market digitization index (SLMDI) is as follows:

$$SLDMI = \frac{VL+RD+IC+PC+DS+ES+IS+ICS}{8} \quad (2)$$

where the volume of labor is indicated like (VL); regional division is indicated like (RD); industry components is indicated like (IC); professional components is indicated like (PC); demographic structure is indicated like (DS); educational structure is indicated like (ES); innovative structure is indicated like (IS); information and communication sphere is indicated like (ICS).

Comparing the obtained value in the quantitative dimension of the synthetic indicator with the corresponding values for previous periods will allow to assess the dynamics of digitalization of the EU labor market integration (EULMI) and to extrapolate its movement trends in the future.

An organic component of the synthetic index of digitization of the labor market is the segment index of digitization. The purpose of this index is to distinguish individual sectors of the labor market by types of economic activity for a certain

period of time. The reference indicator for such a calculation can be taken as the average share of any group of the most employed in some sectors of the economy. For example, the following complexes are concentrated in the sectoral group: agricultural sector, industrial sector, wholesale and retail trade, educational sector, transport sector, warehousing, postal and courier activities ( transport sector, warehousing, postal and courier activities), public administration and defence, health care and social sector. By analogy with the previous formula, we will use the above statistical data to calculate the segmental index of digitization of the sectoral structure of the labor market (SLDMISS):

$$SLDMISS = \frac{AS+IS+WRT+ES+TSWPCA+PAD+HCSS}{7} \quad (3)$$

The calculated value of the segmental index of digitization of the sectoral structure of the labor market (SLDMISS) according to the given formula, namely the numerical value of this index can be oriented towards the need for a more complete use of the economic potential of the country in order to create the prerequisites for the growth of labor force employment in each sector of the labor market as a system entity, in particular, in the digitized service sector, which should gain more and more importance in the growth of the country's GDP and, in general, in its digital economic system.

Thus, the assessment of the impact of digitalization within the limits of the application of the possible values of the proposed indices, namely synthetic and segmental, allows: a) to determine the level of implementation of innovative digital technologies in production; b) specify the scope of using the digitalization educational potential in the EULMI; c) focuses on the growth of the efficiency of regulation and management of the EULMI; e) creates the basis for optimizing the conditions for the operation of the EULMI at all stages of its development; e) contributes to the justification of the feasibility of the innovative transformation of EULMI, first of all, it is about the growth of the share of ICT in the services market;

g) focuses on the need to increase the volume of involvement of foreign labor force with professional digital potential at EULMI.

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**GLOBAL SHIFTS IN MONETARY REGULATION APPROACHES**

Over the past 15 years, there has been a gradual unfolding of the process of changes in approaches to conducting monetary policy in the countries of the economic core and their spread to the periphery [1]. The changes have already touched on the revision of monetary policies objectives and previous views on interconnections between monetary indicators and instruments with economic activity. The motivating factors for such a transformation were:

- a change in the distribution of centers of capital accumulation;
- falling rates of return on capital and savings;
- accelerated accumulation of sovereign and private debts;
- separation of the financial sector from the real sector;
- approaching to a new technological era and the challenges of climate change.

These factors not only determined the ineffectiveness of the previous monetary model of managing economic dynamics, but also reflected the need for the next reform of capitalism, which entered another systemic phase crisis inherent in it [2]. Distinctive features of this phase are:

- accelerated movement of increased volumes of cross-border capital flows, which provoke the accumulation and executing of the systemic risk of financial instability;

- imbalance of the markets: raw materials, financial, labor, manifested in the disproportion of supply and demand, violation of trade balances;

- growing regulatory role of supranational financial institutions (IMF, World Bank, international banks, funds and other development institutions), which narrowed the monetary sovereignty of dependent countries;

- spread of protectionism;

- increased dependence of developing economies as a result of the deployment of the policy of quantitative easing in the countries of the economic core.

In such conditions, the practice of reforming economic policy, which during the period of the phase of financial liberalism in the 1970s – 2010s was concentrated mainly in the sphere of monetary policy, under the influence of the existing practice of monetary measures of the leading countries of the world, reflects a number of characteristic directions of the transformation of monetary regulation. Among such directions, it is possible to single out:

- moving away from the unconditional priority of inflation targeting and recognizing the need to limit the volatility of the exchange rate;

- giving advantages to the fiscal policy in terms of supporting economic growth, reducing inflation;

- sectoral approach in the implementation of anti-inflationary measures or money emissions, as well as in the exchange-rate and credit policies, embodied in the instruments of macroprudential regulation;

- implementation of fintech tools in the practice of monetary regulators.

The key result of the analyzed trends at the moment is the conclusion about the need to regulate economic activity in general, and the level of inflation in particular, by a combination of fiscal policy measures, interest rates and limiting the volatility of the exchange rate. More and more studies show that exchange rate management

increases the probability of achieving the inflation target [3]. In general, the existing process can be characterized as a phase of transition from the era of pure monetarism to the era of new Keynesianism with the synthesis of the acquired experience, which will be restrained by the neo-liberal conservatism of previous approaches [4].

Monetary regulators in Ukraine need to take into account the above trends. The prospect is the modernization of the monetary regulation approach in terms of expanding the inflation targeting regime as well as limiting the volatility of the exchange rate by means of currency regulation and strengthening the structural direction of the macroprudential toolkit.

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### **RISK-ORIENTED STATE AUDIT**

**Abstract:** *a model for conducting an effective external public audit within the framework of the public administration system using a risk-based approach has been developed. Using the Smart PLS program, the factors for the development of public audit, its classification and role in the mechanism of public administration, the construction of a structural model were studied, and recommendations were given. 3*

*main hypotheses were formulated, the impact on risk-based public audit was determined.*

Based on the application of risky state audit, key goals, objectives and principles of activity of state audit and financial control bodies are determined. At the same time, risky justification in the field of public audit, being one of its main tools, also needs to be improved. It should be noted that currently there is no unified risk management system used in the planning of control activities. All this negatively affects the reliability and completeness of risk assessment, the quality and efficiency of planning, the results of systemic control activities of state financial control bodies, and their inefficient use of labor and financial resources. The main task of the public audit, on which the risk is based, is to identify and prevent risks and deficiencies in order to take timely supervisory actions to ensure financial stability and prevent the increase in risks.

In the article Research methods consist of scientific conclusions, analysis, systematization of classification, modeling methods, expert survey. In the course of the study, questionnaires were conducted, the data obtained were summarized and used in the statistical program SMART PLS 3. Identification of the main mechanisms influencing risk-based public audit. The survey participants were employees of the state audit of the Republic of Kazakhstan. The survey was made in the form of Google and was as convenient as possible for the respondents.

Initial data were collected using a questionnaire, all data obtained were set on a scale from 1 to 5 (None – 1, little – 2, enough – 3, Much – 4, very much – 5).

Below are the survey questions (Table 1).

A risk-based audit enhances the effectiveness of risk management and controls, which in turn improves the accuracy of financial reporting, contributing to the financial performance of an institution. The subject of the study is the analysis, evaluation and verification of the effectiveness of the management and use of budgetary funds, state assets, objects of state audit, related grants, state and state-



guaranteed loans, as well as loans attracted under the guarantee of the state, including other activities related to budget execution. based on the risk management system.

*Table 1*

**List of questions for assessing independent factors**

<i>Designation</i>	<i>Survey Questions and Factors</i>
<i>1</i>	<i>2</i>
Qualifications, skills, professional ethics of public auditors	
111	There are enough public auditors in the public sector
112	Auditors have sufficient technical, professional skills, competencies
113	Government auditors are trained in risk-based government auditing
114	Government auditors adhere to professional ethics and standards
116	Employees of the state audit effectively
Transparency of audio recording and timeliness of response to audit requests	
115	The transparency of the audit report is preserved
119	There are timely actions on audit requests
Risk-based state audit	
117	Risk based public audit planning used for transparency and accountability
118	Annual risk-based audit plan discussed with management
120	Risk assessment in progress
121	Risk identification in progress
122	When errors are identified, a risk assessment is carried out

*Note:* developed based on data collected by the author.

The economic nature of the risk-based governmental audit was demonstrated with an assessment of the features characteristic of a single audited object of the governmental auditor, with a description of the factors affecting financial operations and financial reporting. The study considers 3 hypotheses in evaluating the independent factors of whether a risk-based public audit is carried out or not. Hypotheses:

*Hypothesis 1.* Qualifications, skills, professional ethics of public auditors increase the effectiveness of public audit in public administration.

*Hypothesis 2.* The transparency of the audio text and the timeliness of response to audit requests increase the effectiveness of public audit in public administration.

*Hypothesis 3.* Risk-based public audit increases the effectiveness of public audit in public administration.

After entering data into the SMART PLS 3 program, we determine the relationship of factors for the correlation model. Dependence may be among the factors, but depending on the object under study, in practice, the effective indicator may vary depending on other factors. Figure 1 shows the density of relationships between factors in the hypotheses under consideration.

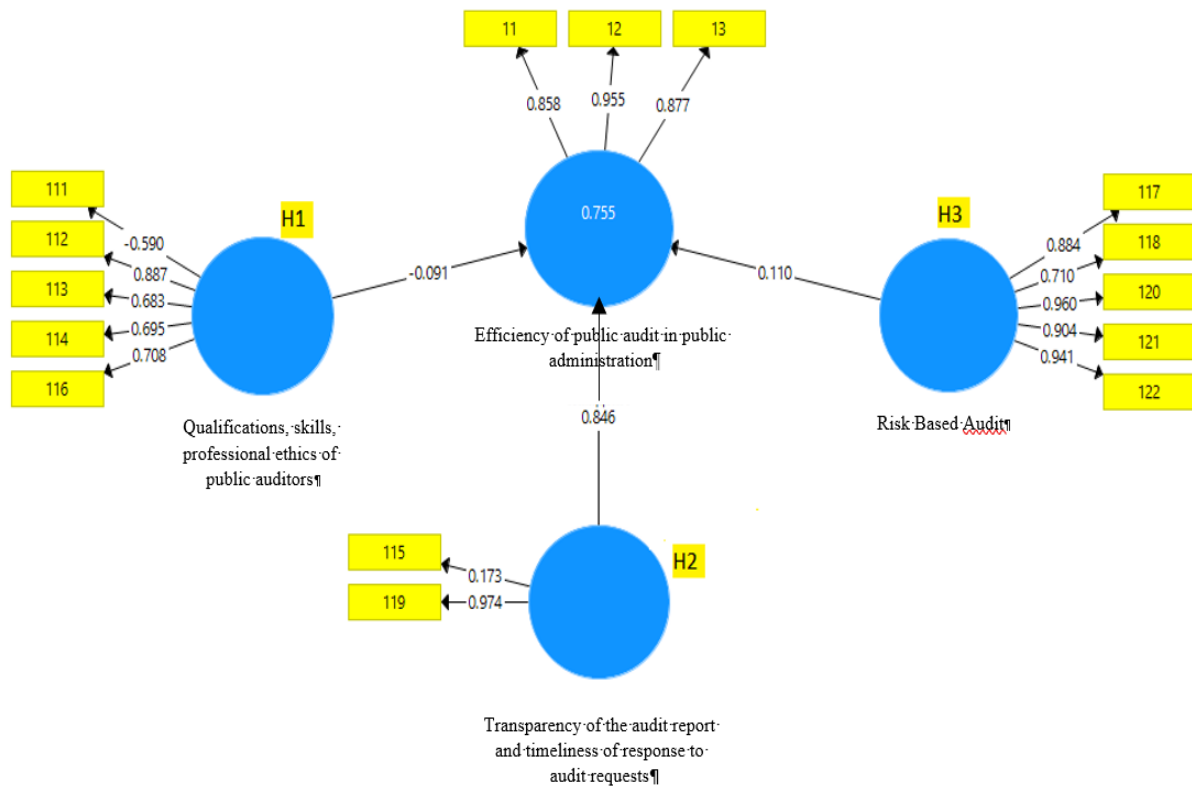


Figure 1. Relationship density between factors

Note: developed by the author based on data collected in the SMART PLS 3 program.

In the figure, the coefficient of determination of the effectiveness of public audit in public administration was 0.755. This means that 3 factors explain the fluctuations in the effectiveness of public audit at a high level of 75.5%.

It is necessary to conduct a correlation analysis of the statistical data of factors.

The value of the correlation coefficient shows the strength of the relationship between variables. To assess the relationships, the relationship of variables with a correlation coefficient of 0.1–0.3 means weak, 0.3–0.5 – medium, 0.5–0.7 – significant, 0.7–0.9 high, 0.9–0.99 – very high. The correlation coefficient takes values from –1 to +1.

The relationship of factors is presented in the table (Table 2).

Table 2

**Correlation coefficients between factors (Latent Variable Correlations)**

<i>Factors</i>	Transparency of the audit report and timeliness of response to audit requests	Efficiency of public audit in public administration	Qualifications, skills, professional ethics of public auditors	Risk Based Audit
Transparency of the audit report and timeliness of response to audit requests	1.000	0.866	0.755	0.804
Efficiency of public audit in public administration	0.866	1.000	0.632	0.721
Qualifications, skills, professional ethics of public auditors	0.755	0.632	1.000	0.767
Risk Based Audit	0.804	0.721	0.767	1.000

Note: developed by the author based on data collected in the SMART PLS 3 program.

The table shows that all factors are related. Having determined the correlation coefficients between the factors, we will consider the coefficient of determination. The value of the coefficient of determination is equal to the square of the correlation coefficient.

So, according to the results of the study, one of the 3 proposed hypotheses was confirmed, two were not confirmed (Table 3).

Table 3

**Hypothesis Testing**

<i>Hypotheses</i>	<i>Hypothesis confirmation</i>
Qualifications, skills, professional ethics of public auditors → increases the efficiency of public audit in public administration.	No
Transparency of audio text and timeliness of response to audit requests increases the efficiency of public audit in public administration.	Yes
Risk-based public audit in public → administration → increases the efficiency of public audit.	No

Note: developed by the author based on data collected in the SMART PLS 3 program.

According to the first hypothesis ( $-0.091$ ), the qualifications, skills, professional ethics of public auditors negatively affect the effectiveness of audit in public administration.

According to the second hypothesis ( $0.0846$ ), the transparency of the audio recording and timely response to audit requests have a significant impact on the effectiveness of public audit in public administration.

According to the third hypothesis ( $0.110$ ), risk-based public audit has an average negative impact on the effectiveness of public audit in public administration.

The risk management system can be characterized as a set of methods, approaches and activities that allow, to a certain extent, to predict the occurrence of risk events and take measures aimed at preventing or reducing the negative consequences of such events.

A risk-based audit allows you to avoid spending a lot of time identifying and resolving problems rather than checking areas that are already performing well. The control of each organization should clearly define tasks related to the management, risks and control of employees in order to facilitate the reduction of violations.

The use of a risk-based approach during inspections ensures:

- 1) reorientation of control and supervision activities at high-risk facilities;
- 2) implementation of scheduled inspections for low-risk facilities;
- 3) overall reduction of excess administrative costs;
- 4) increasing the effectiveness of control and supervisory activities, expressed in the improvement of socially significant indicators;
- 5) increasing the efficiency of the use of material, financial and human resources.

These benefits are enhanced when moving from a simplified method to a risk-based advanced method to an audit.

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## **SOCIAL PRIORITIES OF DEVELOPMENT IN THE CONTEXT OF MODERN GEO-ECONOMIC TRANSFORMATIONS**

The current period of complex geo-economic transformations has a number of characteristic features that affect its duration, as well as the goals and policies of national governments. One of these features, as the ILO notes, following the official position of the UN, is the combination of multiple economic and political (and often military-political) crises that cascade over each other, disrupting established economic ties and supply chains, fuelling socio-economic divergence between developed and all other countries, threatening the recovery of economies and the global labour market after the "corona crisis" and already leading to rising unemployment and inequality in the world [1]. Under such conditions, at all levels, from the planetary to the local and social, the issue of following social priorities of development is becoming more relevant in order to effectively counteract the crisis influences, overcome their negative consequences, heal the received "social

traumas"<sup>2</sup> and ensure not only the dignity and quality of life of people, but also to protect it from modern hybrid threats. In the institutional and administrative context, setting social priorities is an objective reflection of the realities at the (supra)national level, which are currently quite complex.

Thus, the reports of the relevant UN agencies published in 2022 show that a number of global crises – primarily those related to the COVID-19 pandemic and large-scale military conflicts such as the one launched by Russia on February 24, 2022 war against Ukraine, has reversed all the progress of recent years in achieving the declared Sustainable Development Goals for the period until 2030, especially in eradicating poverty and hunger, improving national health, education and social protection systems, ensuring full and productive employment and decent work for all, providing basic services, including social services, etc. According to estimates, on a global scale, this has led to an increase in the scale of multidimensional poverty (takes into account the individual level of income and access to housing, health, education, social and other services), which already covers 1.2 billion people, and because of the war in Ukraine, the number of poor people in countries of Central and Eastern Europe in 2022 will increase by more than 10 million people, of which 4 million are children; undermined global food security, and today every tenth inhabitant of the planet suffers from hunger; caused failures in the sustainable functioning of the most important health services in 92% of the world; created a threat for 24 million students (level of education from pre-school to university) to never return to educational institutions; caused a situation in which the unemployment rate in the world will be higher than pre-pandemic (5.4%) at least until 2023, and the number of unemployed will increase from about 186 million to 207 million during 2019–2022; deepened inequalities both within and between

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<sup>2</sup> The notion was introduced into scientific circulation by the prominent Polish sociologist Piotr Sztompka, who, on the example of post-socialist countries, defined "social trauma" as a manifestation of social crises caused by social changes that can undermine the normal course of social life, inflicting peculiar blows on members of society, deeply and permanently traumatizing them (*See: Sztompka P. Sociology. The analysis of modern society / translated from Polish by S.M. Chervonnaya. Moscow: Logos, 2005. 664 p.*).

countries in terms of wealth and income, gender, digital skills, carbon emissions, etc. [2; 3].

In this list of problems, the most acute is the problem of inequality, since its solution gives societies the power to overcome the deficit of social injustice, to protect themselves from the threats of social entropy and "avoid social and political catastrophes" [3, p. 22]. Accompanied by a cascade of crises, modern geo-economic and geopolitical shifts lead to an even greater depth and multivariance of inequality in societies, directing their national governments to revise the social priorities of public policy. The experience of the last three global crises – the financial and economic crisis of 2008–2009, the "corona crisis" under the influence of the COVID-19 pandemic and the crisis caused by the Russian-Ukrainian war – has shown, among other things, two important things. Firstly, it is the employment sector that suffers the greatest blow under crisis circumstances, as job cuts, a significant increase in unemployment and the number of working population who join the cohort of those "thrown out of the open labor market"<sup>3</sup>, instant transition to non-standard forms of employment, direct and indirect reduction of wages are the fastest, although anti-social in essence, way to optimize business costs in the face of shocks. Secondly, it is the support of employment that plays a stabilizing role for economies during the crisis and a stimulating role during their post-crisis recovery, as well as an effective preventive measure against social unrest in societies.

On the part of the ILO, the institutional response to the lessons learned from the crisis periods was, in particular, the adoption of the ILO Centenary Declaration for the future of work, 2019; Resolution concerning inequalities and the world of work, 2021; as well as Comprehensive and integrated ILO Strategy to reduce and prevent inequalities in the world of work, 2022 [4]. This Strategy was adopted for the period 2022–2027 and regulates, in particular, the following *social priorities* and

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<sup>3</sup> The authors refer to the cohort of "thrown out of the open labor market" as working population who are quite competitive in the labor market, but have lost their job or the opportunity to immediately start it due to force majeure circumstances at the (supra)national level – for example, the COVID-19 pandemic or the full-scale war of the Russian Federation against Ukraine.

policy measures for national governments and other participants in social dialogue:

- *universal and adequate social protection of the population* (requires ensuring that every citizen has access to a system of comprehensive, adequate and sustainable social protection throughout life);
  - *adequate protection of all workers and fair distribution of the results of economic growth* (requires guaranteeing: social and labour rights for all workers, regardless of their employment status in the formal and informal economy; an adequate minimum wage established by law or contract in accordance with ILO Convention No. 131; improving the efficiency and inclusiveness of national labour market institutions, including relevant inspection services, etc.);
  - *equality for all, including gender equality, non-discrimination and social inclusion* (requires addressing unfair wages, gender, ethnic, age discrimination, social exclusion, etc.);
  - *job creation* (involves active policies in the labor market and other areas that stimulate employment growth, overcome gaps in productivity levels between enterprises, increase investments in digital infrastructure and skills, etc.);
  - *the reduction of informal employment* (requires solving the problems of shadow economy and labour markets, restoration/improvement of their institutions);
  - *equal access to quality education and training*, including the system of lifelong learning, as well as access to quality public services from early childhood [4, p. 6–7].

In our opinion, the social priorities outlined in the ILO Strategy should be supplemented by several more, taking into account the specifics of the crisis impact, including the impact of large-scale military shocks. Thus, over the past decade and a half, the problem of financial sustainability of national social insurance systems, primarily pension and unemployment insurance systems, has become more acute for many countries. The cascade of modern global crises, which are rapidly replacing each other, significantly limits the resources and opportunities to solve this problem, leaving *the improvement of national social insurance systems* on the basis of



financial sustainability and social quality, universal coverage and access to appropriate benefits in the list of social priorities of governments.

The experience of war-torn countries and many post-conflict territories shows that under the influence of military shocks and as a result of hostilities (by the country itself or by neighbouring countries), the following are added to the list of social priorities of the state:

- *to overcome the consequences of local humanitarian disasters as soon as possible* (in the case of Ukraine, the whole districts of Donbas and many settlements of other regions – Dnipropetrovsk, Zaporizhzhia, Kyiv, Mykolaiv, Sumy, Kharkiv, Kherson, Chernihiv oblasts – became their centers);

- *ensuring basic social needs of people* in access to food, water, heating, lighting, mobile communication, as well as medical, social, transport, educational services, etc.;

- *efficient implementation of the voluntary evacuation of the population* from the territories where armed conflict is going on, *creation of a network of bomb shelters and temporary accommodation centers* in the territories subject to shelling, air raids, military diversions (since October this year, Ukraine has had Law No. 2486-IX of 29.07.2022, which allows the design and construction of new buildings only if they have modern shelters to protect the civilian population);

- *providing adequate social support to refugees from war abroad, as well as internally displaced persons* (according to UNHCR's data portal, as of 05.12.2022, 7.9 million refugees from Ukraine were registered in Europe, and 4.7 million were already officially covered by the EU's Temporary Protection Directive (Council Directive 2001/55/EC of 20 July 2001); more than 5.9 million Ukrainians had the status of internally displaced persons as of the date indicated);

- *strengthening social protection and support*, including medical, psychological and vocational rehabilitation, promotion of reintegration into *the labor market of the military, who became disabled* while defending the country from external military aggression, as well as *civilians affected* by it;

- *facilitating the voluntary return of citizens* of the country who became abroad refugees due to the war, as well as their *subsequent reintegration into the national education system*, including vocational education, and *the labor market*;

- *compensation for the loss of the state's labor potential* incurred as a result of the war and forced migration (according to ILO estimates, the employment rate in Ukraine in 2022 compared to the pre-war 2021 will decrease by 15.5 percentage points, with 2.4 million jobs lost. Currently, 10.4% of all pre-war labor resources of Ukraine (1.6 million working population) are in the status of refugees in other countries. According to sociological surveys, only 28% of Ukrainian refugees have so far been able to find paid job or the opportunity to engage in self-employment in host countries [1]).

All the above-mentioned social priorities, especially those of the wartime period, are extremely relevant for Ukraine today. In the period of its post-war recovery, according to scientists, it seems expedient to form social priorities of the state, based on modern international approaches. Firstly, the approaches of the National Academy of Social Insurance (USA) to building four social pillars of economic security of modern societies, namely: (1) *labor policy*, which is aimed at active regulation of the labor market, including stimulation of employment and vocational education and training; (2) *benefits policy*, which refers to the taxation and expenditures of the national government that, through transfer programs, social insurance systems or tax exemptions, helps to increase the incomes of poor households; (3) *protection policy*, which protects households from fluctuations in their income and expenditures by encouraging savings, reducing indebtedness, facilitating access to credit and regulating the actions of key financial players, including banks; (4) *equity policy*, which aims to counteract social injustice and income inequality of different demographic groups [5, p. 36–38]. Secondly, the approaches of the European policy of social quality, which is based on the principles of social peace, social equality and justice, social welfare and quality of life. The implementation of such approaches in Ukraine is conditioned by its relevant

obligations under the EU–Ukraine Association Agreement, as well as the acquisition of the status of a candidate country for accession to the EU in June 2022 [6, p. 116].

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**GLOBAL STAGFLATION SHOCKS AND THE REVISION OF MONETARY  
POLICY: LESSONS FROM THE CRISES  
OF THE 1970s AND 2020s**

The current situation in the global economy – the combination of significant geopolitical tensions, high and volatile commodity prices, persistent and high inflation, the prospect of economic slowdown and recession in some countries is reminiscent of the global stagflation episode of the 1970s.

Common features of the global environment and the nature of the stagflationary threats of the 2020s and the crisis of the 1970s are: 1) rising inflation as a result of both supply shocks and excessive demand stimulation in advanced economies, primarily in the United States; 2) too optimistic and inertial estimates of

potential and equilibrium macroeconomic indicators on the eve of crises; 3) the significant impact of US macroeconomic policy on the policies of developed economies and of the impact of developed economies policies on financial sustainability in EMDE.

The more favourable current conditions for monetary policy compared to the 1970s are: the developed institutional mechanism of anti-inflationary monetary policy, smaller institutional opportunities for emerging a "wage-price" spiral; better resilience of EMDEs to external shocks.

The following factors worsen the situation for the monetary policy compared to the crisis of the 1970s: 1) larger-scale geopolitical threats (global, more lasting and profound impact of a full-scale Russian military invasion of Ukraine; higher threats of the third world war, since the Russian Federation considers the war in Ukraine as a struggle against the "collective West"; large-scale sanctions against the Russian Federation as an aggressor, which are being intensified in response to the murders, torture and deportation of thousands of Ukrainian civilians, the targeted destruction of critical infrastructure facilities and other crimes; the destruction by the aggressor of the production and export potential of Ukraine and the blocking of many channels of international transportation); 2) a wider complex of supply shocks and accelerated restructuring of the energy supply system under the influence of growing geopolitical threats; 3) much more complex global supply chains; 4) restructuring of global value chains according to the criterion of safety, which, especially in the short term, will cause significant additional costs and an increase in inflation; 5) the more differentiated nature of countries' vulnerability to the current supply shocks, that creates new sources of external instability as a result of the growing gap between interest rates and changes in exchange rates; 6) strengthening the global implications of US Fed policy under conditions of stronger global integration; 7) significantly higher levels of private and public debt; 8) intensification of political and economic confrontation between the largest economies of USA and China [1].

What lessons for monetary policy under conditions of stagflationary shocks can be drawn from the analysis of inflation drivers, the global environment and approaches to macroeconomic policy in the run-up to and during the oil shocks of the 1970s and the supply shocks of the 2020s, caused by the pandemic and by the global effects of the full-scale war of the Russian Federation against Ukraine?

**Lesson 1.** *To prevent the formation of pro-inflationary behaviour of economic agents, a decisive anti-inflationary policy is necessary.* In a narrow sense, the key lesson of the Great Inflation that the central banks of advanced economies took up in the face of contemporary challenges was the need to apply a strong and proactive anti-inflationary monetary policy to prevent the entrenchment of pro-inflationary behaviour of economic agents that would require tighter policies in the future, and thus, greater losses of economic activity. In practice, this means refusing to tighten policy in the event of signs of a recession until the inflation problem is resolved – as Fed Chairman J. Powell put it, "we must keep at it until the job is done" [2]. The price of procrastination and, as a result, the forced tighter monetary policy of the advanced economies in the future is also the growing threat of financial crises in the EMDE countries [3, p. 64]. As L. Summers points out, this does not mean denying the importance of a tight labour market or a literal choice between inflation and unemployment, but choosing a policy that would minimize unemployment over a certain period of time [4].

**Lesson 2.** *Present model of central bank institutional independence is not a reason for independent optimization of two extremely closely interrelated instruments of macroeconomic regulation – monetary and fiscal policy.* Anchoring of inflation expectations, and even more so keeping "calm" in financial markets, requires confidence in both monetary and fiscal policy. At the same time, ensuring trust in fiscal policy does not necessarily mean the implementation of the "small government" policy, but rather the communication of the strategy for maintaining public debt sustainability, communication of goals and logic of large-scale fiscal measures. In the 2010s, advanced economies combined tight fiscal policy with

expansionary monetary policy. But in the 2020s, there are signs of the transition of rich world countries to the "larger government" model. Probable areas of increase in government spending will be: defence spending; energy security and decarbonisation; social expenses related to the population aging; protection of the most vulnerable households and businesses from the energy inflation; industrial policy in view of growing geopolitical tensions. In April 2022, the IMF counted 94 countries that, at the expense of budget funds, helped households and companies cope with higher energy prices [5]. Germany has nationalized Uniper, its biggest gas importer, and is spending 5.2% of GDP on "economic defence shield" against the impact of the soaring energy prices on firms and consumers. France nationalized energy giant EDF and caps energy prices. According to the IMF Fiscal Monitor, the gross public debt of advanced economies increased from 71.7% of GDP in 2007 to 119.8% of GDP in 2021. Therefore, in developed economies a combination of loose fiscal policy with tight monetary policy is likely [6].

The more the debts – public and private – grow, the bigger the price in the form of a decrease in economic activity will be paid by the economy for the stabilization of inflation by raising interest rates. One of the presentations at the International Economic Symposium in Jackson Hole 2022 was devoted to the role of fiscal policy in stabilizing inflation. As it turned out, the problem remains relevant even in the conditions of an independent central bank. Back in 1981, T. Sargent and N. Wallace in an article entitled "Some Unpleasant Monetarist Arithmetic" showed that if the government does not pursue a policy of stabilizing the public debt in the medium term, then the increase of interest rates by the central bank leads to higher, not to lower inflation because it simply encourages governments to borrow more to pay for rising debt service costs [7]. In addition, pressure on inflation occurs due to a reduction in business activity as a result of a tight monetary policy, which increases the debt-to-GDP ratio. F. Bianchi and L. Melosi calculated that only half of the jump in inflation after the introduction of the American rescue plan – a package of

incentives to combat COVID-19 – is caused by supply shocks and can indeed be considered temporary. The rest of the increase in inflation, according to their estimates, is a trend component of inflation associated with a change in expectations regarding the future monetary and fiscal policy mix, and not a change in confidence in monetary anti-inflation policy alone [8]. This conclusion corresponds to the idea of T. Sargent from "Letter to another Brazilian finance minister": "Persistent high inflation is always and everywhere a fiscal phenomenon, in which the central bank is a monetary accomplice" [9].

Therefore, F. Bianchi and L. Melosi warn that raising interest rates in the US without a fiscal policy with a clear plan to stabilize the public debt will not only not allow to completely overcome the growth of inflation, but may also lead to fiscal stagflation. The IMF also emphasizes that although the priority of fiscal policy for all countries in the current crisis is to ease the burden of the rising cost of living for the most vulnerable population groups, its overall position should be tough enough to achieve the goal of monetary policy to return to price stability [10, p. XVI].

**Lesson 3.** *The model of aggregate supply should be revised (we need to loosen the assumption of absolute elasticity of aggregate supply in the world of globalization and technological progress; to take into account the limitations of production capacities and different rates of price adjustment at the industry level) and methods of estimating and forecasting potential and equilibrium values, at which macroeconomic policy is based.* As A. Carstens, general manager of Bank for International Settlements points out, thanks to favourable "tailwinds" from the side of aggregate supply over the past few decades, we have become accustomed to looking at the economy mainly through the lens of aggregate demand. These "tailwinds": a relatively stable geopolitical environment, technological progress, globalization and favourable demographics during the three decades before the pandemic contributed to a weakening the link between domestic economic activity and inflation, and ensured a rapid adjustment of aggregate supply to changes in demand. But even this model of

the global economy began to wear out over time. The first sign was a decline in productivity growth. In advanced economies, productivity growth began to decline in the late 1990s and has not recovered since the global financial crisis (GFC). In emerging market economies, a collapse in productivity dynamics occurred after the GFC, and during the past decade the momentum from shifting resources from agriculture to more productive industry began to subside. Losing the support that rapid productivity growth could provide, economies by 2008 relied on other sources of growth: the expansion of the financial system and the growth of debt. After GFC, more and more stimulus from monetary and fiscal policy was needed to support the economy. Russia's full-scale military invasion of Ukraine threatened global energy and food security and accelerated the realignment of geopolitical alliances. As a result, access to global production networks and international financial markets can no longer be taken for granted [11].

G. Gopinath, first deputy managing director of the IMF, emphasizes that it is necessary to correct macroeconomic models in terms of using alternative indicators of measuring slack, such as the ratio of vacancies to the unemployed, which better reflect tensions on the labour market, as well as improve models in the direction of more active use of sectoral models that take into account capacity constraints and different rates of price adjustment at the industry level [12].

K. Rogoff, in the conditions of powerful anti-globalization forces, suggests to abandon the assumption that the era of ultra-low global equilibrium interest rates will last for a long time, as well as "maximalist macroeconomic policy", which, based on this assumption, tried to expand the range of monetary policy goals (inclusive employment, housing prices, climate change prevention) and called for a more active fiscal policy as long as average growth rates are higher than average interest rates [13].

**Lesson 4.** *It is necessary to strengthen the policy to stimulate aggregate supply, which, among other things, will reduce pressure on monetary policy. Delaying such measures prolongs the duration of tight monetary policy, which*



reduces the potential of the economy. In modern conditions, according to A. Carstens, monetary policy should focus on maintaining a stable low level of inflation, and fiscal resources should be directed to overcoming the limitations of aggregate supply [11].

J. Stiglitz and D. Baker prove that governments should play a much bigger role in the fight against inflation at the current stage. They emphasize that the effects of modern upheavals have been exacerbated by political and economic philosophies that prioritize corporate interests and "market" decisions. Therefore, "government policies aimed at circumscribing concentrations of market power and encouraging greater diversification and more long-term thinking (through tax structures and corporate-governance laws), and for industrial strategies that recognize the importance of borders and the real risks we face" are needed [14].

**Lesson 5.** *We need to adapt the strategy, communication and tools of monetary policy to conditions of radical uncertainty.* Former Governor of the Bank of England M. King accuses central banks of overconfidence in their ability to manage expectations and the ability of expectations to manage inflation. Markets estimate the future trajectory of the interest rate by feeding their vision of the evolution of the economy into the central bank's reaction function. Their narrative about where the economy is headed can be significantly different from the central bank's narrative, and that's natural and useful, M. King notes. Forward guidance policy, which combines the reaction function of monetary policy with the central bank narrative, is dangerous, in his opinion, precisely because it weakens the impact of the debate on the economy and shifts the market's attention to quasi-commitments by central banks about the future trajectory of interest rates [15]. The experiment conducted by L. Summers demonstrates the complexity of reflecting structural changes in macroeconomic models. With the help of a large dynamic stochastic model of the Fed FRB/US, he estimated the impact of an annual increase in the budget deficit by 10% of GDP on inflation for seven years and obtained its increase by only 70 p.p. [16]

According to M. King, "In a world of radical uncertainty, the Holy Trinity comprises a narrative about the changing structure of the economy that is explained clearly and transparently; a process by which the prevailing narrative can be challenged; and a heuristic for setting policy that is robust with respect to the many surprises in the economic climate." [15, p. 9].

**Lesson 6.** *The concept of monetary policy independence in EMDEs with small open economies should be considered more widely: a system of flexible exchange rate formation, significant foreign exchange reserves, and sound fiscal policy is not enough for this. The international economic order must take into account the disproportionately large losses of this group of countries from importing inflation and recession from advanced economies.*

A sustained transition to a more fragmented global environment will mean greater upheaval for EMDEs due to their greater vulnerability to commodity price shocks and exchange rate pressures, the possible difficulty of borrowing technology from the rich world, and the difficulty of developing international debt relief mechanisms for weaker economies. This puts the central banks of this group of countries in worse conditions of choosing between goals, forcing them to tighten monetary policy to contain inflation at the expense of a significant reduction in growth rates [12].

The existence of such an unfavourable choice for the macroeconomic policy of EMDE should be taken into account in the policy of international economic and financial organizations, especially in the conditions of a likely long cycle of increasing global interest rates.

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**THE VALUE DIMENSION OF ECONOMIC RECONSTRUCTION:  
CONFUCIAN EXPERIENCE FOR THE POST-WAR REBUILDING  
OF UKRAINE**

For the time being much attention is paid to the geopolitical struggle and resource confrontation: who has more resources and influence, whose tools will be more effective in the current global confrontation with localization into the full-scale war on the territory of Ukraine. However, no matter how breath-taking the current global confrontation and fundamental, tectonic shifts of the geo-economic system of the modern world are, this is more an empirical level of what is happening.

Meanwhile, it is important to investigate the deep nature of those two global centers of power – the Western one around the Washington-London-Brussels axis and the conditionally Confucian-Eurasian one, gravitating towards Beijing with semi-peripheral poles in Delhi, Moscow, Tehran, probably also in Ankara, Pretoria, Brasilia, Buenos Aires, and more recently in Riyadh (Saudi Arabia).

In the Western camp, which strongly supported the sanctions against Russia, and these are about 50 states of the world, today there is practically not a single former colony of the West, save mostly Anglo-Saxon population countries like Canada and Australia. And this is a rather alarming signal for a unipolar heliocentric system. Former colonial and semi-colonial countries gravitate more towards the Confucian pole.

In this regard, it seems very important to understand the difference in the nature of the Western and Confucian economic order, economic systems.

As Joseph Schumpeter put it in his famous "The Theory of Economic Development": "If economists have had something to say on the theme of economic development, "this is only because they did not restrict themselves to economic

theory, but <...> studied historical sociology or made assumptions about the economic future [1, p. 59–60]."

According to Fernand Braudel, the long duration (*fr. longue durée*) historical time characterizes the large structures of the coexistence of people that maintain the integrity of large socio-cultural formations (civilizations) [2]. So, Braudel's methodological approach allows us to determine that the traditional economy of the Confucian tradition, which developed in the 17th – the first half of the 18th century, is a labor-intensive economy based on the desire for social stability and harmony, on the balance of state, communal, family and individual interests, honoring elders in the hierarchy in the family and society, and on market exchange, motivated not by the interest of maximizing profits and capital, but by the desire for the harmonious reproduction of one's place and vocation.

As posited, after Adam Smith, contemporary renowned American World System School sociologist and economist Giovanni Arrighi, Capitalism comes when social conditions change in relation to the change of decision-makers and organizers of production and the loss by direct producers of control over the means of production, so that the main factor-motive, profit maximization, comes into play [3, p. 24]. As Fernand Braudel put it, "Capitalism only triumphs when it becomes identified with the state, when it is the state [4, p. 92]". And it was almost never a case for China. Despite the spread of market exchanges in the pursuit of profit, therefore, the nature of development in China is not necessarily capitalist.

In the Confucian tradition system profit and wages are not the principal motivator of the economic subjects' behavior.

The economic resurgence of China incited among quite a large group of scientists of the world a new awareness, a kind of discovery (or rediscovery) that trade and markets were more developed in East Asia in general, and in China in particular, than in Europe, through the eighteenth century [3, p. 26]. Thus, for almost the entire 18th century, the Chinese economy surpassed the Western economy in terms of market development.

China's economy has never been capitalist in the sense that profit and capital maximization have never been the main engine of the economy or the basis of decision-making by the main economic entities, while retaining a strong overall basis towards the East Asian centuries-old tradition of greater utilization of human (primarily domestic) than of non-human resources [5].

As a as a typical example, one can take contemporary great amount of traditional Chinese or Japanese ethnic cuisine restaurants with their stable menu, no advertisement campaigns, absence of information or very scarce information in foreign languages, and the staff almost never speaking English or another Western language. And the prices for traditional dinner are very moderate. This is a family business throughout generations. And this picture is characteristic even for the capital city areas adjacent to the world class university campuses where thousands of foreigners' work, study and live.

As Giovanni Arrighi emphasizes, both Adam Smith and Karl Marx singled out as the key specificity of the European path in its extraversion, its embedding in the global market, and the "retrograde" direction of its progression from foreign trade, to industry, to agriculture. And even industry became their main foundation only after several centuries [3, p. 90].

In 1700 the combined GDP of the US and UK (in modern boundaries) was ten times bigger than (versus the combined GDP) that of China + Japan [3, p. 38, based on 6].

And only after 1870 jointly the US and the UK surpassed (outperformed) left China and Japan behind according to this indicator. I.e., the East Asia Economic leaders have been yielding to the Anglo-American world leaders for approximately 150 years out of more than 500 years of the New Time, or Capitalist, era (since the discovery of America and the start of the Protestant Reformation).

And today the picture is again in favor of East Asia, as in 2017, according to World Bank and IMF, China overtook the USA in GDP on purchasing power parity

basis [7], while back in 2012 China overtook the USA as the world's biggest trading nation in goods [8].

In fact, prior to the Great Divergence between East and West at the turn of the 18<sup>th</sup> and 19<sup>th</sup> centuries, the East Asian developmental path, and that of China in particular, was as market-based as the European but was not the bearer of a capitalist dynamic [3, p. 93]. From the long-duree world-system methodological viewpoint, we see that China has its own robust market economy tradition. It echoes with Grzegorz Kołodko's insights about the China's "Third Way" [9].

Unlike Russia and some other post-Soviet states, since the start of implementing the "socialist market economy" reforms China never confused ends (the welfare of the population) with means (privatization and trade liberalization). It always strived more or less successfully for "a socially more equitable and <...> more sustainable development path" [3, p. 10].

The Deng Xiao Ping reform and post-reform China always considered social stability as a top priority, so that job creation had to go hand in hand with restructuring the economy. According to Joseph Stiglitz: "When China liberalized, it did so gradually and in ways that ensured that resources that were displaced were redeployed to more efficient users, not left in fruitless unemployment [10, p. 125–126]." Moreover, China fully used the great opportunity of the US-USSR Cold War confrontation and the Nixon-Kissinger's turn to China in 1971 just to obtain very favorable conditions and access to the huge US and Western markets and technologies.

As soon as wages in one country rose even fractionally, that country had to seek a new industry which would produce a higher quality commodity to survive the competition, producing an effect like the flying geese pattern of economic development originally described by a famous Japanese economist Kaname Akamatsu [11]. Following the successful experience of the post-war Japan and South Korea's economic modernization, China made full use of the synergy effect of the

flying geese paradigm, a leading sector model of spatial diffusion of industrial innovations.

In China, innovation is not seen as a delicate or enigmatic task that can only be carried out by special individuals, and it is certainly not something that needs to be protected from government interference. In contrast, innovation is seen as a social and economic process that can be steered and expedited with the proper balance of material resources and institutional tenacity. China's strategy has produced more scientific advancements and commercial success than most American experts anticipated was conceivable, even though it runs counter to Silicon Valley's deeply ingrained beliefs about the importance of free markets and free expression.

As points out American analyst Matt Sheehan, any complacency regarding American technological dominance has vanished in recent years. The US government is currently attempting to emulate Chinese innovation and high-tech investment. A promising beginning for this kind of experimentation is provided by the congressional proposal to establish a "technology directorate" under the National Science Foundation, a new agency with the authority to link academics, government, and business [12].

Ukraine as well can adapt the East Asian, especially the flying geese paradigm, experience for the post-war reconstruction of its national economy.

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## **ECONOMIC DIPLOMACY WITHIN GEO-ECONOMIC SHIFTS OF THE WORLD AND GLOBAL TRADE**

In conditions of geopolitical instability, an absolutely new quality of relations of international economic relation stakeholders is appearing, diplomacy economization and modernization of states' trade policies and customs territories are taking place. We have entered the world where extreme uncertainty is dominating and we are dealing with new diplomacy boundaries. We must accept a new reality and adapt to it prioritizing flexibility and sustainability. The uncertainty has turned into a rule. Events that were not supposed to ever happen, are happening one after another. This way, "black swans" (exceptional events) will turn into a majority. These theses started the speech of Josep Borrell at EU Ambassadors Annual Conference in Brussels on October 10, 2022 [1]. He highlighted that the old world does not exist anymore and pointed out four factors of the global crisis. Firstly, Ukraine. The full-scale war in Ukraine continues and the country efficiently and successfully resists the enemy; also, open nuclear threats of Putin and mass mobilization in the Russian Federation. Secondly, China. Deep US-China competition and tension escalation in Taiwan. Thirdly, global food and energy crises. Josep Borrell stated that they had

been predicted but not as acute as they are now. He said that the world is entering a perfect storm. Firstly, prices are rising. Secondly, central banks are increasing interest rates. The United States is the first to do so and others have to do the same, otherwise their currency will be devalued. And fourthly, security situation. Dangerous megatrends and security issues in the European neighbourhood that are not limited to Ukraine only.

Josep Borrell identified three features of the modern world. First, the world has entered a chaos multipolarity. There is a competition between the USA and China and it is "structure-forming". The world is moving around this competition whether we like it or not. Nowadays, there is an authoritarianism trend in the world. The second feature says that we have a competitive world where everything is turned to a weapon. Power engineering, investments, information, migration torrents, data, etc. are all weapons. There is a global war going on for access to strategic spheres: cyberspace, sea or outer space. The third feature of this world is increasing nationalism, revisionism and identity policy.

According to Stephen Roach, ex-Chairman and Chief Economist of Morgan Stanley Asia and Senior Researcher at Yale University, the world economy globalization which started after the Cold War, is moving backwards today [2]. In his opinion, the decrease of global trade growth pace is intensified by production chain failures, e.g., the pandemic, issues caused by the US–China trade war as well as attempts to create cross-border economic relations according to geo-strategic alliances (so-called friend-shoring). Similarly, Russian full-scale invasion of Ukraine has had a considerable impact on geo-political instability [3].

Increasing geostrategic contradictions intensify the deglobalization process. Friend-shoring policy basically transforms calculations of the efficiency (within Ricardo's definition) of international trade to assessment of benefits of strategic alliances with countries sharing the same safety opinions. Thus, among many globalization indicators including financial, information and labour torrents, international exchange of goods and services is mostly connected to economy growth

pace. According to Stephen Roach, mostly due to this problem, the global trade pace decrease, which started after the Global Financial Crisis of 2008–2009 and aggravated during the COVID-19 pandemic, indicates deep financial changes in the globalization process.

Under the conditions of global geopolitical instability caused among others by the Russian full-scale invasion of Ukraine which drastically effected the ability of the latter to fully produce and export a number of product groups, in order to create critical reserves of national food security, countries and particular customs areas resorted to implementing numerous non-tariff measures to regulate agricultural products trade including full ban of such products export. A lot of countries have already experienced serious economic consequences of the Russian full-scale invasion of Ukraine. These two countries are major exporters of agricultural products and fossil fuels, therefore, hitches in supply of these goods and resulting price hikes are being observed all over the world. Since the countries of the Black Sea region are significant exporters of fertilizers, deficit and price hikes may lead to a decrease of yield in many world regions. This, in its turn, may lead to food prices peaking again [4].

New nature of international economic relations is caused by the absence of coordinated rules of the game on the global market where countries' governments are compelled to actively create law and organization framework for already globalized economy functioning where their role is not less but is transformed and adapted to new conditions. As it is widely considered, economic diplomacy development peculiarities and decisive economization of foreign political activity were founded in the late 19<sup>th</sup> century by the USA and they have become a role model for many other states [5].

A major feature of economic diplomacy in the early 21<sup>st</sup> century is its comparatively open character. Leadership in defining urgent issues in agricultural development, market strategies and issues of global and regional development is counted on. Evidently, the most active countries are heavily industrialized ones

which possess enormous financial, organizational, intellectual, scientific, technical and other resources. The majority of these countries rely on strong economic base and pursue global interests. Therefore, methods of economic diplomacy are gaining particular significance [6, p. 3; 7]. And in order to create a foundation for their efficient use, economic interests of a country must be concentrated as distinctive political goals, since should there be no real prioritizing when considering economic needs while making political foreign economy decisions, it is hard to hope for serious diplomatic cooperation within the current conditions, the conditions of economic globalization which among others involve either substantial initiative financial investment or action coordination and partnership with a more competitive side. It must also be considered that even economic interests of allied countries may and constantly come into conflict reflecting acute competition at the global market. A particularly complicated situation demands that states' governments, business, science and civil society suggest adequate responds and decisions which are relevant to these challenges. Social enquiry and citizens and business' expectations of advanced economy development within the conditions of geopolitical instability define further actions of governments. It also concerns Ukraine.

Therefore, there may be drawn a conclusion about the dynamization of the diplomacy economization process within the context of geo-economic shifts of the world and global trade in order to secure economic resilience. Although "economic resilience" has become a popular term to capture the broad and diverse factors and strategies needed to reduce business interruptions and economic losses caused by shocks, it lacks a common definition [8; 9]. The "economic resilience" is defined as the ability of a system, including households, firms, and governments, to prevent and prepare for, cope with and recover from shocks.

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*First of all, I would like to thank the organizers of the conference for holding today's forum despite the current political situation in Ukraine.*

*It is a great honor for me to greet the conference organizers, participants and guests.*

*First of all, I want to support Ukraine and the Ukrainian people in the fight for freedom and protection of national interests. The Georgian people express their solidarity and they will be by your side until victory in this battle.*

*Georgians and Ukrainians have historically been friends for a long time.*

*Georgian – Ukrainian relationship is based on the traditional partnership and close cooperation.*

*Ukraine is one of the largest and most important trade partners of Georgia. Between Georgia and Ukraine there is free trade regime, which is legally regulated in both bilateral and multilateral format (within GUAM).*

*Important part of cooperation is sharing of experience regarding successfully implemented reforms. Collaboration is also actively developed in the fields of agriculture, public health, sports and youth. Direct scientific–educational ties have been established between major universities of the two countries.*

*Cooperation in the field of tourism is one the main priorities. Georgia is one of the most important destinations for Ukrainian tourists, bright example of which is the increasing number of Ukrainian tourists in Georgia.*

*I would also like to note with pride and joy the scientific-research cooperation between Ukraine and Georgia, which today's conference is proof of. Despite the intense political climate, the Ukrainian scientific community continues to work intensively in the scientific direction. On behalf of Georgian science, I would like to point out that such connections and cooperation are very important for us as well. Georgia also recently experienced similar political tension, in the form of the Russian-Georgian war. We know the cost of the consequences of this war and we are deeply convinced that knowledge, knowledge-based development and socio-economic and political relations supported by scientific knowledge will save these two countries and lead them to independence.*

*I wish today's conference to be fruitful and successful!*

### **FEATURES OF COMMERCIALIZATION OF INNOVATION**

**Abstract.** *Development of the modern stage, the difference between rich and poor countries is expressed not only in the volume of financial resources but lacking knowledge. Currently, development is considered by the level of knowledge particularly, the technical and socio-economical levels. Overcoming the lack of knowledge of the conditions is a difficult task. To eliminate Technical backwardness, developing countries have to acquire knowledge, its utilization, and mechanism of consistent transfer. Objectives of knowledge acquisition should include using knowledge to solve problems.*

*The article discusses the peculiarities of Georgia's innovative activity and the problems of commercialization of innovation and patent activity are noted there. In the conclusion, there are made recommendations for problem-solving.*

In highly efficient industrial economies, the process of commercialization and transformation of innovations and scientific research results into industrial business are particularly developed today.

Scientists describe the modern global economy as transitioning to an "innovative (knowledge) economy".

Innovation is the result of innovative activity. The specific content of innovation is expressed by change, transformation. The main function of innovative activity is to implement change. The innovation process is related to the creation, adoption and dissemination of innovation. Creators of innovations use such criteria as product life cycle and economic efficiency. Their strategy is aimed at winning over competitors, creating a unique innovation that will be recognized in the given field.

Developed countries are convincingly moving to a fundamentally new stage of development – innovation. The process of using innovations becomes a re-production process on a deliberate, purposeful and systematic basis.

At the modern stage of world development, the difference between rich and poor countries is manifested not only by the financial resources amount, but also by the lack of knowledge. Currently, development is considered according to the level of accumulated knowledge, in particular, the level of technological and socio-economic knowledge.

Overcoming the lack of knowledge in modern conditions is quite a difficult task. Due to technological backwardness, developing countries should clearly establish a coherent mechanism for acquiring knowledge, its utilization, transfer and use. Knowledge acquisition task should include the use of existing knowledge in the world to solve one's own problem, which is ultimately related to the embodiment of innovative activities.

Innovative cycles are an important condition for the goals and objectives of innovative development. The innovation cycle includes the period that involves the creation of idea, development and implementation of this innovation. The basic links of the cycle are: science-production-consumption. According to I. Schumpeter, the basis of economic development is the use of innovations.

Companies will not succeed in the conditions of intensified competitive struggle if they do not make timely innovations in their technological process, do not optimize

communication and management, and do not implement new innovations before competitors.

The main factor in the formation of a new economy is the dynamics of innovation. The term "innovative economy" comes into use. The innovative economy developed as a result of a specific type of investment that accompanies the most recent technological progress. Due to the fact that such investments were made directly in the risky sector of production, they received the name of risky, venture investment.

Unlike investment typical for industrial production, which bring 2–3% annual profit, venture investments are able to bring unprecedented profits from 20–30% to 200%. Of course, the risk of failure increases at the same time. It is the kind of investment that underpinned the commercial boom in high-level technology. They have always accompanied their development, leading to both their massive collapse and revival. Currently, venture investments form the basis of each new generation of high-tech production, including bio and nanotechnologies. The prosperity of any country depends on the level of development of the national innovative economy.

Since the 1990s, two most important trends have been observed in the field of innovative activities of developed countries: the first is that the financing of scientific research works is gradually moving from the state sector to the private sector; Second, the role of venture capital in the development of scientific research and new technologies is increasing more and more.

The creation of new technologies and knowledge and their use for socio-economic development of the country determines the role and place of the country, the level of national security around the world. 80–95% of GDP growth in developed countries is due to the use of new knowledge in techniques and technologies. Therefore, innovative economies are developing in these countries, Companies in developed countries spend more and more on research.

As a result of the analysis of Georgia in recent years, it was revealed that compared to the indicators of 2020, the rating of Georgia according to the global



index of innovation has determined and moved from the 11<sup>th</sup> to 74<sup>th</sup> place. A downward trend was observed in the market development category from 34<sup>th</sup> to 72<sup>nd</sup> place, in the human capital category from 60<sup>th</sup> to 70<sup>th</sup> place, in the business development category from 61<sup>st</sup> to 64<sup>th</sup> place, and in the creative product category from 74<sup>th</sup> to 86<sup>th</sup> place. Institutions and infrastructure ranking and knowledge and technology index have improved slightly.

Regarding the use of innovations, the issue of patents is very important and noteworthy. The deep meaning and economic benefits of patents are effectively used by the developed countries of the world, which is also demonstrated by the dynamics of patent applications. In 1985–2013, the number of applications for inventions in the world exceeded 2 million. The owners of the largest portfolio of US patents are IBM; Samsung; Microsoft; Canon; Panasonic. The modern patent strategy of competitive companies is a combination of monopoly maintenance and licensing activities. According to the World Bank, the licensing potential of the world is up to 0.5–1.0 trillion dollars; Annual license of IBM is 1.0–1.5 billion.

The data from National Intellectual Property Center of Georgia for 2010–2013 show the negative dynamics of inventions, according to which 24 out of 137 inventions are patented.

The analysis revealed that decrease in the number of patents was caused by a sharp increase in the patent fee to 700 dollars. The innovative activity was no less affected by the total cancellation of scientific centers and institutes and the dismissal of experienced specialists, which caused an artificial suppression of the innovative potential in Georgia.

Although, the situation has changed since 2015, there is still a lot to be done in the direction of scientific inventions.

Based on the abovementioned, it is necessary to develop a new innovation strategy, on the bases of which the national scientific forces in Georgia will be given the opportunity to use national resources to create and launch scientific-business incubators (only the technical university base is not enough); clusters; It is necessary

to create and operate techno parks in separate territories (Mtskheta, Rustavi, Tbilisi, Kutaisi), where the Georgian innovative potential, based on cooperation, will be able to develop its capabilities, which is very important for innovative knowledge and socio-economic development of Georgia.

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## **THE INFLUENCE OF WAR IN UKRAINE ON GLOBAL TRADE**

The horrible war in Ukraine has brought enormous human suffering, and also threatened the financial stability by affecting almost every aspect of the economy and financing conditions. It directly affects global trade and investment.

Five trade and investment channels through which countries are affected by Russian aggression against Ukraine have been identified. They include:

- I. Commodity market (especially food and energetics),
- II. Logistic networks,
- III. Supply chains,
- IV. Foreign direct investment,
- V. Individual sectors.

It is noted that world trade will decrease by 1%, which will lead to a drop in world GDP by 0.7% and the GDP of low-income countries by 1%. Beyond these immediate effects, the long-term effects of war on world trade and investment will depend largely on how governments respond to the changing geopolitical environment.

In the long run the war may radically change the global economical and geopolitical order, if the energy market, the supply chains are reconfigured, payment networks are fragmented, and countries rethink their reserve currencies. Rising geopolitical tensions further raise the risks of economic fragmentation, especially for trade and technology.

The Russo-Ukrainian conflict have highlighted that some countries can be completely cut off the global financial system, and their painstakingly accumulated

dollar reserves can become worthless in a few days. This is likely to accelerate the shift away from the dollar to alternative assets and payment systems.

In addition to the imbalances in the global dollar-based financial system that have been observed for some time, we are now seeing the effects of the use of the dollar as a weapon on the global economy and world power. While this is a constant threat, and countries have sought ways to diversify their financial systems over the past two decades, the speed and severity of sanctions imposed on Russia's Central Bank and the country's closure of SWIFT have highlighted the necessity of access to the dollar.

Over just one night Russia have found itself in a financial dead end, with its citizens losing their savings to the steep fall of the ruble, which has fallen by 50% since the start of 2022.

The Ukrainian crisis have created a global humanitarian crisis of enormous proportions, and also dealt a serious blow to the world economy. The biggest weight of the suffering and ruination is being felt by the Ukrainian people itself, but the impact of damaged trade and production, would probably, be felt by people in the entire world due to rising food and energy prices, as well as reduced availability of products exported by Russia and Ukraine. The poor countries are at higher risk of war because they tend to spend more of their income on food compared to richer countries, which can lead to a huge political instability around the world.

From the macroeconomic point of view, the higher food and energy price will lead to a reduction in real income and global demand for import. Sanctions will damage economy not just of Russia but also of it's trade partner. Besides Russia and Ukraine, the decline of GDP will, probably, be observed mostly in Europe, given the regions geographical proximity and its dependence on Russian energy.

Trade costs will rise in the near future due to extreme sanctions, export restrictions, high energy costs and supply chain disruptions. As a consequence, the influence this war had on the world trade in 2022 can be more significant than its influence on the global GDP. Although the shares of Russia and Ukraine in world trade and production are relatively small, they are important suppliers of basic commodities,

including food and energy. In 2021, the two countries accounted for 2.5 percent of global merchandise trade and 1.9 percent of global GDP. However, in 2019 they supplied about 25 percent of wheat, 15 percent of barley, and 45 percent of sunflower product exports, 9.4 percent of global fuel trade, including 20 percent of fossil fuel exports. Many countries are very dependent on food imports from Russia and Ukraine, for example, more than 1/2 of wheat imports to Egypt, Lebanon and Tunisia come from Russia and Ukraine. Other countries are more dependent on fuel imports from Russia, such as Finland (63 percent) and Turkey (35 percent). Russia and Ukraine are also key suppliers of resources for industrial value chains. Russia is one of the world's largest suppliers of palladium and rhodium, key raw materials for the production of catalytic converters in the automotive sector, and therefore for the production of semiconductors. Production of semiconductors is also heavily dependent on neon, which is supplied by Ukraine, which also provides a range of low-tech products such as wire harnesses. Prolonged disruptions in the supply of these goods could harm the recovery of the automotive industry. The sanctions are already having a strong impact on Russia's economy, with possible medium- and long-term consequences. Disconnection of the Russian banks from the international transaction system SWIFT and the blocking of Russia's use of exchange reserves provoked a sharp depreciation of the ruble, reducing real incomes in the country.

The vast majority of big international companies are also leaving the Russian markets, Export of petrol oil and gas exports haven't yet been heavily sanctioned, but the crisis can accelerate the transition from fossil fuels to more environment-friendly energy sources. Long-lasting economic relations are being disrupted by the war and the sanctions imposed after it. Prominent economists have modeled various scenarios, bracketing the channels through which trade may well be affected, and exploring possible short- and long-term consequences. It is predicted that the global trade growth may slow down to 2.2 percentage points in 2022. Long-term influence may even be indirect, there's a risk that trade may become more fragmented in terms of bloc-based geopolitics. Regardless of whether official blocks emerge, private actors may prefer to

minimize the by reorienting supply chains. This may reduce the global GDP in the long-run by around 5 percent, in particular by restricting the competition and by suppressing the innovation (WTO, 2022). The global economy plays a crucial role in mitigating the negative effects of the crisis and in rebuilding the post-war global economy. Keeping markets open is critical to ensuring that economic opportunities remain open in all countries. This can be very true in the post-war period, when businesses and families will have to save their balance sheets and rebuild their lives.

Due to its importance for the international trade and its function in monitoring and convening, the WTO plays a central role in ensuring that international trade continues to serve billions of people around the world.

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## **GEOPOLITICAL FACTORS OF TRANSFORMATIONS IN CAPITAL MARKETS**

Over the past 15 years, capital markets have undergone quite serious transformational processes. Impulses to them had their reasons and periods. Basically, they lie in the plane of upheavals that have not only economic and financial causes, but also geopolitical, pandemic, social, man-made, trade, etc.

The capital market experienced the first serious impact in recent history after going through the financial crisis of 2008. The financial crisis changed the landscape of all global financial markets. This led to a series of events that had a chain reaction. Low mortgage rates gave rise to the phenomenon of secured debt. Unlimited mortgage loans were issued at low interest rates. Such loans were pooled and resold as collateralized debt obligations (CDO).

Such securities were insured against default through credit default swaps (CDS). The risks of CDOs were rated as minimal, so insurance was cheap, which led to the mass issuance of mortgage loans without due diligence on borrowers. Due to such a scheme, the real estate market took on the characteristics of a pyramid and had a speculative character, which inevitably led to its collapse in 2008.

The US government decides to help the financial sector, and in December 2008 the US Federal Reserve developed and implemented a quantitative easing program, which was carried out in several stages. As a result, during the period of the KP policy, the US Fed's asset balance increased almost 5 times [1, p. 78]. All these funds got and mainly got into the stock markets, and not into the real economy.

The second period of influence on the capital markets is connected with the pandemic crisis, which in 2020 spread around the world, starting with China. This crisis for the countries of the world and their financial markets became one of the deepest, although not long-lasting. The chief economist of the OECD, Lawrence Boone, estimated the total losses of the world economy from the coronavirus pandemic at 7 billion dollars. until the end of 2021 [2]. IMF Managing Director Kristalina Georgieva estimated the damage to world GDP from the corona virus at \$30 trillion. in the next five years after the crisis [3].

Monetary and fiscal support was quite significant in many countries of their own economies. Professor Pierre Oliver Gourancho calculated the global effect of anti-crisis measures. According to his team's estimates, the total volume of anti-crisis measures amounted to 11.3% of global GDP, including 16.6% of the GDP of developed countries and 5.9% of developing countries (the estimate included

payments to the population, support for companies, state investments, business loans, as well as unreceived income from tax benefits) [4].

Such support could not fail to affect the global capital markets and had both positive and negative consequences. Monetary policy has always been a tool for curbing inflation, with the help of fiscal measures, the tasks of increasing investments in infrastructure, health care, education, business support, etc. were solved. However, at the same time, it had the negative consequences of swinging inflation and unbalanced budgets. It should be noted that global inflation is not only monetary (excessive expansion of the money supply) and fiscal (tax incentives and increased social spending). The other concerns the economic restrictions of the states in connection with the pandemic, which led to the loss of established logistic routes for the supply of goods, a shortage of supply of goods, a decrease in the income of certain groups of the population due to the loss or reduction of working hours, etc. Risks of loss of financial stability and volatility increased in the capital markets.

One of the positive consequences and the third factor influencing the transformation of capital markets was the increase in the role of digital technologies in economic and financial world processes as a result of the pandemic crisis. The current situation accelerated the development of digital technologies. Cloud services, blockchain technologies, Big Data technologies, artificial intelligence, machine learning technologies, etc. began to develop. Digitalization in financial and other areas has made it possible to increase and expand online financial services in contrast to traditional financial technologies. The capital market began to move at a rapid pace to companies that served such technologies and provided so-called non-traditional financial services.

The introduction of financial technologies into life has a number of positive aspects for both companies and consumers of financial services. In particular, financial companies have reduced the cost of providing financial and related services, reduced customer service time, switched to online service, optimized the work of offices and employees, and opened the possibility of providing the entire range of financial services, including related ones.



For the consumer, the advantages are the ability to receive information and services remotely, increased mobility, reduction of time and costs for receiving services, convenience of receiving services, the ability to receive services without reference to time (for example, the opening hours of a financial institution), receiving free digital products, expanding opportunities to receive services for people with disabilities or those living in small settlements, provision of alternative financing.

The capital market, with the expansion of the provision of digital services, has become more active due to increased investments in such companies. From 2013 to 2020, investments in fintech projects increased fivefold, although the dynamics were uneven [5, p. 44].

Russia's full-scale aggression against Ukraine in February 2022 became the most painful factor affecting global capital markets. First of all, 2022 was supposed to be the year of the world economy's exit from a deep recession and the resumption of growth in financial markets. Secondly, the world economy intensified and new problems arose, and the exit from the crisis was postponed indefinitely.

One of the main and most critical problems was the possibility of world hunger. Other problems for the global economy and capital markets have three channels – an increase in the prices of raw materials and agricultural products, the loss of logistics chains, economic sanctions against the aggressor. Mikel Ruta identifies five channels of influence on financial markets and investments as a result of the war in Europe, through which the world economy will suffer: disruptions in supplies in food and raw materials markets (in particular, oil, natural gas, wheat, sunflower seeds, mineral fertilizers, other agricultural goods), disruption of supply chains, loss of logistics links, reduction of foreign direct investment and impact on specific sectors of the economy.

Consequences for the world economy. Europe is on the brink of a recession, linked to higher prices for gas and energy, food and agricultural commodities. Inflation rates for almost all countries of the world have reached their peak values.

Fluctuations in exchange rates of major world currencies are observed. This year, the euro rate fell by more than 12%. This is the maximum drop since the period of its management in 1999. A drop in production is observed in those industries that use large volumes of oil and gas for production (chemical industry, automobile industry, aircraft industry, etc.). High interest rates and inflation will take a toll on households and businesses.

Implications for European and American stock markets. The crisis in the world markets could not fail to affect the stock markets. European stock markets were particularly affected, as the cost of borrowing rose sharply and default expectations increased.

It should be noted that the American stock market did not have such severe consequences as the European one. American companies have a low direct dependence on Ukraine (less than 0.1%) and Russia (about 0.6%) as expected by the Russell 1000 index. Although the investment opportunities of American companies may be reduced against the background of increasing inflation and close ties with European companies.

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### **CONTROLLING: FOREIGN EXPERIENCE OF USE**

Countries with developed market economies have accumulated a lot of experience in working effectively in market conditions based on the controlling system, which is widely used, in particular, in many leading German firms. In the theory and practice of managing German enterprises, management accounting is the most important component of controlling. Accounting is divided into financial and production. The controlling scheme operating in Germany cannot be used directly in Russian conditions, since the accounting and analytical schools in Germany and Russia are different and, although they have common features, are based on their own traditions and experience. The mentality of accountants, managers, entrepreneurs is also significantly different. It must be emphasized that in Western countries, including Germany, there is still no clear and generally accepted idea of the content of the controlling system. At the same time, the dispute about whether controlling is needed or not was resolved long ago, since already in 1974 over 90% of large German enterprises, which employed over 5,000 employees, had an institutionally separate controlling unit. Today, the main part of medium and many small enterprises of the country have also introduced the corresponding service. At the same time, the practical tools of controlling at different enterprises differ significantly. The organizational basis of such services is also built differently. Controlling is not identified in Germany with the words control and revision. Although they are consonant with controlling, they have little in common with it. Enterprise management is the task of management. Real management without control, especially

financial, is not possible. At the same time, it is incorrect to confuse the concepts of management and controlling, since controlling does not implement a managerial function. Employees of the controlling service do not make management decisions, which remains the function of the management of the enterprise.

The controlling services available in most German companies are primarily concerned with the accounting and analysis of costs, as well as the results of financial and economic activities. Specific actual data for analysis is provided to the Accounting Controlling service. The controller receives statistical materials, plan data and the results of comparing the actual values of indicators with the planned values from the planning and financial services of the enterprise. On the basis of the calculations, the controller offers the company's top management recommendations for reducing costs, increasing profits, profitability of production and sales. Based on such recommendations, the best management decision is selected from among the available alternatives. Controlling is widely used in forecasting prices for products and services, to determine the maximum allowable limits for prices and tariffs, to calculate the expected profit, tax payments and formed reserve funds. As part of controlling, the effectiveness of various investment options is checked before and during their implementation, project implementation is modeled. The generalized and systematized information provided by the controlling service to the management of the enterprise is of great importance not only for operational, but especially for strategic management.

The practical results of the introduction of the concept of controlling can be demonstrated on the results of the work of the joint-stock company "Continental", where this process has been developing for more than 40 years. During this period, the market situation, the organizational structure of the enterprise has been transformed many times, but business development has been going under the sign of growth. This company is one of the world's largest tire manufacturers, also producing a wide range of synthetic rubber products. Currently, the concern includes more than 90 industrial, marketing and trade enterprises in a number of countries in Europe and

North America, providing about 50 thousand jobs and an annual consolidated turnover of several billion euros.

The areas of application at these enterprises of controlling are delimited by departments, taking into account the technological chain of production, for example, the manufacture of tires for cars and trucks, the production of various kinds of products from synthetic rubber, production maintenance lines, etc. Management of all current activities of the Continental company is carried out by the board, which functions in close relationship with the board of subsidiaries. During the process of decentralization of management, responsibility for the final financial results and operational management functions are delegated to a subsidiary, and within the latter are distributed among profit centers. Thus, the processes of production and marketing of tires for cars and trucks are under the jurisdiction of central services, and the enterprise for the production of products from synthetic rubber is separated into independent profit centers. The center is also in charge of cash flows, investments, development of information systems, strategic goals of the company and control over their implementation. The controlling service is faced with the task of serving the management, which consists in solving individual managerial problems in the short term, as well as in presenting to the board of the joint-stock company data on the costs, results and financial condition of subsidiaries and profit centers. Since the financial policy of subsidiaries can sometimes diverge from the strategic objectives of the whole company as a whole, it is necessary to adjust plans and control their implementation at the appropriate levels of responsibility, costs and profits. For example, in the management process at Daimler Benz (which unites a number of large subsidiaries, such as Mercedes Benz, AEG, Deutsche aerospace), target plans are drawn up (strategic planning), plans are put into practice (operational planning), the results obtained are compared with the set goals (comparison of actual indicators with planned ones), deviations are analyzed, appropriate decisions are made to eliminate shortcomings and adjust plans. Thus, the enterprises themselves develop optimally.

For example, in the management process at Daimler Benz (which unites a number of large subsidiaries, such as Mercedes Benz, AEG, Deutsche aerospace), target plans are drawn up (strategic planning), plans are put into practice (operational management), the results obtained are compared with the set goals (comparison of actual indicators with planned ones), deviations are analyzed, appropriate decisions are made to eliminate shortcomings and adjust plans. Thus, the enterprises themselves develop optimally. In JSC "Continental" the development of controlling began with the analysis of production and marketing costs of individual divisions of the enterprise. It was initially carried out centrally, exclusively at the operational level. In addition to the center, controlling developed at subsidiaries, and operational controlling began to be combined with strategic. At the same time, the areas of application of controlling were clearly defined. Thus, the controller is not responsible for financial and production accounting, financing processes, cash flow management, taxes and insurance. In addition, the controller is not engaged in control and auditing activities. A different picture is observed at medium-sized enterprises that produce industrial products and provide a wide range of services. For example, in Schering JSC, Festo LLC, Shtil LLC (Stuttgart industrial region), production accounting, in essence, has become an integral part of the controlling service. In AOZT, Hewlett Packard abandoned central regulation altogether and created a network of controlling services in the company's divisions as part of the decentralization process.

In JSC "Continental" the controller has the right to "veto" when making many management decisions. In particular, the consent of the controller is required when setting prices for products and services, new investments, calculating the cost of production, making decisions such as "make or buy", determining the assortment or entering into a dispute with the manager, the decision is made by a higher management and controlling body. The cornerstones of both operational and strategic controlling are systems of information support, accounting and analysis, planning, and control. In JSC "Continental" internal reporting and information support perform the task of planning and reporting data for responsible managers. Clear and concise,

complete and timely information should be presented for consideration, distributed both by levels of responsibility and by the degree of complexity of making managerial decisions. Strategic goals are set at the enterprise in terms of the volume and range of output, market shares, the values of indicators of the annual financial plan (budget) and the preparation of measures to achieve the set goals. To set strategic goals by product type and market share, a standardized form is filled out, which analyzes market conditions and provides information about competitors, assesses possible risks, and also provides a financial assessment of upcoming events. The reporting information contains a description of the actual data on all indicators of financial and economic activity and liquidity of JSC "Continental", the results of the analysis of deviations of the actual values of the indicators from the planned ones, as well as the forecast of further developments. It also provides an assessment of the effectiveness of already implemented and only yet considered measures to reduce costs and increase profitability. Own internal reporting systems have been developed, in particular, also in the Volkswagen concern, Bertelsmann JSC, Porsche JSC, Markvardt CJSC.

Reporting and information in the strategic control system covers the re-examination of the strategy of named enterprises in the light of current changes as a first step towards the preparation of an annual financial plan. The data of the analysis of independent experts and auditors are immediately taken into account. Reporting and information in the operational control system at the above enterprises is based on such a huge amount of initial information that it certainly requires the involvement of a computer and special software for its processing. For reporting, special accounting and analytical tools are used: direct costing, calculation of break-even points, determination of pricing policy, analysis of the relationship between production volume, cost and profit, etc.

Here it should be noted that on the basis of German experience for domestic industrial enterprises, it is possible to offer a multi-stage scheme for the formation of coverage amounts, and, ultimately, the profit of the enterprise. This approach

increases the effectiveness of internal control over the efficiency of profit and responsibility centers, since in this case the contribution of one or another level of management to the formation of production results becomes more visible.

Compiled reports are submitted monthly by the controller to the manager of the enterprise. In Continental JSC, it includes statistics on the volume of output and sales of products, calculation of production and distribution costs, calculation of financial results according to various cost accounting schemes, calculation of coverage amounts (marginal income), profitability and liquidity indicators, statistics on the movement of labor and stocks, cash flow calculations, investment calculations, etc.

Complete internal reporting of Continental JSC outlines the general economic result of the development of the entire enterprise as a whole and its subsidiaries based on the consolidation of their reports, analysis of the production, marketing and financial activities of the enterprise by profit centers, types of products, methods of implementation, sales market. An indispensable part of reporting is an explanatory note for each level of controlling. Responsibility for the clarity of the flow of information flows, the completeness and accuracy of the information presented in internal reporting lies with the central controlling service and local controllers. The process of strategic planning of JSC "Continental" is as follows: annually from March to May there is an accumulation and preparation of materials, which then directly go into the preparation of the annual financial plan (budget). This stage begins in June with the setting of tasks facing the enterprise, continues throughout the summer and autumn with a detailed study and discussion of each individual article of the plan and follows in the merging of all parts of the plan into a single whole in November. In December, the board of the joint-stock company considers and adopts the financial plan (budget) for the next financial year. During budget preparation, attention is drawn to the preparation and execution of operational plans. Currently, annual planning at the enterprise is expanding to three years. Particular attention is paid to the planning of investments, the introduction of innovations and the technological re-equipment of production. The managers of AO Continental and its subsidiaries are



responsible for the process of strategic and operational planning. They are assisted by controllers of all levels. If the planning service of the enterprise is engaged in strategic planning, then operational planning is the prerogative of the controlling service. Often external consultants are also involved in the problems of strategic planning.

The intensity of the controller's operations to oversee the execution of the note's plans prevails in the operational area. This is typical for many enterprises, in particular, for the limited partnership for shares "Heinkel", which produces chemical products, JSC T. Goldschmidt, etc. According to the control data, JSC Continental prepares a monthly report on the implementation of individual projects and the achievement of the specified values of economic activity indicators. Operational control consists of several interrelated stages. First, there is a presentation of actual data, which is largely decentralized and offers a clear organization of workflow (if possible, a one-time release of the primary document, then processed by means of electronic computers), as well as a clear work of production and financial accounting. The main requirement at this stage is the minimum time gap between the completed operation and the moment of its processing on the computer. Then the planned indicators are compared with the actual ones. Articles of the annual financial plan, for example, the turnover of the amount of coverage (marginal income), profit (loss), cost items are compared with the actual ones, deviations are recorded and analyzed. The same process takes place when checking the progress of individual investment projects. In continuation of what has been started, an operational forecast of the real development of events is made. According to the analysis of deviations, an assumption is substantiated about the possible values of indicators of financial and economic activity by the end of the period under review or at the end of the project. The forecast is prepared monthly. Finally, at the last stage, the annual and triennial plans are adjusted.

Depending on the current market situation, development priorities and promising areas for investment are redefined or confirmed. Strategic control carried

out in the joint-stock company “Continental” also consists of separate elements. First of all, the quarterly strategic reviews highlight the progress of the implementation of individual projects and the successes achieved along this path, as well as the reasons for the failures. Then the information from strategic reviews is processed into a single forecast-planning picture of the most probable development of events. At the same time, conclusions are drawn for the reshuffling of personnel and changes in the nature and volume of funding for certain areas. If necessary, the company's strategy is adjusted according to the results of the financial year. At the same time, individual elements of the plan are eliminated or replaced, but the main line of the company's development, as a rule, remains unchanged. Finally, in some cases, even with the possible involvement of external consultants, a strategic audit is carried out. This concept includes a fundamental rethinking of the strategy of both the group as a whole and its subsidiaries. The decision to conduct a strategic audit is made by the board of the joint-stock company or the boards of subsidiaries. Responsible persons for carrying out strategic and operational control are management and controlling bodies both in the center and in subsidiaries, in separate profit centers. Coordinate and manage control processes by the central controlling service of Continental JSC. Even a cursory acquaintance with the controlling system functioning at German enterprises shows that the differences between Russian and German accounting, analytical, financial and planning services are, in essence, external. Domestic entrepreneurs and accountants solve largely the same problems as their German counterparts. However, the form of labor organization, production, marketing, the culture of market agents, the market infrastructure in Germany are significantly ahead of domestic ones. Meanwhile, due to the unsatisfactory organization of production and management, not to mention mismanagement, our enterprises are suffering huge losses.

It is realistic to put into practice the experience of German firms in the development and application of the controlling system in our enterprises, but this should be done gradually. It is necessary to fully take into account the peculiarities of

the development of economic management at each stage of the advancement of the Russian economy to the market. At the first stage, the problem of survival, the preservation of qualified specialists, and the provision of acceptable wages to them is of paramount importance for most domestic enterprises. In such a situation, a simplified version of operational controlling can function, focused on the maximum utilization of existing production capacities and the production of products that break even in terms of direct costs while ensuring its sale and payment. At subsequent stages, it becomes realistic to use more methodologically complex controlling options based on choosing the best alternative for capacity utilization, using various discount systems to ensure more efficient sales of products, etc. The most complex controlling system is characterized by the search for and justification of the choice of the option of production and financial investments. It is realistic to apply it in practice in the conditions of Russia when the economic situation at enterprises is firmly stabilized, and market management tools will be used to the fullest extent.

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### **CORPORATIVE SOCIAL RESPONSIBILITY IN MODERN BUSINESS**

**Abstract.** *Modern business requires modern approaches and innovative processes, although the issue of Corporate social responsibility (CRS) is not a new approach in the field of business management, today's reality requires its more thorough application. Our article is a response of this, where we briefly tried to discuss the reality of Georgia in this direction and also discussed the role, place and steps of the government which must be taken now to present the country in the international arena with better indicators of sustainable economic development.*

The growing competition and globalization in the modern world gradually make more and more necessary for business companies to undertake corporate social responsibility (CSR), which makes this topic more relevant.

Increasingly developing the idea that a business company is responsible to all interested groups and should have other goals besides making a profit. Therefore, it must take into account the social and environmental consequences of its operations, integrate the idea of sustainability into action, be interested in circular production and all together means having corporate social responsibility (CSR).

History shows that basic issues related to business ethics have always concerned society, but the cultural and technological contexts of these social problems have changed over time [9].

In addition to the fact that corporate social responsibility (CSR) is becoming more and more important for competitive success, companies also act for other reasons, we highlight three main reasons [3]:

1. To maintain and increase the perception of justice;
2. Manage relationships with key stakeholders;
3. Reflect their own corporate values.

We should not also forget that there are three driving principles of social responsibility [4, p. 1–7]:

1. Business is a social organization and therefore it is obliged to use its power with a sense of responsibility;
2. The business is responsible for the results related to the scope of its participation in society;
3. Individual managers are moral agents who are bound to exercise good judgment when making decisions.

For the implementation of social responsibility, the size of the company is important (although not decisive). The bigger the corporation is, the higher the motivation to implement corporate social responsibility (CSR), because it attracts more attention of society.

In general, views of corporate social responsibility (CSR) fall into two broad categories: one asserts that business is solely obligated to make a profit while

complying with legal and minimum ethical norms, while the other asserts that business has a wide range of obligations to society.

The traditional economic argument holds that business operators should make decisions that maximize the wealth of the firm's owners. However, traditional financial logic also asserts that social responsibility is incompatible with economic goals and should therefore be avoided.

Investors are becoming more and more sensitive to social responsibility issues as it relates to the risks of a business company. This means that companies that do not take this into account suffer from a high cost of capital because it assumes that the risk of the company is the main influencing factor on the cost of capital. Therefore, investors start a social responsibility program in the companies where they invest.

However, it is clear that irresponsible corporate behaviour carries risks. Brand image and reputation are increasingly seen as a company's most important asset. One of the main risks is the danger of harming a good reputation.

It is interesting how the Georgian reality has a connection with the developed history. Unfortunately, it should be noted that Georgia cannot really boast of a high level of corporate social responsibility (CSR), it is rather a sad situation, if only individual companies tried to implement socially responsible actions and implement them in their activities in a fragmented manner.

Those entities that have historically been the initiators of the actualization of the topic in the developed countries of the West, are less developed or passive in this direction in Georgia. In our country, there is little pressure on companies from the media, government, non-governmental organizations and society, as well as trade unions, investors, consumers and labour organizations – to make them more responsible. There is also minimal response to irresponsible actions. On the other hand, the degree of recognition and encouragement of socially responsible companies by local consumers, government, media or investors is much less and insufficient. The development of corporate social responsibility (CSR) is also hindered by difficulties such as the low level of awareness of consumer rights and the

ineffectiveness of the mechanisms for exercising these rights, the absence of consistent legal regulation on issues related to CSR, the absence of socially responsible investments, etc.

A serious problem hindering the development of CSR is also the lack of knowledge and experience in Georgian companies. It is not considered as a concept, an approach related to performance standards, risk management, stakeholder relations, and which should be integrated into core business activities at all levels – the company's mission, strategic decisions and daily operations. CSR is mostly perceived as initiatives independent of the company's main activity, a supplement to the main activity, and is often related to charity, philanthropy, sponsorship, social investments. The business companies themselves identify as one of the main obstacles to the introduction and development of corporate social responsibility (CSR) in their own activities, insufficient level of awareness, lack of experience and knowledge about tools for implementing social responsibility, proper planning, management and evaluation of CSR projects.

Despite the difficulties described above, there are serious prerequisites and potential for the further development of CSR in Georgia, which is indicated by many factors. Among them are the presence of a long tradition of business support for local communities and corporate philanthropy (which establishes connections between business and the society), a fairly broad vision of the role and functions of business in society, and fairly high expectations of the private sector on the part of the society; Realizing the positive impact of CSR on the company's reputation and image; Also, the existence of motivation and enthusiasm to deepen knowledge about CSR concept and implementation tools in Georgian companies.

The majority of large Georgian companies believe that although the primary function of business is profit maximization and economic efficiency, they can and should contribute to the implementation of the country's economic, social and environmental goals.

Companies are willing to act more responsibly, but they often have lack of economic incentives, as well as proper recognition, support and encouragement to develop their socially responsible activities. According to the companies, if the government and other stakeholders create a more friendly environment in this direction, it would give them an incentive. In this context, the business assigns a decisive role to the state policy towards business, the support from the government, the system of incentives or benefits.

The activity of business operators during the period of COVID-19 must be mentioned, 170 companies operating in Georgia showed high social responsibility in the process of fighting the pandemic. The volume of funds deposited in the fund created for the prevention of COVID-19 exceeded 131 million GEL. This is undoubtedly an appreciable step, although Georgian companies do not show social responsibility only in this form. Many of them showed social responsibility in other ways as well – among them were both profile activities (for example, supplying doctors with fuel or food; loan restructuring, etc.), as well as non-profile directions. It is regrettable that due to insufficient communication, the information about the social responsibility steps of certain companies did not reach the consumers. And with this, companies lost the opportunity to establish a positive reputation based on mutual benefit [12].

Based on all abovementioned, the critical role for the development of social responsibility in Georgia is assigned to the government, and it is necessary to [10]:

1. Stimulation and support of responsible business behavior;
2. Increasing awareness and knowledge of business companies;
3. Creating a CSR-friendly environment in the country;
4. Raising the awareness of different sectors;
5. To present its importance for the development of the country;
6. Facilitating the dialogue of interested parties;
7. Development and implementation of active involvement in the development of CSR and correct supporting policy.

CSR development will have many positive results for Georgia. It is considered as a mechanism for increasing the country's economic competitiveness, solving social and environmental problems, attracting trade and investment, as well as achieving sustainable development goals. In countries with transition economies, CSR can become a powerful tool that contributes to the revival of the country and the achievement of public goals. Therefore, the development of CSR will be particularly important and beneficial for Georgia at the current stage.

In addition, CSR development in Georgia will contribute the improvement of the country's image at the international level, the more effective implementation of obligations under international agreements (through the voluntary involvement of the business sector in the implementation of these obligations) and the integration of Georgia into various international structures.

After analyzing the essence and purpose of business social responsibility, its relevance and growing importance for modern society, it can be boldly said: the development of business social responsibility should undoubtedly be one of the main strategic directions of Georgia today. If the country aspires to deepen international relations, the introduction of corporate social responsibility (CSR) principles should be the easiest way to achieve the standards set by international organizations. Due to the fact that Georgia is a member of many international organizations, whose priority is the development of social responsibility, therefore, the country's success in this field will be an important step forward for its international integration [10].

It is clear that the development of corporate social responsibility (CSR) itself follows a highly developed, free market economy in which there is a strong competition mechanism. In the process of fair competition, each company embraces the principles of corporate social responsibility (CSR) as an essential part of its business strategy and essentially considers it impossible to enter the competitive battle and therefore achieve long-term success if it does not include social responsibility as one of the main components of its strategy.



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**TOOLS FOR STABILIZING THE FINANCIAL SECTOR OF  
UKRAINE UNDER MARTIAL LAW**

In the conditions of martial law, the economy of any country, depending on the severity of the conflict, usually shows a drop in key development indicators, which, in turn, indicates a recession. According to the World Bank, Russia's war with Ukraine may threaten a global recession: the decline in global economic growth from 4.2% to 3.2% for the period from March to May 2022 is a serious concern [1].

Special attention should be paid to the financial sector. The strategy of the financial sector of Ukraine until 2025, adopted in 2020, is based mainly on the reforms carried out in the period from 2014 to 2019, which contributed to macro-financial stabilization and strengthening the resistance of financial market participants to crisis phenomena [2].

At the same time, negative phenomena related to military operations can be observed over the past 10 months:

- growth of the dollar and euro cash rate by 1.5 times;
- acceleration of the inflation rate to 26.6% in the annual equivalent (as of October 2022);
- volatility of Eurobonds depending on actions on the battlefield and shelling, which reduces attractiveness for external investors;
- forced alienation of shares of PJSC "Ukrnafta", etc. [3].

That is why, in this situation, the stabilization of the financial system becomes one of the primary tasks of the state economy.

In global practice, the following categories of instruments for strengthening the stability of the financial market are distinguished:

1. GDP redistribution tools (subsidies from the state budget; funds for targeted financing; creation of regional development funds, etc.).
2. Fiscal instruments (direct and indirect taxes; local taxes and fees);
3. Tools for financing public services (municipal securities; resources of credit institutions);
4. Tools of economic growth (domestic and foreign investments; investment subsidies; grants) [4].

In wartime, the above tools take on a specific meaning for several reasons. First, it is not always possible or appropriate to use one or another tool. Secondly, the tool may not give the expected efficiency at the output, which leads to a worsening of the situation. Thirdly, decisions must be made in a short period of time in conditions of increased risk to the life and health of citizens.

In the first category of instruments, subsidies to the agricultural sector need to be revised upwards. For example, UAH 3100. for 1 hectare of agricultural land is quite a small amount to support small agricultural producers. It is also necessary to increase the number and expand the size of the target funds in cooperation with the EU, UN, etc. organizations

Thanks to the fiscal stabilization policy, tax revenues for the period from January to July 2022 will amount to UAH 625.4 billion, which is 19.6% more than in the same period of 2021. Yes, the tax amnesty program was implemented (until September 1, 2022); expanded framework of cooperation with the OECD in matters of tax policy; monitoring measures were carried out to detinize the markets; canceled customs benefits for the import of goods of certain vehicles to the customs territory of Ukraine; optimization of customs operations was carried out; the Institutional Development Strategy for 2022–2027 is being formed.

External grant aid plays a significant role in stabilizing the financial system (80.4 billion UAH for the first half of 2022); expansion of external borrowing programs (UAH 613.8 billion, including raising funds through Government Bonds in the amount of UAH 402.1 billion for the period from January to July 2022); implementation of debt transactions with state Eurobonds and derivatives (GDP warrants), which are expected to reduce the state budget deficit by \$5 billion. monthly until the end of this year [5].

Thus, the state now has a wide range of tools for continuing stabilization measures to strengthen the financial system of Ukraine. However, debt instruments should not be misused without proper provision of real industrial and production capacities. Supporting the agricultural sector is also an important step on the way to increasing export opportunities. At the same time, it is worth creating favourable conditions for the financial logistics of business to facilitate the conditions of the movement of cash flows, but under careful supervision of them in the conditions of martial law.

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### **FINANCIAL DEEPENING FOR ECONOMIC GROWTH**

The global economy is currently in a crisis phase, with increasing financial depth and slowing economic growth that signals a deep and prolonged recession. The war in Ukraine and the pandemic have lowered global growth prospects. Vulnerable low- and middle-income economies face rising inflation and soaring debt amidst the strong dollar and supply chain disruptions. For the first time in history, inflation in the euro area has risen to two digits. Major central banks are tightening monetary policy, fighting to decrease inflationary pressures.

Financial depth refers to financial market size and liquidity. Financial deepening leads to an increase in the percentage of the money supply that constitutes GDP or the price index. Financial depth affects monetary policy's ability to achieve its key aims via the transmission channels (mainly via short-term interest rates), through which monetary policy affects economic variables of the real sector depending on the size and structure of the financial depth, and the economic cycle.

For instance, the study of the Fed's economists has shown that China's lending policy to its economy is the most critical driver of global finance, even influencing Fed decisions. The policy-induced increase in China's credit impulse of 1% of GDP boosts its own economy by 1.2%. After one to two years, the credit shock is estimated to induce a 0.3% increase in global GDP outside of China and raise commodity prices and global trade excluding China by 2.2% and 1%, respectively,

boosted by stronger Chinese demand. This lag also indicates the transmission of the effect of credit stimulus from the Chinese economy to the global economy and not vice versa [1].

Financial deepening boosts economic growth through capital accumulation and productivity growth via the financing of technological progress. On the one hand, funding drives economic growth by increasing revenues, resulting in increased demand from households and businesses. On the other hand, as the economy grows, investment opportunities and demand for financial services will enable the financial system to provide additional loans. Economic growth results in a rise in the banking, non-banking, and capital market development level.

The recent study by R. Cho et al. has confirmed that for emerging economies, financial deepening does not hamper a shift from capital accumulation to an innovation-based growth model, or their structural transformation away from the primary sector. Meanwhile, too much finance for this group can increase the propensity for banking crises through capital inflows and commodity price movements [2].

Generally, there is no consensus among economists that financial deepening is beneficial to economic growth. The relationship between the financial system and economic development is not linear. Too quick or too slow a financial deepening could not foster economic growth.

The path towards effective financial depth also depends on reducing structure imbalances. The structure of the financial system, i.e., the prominence of banks, capital markets, contractual savings institutions, and non-regulated shadow banks within a financial system, as to the interaction of these different segments, influences the effect of financial deepening on growth beyond a certain threshold. Furthermore, the optimal design of regulatory systems and their interaction with the governance of financial institutions impact the finance-growth nexus [3].

As the financial system needs to adapt to the economic growth stage in size and structure, different economic growth stages have different requirements for the

financial deepening. Governments of developed economies pay attention to financial stability due to their high degree of financial marketization and vulnerability to systemic risks. Governments of developing economies have the benefits of labour-intensive industries and lower industrial risks, so they place on the utility and functionality of the financial system. The difference of factor endowment structure determines a threshold effect between the financial system and high-quality economic development [4].

Under war concerns promoting effective financial deepening has become one of Ukraine's government's priorities for the economy's revival. Notwithstanding the shocks of 2022, Ukraine's economy adapted to war because of its military's success on the battlefield. A non-standard situation has called for non-standard solutions from Ukraine's government, particularly the monetisation of the budget deficit. Meanwhile, foreign financing aid remains critical for budget financing. The potential effects of such financial deepening are debt crisis loom and weakened fiscal position. A severe credit contraction accompanies the worsening economic situation in Ukraine: the deterioration of borrowers' solvency, the drop in demand for new loans due to the high-interest rates, and the reduction of credit supply, limiting business activity.

Although the dynamics of economic growth and financial depth of the Ukrainian economy were coordinated before 2008 and after the GFC it is multidirectional, financial depth only accompanies economic growth. Financial deepening in Ukraine has not enhanced economic development due to imbalances in the financial depth structure. Banks continue to dominate the Ukrainian financial depth. Although Ukraine's banking system is characterised by technologically advanced payment infrastructure, sluggish lending and non-performing loans exist. Banks provide limited funding for long-term investments in light of the short-term nature of retail deposits. Ukraine's underdeveloped capital market is associated with the narrowness of the domestic institutional investor base. The share of assets of

domestic institutional investors, such as pension funds and insurance companies, is still tiny.

There is no simple answer to how to build resilience in Ukraine's economy in today's economic maelstrom. Given the high level of debt, Ukraine's economy is entering a hazardous zone of debt crises. The increase in budget expenditures amidst the decrease in budget revenues and the underdeveloped finance sector require continued external financial aid for economic survival and further development of the sectoral structure of financial depth for increasing financial resilience.

Summing up, financial structure (depth, inclusion and effectiveness of activities of banks and non-banks, capital market) is vital in the relationship between finance and growth. Financial deepening can underpin resilient economic development through capital deepening and, therefore, the technological innovation capacities improvement of industrial enterprises.

Russia's military invasion of Ukraine has caused the need for financial instruments to build a resilient financial system that is flexible enough to respond to a range of shocks. An essential factor in maintaining the financial system's stability is promoting long-term financing with credit-investment instruments and distributing financing through state banks. Moreover, the development of the military risk insurance market by foreign insurers and Ukrainian insurance companies is necessary for economic reconstruction. Intensified Ukraine's capital market activities via the development of long-term institutional investors will expand the domestic investor base.

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**PECULIARITIES OF CRISIS PHENOMENA IN INTERNATIONAL  
FINANCIAL MARKETS AND APPROACHES TO OVERCOME THEM**

The year 2022 in the global economy will go down in modern history as one of the most difficult years for the development of international trade, business and finance. Thus, humanity simultaneously felt the influence of several global factors that negatively affected the world economy and financial markets, which significantly reduced their activity in investing, lending, savings enhancement services, etc.

The first global factor is the coronavirus pandemic and its consequences – in many leading countries of the world, this disease was actively spreading during the year, which led to lockdowns and suspension of business activity. In connection with the unprecedented measures to stimulate and support business structures and the population during periods of lockdowns in the vast majority of developed countries and developing countries, inflation has increased significantly, which began to threaten the macroeconomic stability of these countries of the world.

The second global factor that increased the destructive tendencies in the world economy is the full-scale war of the Russian Federation against Ukraine. The imposition of sanctions against the aggressor and blocking the ports of Ukraine significantly destabilized the global energy market, international trade in agricultural products and chemical fertilizers. Food and energy prices have risen significantly, which is why many countries around the world are experiencing anxiety and social protests. In addition, there was an increase in militarization not only in the warring countries, but this conflict influenced the rethinking of the security system in many countries of the world, significant budget funds are not invested in development, consumption, socio-economic recovery, but are directed to military purposes. In



addition, not only Ukraine, but also almost all EU countries are negatively affected by the war in their region.

The third global factor is environmental problems and irreversible climate change, which are beginning to have a significant impact on infrastructure, the quality of life of the planet's population, and the safe future of the younger generation. Thus, according to the UN, only from the climate "Ilzinho effect" the world expects losses of 1 trillion. USD USA in 2022; 5.5 years ago, only 80 million people in the world were on the verge of starvation, but climate problems have increased their number to 135 million.

The fourth global factor is the uncontrolled cross-border digitalization of financial services, especially in the field of tokens and cryptocurrencies. This year, the vast majority of digital assets have lost their value many times over, a number of projects have already gone bankrupt and the medium-term outlook remains negative. It should be noted that an effective infrastructure for monitoring this area at the international level has not been formed.

The fifth global factor is excessively harsh labor market conditions due to lockdowns, automation and digitalization of the economy, which generally forms protest moods and movements in many countries of the world, especially in low-income countries.

The sixth global factor is the increase in geopolitical fragmentation, which complicates international trade and cooperation. Competition at the level of global hegemony (the US, China and the EU) is complemented by a significant number of conflict situations and inconsistencies between countries at the regional level. Such actions do not contribute to the establishment of sustainable trade and economic relations in the world.

The seventh global factor is a significant increase in the debt burden on the budgets of most countries of the world. At a time when countries are experiencing significant fiscal constraints, meaning they need additional leverage, but financial conditions are tightening in 2022, especially for developing and emerging markets.

The proportion of low-income countries that are already in debt distress or at high risk of one has risen to 60% from about 20% a decade ago. Rising borrowing costs, reduced credit flows, a stronger US dollar and slower economic growth will only exacerbate this predicament.

The listed global factors had a significant impact on the state and prospects of the global economy in 2022. In difficult conditions, the World Bank predicts a sharp drop in global economic growth from 5.7% in 2021 to 2.9% in 2022 and 3% in 2023–2024. The institution's experts believe that the rise in strong inflationary pressures and a faster tightening of monetary policy than previously thought is the main reason that the economic growth forecast for the current year has been revised down [1].

The IMF, in much the same way, sees economic growth slowing from 6.1% last year to 3.2% this year and 2.9% in 2023. This is due to slower growth in the three largest economic regions of the world – the US, China and the Euro area, which is fraught with serious consequences for the global economic outlook. In the US, declining household purchasing power and tightening monetary policy will slow economic growth to 2.3% this year and 1% in 2023. In China, new periods of self-isolation and a deepening real estate crisis have slowed growth to 3.3%, the lowest in more than four decades, taking into account pandemics. The forecast for economic growth in the Euro area has been revised down to 2.6% this year and 1.2% in 2023, reflecting spillovers from the war in Ukraine and tightening monetary policy.

With a complete shutdown of Russian gas supplies to Europe, inflation will rise even more, and global economic growth will further slow down to about 2.6% this year and 2% in 2023; growth rates have been only five times lower since 1970. Under this scenario, economic growth in the US and the Euro area will be near zero in 2023, negatively affecting the rest of the world.

The IMF experts raised the global inflation forecast at the end of July 2022, partly due to rising food and energy prices. This year, inflation is expected to reach 6.6% in advanced economies and 9.5% in emerging market and developing countries.

Inflation has also widened in many countries, driven by spending pressures from supply chain disruptions and unprecedentedly tight labor market conditions.

Due to the intensification of inflationary processes in almost all countries of the world, there is a synchronized strengthening of monetary policy, which in many countries has no historical precedent, and its consequences are expected to slow down the global economic growth next year and reduce inflation.

For the general improvement of the socio-economic situation in the world and in the financial markets, it is necessary, first, to make every effort to end the war in Ukraine as soon as possible. In addition, targeted budget support can mitigate the impact of prices, inflation, and unemployment on the most vulnerable groups of the population. Therefore, the macroeconomic policies of countries should take into account the balance between social spending and tax revenues, so that fiscal policy does not complicate the achievement of monetary policy goals (taming inflation). In addition, the countries of the world should correctly use macroprudential instruments to protect financial stability and promptly implement measures to manage capital flows in a crisis situation. There is a need to intensify vaccination campaigns, eliminate bottlenecks in the distribution of vaccines and ensure equal access to treatments. Climate change mitigation requires immediate multilateral action to limit emissions and increase investment to accelerate the transition to a green economy. Only a rapid transition and an increase in the supply of clean energy sources will ensure energy security and a more favorable environmental environment in the world. Multilateral cooperation among countries will also be key across many sectors, from transitioning to a climate-smart economy to pandemic preparedness, food cooperation and debt crises. Amid significant challenges and conflicts, strengthening cooperation remains the best way to improve economic prospects and reduce the risk of geo-economic fragmentation [2].

The unfavorable state of the international economy is complemented by negative trends in the leading securities markets. Therefore, since the beginning of 2022, the US stock market has lost more than 19% and this is the sixth worst result in history.

The fall in the US bond market amounted to almost 12%, which has not happened for more than fifty years. In 2022, in one trading session, the largest international companies sometimes lose up to a quarter of their price, which is even more than on such sad days as Black Monday in 1987. The European stock market declined over the year similarly – by about 20%, and the stock markets of the Pacific region – by 8.5%. In general, the decline in liquidity indicators of investment and financial markets and the growth in the cost of loans exacerbates the prospects for the resumption of business structures in the world [3].

A feature of the crisis phenomena in the international financial markets now is that the main reason is not in financial and monetary management or in the regulators of financial markets, but in a complex of strategically incorrect political, economic, technological and environmental decisions. These decisions aggravated both the state of the world economy and led to a significant crisis in international financial markets. Therefore, first of all, correct, effective and timely political decisions are needed against dictators in the world, against selfishness and autonomy in the policy of vaccination in the world, against the non-compulsory nature of countries to decarbonize and green their own economies. As this crisis showed, international financial markets are very dependent on the real economy, the social sphere, and are sensitive to political decisions. Such challenges require significantly greater cooperation between the countries of the world and more balanced, strategically thought-out decisions at the global level [4; 5].

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## **INNOVATIVE APPROACHES TO TEACHING AND PROBLEMS OF ITS IMPLEMENTATION IN GEORGIA**

**Abstract.** *The new era has put the world in front of many challenges. Internetization and the rapid development of modern technologies have made radical changes necessary in more or less all areas. The field of education also needed changes. Teaching with outdated methods has become a serious barrier in the issues of assimilation of modern technologies and integration with world civilization. The need to share the cultural, scientific, intellectual experience of America and successful Europe was clearly identified. All this led to the modernization of existing teaching methods and the necessity of integration with the modern Euro-Atlantic educational space.*

### **Introduction**

In 2005, Georgia decided to become a full member of the Common European Educational Area and signed the Bologna Declaration at the Bergen Summit. As of today, 47 European countries are united in the Bologna process. "The declaration emphasizes the compatibility of the higher education systems of different countries and the need for the international competitiveness of European higher education in general. This fact led to numerous reforms in the educational field, especially in the direction of higher education, namely [1, p.16]: a unified quality system with compatible and comparable qualifications; Unified Credit Transfer and Accumulation System (ECTS); quality assurance and its mechanisms; mobility of students and academic staff; close connection of higher education and research; connection of

higher education and ability to adapt to the demands of the employment market; lifelong learning (lifelong education); social dimension, which implies equal access to higher education, both in gender and ethnic-cultural terms (Eurostat, 2009); Incorporation of the European dimension (mobility and international cooperation) in higher education". It is quality assurance that became the basis for the introduction of modern teaching methods in the field of general and higher education, which ensures the formation of critically thinking, free, independent, active people.

### **Overview of the situation**

Researches are periodically conducted in the country, the purpose of which is to study the current situation in Georgian universities, how the Bologna process and the educational reform in general affect higher educational institutions, how much the reforms have changed the teaching and research process. Program accreditation is also a necessary condition for higher education institutions, which provides for the determination of the educational institution's compliance with the accreditation standards of the educational program, which is a rather difficult and time-consuming process, but nevertheless, the studies available so far have made it clear that the results are not very favorable, many components are only formally is completed [1, p.16].

In order for the reform to work properly, one of the important issues is to ensure a student-oriented learning process. Maximum involvement of students in lectures-seminars is important. which is made possible by the use of modern teaching methods in higher education institutions. In particular, it is necessary to increase the use of discussion-debates, group work, work on cases, situational tasks, problem-based teaching and other methods in the teaching process. Moreover, in all surveys, students demand an increase in the share of the practical component. Which can be ensured by using practical examples and situations in teaching.

The use of modern teaching methods ensures full interaction of students in the lecture process, which means their maximum involvement with questions, examples,

and participation in various activities. This guarantees a good understanding and long-term memorization of all the material.

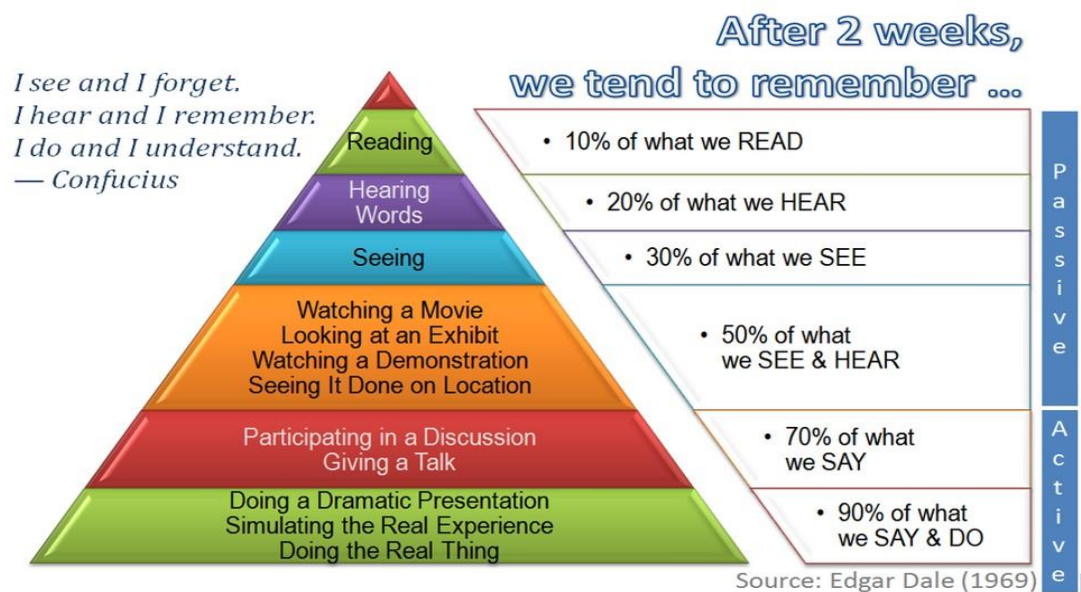
There are still teachers who believe that the student should not ask questions during the lecture, should not be involved, that only the lecturer should speak during the lecture and the student should only play the role of a passive listener, which is totally unacceptable for modern teaching.

In a modern lecture, together with methods, visualization is necessary, which gives students the opportunity to better absorb the material. Research shows that the majority of people (according to one study – 86% of respondents) have a visual memory, which means that they remember much better by looking than by listening.

According to the latest studies, students remember only 30% of the information by passive listening, and 90% by the interactive method.

## The Cone of Learning

sparkinsight.com



Source: Edgar Dale's Cone of Experience. URL: <https://teachernoella.weebly.com/dales-cone-of-experience.html>

Figure 1. The corn of learning

If we consider the research results in more detail (Figure 1) [1, p. 17]: only 10% of information is remembered by reading, only by listening – 20%, by listening

–30%, by watching and listening – 50%, by expressing one's own opinion – 70% % and when they talk, participate in the natural process, do (work) themselves, or make a decision independently – they remember 90% of the information.

Students must know how important it is to be involved in explaining new material, asking questions related to the topic, and expressing opinions so that the issues of interest to them are not overlooked.

It is necessary to choose a method or a combination of techniques based on the topic's goals and on what result the lecturer wants to get as a result of using a particular way.

As for the seminar, it is desirable that the survey is conducted in a question-and-answer mode, that cases and situations be discussed, and that the workshop be as interactive as possible.

The question is often asked why the quality of student's education does not improve if one of the main reasons and goals of the transition to a new teaching system is to increase their level of education; the answer is simple – teaching, assessment system, modern textbooks, adapted to modern teaching methods, and in many cases, teaching Proceeding with the old techniques, which are only focused on learning and delivering large volumes of material. Modern education should be based not only on transferring specific knowledge to the student but also on developing general/transferable skills (e.g., independent decision-making, presentation, communication, cooperation skills, etc.).

If all of the above is done in compliance with all the rules, the lecturer will be focused on the transfer of knowledge to the student and on developing transferable skills. Lecture seminars will be interactive and student-oriented, then the result will be completed on time, increasing the knowledge quality.

### **Conclusion**

Thus, the article's main goal was to emphasize the importance of using modern teaching methods and how effective these methods are in the teaching-learning process, to what extent interactive methods contribute to the development of students'



free and critical thinking, protection of democratic principles, creativity, analysis, communication, expression, and defense skills.

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**METHODS OF COST ACCOUNTING AND CALCULATION  
OF PRODUCTION COSTS**

An important step in preparing for the production process is the choice of the method of cost accounting and calculation of the cost of production. Since the costing process has a direct impact on the profit and profitability of the enterprise, any economic entity strives to ensure that its inherent organization of production is cost-effective, that is, the maximum result can be achieved at minimum cost. However, before proceeding to the consideration of the cost accounting system, it is necessary to dwell on the category of "cost price", its components and factors influencing it.

The cost price is the cost of its production and sale, expressed in monetary measure [1]. That is, in other words, the monetary evaluation of natural resources,

raw materials, fuel, fixed assets, workforce, etc. used in the production process. The cost is one of the most important economic categories that reflects the production and economic activities of the enterprise. It reflects the quality of work, its achievements in the search for internal reserves to reduce production costs.

The cost of production is formed from three main components: the cost of materials, labor costs and production overhead costs. In addition, the prime cost reflects losses from downtime through no fault of the enterprise, shortages of stocks included in the norms of natural loss, benefits paid on the basis of court decisions to workers who have received industrial injuries, etc. In this regard, it is impossible to talk about the constancy of the cost structure. It is in constant motion, changes and transforms under the influence of various factors, including the specifics and type of activity of the enterprise, the management structure, the nature of production, the range of products, the regularity of its production, the use of the results of scientific and technological progress, etc.

Let us present the most common methods for calculating the cost of production, as well as the signs of their classification, in Table 1.

*Table 1*

**Classification of methods for calculating the cost of production**

<i>Classification attribute</i>	<i>Cost accounting and calculation method</i>
By cost accounting objects	Order-by-order, process-by-process, peredelnny
By completeness of cost accounting	"Abzorpshen-costing", "direct-costing"
By the efficiency of accounting and control	Accounting of standard costs, accounting of actual costs

Table 1 presents the most traditional calculation methods that have been used in companies for quite a long time. The presence of choice gives the management personnel of the enterprise a huge scope for activity. Practice shows that various methods can be combined with each other and acquire a more narrowly focused specific character. Further development of production and scientific and technical progress leads to the fact that for the rational organization of cost accounting and costing of products, the use of the "template" of one of the popular costing methods

becomes insufficient. Each company needs to adjust the chosen calculation method according to the specifics of its activities, modernize, adjust and complicate it. In addition, the desire of companies to increase profitability, efficiency, production efficiency, improvement of quality and establishment of time management system leads to the fact that more traditional and classic cost accounting methods in some cases do not cope with the tasks set, do not provide internal users with all the information needed for decision making. In such cases, more modern cost accounting methods are being actively introduced into the field of management accounting, aimed at improving the quality and reliability of the process of calculating the cost of production [2].

Modern methods of calculating the cost of production include: activity-based costing (costing by function; ABC method), the method of target costs ("target costing"), "kaizen costing", "just-in-time" system, strategic cost analysis method, method of costing by stages of the product life cycle, functional cost analysis and much more.

All the principles and methods of costing, classification features and methods of cost accounting can be combined into a capacious concept – a cost accounting system. Unlike other relatively "young" cost accounting methods, costing by function (ABC method) can be considered as a complete cost accounting system with its own characteristics and philosophy.

A more complex and detailed and, accordingly, more accurate costing practice is offered by traditional and functional cost accounting systems (ABC method). However, before characterizing these systems, it is necessary to dwell on the logic of their construction [3].

Traditional systems for calculating production costs have been widespread since the beginning of the twentieth century. At that time, most companies produced limited range of products, and the dominant production costs were the costs of basic materials and the labor of the main production workers. At the same time, the so-

called conditional cost allocation was used, in which the cost allocation base had a fairly generalized character.

Currently, the product range is wide, and the share of overhead costs is a significant part of the total costs. In 1988, R. Cooper and R. Kaplan developed a more detailed approach to attributing production overheads to a product and calculating the cost of production.

Activity Based Costing (ABC) is the name of one of the most modern approaches to cost calculation, which has become widespread in the theory and practice of analyzing the functioning of various types of activities enterprises. Literally, "Activity Based Costing" means "cost analysis based on works". However, the widespread name of this system is cost accounting by function, or functional accounting.

The main prerequisites for the emergence of a new cost accounting system were the following:

1. Expanding the range of products;
2. The increase in the share of production overheads in the cost structure as a result of automation of production processes;
3. The increase in the cost of indirect costs: logistics costs, adjustment and technical control of equipment, etc.
4. Automation of accounting and computing work, which allows the use of more complex methods of information processing [4].

Thus, the company solves many important issues and tasks in the process of calculating the cost of production: determining the object of cost accounting, choosing calculation units, using a certain calculation method. Combining together, all these processes and concepts add up to a cost accounting system. Cost calculation by function (ABC method) is the basis of a functional cost accounting system. During the consideration of the functional system of cost accounting, attention is focused on the fact that it is necessary to calculate both direct and indirect costs with equal care for decision-making. Currently, two types of cost calculation are successfully

coping with this task: the traditional cost accounting system and the function accounting system. Traditional systems have been used for a very long time, but due to the fact that conditional distribution bases are used for the distribution of indirect costs, by now the indicators of the cost of production according to this method can be quite distorted. The emergence of functional systems is a consequence of attempts to eliminate the disadvantages of traditional calculation systems and offers a more accurate mechanism for allocating costs by product type.

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**THE ROLE OF MANAGEMENT ACCOUNTING IN THE  
DEVELOPMENT OF SUPPLY CHAIN PERFORMANCE IN LOGISTICS  
COMPANIES**

**Abstract.** *The supply chain has been a major component of competitive strategy to enhance organizational productivity and profitability, and the supply chain is a relatively new and rapidly expanding discipline that is transforming the way that manufacturing and non-manufacturing operations meet the needs of their customers. This study aims to establish the role of management accounting (MA) in the development of supply chain performance (SCP) in logistics manufacturing companies. The study applies a quantitative research methodology and uses a*

*questionnaire method to collect the data. The study sample consists of 181 respondents. This study analyzes the data using the (SPSS) program. The results reveal a statistically significant relationship at the significance level ( $\alpha \leq 0.05$ ) between the management accounting, including the "target cost, value chain costing and quality costing" and supply chain performance in logistics manufacturing companies.*

In recent years there has been a lot of benefits specific to spreading this concept via concepts such as supply chain, where they determine the SCP as a group of three or more entities institutions and people directly implicated in the upstream, and downstream flows of products, services, finances, and information from an exporter to customer importance in original. Also, spreading the notion of likely business operations to cover both and downstream SCP activities and partners are becoming a frequently prominent topic in business, accounting research. In an SCP, MA techniques and practices are designed to produce information for control and decision-making of methods and activities in logistics companies. The MA between logistics companies' points attention to a more complicated set of challenges than traditional logistics companies focused on accounting. More logistics companies must be included in providing and consuming accounting information because the role of the decision-maker or measuring principle is none a priori given. The fields of control also decision-making problems are much wider and more diverse. In an SCP, there are many principals with both conflicting also aligned interests. On the one round, cooperating logistics companies have a joint benefit in maximizing the effectiveness and profitability of the product; on the other hand, logistics companies have contradictory interests, such as pricing decisions. In a supply web, different relational structures such as arm's length or strategic relationships provide, and these may further be supposed to adjust the relationship between SCP and MA. Also, the supply chain has become an integral part of business enterprises and is now synonymous with the success of the business enterprise and improving customer satisfaction levels. The supply chain plays a major role in reducing operating costs, boosting customer satisfaction, and improving the financial position of logistics

companies. Thus, the supply chain is the lifeline on which most of the performing companies depend. This dependency on the supply chain raises the question of the supply chain efficiency but also the costs associated with it. MA function within the SCP is used for obtaining information and using them for various monitoring and decision making of processes and activities with the objective of optimizing activity amongst and within the logistics companies, value chains, and networks.

The managers can use MA to support the creation of a successful supply chain management environment that will lead to improved SCP. According to Mohd-Jamal & Tayles (2014), suggest the findings a positive relationship between supply chain administration practices and SCP and between MA practices and SCP. Also, the results provide the administration with a strategically important overview of the relationship between supply chain management practices, MA practices and SCP. Also, Jamal & Tayles (2010) findings that the sophistication level of MA practices differs from supply chain management practices. Further analysis reveals that the interviewees differ in their views of how supply chain management affects them MA. But Pointed out in the study Ramos (2004) supply chain management had just a relatively modest effect on MA research.

The study by Dekker & Van Goor (2000) found MA plays an as yet undefined role in supply chain management, and it is specially focused on activity-based costing. In Pradhan et al., (2018) this present study proves that the approval of various management accounting techniques on supply chain activities is the most appropriate strategy to increase the performance of any firm. This study by Lee (2012) also finds that eco control can foster alignment between a firm's carbon management strategy and carbon performance measurement and provides useful quantified information for corporate decision-makers and viable mapping of carbon flow in production provides significant opportunities to improve carbon performance within the supply chain. Considering the above discussion, the following hypotheses are presented:

- H1: There is a significant and positive relationship between target cost and supply chain performance.
- H2: There is a significant and positive relationship between Value chain costing and supply chain performance.
- H3: There is a significant and positive relationship between quality costing and supply chain performance.

To the validity and reliability of the study, Cronbach alpha was used. To measure the internal consistency, Cronbach alpha is used to measure how closely related a set of items are in a group. It is believed to be a measure of reliability scale. "High" values for alpha do not imply that the measure is one-dimensional. To measure internal consistency and introduce evidence that the question in scale is one dimensional more than analysis can be done. One of the methods of checking dimensionality is exploratory factor analysis. In other words, Cronbach alpha is not a statistical test; rather it is a coefficient of reliability or consistency. Moreover, Cronbach alpha can be written as a function of the number of test items and the average inter-correlation within the items. Table 1 show that the highest Cronbach alpha value was 0.85 for value chain costing. The highest reliability value was 0.84 for supply chain performance and the alpha value was 0.80 for target cost and 0.78 for quality costing, indicating the acceptance of reliability, and Mean and Descriptive Statistics. Also, this study examined the average variance extracted (AVE) and specified that all AVE values were greater than the recommended value of (0.50).

*Table 1*

**Reliability and Mean and Descriptive Statistics (S.D) and Average Variance Extracted (AVE)**

<i>Variable</i>	<i>Cronbach's Alpha</i>	<i>Mean</i>	<i>S.D</i>	<i>AVE (&gt; 0.5)</i>
Target Cost	0.84	3.78	0.93	0.64
Value Chain Costing	0.85	0.81	4.01	0.74
Quality Costing	0.78	1.70	3.40	0.72
Supply Chain Performance	3.65	0.80	1.86	0.69



SCP has been an influential component of competitive strategy to enhance organizational productivity and profitability, where the administrators can use management accounting information to help the creation of a strong supply chain management environment that will lead to improved SCP. This study found a statistically significant relationship between the MA, including the "TC, VCC and QC" and SCP in logistics manufacturing companies. This result is in agreement with the result of previous studies such as a study Mohd-Jamal & Tayles (2014) on the positive finding relationship between supply chain management practices and SCP also between MA practices and SCP. Also, Jamal & Tayles (2010) findings that the sophistication level of MA practices differs from supply chain management practices. Further analysis shows that the interviewees differ in their views of how supply chain management affects MA. The study by Dekker & Van Goor (2000) found that MA helps an as yet undefined role in supply chain management, and it is specifically focused on activity-based costing. Doktoralina & Apollo (2019) found that strategic MA practices had an influential positive with supply chain outcomes and supply chain outcomes had an important positive with the profitability of the logistics companies.

In Pradhan et al. (2018), this present study proves that the approval of various MA techniques on supply chain activities is the most appropriate strategy to increase the performance of any firm.

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## **FEATURES OF THE TRANSNATIONALIZATION OF THE WORLD MARKET OF INFORMATION TECHNOLOGIES**

Transnationalization is the process of strengthening global integration because of global operations of TNCs, within which a significant part of the country's production, consumption, export, import, and income depends on international centers outside the state.

Today, the driving forces of economic globalization are formed in the context of the development of a new model of the world order, formed under the influence of the civilizational development of productive forces because of the dominance of information and technology in the economic system.

Corporations influence the systematic "clustering" of countries through both their production and supply chains, and through the various markets, they serve. In the era of information technologies, there are qualitative changes in the field of globalization of markets and competition, which tend to accelerate. Those industries and companies that are not able to respond to the challenges of globalization, do not have marketing opportunities for global activities, are out of the game.

At the beginning of the XXI century, there are more than 80,000 TNCs and 850,000 of their branches in the world. Parent companies are located mainly in developed countries (50.2 thousand), the largest number of branches is in developing countries (495 thousand). About half of world industrial production and more than 23% of foreign trade is accounted for by TNCs. They control approximately 80% of patents and licenses for inventions, new technologies and know-how.

The activity and role of TNCs is multifaceted in various markets, including the global information technology market.

The active use of transfer pricing and the use of offshore zones is inherent in the financial activity of TNCs. For example, the global technology leader – the Apple company – keeps more than 181.1 billion dollars in the accounts of its offshore subsidiaries, the computer corporation Microsoft keeps 108.3 billion dollars of accumulated profits in 5 offshore accounts [1].

Another important feature of the activities of leading TNCs is innovation and the ability to implement them, the adaptability of firms to the ever-changing conditions of the global economic space. The geographical directions of the spread of innovations are changing dramatically, as scientific research and development are becoming more and more global in nature. According to estimates, 94% of the world's largest innovative firms implement at least part of their R&D abroad. These companies transfer innovations to countries where their sales and production are dynamically growing and where there are many highly qualified technical specialists, primarily to China and India.

Among 1,420 companies, 22% are engaged in finance, and 21% in information technology, which indicates the growing role of the financial and transformational component in the development of developing countries.

The MSCI Emerging Market Index is a special index for developing countries that assesses the situation in their stock market. The level of the index is an indicator of the state of the global stock market. It includes a number of securities listed on the stock exchanges of 24 developing countries. Their share in the capitalization of the world market is already more than 10%. At the very beginning, it included only 10 countries, which accounted for only 1% of world capitalization. With 1,399 components, the index covers approximately 85% of the market capitalization in free circulation in each country [2].

As of March 31, 2022, the importance of the first 5 developing countries in this index is about 80%. These countries are China (30.04%), Taiwan (16.15%), India (13.1%), South Korea (12.58%) and Brazil (5.82%) [2].

Despite the fact that China occupies TAIWAN SEMICONDUCTOR MFG (7.02%) makes the first place, the most significant contribution to this index (Table 1).

*Table 1*

**TOP-10 companies by share in the MSCI Emerging Market Index**

<i>No</i>	<i>Company</i>	<i>Country</i>	<i>Share in the index</i>	<i>Activity</i>
1	TAIWAN SEMICONDUCTOR MFG	Taiwan	7.02	Information Technology
2	TENCENT HOLDINGS LI	China	3.76	Connection services
3	SAMSUNG ELECTRONICS CO	Korea	3.75	Information Technology
4	ALIBABA GRP HLDG	China	2.97	Energy
5	RELIANCE INDUSTRIES	India	1.36	Different types of activities
6	INFOSYS	India	1.16	Information Technology
7	VALE ON	Brazil	1.13	Materials
8	MEITUAN B	China	1.11	Different types of activities
9	CHINA CONSTRUCTION BK H	China	0.99	Finances
10	JD.COM	China	0.82	Different types of activities

*Source:* [2].

For the world’s leading companies, the implementation of a global innovation strategy is a fact. Global R&D firms financially outperform their competitors. Companies with corporate centers in the USA, Europe, and Japan accounted for 86% of all R&D expenditures in 2021 [3]. Such companies, as before, dominate the ranking of globally innovative companies.

Apple spends only 3.3% of its revenues on R&D, compared to an average of 12.5% for the rest of the world's 19 largest companies [4].

Apple's R&D spending percentage is lower than most of its competitors in the ICT sector. On the other hand, there is no statistically significant evidence that higher levels of R&D spending are guaranteed to produce better results. The innovation sphere is dominated by ICT sector companies.

The combined R&D expenditures of the 10 largest US corporations exceed similar expenditures of countries such as Great Britain or France. US IT companies

such as Facebook, Google, Apple, 3M Corporation, Microsoft, Cisco are leaders in the ability to innovate and implement them; Japanese Sony Corporation; Korean companies Samsung, LG. According to Forbes, the list of the most innovative companies in the world is currently headed by Apple and Alphabet Inc. [1].

The biggest tech companies make billions using their platforms and growing user databases. With increased growth and adoption of software, cloud computing, and advertising, MNCs will continue to dominate the IT market.

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**DIGITALIZATION AS A TOOL FOR THE GREEN ECONOMY  
TRANSITION IN THE CONTEXT OF CLIMATE CHANGE**

***Abstract.** Global digitalization and green transition shape very influential megatrends affecting modern economy and society. This research aims at showing the connection between these form-building concepts. It is shown that digitalization provides an effective tool for the green economy transition and contributes to its acceleration in the context of high climate risks and challenges. The study examines the prerequisites for using digitalization to achieve climate neutrality of the global economy. This aspect implies author's vision of systematization of the digital solutions depending on the tasks of the green economy.*

**Relevance of the research**

Over the past decades, climate issues have transformed into serious global challenge for the society. The concept of a green economy contributes to the

formation of a climate-oriented economy, which is based on the principles of sustainable development, inclusion, decarbonization and overall industrial "greening". On the other hand, this is an attempt to maintain the material interests of global business, but at the same time to focus them toward the responsible consumption and the preservation of the geo-economic landscape of the planet for the future generations. By achieving this global goal, digitalization is rightfully becoming an effective tool for optimizing and accelerating the process of green economy transition. At practice such digital and ecological integration is quite complex and multifactorial due to the high amount of stakeholders involved to comply with economic-environmental tasks.

The problem of reaching the green economy throughout digital framework is considered in the modern scientific studies and governmental policies. Ones pointed out that climate issues are considered among other global goals, and digitalization is considered as a global trend which should be taken into account when solving environmental issues [1–3]. Other scientists [4–6] consider digitization as an irreversible stage of the global industrial transformation, while climate effects are proposed to be taken as a selection criterion for choosing right digital model for the manufacturing. Besides, recent researches admit the absence of crucial "semantic bridge" between digitalization and its role in overcoming climate effects by ensuring the climate neutrality of the world industry [7]. Moreover, some scientists rise the important question of "rebound effect" of digitalization, that provokes negative environmental impact [2, 8].

### **The main results of the study**

There is no doubt, green economy contributes to a global sustainable development by shaping overall vision of geoeconomic landscape and the standards of global industry. However, the corner of this concept leads from the crucial and urgent necessity of eliminating the GHG emissions and keeping the global temperature to 1.5° C above pre-industrial levels by 2050 [9]. This important idea was firstly approved by world leaders at Kyoto Conference, and later developed

within Paris Agreement and European Green Deal. Accordingly, a number of unique regulatory documents were formed in recent years, such as "Long-term Environmental Strategy 2050", "Road Map of EU Climate Neutrality until 2050" and the first in the world "European Climate Law". According to these documents, a climate-neutral economy is an economy with zero greenhouse gas emissions. Its formation involves the study of technological, institutional and financial mechanisms for ensuring climate neutrality in all key sectors of the economy, in particular industry, energy, transport and agriculture.

Despite all these climate strategies, global geoeconomic trends illustrate huge gap in achieving the goals of climate neutrality [10]. Climate impacts are increasing across the globe. The war in Ukraine, global supply shortages and the global COVID-19 pandemic have all contributed to an evolving energy and food security crisis, with the cost of living as well as inflation surging in many countries across the world [11].

In this way, digitalization is considered as a tool for green economy transition on the basis of sustainable development and reaching the concept of a "smart green planet" [12]. Currently, the strategy for ensuring a climate-neutral economy of the EU is based on the following key components [9]: Energy efficiency of the infrastructure; Renewable electricity; Ecological transportation; Green industry and closed cycle economy; "Smart" infrastructure for communication; Eco-innovations.

In today's conditions, digital technologies help significantly in the implementation of the outlined strategic directions [13]. The success of such digitalization will depend on cooperation between government-to-business sectors and policies, that applies technology-push instruments, demand-pull instruments and systemic instruments [4, 14].

Effective digital solutions for climate-oriented projects could be arranged in some groups:

- "Open big data" and access to information in all areas related to the use of natural resources, subsoil and environmental impacts of production;

- Constantly updated electronic registers of the country's natural wealth that track changes caused by greenhouse gas emissions; digital integrated mineral maps and digital "investment atlases" for various industries;
- Open and transparent digital auctions related to the sale or lease of natural resources; electronic tickets for individuals as permissions for hunting, fishing, logging, etc.; digital permits for the use of subsoil, which allow not only to speed up the process, but also to create a single transparent register of subsoil use;
- Electronic systems for monitoring emissions in industrial zones and the public sector with automatic generation of protocols for violation of established environmental norms.

The specified digital solutions are summarized from the international experience of digitization projects in sphere of environmental protection. Mechanisms for their implementation should be established now, because in the nearest future it will contribute to the permanent and ecologically sustainable reconstruction of the domestic industry.

### **Conclusions**

Digitalization is a powerful tool for solving the problems of modern industry greening. Positive influence is observed in several areas simultaneously. First area is the reduction of greenhouse gas emissions through the digital optimization of production processes at the stages of the manufacturing, resource consumption and transport logistics regulation. The second one is the use of eco-innovations to absorb harmful substances in the urban ecosystem and reduce the existing consequences of the greenhouse effect. The third sphere is regarding general regulation of the industry climate neutrality by creating and implementing digital platforms for monitoring environmental impacts, whether adverse or beneficial ones, and participants involvement in this process.

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### **FINANCIAL GLOBALIZATION AND BANKING REGULATION MECHANISMS**

**Abstract.** *The issue of regulation of the banking sphere is a mechanism for the effective functioning of financial markets, which should become the basis of financial stability in the process of globalization. This is even more important today, because new players have appeared on the financial markets – "Digital Banks". Against this background, compliance of financial markets and institutions with EU standards is one of the important challenges posed by the European Association Agreement.*

*The paper deals with the harmonization of the financial market regulation mechanism with the European Union standards. The paper discusses the experience of the leading European countries in the direction of banking sector regulation; The following laws were analyzed: (1) The organic law of Georgian banks; (2) Law of Georgia "On Commercial Banks and Basic Principles of Banking Supervision".*

*The paper mentions that the accurate and correct implementation of banking supervision regulation mechanisms will help to protect the principle of equality in the financial markets and prevent carter or monopoly situations in the market. The fulfillment of the latter is also necessary to ensure the fulfillment of the EU Association Agreement and convergence with European standards.*

Modern globalization is characterized by the growing pace of financial globalization, which is caused by the development of innovative technologies. Financial globalization is characterized by the development of capital markets and their capital growth;

The rapid and growing development of digital technologies has given rise to the operation of digital banks in both developed and developing countries. The increase in demand for the latter was due to the well-known processes taking place in the world, which are related to the COVID-19 pandemic.

Against this background, compliance with the modern requirements of financial markets and institutions, in particular with EU standards, is one of the important challenges posed by the European Association Agreement.

One of the important issues for harmonizing the banking system of Georgia with EU standards is ensuring the banking supervision and institutional arrangement of Georgia.

In 2014, the European Union signed association agreements with Ukraine, Moldova and Georgia. The agreement includes new ways of cooperation and envisages the gradual integration of the market space of the mentioned countries with the internal market of the European Union.

Within the framework of promoting financial stability, the National Bank of Georgia carries out financial supervision in accordance with international practice.

The financial sector is the most regulated sector of the world economy. The common vision of its regulatory instruments is reflected in the documents of the Basel Committee and the Financial Stability Board, as well as in the European

directives, which outline the main approaches that should be used in the regulation of financial markets.

However, the question of what kind of institutional structure is needed for the implementation of said regulation is less discussed. The banking sector of Georgia, having been operating and developing in market conditions for a long enough time, has already managed to adapt to them to a large extent and has developed a number of mechanisms to prevent "failures" of its activity.

But crisis situations in the country often reveal problems of indeterminacy in the functioning of the banking sector, due to which it experiences difficulties in further development.

The regional disparity in the development of the banking infrastructure and the difference in the budgetary and fiscal potential of individual territories lead to the aggravation of the issue of ensuring the sustainability of the country's banking sector.

The main challenge for the government is to improve the legal and institutional requirements that affect the regulation of banking competition. In this regard, certain tasks are set before the National Bank of Georgia, in terms of activating its regulatory and supervisory role.

Despite the fact that the banking sector belongs to the category of natural monopolies, it is significant here that the economic agent (bank) that offers the most useful financial services to the customer under acceptable (profitable) conditions should be the winner. This is only possible if all economic agents follow the rules defined by the law. Despite the legislation and regulatory norms, often both the consumer and the "honest" market player (bank) are vulnerable to unscrupulous competitors. Unfair competition, as an event contrary to the foundations of the effective functioning of a market economy, is prohibited by law in all countries where there is competition legislation.

In order to fully consider the problems of prevention and regulation of unfair competition, the existing law "On Competition" should be reworked in time, which should take into account the modern world experience and bring it as close as

possible to the relevant legislation of the European Union and also to the requirements of the World Trade Organization in the field of competition.

To date, in all countries except for three EU countries – Latvia, Malta and Poland, the central bank is either directly responsible for banking supervision or closely cooperates with the supervisory authority.

As for the European Central Bank (ECB), it is the body implementing banking supervision within the Eurozone. The ECB exercises direct supervision over "significant institutions", which together account for 85% of total banking assets in the euro area. And the rest, "less important institutions", are supervised by the national supervisory body, under ECB monitoring.

At the modern stage, the main mechanism for protecting deposits in Georgia is the means defined by Article 37, Paragraph 7 of the Law of Georgia "On the Activities of Commercial Banks" (1996), which provides for the transfer of depositors' funds in case of bank bankruptcy. Unfortunately, as practice has shown, the fulfillment of the mentioned requirements is actually complicated, since the depositors could not get their funds back, which further reduces the confidence of the population in the banking system. Therefore, in the conditions of the current economic reforms, in our opinion, it should be taken into account that the protection of the population's deposits (savings) and the settlement of problems arising from the bankruptcy of banks are impossible without the creation of a deposit insurance system.

Thus, the introduction of the bank deposit insurance system and its implementation should be considered a strategic measure.

It should be noted that the financial sector is the most regulated sector of the world economy. The common vision of its regulatory instruments is reflected in the Basel Committee and Financial Stability documents, as well as in the European directives, which outline the main approaches that should be used in the regulation of financial markets in order to protect the principle of equality and not to get carter or monopoly situations in the market. World practice shows that similar cases are disastrous for both the banking system and the country's economy as a whole.

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### MAIN TRENDS IN ECONOMY DIGITALIZATION AS FUNDAMENTAL SHIFT OF HUMAN BEING

The current stage of the industrial revolution is associated with the development of communicative Internet technologies, which significantly changed the technology of business processes and was called "digitalization". Digitalization is a profound transformation that creates new grounds for countries to increase their role in the world economy. Besides, it brings opportunity to improve production structure, acts as an instrument for transformation in different sphere of economic system and may solve some unresolved economic issues. Digitalization in the global economy has upward trend, especially in digital banking.

The digital economy is an economy based on digital computer technology and information and communication technologies (ICT), but, unlike informatization,

the digital transformation is not limited by the introduction of information technology, but radically transforms areas and business processes into the Internet-based and new digital technologies [1, p.135].

Achieving the most complex levels of digitalization in the economy is a radical transformation of production relations of participants, resulting in the integration of production and services into a single digital (cyberphysical) system, in which:

- all elements of the economic system are present simultaneously in the form of physical objects, products and processes, as well as their digital copies (mathematical models);
- all physical objects, products and processes become part of an integrated IT system due to the presence of a digital copy and the element of connectivity;
- due to the presence of digital copies (mathematical models) and being part of a single system, all elements of the economic system continuously interact with each other in a mode close to real time, model real processes and predicted states, provide constant optimization of the system.

The main segments of the digital economy are information and communication technology sector, e-business infrastructure (networks, software, computers, etc.); digital production and e-business, including industry, i.e., business organization processes using computer networks; e-commerce, i.e. retail online sales of goods [2].

The world economy has entered an active phase of digital transformation aimed at accelerating economic growth, increasing productivity and creating new areas of activity. The digital economy is expected to reach \$23 trillion by 2025 (or 23.3% of world GDP). At the same time, a huge role in the development of economies in different countries in the near future is given to digital banking. According to the European Retail Banking Radar report conducted in 2019, around 20% of Europeans are expected to start using digital banking services in the next five years, and by 2023 the number of customers of such banks will reach 85 million, compared to up to 15.6 million in 2019, the growth in the number of digital banks will be driven primarily by new generations who prefer digital products [3].

To the main trends of economy digitalization belongs:

- further transformation of industry based on ICT;
- deepening digitalization of service industries;
- financial digitalization (usage of cryptocurrencies, Digital Currencies of Central Banks emergence).

It should be accented on the emergence of Digital Currencies of Central Banks. This new trend in economy digitalization is dynamically developing. Lots of countries are steadily elaborate on it. Besides, different countries recognize the status of cryptocurrencies and operations with them in national economies in different ways. In our opinion, digital currencies or cryptocurrencies will take the leading positions in international settlements, transforming the global monetary and financial system into a digital one.

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### **CYBERSECURITY AS A FACTOR OF STABILIZATION OF THE GLOBAL ECONOMY**

The latest information and communication technologies (ICT) have become an important component of social development and the development of the global economy as a whole. They are among the most significant factors that influence the formation of the information environment and provide an opportunity to conduct

daily operational work at a qualitatively new level, to analyze the state and prospects of activity, as well as to obtain data necessary for making management decisions. The pace of informatization of production and personal life determines the urgency of researching the problem of analyzing cyber threats in the global economy, the impact of new types of cyber threats on the world market and its transformation under the pressure of new realities in the context of building business processes and interaction between divisions that may be located in different countries for the purpose of system development ensuring state cyber security, creation and improvement of cyber protection methods, means and measures.

The number of cyberattacks in the world is increasing every year, and with it the level of losses incurred by the state and other economic entities

Companies face many challenges, including those caused by cyber security threats. Last year, 2021, turned out to be a significant year for cyber security threats, ransomware attacks and vulnerabilities. Unfortunately, the situation with cyber threats, security vulnerabilities and security compliance issues is not improving. Looking ahead to 2022–2023 and beyond, we can expect new types of cyberthreats and simplification of attack tools. This is possible because cyberthreats become services and spread through the dark net for a percentage of the damage that was caused. Businesses need to protect their own assets both locally and in the cloud.

Cybersecurity experts agree that ransomware is now the number one threat to business-critical data. Thus, security experts Cybersecurity Ventures predict that by 2031, the frequency of ransomware attacks will increase and reach the frequency of attacks every two seconds. In particular, in 2021, the number of major ransomware attacks on critical infrastructure services increased in frequency and scale [1]. In late April 2021, Colonial Pipeline, a major fuel supplier for the US East Coast, was attacked by ransomware using stolen VPN credentials, causing a fuel supply shutdown for several days and resulting in fuel shortages for the general public [2]. And JBS Meat Packing, responsible for a significant segment of the global meat supply market, suffered a ransomware attack that halted production and affected



supply volumes. But as a result, JBS paid a ransom of 11 million dollars to restore access to critical files [3].

These attacks on critical infrastructure services placed organizations worldwide on high alert and demonstrated just how quickly and easily a significant ransomware attack can wreak havoc on the general public.

There are two developments in ransomware leading to the proliferation of attacks worldwide. These include:

- Ransomware-as-a-Service / RaaS;
- Initial Access Brokers / IABs.

The concept of "cloud" has firmly entered the lives of ordinary people. The need for local hard drives and other drives to store information is no longer so relevant. Business owners are increasingly turning to cloud providers to deploy or migrate their resources to cloud servers. The principle of operation of cloud platforms is quite simple. Cloud storage is provided to the user on an as-needed basis, pay-as-you-go and eliminates the need to purchase and manage your own data storage infrastructure. This provides flexibility, rapid scalability and reliability.

Businesses today are using the cloud more than ever. As organizations adopt cloud environments, particularly cloud-based software-as-a-service (SaaS) solutions: hybrid cloud is becoming the new normal for enterprise operations. It also allows companies to leverage a hybrid workforce and provide users with the tools they need, regardless of location.

With more business-critical data now stored in the cloud, protecting mission-critical data is more important than ever. Data protection in the cloud is required, as automatic protection in hyperscale data centers may not be sufficient.

For example, 5 points how cybercriminals can threaten the economy:

- Shared responsibility model;
- User actions and human error;
- Ransomware;
- Hardware failure or cloud outage;

- Malicious third-party applications.

Each of these points is a consequence of the impact of the acceleration of globalization processes, which also requires personal responsibility of the participants in the economic process.

At present, reliable systems and methods of data protection and recovery have been formed. A number of compliance rules have been developed for the corporate sector (including international ones) to ensure the security of national and global economies.

In recent years, the level of investment has increased in companies dealing with data storage and protection, or conducting audits for compliance with security requirements within companies [4]. This indicates that the market is aware of the level of dangers and tries to fight them, realizing the vulnerability of the economy that is being used. However, in addition to investing, it is necessary to introduce courses at enterprises on how to maintain cyber hygiene at all levels (since employees who do not have direct access to the system, such as drivers, have corporate accounts and can be “entry points” for the direction of the attack).

### **Conclusions**

Today, cyberspace remains one of the main vulnerabilities in national economic security. It should also be noted that one of the main factors that makes it much more difficult for states to solve this problem in the event of further growth of the threat is the impossibility of full cooperation and the creation of a unified electronic security system. As for repelling attacks on national economic systems, each country is left alone with the threat for security reasons. The outcome will depend on the adequacy of the response of the government of one or another country to create a system of active protection against cyber threats, provided that an understanding will come: the cyber security of all countries depends on each country. Therefore, as in the case of global terrorism, it is necessary to make joint efforts to prevent cybercrimes and search for criminals (which is already happening today, but not on a permanent basis).

Cybercrime is a multibillion-dollar industry in the global shadow economy. Over the past ten years, there has been a sharp increase in its revenues and, as a result, an increase in the number of intrusions, which not only lead to the compromise of protection systems, but also cause tangible damage to private businesses. Given the current level of demand for the services of cyber criminals, the shadow market of cyber-crimes will only grow and, therefore, the number of intrusions will increase, which in the medium term threatens to seriously shake both political and economic stability in the world and the world economy as a whole will suffer the most at the hands of cyber criminals.

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**ORGANIZATION AND LEGAL ASPECTS OF INFORMATION  
SECURITY IN UKRAINE UNDER MODERN CONDITIONS**

The level of the information system influences the pace of development and introduction of scientific and technical innovations in production processes and

contributes to the companies' stability. In fact, competitors are always happy to get the most intimate secrets to start using them. Based on the above, business entities should develop measures to protect information and allocate funds for security and make sure that they are ready to detect, respond to attacks such as phishing, malware, viruses, malicious insiders and ransomware, as well as prevent such attacks in advance.

Information security covers the tools and processes used by businesses to protect information and that prevent unauthorized persons from accessing business or personal information. Information security is a growing and evolving field that covers a wide range of fields, from network and infrastructure security to testing and auditing [1]. Information security protects confidential information from unauthorized actions, including verification, modification, recording and any disruption or destruction. The goal is to ensure the security and confidentiality of sensitive data such as customer account details, financial data or intellectual property data. The consequences of information security breaches include theft of personal information, data tampering, and data deletion. Attacks can disrupt work processes and damage a company's reputation, as well as cause significant losses.

Data protection standards around the world focus on increasing the privacy of personal data and impose restrictions on how companies can collect, store and use customer data. Data privacy focuses on personal information and primarily concerns how data is stored and used. Today, Ukrainian businesses face the almost impossible task of complying with a confusing set of laws and rules regarding data privacy and security. They can come from different sources: local, state, national and even international. This is not just a problem for big business. Even a small business with a localized geographical presence may be subject to the laws of other states because of their presence on the Internet, including interaction with the Internet through mobile devices and applications.

The Constitution of Ukraine (Part 1, Article 17) gives the protection of information security the status of a separate function of the state, which indicates

official recognition of the priority of this area of state activity at the present stage. In other words, the Constitution considers information security at the same level as the inherent attributes of statehood, such as sovereignty and territorial integrity. The main statutory acts regulating information security issues in Ukraine include: Law of Ukraine "On Information" dd. 02.10.1992; Law of Ukraine "On Protection of Information in Information and Telecommunication Systems" dd. 05.07.1994; Law of Ukraine "On State Secrets" dd. 21.01.1994; Law of Ukraine "On Personal Data Protection" dd. 01.06.2010.

Information security issues may be subject to the laws of other countries due to their specificity and this should be taken into account by companies. Consider the legal regulation of this issue in the main jurisdictions. The most well-known information security law in the EU is the General Data Protection Regulation. This regulation includes the collection, use, storage, security and transfer of data related to EU residents [2]. The General Data Protection Regulation applies to any organization doing business with EU citizens, regardless of whether the company itself is in the EU or outside the EU. Violation of the instructions can lead to fines of up to 4% of world sales or 20 million euros [2].

It is interesting that there are no federal laws governing data privacy in the USA. However, some regulations protect certain types or uses of data. These include:

1) Federal Trade Commission Act prohibits organizations from deceiving consumers about privacy policies and advertising, requires organizations to properly protect customer privacy and misleading advertising [3];

2) Gramm-Leach-Bliley Act regulates personal information collected and stored by financial institutions and banks [4];

3) Fair Credit Reporting Act regulates the collection, use and availability of credit records and information [5], etc.

Therefore, companies should take into account not only the legislative acts of Ukraine, as well as acts of other countries, which may regulate some information

security issues when these companies carry out commercial activities in other countries due to their presence on the Internet.

The basic information security principles that should guide companies when using IT assets are confidentiality. The purpose of the confidentiality principle is: 1) to preserve the confidentiality of personal information and to ensure its visibility and access only to those individuals who own it or require it to perform their organizational functions); 2) integrity (consistency includes protection against unauthorized changes (additions, deletions, changes in data). The principle of integrity ensures that data is accurate and reliable and is not modified incorrectly, whether accidentally or maliciously. The purpose of availability is to make the technology infrastructure, the applications and the data available when they are needed for an organizational process or for an organization's customers. Each element of the information security program should be designed to implement one or more of these principles.

It is also necessary to pay attention to such an important component of information security measures as information security policy. An information security policy is a set of rules that guide individuals when using IT assets. Companies can create information security policies to ensure that employees and other users follow security protocols and procedures. Security policies are intended to ensure that only authorized users can access sensitive systems and information. To be truly effective, policies need to be updated frequently based on company changes, new threats, conclusions drawn from previous breaches, and changes in security systems and tools.

There are hundreds of categories of information security threats. The key threats that are a priority for security teams of modern companies include: unprotected or poorly protected systems; lack of encryption; security misconfiguration; social media attacks, etc. Also, psychologists claim that about 25% of all employees of companies disclose information, sell or transfer it to competing companies because of relations with employees, dissatisfaction with the level of

salary or bad relations with the company's management [6]. The scientific literature notes that the main problem in determining the methodology for organizing the information security system is the creation of "regulations of the restrictive system, personnel access to confidential information, documents and databases, and, above all, the delimitation of powers and duties of all subjects of these legal relations" [7]. This is a major factor in information security, as the more people have access to critical information, the more likely it is to be stolen.

The information security model is individual and consists of elements each of which is aimed at solving its specific task for a particular company and includes specific content according to the tasks assigned. Reconstruction can be used to assess the quality of company information security models and conduct command investigations. The reconstruction is intended to check the quality and reliability of the models according to the tasks assigned to them. The main requirement for the security models studied during the reconstruction is their ability to measure the main qualities and indicators that are studied. A separate and most common way of reconstruction is imaginary reconstruction. It should be noted that the imaginary reconstruction is formed to solve special cognitive tasks related mainly to the indirect study of objects [7].

So, as a conclusion, it can be noted that in today's world the issue of information security for developed countries and companies is becoming a growing priority. Today, without the ability to protect critical information it is impossible to maintain its position in the market. The problem of confidential information will never disappear, states and companies will come up with new ways to prevent the loss of confidential intellectual property, but attackers will also come up with new ideas. Information security issues are especially relevant for Ukraine, taking into account the current aspects of economic and political development of the country.

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## **CURRENT TRENDS IN THE DEVELOPMENT OF THE GLOBAL BUSINESS AVIATION MARKET IN CONDITIONS OF DIGITALIZATION**

In times of crisis the defining trend in the development of the global business aviation market will be digital transformation. Since the beginning of the pandemic, private aviation has become one of the most popular destinations for passenger air transportation. The intensive development of the global passenger air transport market is due to both demographic trends and the emergence of new generations of consumers. At the same time, the main competitive advantage for airlines will be the degree of their digital maturity and their ability to invest in personalized travel experiences based on the application of new digital technologies.

It is worth noting that digital transformation is the introduction of modern technologies into the enterprise's business processes. This approach involves not only the installation of modern equipment or software, but also fundamental changes in management approaches, corporate culture, and external communications. As a result, the productivity of each employee and the level of customer satisfaction



increase, and the company gains the reputation of a progressive and modern organization.

Digitization of processes is relevant not only at the level of individual enterprises: entire industries choose this path of development as the only opportunity to meet the rapidly changing conditions of the surrounding world.

Digitalization has in many ways affected many various business sectors, and this is just the beginning of it. Enterprises aiming at success and growth are obligated to accept the challenges of the modern economy - only then will they be able to achieve leading positions in the industry. Digital transformation will aid them in achieving this goal.

For airlines, digitization will be more about reviewing the customer relationship system and focusing on the "digital consumer". Digitization projects are becoming more important in airline corporate strategies. They relate to specialized innovative services, for example, subscription air travel, the creation of specialized corporate venture capital funds, etc.

The COVID-19 pandemic that began in early 2020 led to many frequent commercial and private travelers choosing to forgo flying and travel altogether. From now on, aircraft owners will have to adapt to the new safety requirements and concerns of their customers. As companies respond to new consumer concerns, the private jet industry will continue to grow.

It should be considered that digital transformation is a long-term project that requires a systemic and serious approach. But even after successfully carrying out such a complex process, you cannot stop: you need to constantly develop the company while taking into account new technologies and developments.

Due to the impact of the COVID-19 pandemic, passenger anxiety about sitting next to others indoors for extended periods has forced many to abandon commercial air travel. In addition to the fear of sitting on a closed plane full of strangers, people also avoided commercial flights because of airport fears. Many potential passengers did not want to wait in long lines and use public toilets, where the risk of contracting

COVID-19 is higher. Because commercial airports facilitate the flights of thousands of passengers every day, people were wary of flying because there were no guarantees that every plane was screened or free of the virus.

In addition to airport and aircraft security, the private and commercial aviation sectors have been hit by online business and a lack of open destinations. For example, in many companies, their employees worked online, and teleconferences replaced face-to-face meetings. As a result of the shift to online work, many business professionals no longer needed to fly commercial or private jets. Leisure travel also declined as many resorts and other major destinations were out of business or did not offer the same experience. With many businesses closed, many people chose to stay at home. For commercial passengers, the risk of flying on vacation was often too great to justify the risks. While private aviation was a much safer option, air passengers were often stuck at home due to the closure of recreational businesses and other key services.

While business travel was recovering very slowly, leisure travel has started to become more popular again in late 2020, with additional travel coming in 2022. Even with the spread of the vaccine and reduced restrictions, many people still do not trust commercial airlines for their personal and leisure travel. With confidence in commercial airlines declining in 2020, many passengers have turned to private jets and not returned to airlines. This trend of passengers using private jets for personal and leisure travel rather than business travel gained momentum in 2021 and will continue into 2022.

Thus, the business aviation industry has proven to be resilient, safe and efficient despite the pandemic. In the recent years, there has been an increase in demand for business class aircraft due to the impact of the coronavirus on air travel. The appeal of private jet travel to many passengers has led to many changes in the private jet industry. These changes affected both private jet owners and customers. In 2020, many travelers have come to appreciate private jets for their privacy and ability to minimize contact with other passengers. This trend will continue in 2022, as the nature of private aviation keeps the number of people aboard charter flights small.

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**GOVERNMENT REGULATION OF THE INTEGRATION PROCESSES  
DEVELOPMENT: UKRAINE AND THE WORLD**

The report focuses on the importance of the good governance in solving the national, regional, and world problems during the global economy transformation. Modern socio-economic transformations of planetary scale are significantly changing the place and role of the state in the local, national and global dimensions [1]. The national economy, regional economies, as well as the world economy as a whole, have always been complex systems. However, the speeding up of the strengthening globalization processes, e.g., financialization, digitalization, global value chains creation, industrialization, etc. at the end of the 20<sup>th</sup> – the beginning of the 21<sup>st</sup> centuries, has contributed to the economic systems acquiring the new features, resulting in their becoming even more open, stochastic, nonlinear systems, the

elements and subsystems of which, according to the the system-proven characteristics of such systems, are so interdependent and interconnected that a change in the relationship of any of them with other elements and subsystems causes changes in the other elements and subsystems increasing the propensity for turbulence and bifurcation [2]. Under the circumstances, the problem of reviewing the roles and responsibilities of the national government, the regional government, as well as the world government have come back on the agenda.

It is argued that the government regulation of the integration processes development plays a key role for the efficient functioning of the highly open national economy which is strongly integrated into the world economy, but mainly in the interests of the partner-countries as opposed to the interests of the country itself. So, the free trade agreements (FTA) are to be concluded so that the foreign trade activities are organized in the interests of the Ukrainian economy to improve the basic human rights and public welfare since we still observe the declining tendency of Ukraine's high tech production, and orientation of development primarily on agricultural production, the extraction of raw materials, their primary processing, and the export of goods with low added value [3]. The reconsideration of the whole set of the necessary government policies is required, and in the context of the research special attention is paid to the optimization of foreign trade relations with the EU member states, and the countries, with which Ukraine has concluded FTA.

Concerning the world economy, the report touches upon the necessity to govern the integration processes development so that the differentiation between the states belonging to the core and the periphery of the world economy is not so sharp and decreased, as well as upon the need to change the globalization paradigm and make the transition to multi-polar world formation as smooth as possible. The analysis of the development of regional integration stages and their functioning is conducted in the context of the following processes: merging and taking over, leveling and adjustment of the member states, as well as the equivalence achievement in interrelations between them.

It is important to underline that the world economy has been characterized as having hierarchical structure, shaped by a certain number of powerful states, which tried to improve their own power during the transformation periods while changing the system to their own benefit. Nowadays the structure of the world economy system is influenced by the networks which results in a qualitatively new level of interaction of networks and hierarchical structures. Thus, in the conditions of the globalized world economy, which is functioning as the above described super complex open system, the problem of the world's future existence and sustainability depends on the organization, management, and governance of the world economy system where the key roles are played by the international economic organizations and the centers of economic power. The transformation of the world economy governance is determined by the actions of the players at the state, regional and global levels through the interaction of the actors and the main elements of the world economy at the level of enterprises, local, sectoral, interstate, regional, trans-regional, and global levels; it results in the change of the major actors, their number, relations. It is emphasized that ideally the centers' successful functioning requires coordination and consolidation of all involved [2].

Taken into account the above mentioned, it is essential to agree with M.M.Ali, who mentions that economic performance as a whole of the world depends on peace, tranquility, socio-economic condition, health services, cultural, demographic scenario, human rights, no one being left behind in the society and effective economic diplomacy with transparency, accountability and fairness. To bring stability, strong good governance with ethical values, morality, corruption-free, environmental protection and humanistic approaches are needed. As such good governances and regulations are the timely need of the current affairs which have a vital role on day to day changing activities of the globe, with geo-political strategies which have been impacting on the global scenarios deviation and ought to be strictly followed by arranging human rights and human dignities along with the fulfillment of 17 sustainable development goals and their 169 targets irrespective of independent

nations and preservation of sovereignty with national identity [4]. It is also evident that the economy of Ukraine has become too open and too dependent lately which means that the set of integration policies need to be elaborated and implemented in order to protect and reintegrate the national economy into the world economy in the interests of the Ukrainian people.

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## **COVID-19 AND PUBLIC-PRIVATE PARTNERSHIPS**

COVID-19 has posed the most challenging and complex global health crisis in at least 100 years. Specifically, the complexity of COVID-19 has been characterized by uncertain and rapidly changing information; interdependencies between decisions made by many individuals/organizations with different perspectives and their outcomes across organizational and sector boundaries; and time lags between policy changes and their effects.

COVID-19 has had a profound impact on the global economy, with disruptions to supply chains and shrinking demand for products and services. In the context of PPP infrastructure projects, the impact of COVID-19 in a broader context can bring to the following results [1]:

(i) decreasing PPP project value and volume,

(ii) an increasing PPP project risk allocation and assumptions being taken on the private sector side,

(iii) a perception on the public sector side that value for money may not currently be realized fully on PPP projects.

It quickly became clear that slowing the pace of COVID-19 and mitigating its impact could not have been the work of governments alone, instead it had required an all-of-society response. The world-wide impacts of COVID-19 have prompted an unprecedented all-sector, rapid response. The COVID-19 pandemic response has demonstrated the interconnectedness of individuals, organizations, and other entities jointly contributing to the production of community health. This response has involved stakeholders from numerous sectors, including governments, international organizations, the private sector, and civil society who have been faced with new decisions, objectives, and constraints. As a result, the international community has mobilized public-private partnerships to accelerate the global response, providing urgent health and socio-economic support, helping communities to live with the pandemic, and working towards post-pandemic recovery.

There can be defined the following key findings about public-private partnerships response to COVID-19:

- A wide range of partnerships have been formed during the pandemic [4].

Examples include collaboration at national and international levels.

- Four main initiators of partnerships are: governments, the private sector, civil society, and the United Nations.

- A business that promotes the creation of a partnership is usually well placed to identify practical solutions and other like-minded organizations that want to collaborate.

- "The private sector has contributed to the COVID-19 response through engagement in COVID-19 surveillance and testing, treatment and management of

COVID19 cases, risk communication and health promotion, and maintenance of access to other essential services" [7].

- Among existing partnerships, private sector initiators appear to be dominated by leading multinational companies that have more resources to focus on their impact within society and seek ways to work with potential partners against the pandemic. Their unique expertise, their capacity to innovate and produce new technologies for adaptation, and their financial leverage enable them to play a key role.

- Multi-sector partnerships, which bring together governments, international organizations, scientists, businesses, civil society, and philanthropists, have been an important driving force in the global response to the COVID-19 pandemic.

- The scope for these public-private partnerships has ranged broadly. Partnerships have (i) provided financial support and technical assistance; (ii) supported project implementation and delivery; (iii) facilitated research, data collection and analytics; and (iv) coordinated various response actions [4, p.3].

COVID-19 has brought to quick partnership development and the response to the pandemic has created the following types of public-private partnerships [3; 5; 6].

1. Crisis-response partnerships. This type of partnership has new features compared with conventional PPPs. PPPs are typically thought of in terms of large infrastructure projects. They are understood as long-term (i.e., running for several decades) working arrangements based on a complex contractual commitment "between a public sector organisation with any other organisation outside the public sector" [2]. Crisis-response partnerships have mostly not followed the typical model of conventional PPPs. Crisis-response PPPs are context-specific and mostly short- and middle-term.

2. Recovery and resilience partnerships. These partnerships are looking beyond the immediate response to plan for systemic change to fit the "new normal" [4, p. 9].



3. Sustainable partnerships. These partnerships are "longer-term multilateral arrangements, involving both local and cross-border flows and linkages that utilize resources and competences from partners, for the joint achievement of collective goals" [4, p. 9].

According to Xiaolan Fu's analysis of 36 partnerships [4], most partnerships focus on Type 1 (Crisis-response) Partnership, but around a third focus on Types 2 (Recovery and resilience) and 3 (Sustainable), several of the partnerships address more than one type.

The tension between the necessity to partner and act swiftly, while attempting to fulfil good governance requirements such as equity, competition and transparency, has shaped different practices during the pandemic. Consequently, the framework of crisis-response partnerships can be defined as follows.

First, such partnerships were established and performed rapidly during the weeks and months of the emergency response, instead of over years and decades.

Secondly, these partnerships have not typically been formalised through the complex contractual arrangements that often characterise PPPs. COVID-19 has created a high-risk environment, where the private sector has borne entrepreneurial risk in search for returns from public contracts. Neither parties have had the necessary time and resources to formalise risk-sharing in long-term PPP contracts.

Thirdly, the private sector's innovation supply push played a more important role in the demand formulation than usual. Many government actors, like Ministries of Health, were overburdened with filtering innovative ideas.

The effectiveness of PPPs to respond to COVID-19 still need to be evaluated. The deficit of public information in many countries on the exact features of these PPPs hinders the assessment of how well they have performed, how fair the processes were that put them in place, and the value they represent [6]. While evidence on their effectiveness is not yet sufficiently available, many have demonstrated the potential for outcome-focused, creative ways of mobilising skills, funds and capacities to help

achieve public health goals. Beyond evaluating their immediate effects, follow up should also assess their long-term sustainability, impact on capacity in the public sector, and their influence on health inequities and social justice.

In conclusion, it should be noted that COVID-19 has led to the further development of public-private partnerships and the emergence of new types of PPPs. The urgency of the pandemic, the fact that it directly affects many people's lives, and the rapid and global spread are unique factors that enable quick action. Quick partnership development may enable positive actions concerning this, as well other pressing global challenges. Despite, the effectiveness of PPPs to respond to COVID-19 still need to be evaluated, many PPPs have demonstrated their potential to respond effectively COVID-19 and other challenges.

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**SPECIAL ECONOMIC ZONES MECHANISMS AND THEIR ROLE IN  
THE ECONOMIC GROWTH OF DEVELOPING COUNTRIES  
(CASE OF VIETNAM)**

In the second half of the twentieth century (mainly the 60s and 80s), the Asian region saw a small group of countries among a number of developing countries that had been extremely active in industrializing and restructuring their economies, in particular through attracting large flows of foreign capital. Asian NICs group included South Korea, Hong Kong, Singapore, and Taiwan. They got the name "Asian dragons" for their high economic growth, industrial development and export. The economies of these countries have become the most successful export-oriented models and have achieved significant results in the creation of manufacturing industry and social progress. The abovementioned countries are usually referred to the first wave of NICs. Over time, their economic development model began to be introduced by a number of other Asian countries, the so-called second wave of Asian NICs: Malaysia, Indonesia, the Philippines, Thailand, and subsequently Vietnam. In the 80-90s of the twentieth century, these countries actually began to copy the main stages of the NICs development of the first wave, taking advantage of the fact that they had lost their previous comparative advantages by this time, first of all, it refers to labor-intensive industries.

Two subgroups can also be distinguished among the second wave of NICs. The first one includes Malaysia, Indonesia and Thailand. These countries have a long history of attracting FDI and stimulating export-oriented MNEs activities. In terms of flows of new foreign direct investment, Malaysia and Indonesia are second only to Singapore and Hong Kong among newly industrialized countries of Asia and far ahead of South Korea and Taiwan. In the mid-1990s, Hong Kong had 6 300

subsidiaries, South Korea 11 500, Singapore 24 000, Taiwan 2 800, Malaysia 15 500, the Philippines 14 800 [1]. As for the second group of NICs, through transnational companies these countries, especially Malaysia, have significantly changed the structure of the economy and exports and are gradually shifting their focus to capital-intensive industries with the average complexity of technology. In another subgroup of second-generation NICs, including the Philippines, Vietnam and Sri Lanka, the volume of MNEs operations was significantly lower, although Vietnam has been increasing its annual flows and total accumulated foreign direct investment. MNEs transfer the production of labor-intensive products to these countries, since labor is much cheaper than in the first wave of NICs. FDI flows into Asian NICs come in the form of greenfield investments and in the form of purchase of existing businesses through mergers and acquisitions.

Vietnam's average annual GDP growth rate in recent years exceeds 7%, which is higher than in most Asian countries. Vietnam is considered as a country with great potential and opportunities for foreign investors. In recent years, foreign direct investment (FDI) flows into Vietnam has shown impressive indicators (Table 1) and reached a record level in 2021 of \$19.74 billion in 2021. In general, Vietnam has received \$241.6 billion of FDI over the past 10 years [2].

FDI continues to play a key role in supporting the country's economy. The government at both central and municipal levels actively promotes FDI attraction and pursues effective regulatory policy. The main part of FDI comes through the special economic zones (SEZs) created in the country. The Ministry of Planning and Investment (MPI) is the national institution of the country responsible for regulating and promoting foreign investment. The MPI approval process includes: 1) assessment of the investor's legal status and financial stability; 2) compatibility of the project with the government's long-term and short-term goals for economic development and public revenues; 3) technological expertise of the investor; 4) environmental protection, etc. [3].

*Table 1*

**FDI flows into Vietnam, billion US dollars**

<i>Year</i>	<i>Inflow</i>	<i>% of GDP</i>
2021	19.74 billion	4.3 %
2020	15.80 billion	4.60 %
2019	16.12 billion	4.88 %
2018	15.50 billion	5.02 %
2017	14.10 billion	5.01 %
2016	12.60 billion	4.90 %
2015	11.80 billion	4.93 %
2014	9.20 billion	3.94 %
2013	8.90 billion	4.16 %
2012	8.37 billion	4.28 %

*Source:* [2].

Vietnam uses the division into economic zones both for the development of certain industry sectors and for the development of certain territories. For example, projects in high technology, environmental protection, scientific research, infrastructure development, processing of agricultural and marine products, software production and renewable energy sources are now encouraged. Today, the MIP of Vietnam defines 260 SEZs among which the most interesting are industrial export production zones and industrial parks. All SEZs are concentrated in three key economic zones such as the Northern Special Economic Zone (NKEZ, Northern SEZ), the Central Special Economic Zone (CKEZ, Central SEZ) and the Southern Special Economic Zone (SKEZ, Southern SEZ).

The Northern SEZ consists of seven provinces: Hanoi, Hai Phong, Bac Ninh, Hai Duong, Hung Yen, Vinh Phuc and Quang Ninh. SEZ enterprises are focused on the production of electronics, high-tech products and mechanical engineering. It should be noted that this area is a priority for investors considering the China-Plus-One strategy. Vietnam took its place in the program due to two main factors: competitive labor costs and proximity to the world's second largest economy, China.

The Central SEZ consists of five provinces: Thua Thien Hue, Da Nang, Quang Nam, Quang Ngai, and Binh Danh. This region is focused on the development of light industry, food industry, production of building materials, paper and forest products processing. The main directions of development of the Central SEZ include

development intensification of such industries as oil production, gas industry, shipbuilding, logistics and other high-tech industries.

The Southern SEZ is the most active economic zone in the country, and consists of eight provinces: Ho Chi Minh city, Binh Duong, Dong Nai, Long An, Ba Ria-Vung Tau, Binh Phuoc, Tay Ninh and Tien Giang. This area is regarded as a center for the rubber, plastic and clothing industries. In addition, this region is engaged in mechanical engineering and metallurgy [4]. The strength of this area is the diversity of economy, the region is endowed with a variety of raw materials and human resources. The SEZ is known as the main industrial center that attracts the largest FDI due to its favorable investment climate.

Vietnam has a number of incentives that encourage foreign investment depending on various factors, including regional profile. Tax benefits include exemption from or reduction of corporate income tax, value added tax (VAT) and import tariffs for certain periods and are granted depending on the activities and location of the enterprise. A preferential income tax of 10% for a period of 15 years is established in economic zones and high-tech zones for new investment projects in the territories with difficult social and economic conditions.

The preferential income tax is valid during the whole period of activity for companies operating in the fields of education and training, health, culture, sports and environment. Other reduced rates include 15% and 17% for enterprises engaged in farming, breeding, processing of agricultural products. Large production projects with investment capital of \$258 thousand or more with a minimum income of \$430 million per year for at least three years after the first year of operation are also entitled to tax benefits. In addition, there are import duty exemptions and land lease privileges for investors. Such benefits and exemptions depend on the industry and investment location[5]. Thus, Vietnam has established export zones, high-tech industrial zones, border and economic zones to stimulate foreign direct investment flows without which industrial development is impossible. As a result, the production volume and productivity of the industrial sector have improved significantly.

The experience of creating and operating FEZs shows that through the use of the mechanisms of FEZs and attracting foreign capital, countries are trying to implement industrial development programs, give an impetus to the development of individual industries or regions of the country, reach a new level of industrial development, and improve socio-economic conditions. Governments of countries are trying to combine the interests of foreign investors with national priority programs for economic development through the mechanism of operation of FEZs through the use of the principle "benefits for foreign investors – requirements for foreign investors – economic effect for the development of a given country". The history of the development of FEZs has accumulated a wealth of experience in attracting foreign investment, and its analysis and use can be useful in justifying the methods and organization of state investment policy in Ukraine in the near future.

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**MECHANISMS OF INTERNATIONAL SCIENTIFIC AND  
INDUSTRIAL COOPERATION AND INNOVATIVE DEVELOPMENT OF  
THE AVIATION SECTOR OF UKRAINE**

Today, under the influence of the processes of globalization and regionalization of the world economy, new vectors of international economic

cooperation are being formed, first of all, by expanding the relationships between individual economic subjects of various industries. The industry that is the driving force of globalization and at the same time sensitively reacts to any changes in the system of international economic relations is aviation. Modern aviation is one of the most science- and capital-intensive industries, where a large number of high-tech projects are implemented. In turn, international cooperation and the pooling of the resources of countries allows us to accelerate the dissemination and effective implementation of the results of scientific and technological activities. For Ukraine, international scientific and technological cooperation in the aviation sphere acquires extremely important features in the context of economic revival in the war and post-war period.

Main reasons of international scientific and industrial cooperation in aviation sector are [2]:

- 1) uneven development of technologies in the countries of the world;
- 2) insufficient financing of production and implementation of scientific and technical developments;
- 3) lack of modern equipment for manufacturing innovative products;
- 4) lack of resources and production capacity of aviation enterprises, etc.

The aviation sector of Ukraine is in a state of crisis, losing its competitiveness in the markets for both final production products and components; there is a reduction in the scientific, technical and technological potential of the aviation industry and its lagging behind developed countries [5].

The development of international cooperation is a priority area of activity of air transport enterprises of Ukraine. The development and implementation of joint scientific and technological projects with foreign partners, international industrial cooperation should be the priority tasks for air transport enterprises of Ukraine [3; 4].

It is also considered necessary to use the potential of scientific, technical and industrial cooperation with international partners, primarily NATO and EU member states [1]. A study of world experience shows that integrated structures created to



ensure the innovative development of aviation are usually formed by companies from countries that are members of one integration group. This factor is decisive in the expediency of international scientific and technological cooperation in the field of aviation. Therefore, Ukraine's entry into the Alliance will provide an opportunity to be included in the processes of production and implementation of aviation innovations.

In addition, the implementation of innovations in aviation must be accompanied by the introduction of new concepts, technologies and training models. From the point of view of aviation education, it is extremely important to cultivate the skills to collect and analyze information (data drives decisions), to develop data processing skills. At the same time, together with technological innovations, "green aviation" should be included in the education of future aviation specialists.

Financing of innovative projects in aviation should be carried out through state orders both within the framework of state defense orders and from aviation transport companies for products of the Ukrainian aviation industry. Additional opportunities will be provided by the attraction of foreign investments in the aviation sector of Ukraine, the development of public-private partnership.

Thus, international cooperation for the innovative development of aviation, the participation of Ukraine in joint scientific and technological projects with foreign partners, the introduction of new models and concepts of aviation personnel training, the diversification of sources of financing scientific and technological projects in aviation, the involvement of the private sector and foreign investments will accelerate the revival of the economy of Ukraine in the war and post-war period. And at the same time international scientific and industrial cooperation and innovative development of the aviation sector of Ukraine will contribute to the further increase of global competitiveness, income to the state budget of the country, integration with the world leaders of aircraft manufacturers, providing the population with jobs.

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**SOLAR POWER PLANTS FOR THE AGRICULTURE DEVELOPMENT ON  
THE EXAMPLE OF BENIN IN WEST AFRICA**

These days there are more ways than ever before to invest. This is thanks mostly to technology and internet. Now we can access it in more ways. We evolved in our thinking of how we use the internet, such that we now feel completely comfortable conducting financial practices and trusting that things will be handled efficiently and securely. These are also some of the most relevant factors to keep in mind when we decide between different investment platforms/apps. There are so many options nowadays that even small differences in reputations for security, efficiency, safety, and customer service can make a huge difference [1].

An investment platform, sometimes called a fund supermarket, allows investors to buy and hold a range of investments in one place online, and sometimes with a smartphone app. Investment platforms often provide extensive research and information, such as investment news, historical and recent performance figures and analysis of the investment styles adopted by fund managers.

The crucial point is that investment platforms are designed for people who are making their own investment decisions [2].

NEoTOffgrid Africais an investment platform designed to support the energy transition in Africa by responding to energy access issues. Founded and owned by Meridiam (as majority shareholder) and EDF, NOA develops innovative financing solutions for its partners to remove obstacles related to initial investments, the deployment of new technologies, and the management of commercial risk. NOA is managed by NEoT Capital, which has assembled a team experienced in financial structuring and clean energy solutions to work together with international strategic partners to provide the financial and operational support necessary for the development of a carbon-free world. So, NOA is the platform to support and accelerate the energy transition in Africa, and which has already committed more than 30 million euros investment to electrify of more than 44 thousand homes and businesses in Côte d'Ivoire, Sierra Leone, Uganda, and Nigeria. NOA's aim is to multiply investment projects with the best technological and operational partners in the field of off-grid energy in order to build the largest mini-grid portfolio in sub-Saharan Africa.

In November 2022 NEoTOffgrid Africa (NOA), GDS International, and ARESS have agreed to join forces to enter the very promising rural electrification sector in Benin by creating a joint company, Les Soleils du Bénin.

Les Soleils du Bénin brings together leading companies in their respective fields: NOA, GDS International, ARESS.

GDS International, subsidiary of the Générale du Solaire group, is one of the main French players in solar energy, an independent electricity producer with more than 200 MW of solar power plants in operation and a portfolio of more than 1 GWp projects under development in France, Italy, West Africa, and the Middle East.

The Générale du Solaire group created in 2008, provides expertise in the development, engineering, construction, financing, and operation of photovoltaic power plants, as well as being an independent producer of electricity in France and

abroad. Present across the entire value chain, Générale du Solaire pilots all solar projects, from their development to their operation. The group, which employs around 80 people, mainly at its headquarters in Paris and its branch in Montpellier, expects to generate a forecast turnover of 100 million euro in 2022 from all its activities. The Group owns more than 300 MWp of solar power plants in France. Générale du Solaire also has a strong presence abroad and currently has nearly 1,000 MWp of projects under development worldwide. With more than 380 projects awarded by the Commission de Régulation de l'Énergie, and 1,000 MWp of projects under development in France, Générale du Solaire is one of the leading players in the sector.

ARESS, created in 2012, is a subsidiary of the MYJOULEBOX group specializing in the marketing of solar systems. ARESS is currently operating in 4 West African markets, and aims to become one of the main private energy operators on the continent. ARESS is an energy transition leader in Benin and West Africa. With a versatile team built around several business segments, since 2012 ARESS has deployed more than 5 MWp distributed throughout more than 50 thousand decentralized and hybrid solutions, with presence in 4 West African countries.

The partnership between NOA, GDS International and ARESS begins with a first flagship project aiming to electrify 12 localities in Benin within a year. This project is operated within the framework of the call for project proposals launched by the MCA-Benin II Offgrid Clean Energy Facility (OCEF) on funding from the Millennium Challenge Corporation, which is the pilot phase of the newly implemented off-grid electrification regulation in the Republic of Benin, a first in West Africa.

The project represents an investment of €8.5 million, co-financed by NEoTOffgrid Africa, as a financial partner of the project, and MCA Benin II. The goal is to install 1.7 MW of photovoltaic capacity and 3 MWh of battery capacity in all 12 localities, supplying more than 5 thousand homes and businesses with electricity. The project has been developed by GDS International, and will be co-

constructed by GDS International and ARESS. ARESS will also be the project operator.

The combined expertise of these three partners will enable them to create autonomous, connected, and environmentally friendly power grids intended to improve the availability of electric current and access to electricity for public infrastructures, SMEs, communities, and households [3].

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## **FINANCING SOURCES OF THE GLOBAL ENERGY TRANSITION PROJECTS**

Combating climate change is a global challenge. It requires consensus in developing international cooperation to ensure the energy transition – the development of renewable energy, energy efficiency, and sustainable development. This consensus was reflected in successive international agreements: the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Climate Agreement. Ukraine became one of the first European countries

to ratify the Paris Agreement, which is partly explained by the significant changes in the climate on the territory of Ukraine and the related environmental, economic, and energy problems, as well as Russia's economic war, and later the armed conflict against Ukraine. Solving the task of the energy transition for Ukraine, whose economy is in a deep crisis caused by Russia's aggression, is closely related to the search for sources to ensure the process of forming a joint carbon-free energy system synchronous with European countries [1].

According to the International Agency for Renewable Energy Sources (IRENA), there are plans to invest USD 131 billion in the global energy system by 2050. The US will focus on creating the technological conditions defined by the Global Warming Control Strategy at 1.5°C. This includes ensuring the energy transition, increasing energy efficiency, developing renewable energy sources, electrification of final consumption, developing power grids, and development of hydrogen energy, as well as innovation, allowing these investments to pay off [2].

Under this strategy, annual investment requirements represent about 5% of the global gross domestic product (GDP). By 2050, it is necessary to invest more than 80% of the total USD 131 billion in technology. The national strategies of a number of countries of the world, which are part of the Planet Energy Scenario (PES), have already foreseen significant investments (about USD 98 trillion) in energy until 2050. However, investments amounted to USD 2.1 trillion in 2019 and were aimed at modernizing aging infrastructure and meeting growing energy demand, while the Strategy calls for redirecting 24 trillion US dollars by 2050 planned investments from fossil fuels in energy transition technologies [3].

This, in turn, makes it necessary for countries to find additional sources (state and private; property and debt) to finance the energy transition. In 2019, private sources funded USD 1.6 trillion in energy assets, representing 80% of total energy sector investment. Of course, the share of debt capital, which stood at 44% in 2019, is expected to rise to around 57% in 2050, almost 20% higher. Long-term credits are expected to be available for energy transition technologies. In addition, in view of the

high risks to private investors, decentralized capital-intensive projects should be supported by governments.

In 2019, the public sector provided nearly USD 450 billion in capital and lending from development finance institutions. And as part of implementing the Strategy, these investments will reach approximately USD 780 billion. Public debt financing will be an important stimulus to other lenders, particularly in developing markets where real risks are high. State funds are also needed to create favorable conditions for the transition and to ensure its speed and optimum socio-economic results [4].

Within the framework of European integration, Ukraine is seeking to join the implementation of the requirements of the Strategy, but its state budget is devastated by the war. As a result, it now relies on foreign investment alone. First, Ukraine is building on the EU's Strategy Implementation Fund and Common Development Fund in joining its energy transition programs.

Thus, the "European Green Deal" (European Green Deal, 2019) is a program to transform Europe into a climate-neutral one by 2050. The Energy Reform Implementation Plan – REPowerEU (2022) provides for ending dependence on energy supplies from Russia and measures to save energy, overcome problems related to the destruction of the global energy market caused by Russia's invasion of Ukraine, the formation of an investment fund to accelerate the transition from fossil fuels to clean energy [5].

Achieving the REPowerEU goals requires additional investments of EUR 210 billion by 2027, including a contribution to the development of Ukraine's energy sector. For the EU and Ukraine, reducing imports of Russian fossil fuels could save nearly EUR 100 billion per year, and these funds could be channeled into the private and public sectors, both at EU, national and cross-border levels. EUR 225 billion of RRF lending is already available to support REPowerEU. In addition, the European Commission proposes to increase the financial envelope of the RRF with EUR 20 billion in the form of grants obtained from the sale of permits in the EU Emissions

Trading System. It is stored in the market stability reserve and can be auctioned off to avoid unbalancing the market [6].

Under the current multi-annual financial framework, the solidarity policy will already support up to EUR 100 billion in decarbonization and green transition projects by investing in renewable energy, hydrogen technologies, and infrastructure. An additional EUR 26.9 billion from solidarity funds can be received in the form of voluntary transfers to the RRF, another 7.5 billion euros from the implementation of the Common Agricultural Policy, and a third of the funds are expected from the introduction of energy efficiency measures.

Thus, the European Green Deal is the EU's long-term growth plan, which aims to make Europe climate neutral by 2050. This goal is enshrined in the European Climate Act, as well as in legally binding commitments to reduce net greenhouse gas emissions by at least 55% by 2030, compared to 1990s levels. The commission also presented the "Fit for 55" (2021) legislative package to achieve these targets, with a 30% reduction in gas consumption by 2030.

Unfortunately, Russia's war against Ukraine broke all plans and led to an unprecedented global energy crisis. The crisis in turn affected the Ukrainian economy but also reinforced its desire to speed up the energy transition and the solitary support of the world's countries, mainly the EU. Investments in the development of free energy sources are now a strategic point for many countries, especially the EU, which are ready to include Ukraine in joint programs and the use of joint funds.

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## **CURRENCY REGULATION AS A FACTOR OF INFLATION REDUCING**

Disbalance in both global and national economies most clearly affect one of macroeconomic indicators – an inflation and its' dynamics. Nowadays the global economy faces another crisis and the potential for its' development perspectives has been lowered significantly, mostly due to Russian invasion of Ukraine. At the beginning of this crisis, the world economy had not yet fully recovered from the pandemic – before the war, inflation in many countries was growing under the influence of imbalances between demand and supply thanks to support measures, which were mainly reduced to the tightening of governmental monetary policies. But the war will lead to a slowdown in economic growth and an increase in inflation, since the risks of economic development have increased sharply and it has become more difficult to find compromise solutions in the field of international economic policy, which is a direct consequence of the war for Ukraine and sanctions for Russia.

The level of inflation in Ukraine, according to analysts' forecasts, will be about 30% by the end of this year. On the background of a high level of inflation in the world (about 10% in EU and US, more than 70% in Turkey), the open economy of Ukraine actively imports this inflation: when prices rise on the world market, they also rise in Ukraine, especially when it comes to our goods that are produced and sold on the global market or goods that we purchase for our own needs. However, when the direct destruction of critical infrastructure occurs at the same time, traditional economic chains are broken and resources become more expensive – all these are powerful drivers of inflationary pressure. At the same time, the devaluation of UAH

is taking place, which is also a source of inflation. At a certain point, inflation turns into a centrifugal force that reinforces itself, destroying the economy. That is why control over it is an important task for the government.

The active instruments of monetary influence on the level of inflation include the exchange rate, which is a lever with which the government can influence the dynamics of inflation. The mechanisms of such influence were described by representatives of the neoclassical synthesis school of thought in the context of the business cycle theory. Following their recommendations on increasing the transparency of monetary policy, in 2016, the National Bank of Ukraine developed an inflation targeting program using exchange rate regulation as one of the country's monetary policy regimes. Like, for example, the European Central Bank, which also defines inflation targeting as a monetary policy strategy aimed at maintaining price stability, focusing on deviations of published inflation forecasts from the announced inflation target index [1, p.113], the National Bank of Ukraine resorts to the same targeting levers. The essence of the inflation targeting regime consists in determining the quantitative parameters of inflation and the obligation of the central bank to achieve these goals over the medium-term period. Among the targeting tools for regulating the level of inflation, the mechanisms of "currency intervention" are used, which are designed to support the rate of the national currency, preventing its depreciation, or ensuring its stability. The central bank sells dollars to prevent the hryvnia from drops on the foreign exchange market and thereby affects the purchasing power of money, exchange rates, and the country's economy as a whole; the purchase of foreign currency by the Central Bank causes a decrease in the rate of the national currency, which contributes to the growth of export volumes.

For interventions, as a rule, official foreign exchange reserves are used, thus it is important that asymmetries in the balance of payments system do not lead to the fact that the foreign exchange intervention causes the depletion of the country's foreign exchange reserves, without fulfilling its function of preventing the depreciation of the national currency and inflation.

As a currency regulator, the Central Bank implements an inflation targeting strategy based on the Taylor rule. In its classical form, the rule is described as follows:

$$i_t = \pi_t + \bar{i}_t + \varphi_\pi(\pi_t - \bar{\pi}_t) + \varphi_p(p_t - \bar{p}_t) \quad (1.1)$$

where:

$i_t$  is the target short-term nominal policy interest rate (e.g. NBU key policy rate)

$\pi_t$  is the rate of inflation as measured by the GDP deflator

$\bar{\pi}_t$  is the target rate of inflation

$\bar{i}_t$  is the assumed equilibrium interest rate

$p_t$  is the natural logarithm of actual GDP

$\bar{p}_t$  is the natural logarithm of potential GDP

$(p_t - \bar{p}_t)$  is the output gap

$\varphi_\pi > 0, \varphi_p > 0$  are the reaction coefficients to inflation and deviations in output in the rule. In Taylor's original paper [2, p.202]  $\varphi_\pi = \varphi_p = 0,5$ .

In this case the linear approximation  $\ln(1 + x) = x$  is used. The non-linear Taylor rule might look as follows:

$$1 + i_t = (1 + \pi_t)(1 + \bar{i}_t) \left( \frac{1 + \pi_t}{1 + \bar{\pi}_t} \right)^{\varphi_\pi} \left( \frac{1 + p_t}{1 + \bar{p}_t} \right)^{\varphi_p}$$

In scientific papers, especially those which use agent-based models to evaluate monetary policy, one might find also a substitution of output gap by the unemployment gap  $(\bar{u}_t - u_t)$  where:

$\bar{u}_t$  is the target level of unemployment [3, p. 9], or natural level of unemployment [4, p. 118];

$u_t$  is the actual level of unemployment.

The linearized Taylor rule thus might look as follows [3, p. 9]:

$$i_t = \pi_t + \bar{i}_t + \varphi_\pi(\pi_t - \bar{\pi}_t) + \varphi_u(\bar{u}_t - u_t) \quad (1.2)$$

The non-linear Taylor rule might look as follows [4, c. 118]:

$$1 + i_t = (1 + \pi_t)(1 + \bar{i}_t) \left( \frac{1 + \pi_t}{1 + \bar{\pi}_t} \right)^{\varphi_\pi} \left( \frac{1 + \bar{u}_t}{1 + u_t} \right)^{\varphi_u} \quad (1.3)$$

where  $\varphi_\pi > 0, \varphi_u > 0$ , або  $\varphi_\pi > 1, \varphi_u = 0$ , if the monetary policy pursues the stabilizing an inflation only, in this case the Taylor rule is *single-mandate*, or  $\varphi_\pi > 1, \varphi_u \geq 1$ , if the monetary policy also pursues both minimizing an inflation and unemployment, in the case of which the Taylor rule is *dual-mandate*[3, p. 9, 12].

It follows from Taylor rule that the main monetary instrument and operational reference point under such a monetary regime is the interest rate: if the projected inflation is above the target level, then the policy of "expensive money" is carried out to contain it, i.e. the interest rate increases. And, vice versa, when the forecast inflation rate is lower than the target level, the policy of "cheap money" is carried out, when the interest rate decreases.

By changing the rates for its operations with banks, the central bank affects the terms on which banks enter into agreements with each other in the money market, and thus the cost of short-term debt funds. Through the mechanisms of capital flow between different sectors of the financial market, the cost of short-term funds affects banking interest rates, the prices of other financial assets, and most importantly, the hryvnia exchange rate, and indirectly affects such macroeconomic indicators as GDP and inflation. Such a mechanism is called a monetary transmission mechanism.

Active instruments of monetary transmission include the foreign exchange rate, which is also a lever with which the state can influence the dynamics of inflation. The graph of the relationship between the dynamics of the exchange rate and inflation, where the X-axis is the percentage increase in the average exchange rate of the US dollar from the current month to the previous one, and the Y-axis is the percentage increase in inflation for the month (consumer price index to the previous month less 100 percent) testifies to its effectiveness.

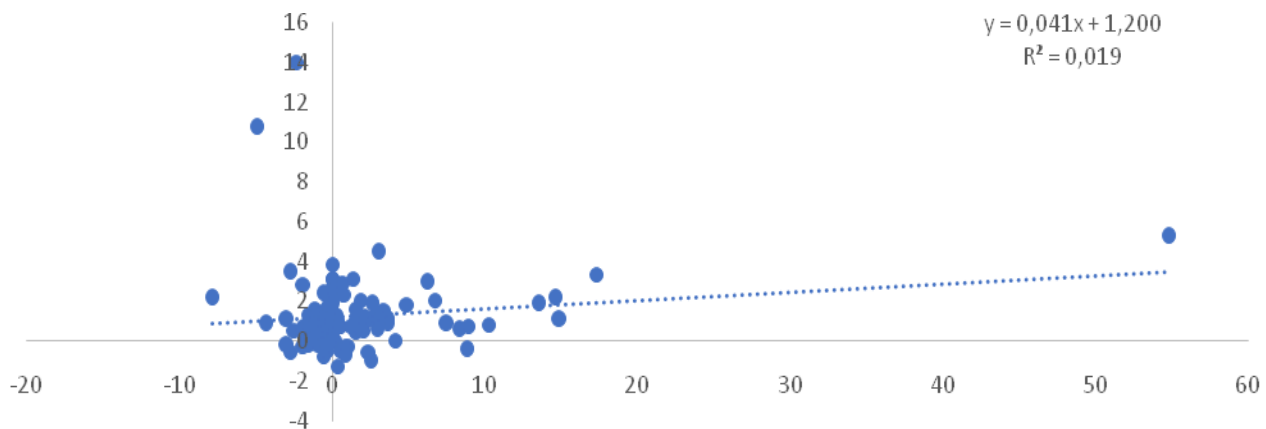


Image. 1. **The relationship between the dynamics of the exchange rate and inflation** ( 2012 to 2014 )

Source: [5, 6]

The issue of inflation targeting in an open economy and the influence of non-resident economic agents remains unresolved and worthy of special attention.

For example, it becomes significantly more difficult to determine the equilibrium interest rate if the economy becomes open, with the exception of the US economy or the European Union, which are modeled by governments. Taking into account the influence of non-resident agents significantly complicates the assessment of supply and demand for loans, which determine the equilibrium interest rate.

Also, the model of an open economy should take into account an "inflation importing", that is, the rise in prices in the country for goods that are either purchased by resident agents for their own needs (goods imports) or produced for sale to non-resident agents (goods exports).

However, the application of the described inflation targeting measures is restrained today by various factors, the most important of which are war and

sanctions, which increases the risk of a long-term division of the world economy into geopolitical blocs with different technological standards, cross-border payment systems and reserve currencies. Such "tectonic shifts", according to IMF experts [7], cause long-term losses of efficiency and increased volatility and become a serious obstacle to the operation of the system based on the rules which have been determining international economic relations for the past 75 years. In these challenging environments, national-level policy interventions and multilateral efforts play an important role. Central banks should decisively adjust their policies to maintain medium- and long-term fixed inflation expectations. Clear communication and guidance from the IMF on the direction of monetary policy will be important to reduce the risk of destabilizing shocks.

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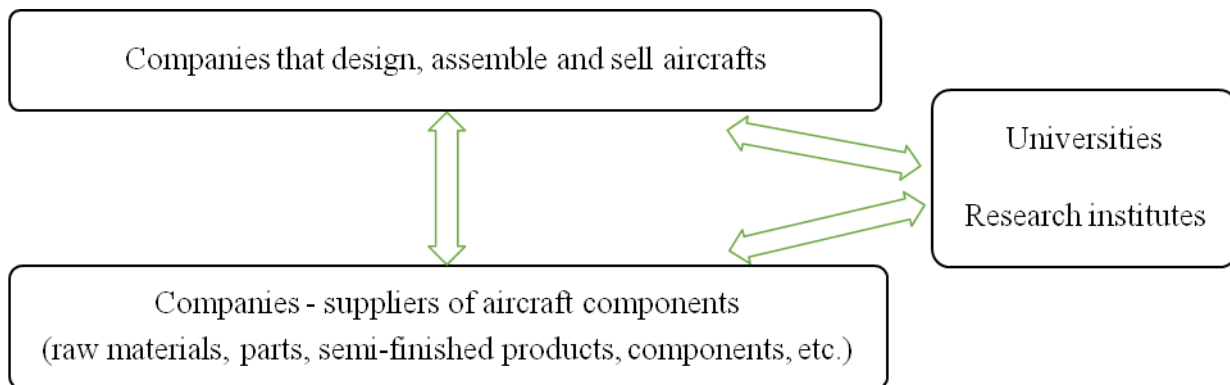
**INDUSTRIAL DEVELOPMENT AND INTERNATIONAL COOPERATION  
IN AVIATION**

Nowadays, cooperation in the aviation sphere must take into account the specifics of international transport markets, such as the localization of a large number of airports in a relatively small area of the EU countries, the high density of air transport, the level of scientific and technical progress in the countries, etc.

Cooperation is implemented in the most important areas of air transport, such as air traffic management, certification, environmental impact, safety, etc., to achieve common goals in view of the vision of the future development of air transport.

The purpose of the study is to determine approaches to encourage the involvement of air transport enterprises in the field of international cooperative relations based on the study of world experience.

Today, a certain model of scientific and technical cooperation in the field of aircraft construction has been formed in the system of international economic relations [3], which is ensured by the clear interaction of all its participants (Figure 1).



**Figure 1. Modern system of international scientific and technical cooperation in the field of aircraft construction**

Source: designed by the author using [1; 2].

The first level of the hierarchical structure is represented by the world's leading aircraft manufacturers (such as Airbus, Boeing, Bombardier, Embraer). The second level is represented by manufacturers of component parts, units and aggregates, semi-finished products necessary for the creation of modern aircraft. In addition, all these companies usually work closely with government agencies, institutions of higher education and research institutes. Such an international organizational and production structure is characteristic of global aircraft construction corporations and is a significant competitive advantage in the global market.

Thus, the development of international cooperation is a priority area of activity of air transport enterprises of many countries of the world. The development and implementation of joint scientific and technological projects with foreign partners, international production cooperation should be the priority tasks for air transport enterprises of Ukraine in the post-war period.

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## **IMPACT OF GLOBALIZATION ON THE EU**

The European Union is revising its foreign economic strategy that is caused by the rise of China, the growing isolationism of the United States and the devastating impact of the coronavirus pandemic. Russia's war against Ukraine has being strengthened the EU's support for Ukraine's perception of democracy as one of the most important values. According to the European Parliament data, 59 percent of the EU citizens are convinced that protecting common European values, such as freedom and democracy, is more important than keeping energy prices low.

In recent years, the EU has been actively negotiating free trade. Agreements on this have been reached with Canada, Japan, as well as with the countries of the MERCOSUR in Latin America. But free trade agreements are not in a hurry to be ratified by national parliaments, in particular, by such a trading state as the



Netherlands. In general, the reason for it based on the fear of cheap and low-quality imports that can flood European markets and harm local producers.

The Belgian "green" MEP also emphasizes his reluctance to cooperate with overseas partners who lag behind modern trends: "We have an outdated agreement with MERCOSUR that does not include mandatory chapters on sustainable development and climate goals", – said Saskia Brickmon.

The largest partner of the European Union, the USA, increasingly prefers to interact on a bilateral basis. President Donald Trump has blocked the mechanism for resolving conflicts in the World Trade Organization. The expert of the Barcelona Center for International Relations does not consider this as the end of the era of globalization and cooperation of large blocs: "We are simply in another phase of globalization, – said Hanna Ayuso. – What is really, there is a crisis of the global system of economic governance. The interdependence of countries has not disappeared, although it may be weakened. We need institutions that are able to respond to changes taking place in the international community".

In our opinion, the concept of the European integration is an attempt to reflect specifics of globalization processes in the European region, and the term "Europeanization" emphasizes the role of the EU in globalization processes. Europeanization is a process of social transformation in which European national communities are gradually integrated into a single regional system. The activities of European integrators acquire a pan-European character, become a certain integrity, the components of which are characterized by interpenetration and interdependence. Europeanization results in the rapid growth of cross-border economic, political, social and cultural connections and relations within Europe, the formation of a single European space and the emergence of a single European identity and culture.

A special role in the processes of Europeanization is played by the institutionalization of the European world and the formation of supranational European institutions (this is often described by the term "Brusselsization"). It promotes contributing to the further integration of Europe into a single world and its

transformation into one of the world leaders, a global actor capable to oppose the hegemonic aspirations of the USA, thereby ensuring a global balance of power and coordinated actions of global actors in the processes of global progress.

European countries now actually face all the risks of globalization. They are interdependent, albeit to varying degrees. As a result of deindustrialization, countries are experiencing crises, not only individual countries, but also parts of countries are becoming economically backward. All of Europe in the context of world globalization is becoming unevenly developed. Influential states, that dictate conditions and monopolize certain areas of the economy, get the benefit. Small and industrialized countries get the only opportunity to provide the unskilled population with at least some kind of work.

Researchers interpret the relationship between European integration and globalization in different ways. In our opinion, the concept of European integration is an attempt to reflect the specifics of globalization processes in the European region, and the term "Europeanization" reflects the role of the EU in globalization processes and the specifics of the European model of globalization.

We consider the formation of a common pan-European value system as an ethical basis for the course of globalization processes in Europe to be an important factor in the successful implementation of Europeanization. Globalization brings both positive consequences and a certain number of risks to Europe.

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## **TRANSFORMATION OF THE FINANCIAL SECTOR UNDER THE INFLUENCE OF THE METAVERSE DEVELOPMENT**

The idea of a virtual world that exists outside the physical world of our everyday lives has become increasingly popular in recent years as technology

advances and virtual reality becomes more accessible. The concept of a "metaverse" has been around since the early 1990s, when it was first described in Neal Stevenson's science fiction novel "Snow Crash". With the accelerated development of technology, the impact of the metaverse on the global financial system is increasing. The metaverse is no longer just a concept – it is now a reality, and its impact on the financial world is becoming increasingly apparent.

One of the most obvious ways in which the metaverse affects the financial system is through the emergence of digital currencies. Bitcoin, the most popular digital currency, has gained increasing acceptance as a viable form of currency and is used for financial transactions around the world. Ethereum, a blockchain-based platform that allows users to create and run decentralized applications, is also gaining popularity as a financial instrument. The metaverse also affects how people invest their money. As the metaverse continues to expand, more and more companies are launching initial coin offerings (ICOs) to raise capital for their projects. These ICOs are similar to traditional stock offerings.

The impact of the metaverse on the global financial system is becoming increasingly apparent. A metaverse, an online 3D virtual environment, is a digital representation of the real world. It is gaining popularity as a financial platform that allows people to transact and build businesses in virtual reality.

The metaverse allows people to interact in completely new ways, creating a virtual economy and offering financial services. It can revolutionize the traditional banking system and create completely new financial models. For example, people can open virtual banks, create digital currencies and facilitate peer-to-peer payments. The metaverse also has the potential to streamline the global financial system. By providing a platform for financial transactions, it can reduce the cost of cross-border payments and ensure more efficient capital flows. It also has the potential to facilitate new types of investment, such as digital tokens, which can provide quick and efficient capital formation.

The metaverse creates completely new opportunities for financial accessibility. By providing a virtual platform, it can give the unbanked people access to financial services and products. This has the potential to increase access to financial products and services for people who are excluded from traditional banking systems.

In addition, the metaverse creates a new market for financial data. By providing a platform for data sharing, it can give people access to valuable financial information and insight. This can open up new opportunities for investors to gain an edge in the market, and will also offer financial institutions the ability to better manage their risks. It is worth noting that the global virtualization market is estimated to reach USD 110.42 billion by 2027. Estimated market value (USD) in 2021 is \$72.57 billion USA. The compound annual growth rate is 7.2% [1].

European bank ABN Amro was the first to open a virtual branch in Second Life, created in 2003. Early forays into the metaverse were largely motivated by branding and visibility, which are now moving into the mainstream. The Metaverse app went beyond gamification to virtual learning and real-world experiences. The world is moving towards a future where digital life is becoming increasingly important [2].

New research from Razorfish and Vice Media Group shows that Gen Z spends more time in the metaverse than older demographics. They are developing more meaningful connections to their online identities and want realistic experiences in their virtual lives. It becomes extremely important for organizations to understand how these customers connect and interact in this virtual space [2].

According to a study by JP Morgan, the metaverse offers the following opportunities [2]:

- transactions – \$54 billion is spent on virtual goods every year, which is almost double the amount spent on music purchases;
- communication – approximately \$60 billion worth of messages are sent on Roblox every day;

- creation – GDP for Second Life was around \$650 million in 2021, with almost \$80 million paid to creators;
- ownership - currently the market capitalization of NFT is 41 billion dollars;
- experience - 200 strategic partnerships to date with The Sandbox, including Warner Music Group to create a music virtual world.

Decentraland is powered by its own cryptocurrency MANA, while Sandbox has Sand. Somnium Space has its own asset market where users can choose to "live forever" [2].

The financial sector faces fierce competition in the virtual space. Digital assets and digital currency are becoming increasingly common in the metaverse. Leveraging the metaworld will help financial organizations create a seamless user experience and enable more personalized and engaging interactions in the future.

By the end of this decade, around 50% of banks worldwide are expected to use AR/VR as an alternative channel for customer transactions as well as employee engagement. For example, Bank of America launched a VR training program for its employees that simulates real interactions with customers, and BNP Paribas launched an app that allows customers to bank using VR [3].

According to a report by Goldman Sachs in early 2022, the metaverse could usher in a virtual economy that could reach \$12 trillion, mainly for cross-border payments, financial asset creation, storage, and trading [3].

Of course, there are certain problems that the metaverse banking system faces, such as the problem of identity theft, especially for protecting avatars, the theft of biometric data that can be used to steal someone's identity, the lack of standards of interaction between different metaverses, given that there is a proliferation of several metaverses, and it will only increase. Also, as with online banking and digital payment platforms, the metaverse requires a secure payment system, which should ideally be configured for the metaverse.

One way to prevent financial fraud in the metaverse is to transact only in cryptocurrency. However, this also has its limitations, and in countries like India,

there is a legal barrier to using crypto-currency and crypto-wallets for meta-universe transactions. The emergence of 5G and Web 3.0 technology is expected to decentralize the Internet and reduce the risks of financial fraud in the metaverse [3].

Therefore, the metaverse has a significant impact on the global financial system. It provides a platform for financial services, streamlines the global financial system, increases financial accessibility and creates new opportunities for sharing financial data. As the technology continues to evolve, it is likely to have an even greater impact on the financial world in the future. Thus, the development of the metaworld allows the financial sector to transform and achieve a level of greater efficiency and security. This allows us to move to a new level of economic development, which will contribute to the growth of the world economy and development.

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## **GLOBAL ECONOMIC IMPACTS AND CHALLENGES**

The decision to grant Ukraine the status of a candidate for the EU membership is a crucial event for our country, and the evidence of transformations in globalisation. The war in Ukraine essentially defined **two historical eras** "before" and "after". For Ukraine, the war basically ended the country's existence in the post-Soviet "family of friendly nations" and gave a chance for a civilized future, although the path to it will be extremely difficult. For European countries and institutions, Russian aggression turned out to be a "perfect storm" that explained the European community the need for updates in the world and European security systems, the international division of labour, global energy supplies and value chains for a peaceful future of humanity.

**New stage of globalisation.** Globalisation, accelerated since early 1990s, collapse of the world socialist system, economic growth of emerging countries seemed to have destroyed the bipolar model of the world, previously personified by the US and the USSR. At the beginning of the millennium there seemed to be the possibilities for the formation of a multipolar world. The US, EU, China, Russia, India — each of them had ambitions to take a leading position in world politics and economics.

However, it quickly turned out that global politics and economics were characteristic of the so-called bipolar world. We mean the two largest countries — the US and China, which now maintain global political leadership, demonstrate considerable economic, scientific and technical achievements. Moreover, these two countries also represent two civilisation communities, one of which is associated with democratic systems of governance and society, the other one — with autocratic socio-political and socio-economic systems.

While the US and China form the "core", their partner countries "complete" the community. The community centred on the USA is formed by the G7 countries (the

US, Canada, Great Britain, Germany, France, Italy, Japan). China leads BRICS (Brazil, Russia, India, China, South Africa), which unites large emerging countries, but still lacks international and integrational influence, including due to contradictions among the member countries.

G7 countries were often accused of "individualism", pursuit for profits, indifference to the interests of small countries, but the situation with Ukraine is almost the reverse and becomes an additional factor of civilisational choice for the country.

Ukraine made a conscious choice regarding the global pole that is closer to it, whose values coincide with its own. Let's assess the attractiveness of both poles in terms of safe development.

From the first days of the Russian aggression, Ukraine received considerable political, economic, financial, military and humanitarian support from developed democratic countries. The BRICS countries did not openly support Russia but mostly took a wait-and-see "neutral" position (except Brazil), which actually meant indirect assistance to Russia.

**Economic dynamics.** Steady growth of economies of the G7 countries during the post-II-World-war decades was interrupted by the Global Financial Crisis (GFC) of 2008-2009. Only the US (among G7) continued to increase its GDP, strengthening its leadership position.

BRICS countries, except for China, could not maintain stable dynamics after 2008–2009. Today, the Chinese GDP is 10 times greater than that of Brazil or Russia. China is de facto not only the economic leader but can claim ideological and political leadership in the grouping.

Better economic dynamics of the BRICS countries (after GFC) significantly improved their indicators, compared to the G7. At the beginning of the century the combined GDP of the BRICS made only about 15% of the G7, but in 2021, it reached almost 60%. This allows BRICS leaders to demand revision of the global economic relations.



Within two decades, China has become one of the global centres of gravity, primarily for emerging countries. While the US economy shaped and will shape global demand, China's economy played a leading role in shaping the global supply, which allowed the country to grow rapidly, and such experience (largely unique) attracts other emerging countries.

**Basic measurement.** However, the comparison of individual indicators of global influence of the US and China remains in the US favour:

- although China is a powerful state, the total military and security power of the US far exceeds the Chinese. China has nuclear weapons, but the non-nuclear power of the US is much higher, which may be decisive in local armed conflicts. The US has a developed system of military allies, military bases, and does not depend on energy resources. China still has no real allies, and its security system is regional;

- China lags behind the US in terms of productivity and technologies, despite progress in ICT, mobile technologies, robotics, etc.;

- with its model of "state capitalism", China raised the competitiveness of some of its national companies at international markets, also being a factor in political expansion;

- meanwhile, the US dollar occupies the key place in the world financial system.

The yuan was only recently included in the IMF currency basket. Although China is the leader in world trade (14% of global exports and 11% of imports), the share of the yuan in international settlements makes less than 2%;

- even the EU, which has always maintained partner relations with the US, supported collective European security, democratic values and human rights, is increasingly speaking about its autonomy, while becoming an object of political and economic influence and pressure from outside, primarily, China and Russia;

- China still has no decisive influence on access to markets. It is extremely interested in access to the American and European markets, so sanctions may be

painful for the Chinese economy and difficult to ignore. This is important for joint efforts to stop the Russian aggression;

- the Russian aggression had a strong impact on the world political map due to democratic countries' support for Ukraine. Coordination between the US and China may contribute to a just peace in Ukraine and averting global security, energy or food crises;

- the European Union, also claiming the role of a global leader, appeared at the intersection of the interests of the United States and China [1]. At the same time, the current confrontation between the US and China is not just a question of democracy/autocracy;

- Ukraine's struggle contributed to the formation of two civilisational groups — democratic and autocratic. Ukraine's victory is important not only for our country, but also for the strategic trend of humanity development, based on democracy and human values.

Thus, in the emerging bipolarity — the competition between the US and China — the advantages of the US are still evident. Today, the US also steps up its geopolitical activity, in particular, in the regions traditionally viewed by China as its sphere of interests.

Ukraine has already made it clear to which pole it gravitates, which values and interests it is ready to defend.

**European choice.** The impact of the Russian aggression against Ukraine was felt by almost all countries of the world. And while the reaction and readiness of the US, Canada, Great Britain, and Japan was evident, the three EU countries (Germany, France, Italy) initially were looking for ways of diplomatical settlement. Since Ukraine has chosen a pro-European vector of development, let us look at the significance of Ukrainian processes for the EU.

For the European Union, Ukraine's struggle was critical and concerned democratic values, on which the EU was built:

- russian aggression against Ukraine united the EU, created conditions for the formation of a rather tough anti-russian and anti-aggressive policy, sanctions, which shaped a new economic and security environment in Europe;

- regardless of internal contradictions, the EU countries almost unanimously condemned the aggression, launched programs of military, economic, social and humanitarian support to Ukraine;

- ideas of "independence" of Western Europe from the US, actively promoted in recent years, saw serious correction. At the same time, the role and reliability of NATO, with the US leadership, has become clear for the EU;

- strategic autonomy of the EU is an unconditional component of a developed economy, for which, primary attention began to be paid to weakening dependence on China and, after the US example, limiting access to technological niches where European companies still retain competitive advantages;

- the EU countries, along with the US, Canada, Great Britain and Japan, gave a clear signal regarding prevention of military aggression as a means of resolving interstate conflicts.

No matter how ideologically contradictory the relations between the US and the European Union seem from time to time, preservation of the US-EU partnership will help the EU solve problematic issues that are considered the most serious. Greater orientation to the US will give the EU more influence.

The aggression against Ukraine caused much greater transformations of the European economy than any previous crises.

There is reason to believe that:

- Europe has become stronger militarily (including due to Finland and Sweden joining NATO),

- less dependent on energy supplies from authoritarian Russia,

- more balanced in its choice of strategic economic partners,

- more united in the understanding of democratic and human values,

- more "picky" in the choice of moral leaders. Germany's hesitation in practical assistance to Ukraine was eventually judged as political insecurity and moral weakness[2].

That is, the entry of Ukraine into the European community formed around the US has already brought security and economic benefits not only to Ukraine but also to the European socio-political, economic and humanitarian space, which brought this country closer to the EU.

**Internal contradictions within BRICS.** BRICS is an example of mutual contradictions and absence of ideals, which Ukrainians are ready to defend.

The economic "nature" of BRICS is being increasingly politicised. The BRICS summit, which took place at the end of June 2022, revealed different positions of its participants. China viewed it as a way to further strengthen its leadership. Russia's position was distinguished by an undisguised desire to involve China into the orbit of its military operations in Ukraine. However, it is extremely irrational for China to have a status of an ally of a Russia "without borders", as this will hinder the development of its economic relations with developed countries.

In this context, the "Ukrainian factor" may be decisive for China's choice. Chinese exports to the US, the EU and Japan make almost 40% of the country's total exports. Meanwhile, economic (trade) relations among the BRICS countries remain very limited. Say, China's exports to India only 2–4% of the country's total. Trade contacts of the BRICS countries, except for trade with China, remain very insignificant.

Nevertheless, in the future, politicisation of BRICS will grow.

On the other hand, "uncoupling" from European and American markets will most likely spell the end of China's economic miracle. This was confirmed by the record deficit of China's capital and financial account in the 1<sup>st</sup> quarter of 2022 — almost \$90 billion.

The "Ukrainian factor" exacerbated the dilemma of partnership for another large emerging country of the BRICS — India. It sees countering China's expansion

in the Indo-Pacific region as one of its main tasks. Therefore, India hopes that expansion of cooperation with the US and other developed countries will strengthen its position in conflicts with China. India relies on the strategic platform, aimed at neutralising China's activity — the so-called Quadrilateral Security Dialogue with Australia, the US and Japan. However, in view of India's long fruitful relations (including military) with Russia, India has taken a predominantly pro-Russian stand in relation to Ukraine (while the other three countries of the Quadrilateral Dialogue are Ukraine's staunchest allies). India refused to publicly condemn the aggressor in the UN Security Council.

**Summing up**, (1) today, there is a global tendency to the political and economic model of a bipolar world, with the US and China personifying, respectively, democratic and authoritarian socio-political and socio-economic systems.

(2). The political, economic and military rise of China means strengthening of the global confrontation between the leading countries of the "bipolar world" and their allies in all social and economic sectors. Such confrontation may provoke the outbreak of military actions, threatening the whole world.

(3). Despite internal contradictions, the EU condemned the aggression, launched programs of military, economic, social and humanitarian support for Ukraine. This became a practical confirmation of the unity of the democratic world community in the confrontation with militant authoritarianism.

(4). Large emerging countries should realise that transformational shifts lie in the sphere of democratic mechanisms of interstate relations and cannot be based on force or military scenarios.

**Between the crises.** Ukraine demonstrated to the world that struggle for independence, democratic values and human rights is an important factor in the choice of prospects for further development. Its struggle united the whole democratic world.

Ukraine's economy is getting integrated in the global economy. Over the past three years, the World, including Ukraine, has faced two deep socio-economic crises.

Although the global nature of the two crises – the coronavirus one, and the one caused by the war in Ukraine – is different, their visual symptoms have common features. The normality of the day is half-empty streets, shops and pharmacies that work under special regimes (mask requirements or electricity supply), restrictions on people's stay out of homes or work, transport disruptions, buying foodstuffs for several days or even on stock, shock jumps in the prices of prime necessities, fiscal and currency imbalances. At the same time, there are similar good signs - easing of administrative, tax and regulatory pressure, state support (albeit limited) for households and businesses.

It is hard to say for sure the symptoms of which crisis we are talking about. And this concerns not only Ukraine.

The first thing that struck the eye during the crises was the total unpreparedness of humanity, even developed Europe, for a quick coordinated response to threats that were initially perceived as local. As a result, there were attempts to use coronavirus diplomacy, instead of real vaccination, or careful countering the aggressor, as if not to anger it.

The inconsistency and controversy of interstate actions became especially shocking. Even when the coronavirus wave became global, the search for and production of drugs was not internationalised. At the same time, it was accompanied by excessive bans and social control not only to comply with quarantine requirements but also (in many countries) to restrict civil rights and freedoms. While governments mobilised resources for healthcare and medical treatment during the coronavirus attack, trade and transport collapsed, work was barred, and the effectiveness of crisis response measures left societies unprotected.

The war had a differentiated impact on societies: countries were affected by it to varying degrees and reacted differently. On top of Ukraine of course, whose losses are unprecedented, many countries lost access to resources due to high import costs, although this was not a shock. At the same time, a number of countries seemingly did or could win (energy exporters), or received additional gains to make up for the

missed benefits (cheap energy resources), which brought risks to strategic partnership (Hungary's demands to the EU).

Psychological losses were added to economic ones and multiplied them. Thus, characteristic features of human behaviour during the coronavirus included the tendency to stay at home, remote work, forced compliance with travel restrictions. The war caused displacement of huge masses of people, powerful waves of migrants that swept across Europe, causing "fatigue" in many countries.

The time factor is also important. Indeed, the coronavirus tsunami hit everyone almost at the same time, all countries suffered losses, all the usual economic mechanisms were destroyed – practically no country was able to protect itself. However, the main risks had a time-limited dimension, as evidenced by the football World Cup, where no one out of the tens of thousands of fans in the stadiums wore a mask. The war in Ukraine does not have a time limit yet. Although there are reasons to expect a victorious advance of the Ukrainian army, the reality does not give us the right to calm down. Therefore, it is important to pay due regard to the mistakes and complications that arose in previous crisis periods, which will give hope for their timely prevention, and with that, transformation of understandable risks into opportunities.

Ukraine's economy is getting integrated in the global economy. The following global economic signs of this autumn, including those shaped by the war in Ukraine, deserve mention:

- very high inflation in the developed countries (including the USA and the EU) due to russian actions in the energy markets, accompanied with high employment, which complicates an anti-inflationary policy;
- global strengthening of the dollar, which is caused by and accompanied with an increase in interest rates in the USA, that pushes a further increase in interest rates in other countries (to prevent weakening of their national currencies), which impedes economic activity and economic growth;

- central banks have to step up anti-inflationary measures and tighten the monetary policy, which may have recessionary impact for economies;
- a decrease in economic activity in the leading countries of the world puts a downward pressure on emerging economies (including China), which discourages global business activity;
- in emerging countries, the situation is worsened by the outflow of capital to "safe havens" (first of all, to the US markets), which limits access to financial resources;
- although developed markets show signs of stabilisation, business and household expectations remain low.

These global factors have an impact on a small open economy, such as Ukrainian. In previous years, crisis manifestations on world markets led to significant socio-economic losses for this country.

Two crises in a row (and who knows when the war will end) is a severe test for the Ukrainian society. At the same time, no one can guarantee that humanity will not face the threat of a new pandemic or environmental crisis soon, which will also be devastating, primarily for emerging countries.

The fact that the Ukrainian economy shows impressive signs of resilience in the face of long-term, large-scale russian aggression forms positive signals that the lessons of previous crises are and will be taken into account by the authorities during the period of the country's recovery. In that period, the country will face serious risks. While the country demonstrated solidarity to repel aggression against a "real" enemy, this unfortunately does not mean that a strong unity of action will be maintained in the future. The history of Ukraine testifies that the biggest losses of independence and freedom took place in peacetime, when patriotic forces failed to unite, lost the trust of citizens, facilitating the revenge of anti-Ukrainian forces.

**Some generalisations and predictions for Ukraine.** The autumn of 2022 turned out to be hard for Ukraine in the international environment. Leading developed countries (the USA, Great Britain, the EU, Canada, Japan, etc.) continued



to support Ukraine economically and militarily. It may be argued that despite the election processes and government changes (in the USA, Italy), comprehensive aid to Ukraine will continue and, probably, even grow.

Unfortunately, China, as one of the influential global leaders, seems to distance itself from the war in Ukraine. The improvement of relations between the USA and China, which will probably take place after Bali, does not at all mean that the circle of those (emerging countries) who support Ukraine will expand. Hence, Ukraine should double its efforts to better inform the leading emerging countries (members of the G19, the Gulf states, ASEAN) about itself, the war, and its economic potential.

Ukraine's struggle against the Russian aggression has clearly demonstrated that the military success of the AFU has a direct impact on Ukraine's image in the world, the scope of military and economic aid provided by partner countries. Taking into account the slow but steady changes in the nature of hostilities, liberation of vast occupied territories, the flow of those who return to Ukraine, one may expect further strengthening of partnership and more active involvement of Ukraine in the civilised world.

While the success of the AFU is a strong positive factor for Ukraine's economic recovery, deterioration of the security situation in the country leads to negative business expectations of economic activity. This is confirmed by various expert studies in connection with the intensification of Russian bombings and destruction of critical infrastructure facilities, primarily related to the livelihood of the population - electricity, water supply, heating (which is especially relevant in winter).

Meanwhile, there are grounds to assert that the strengthening of air defence will reduce the mentioned risks and thus contribute to positive expectations of domestic businesses.

An additional factor for Ukraine's economic recovery may be presented by the decisions adopted in summer and autumn on "visa-free energy", "visa-free economy", "visa-free transport", "visa-free customs", which will contribute to the expansion of international trade and Ukraine's integration in the European networks.

Since the consumer price index strongly depends on food prices, the inflationary component may remain strong in Ukraine at least until the spring of 2023. Although the main price shocks in the country already occurred in the spring of 2022, and there were reasons to hope for a decrease in inflationary pressure in 2023, a new wave of destruction of critical infrastructure by the Russian aggressor may restore inflationary threats.

While in wartime, high inflation is not surprising for Ukraine, and the well-being depends on the purchasing power, the reduction of inflationary pressure will give households a hope for the better. Thus, the reduction of threats to the critical infrastructure will be a stabilising factor of the socio-economic situation in Ukraine.

In autumn, the Ukrainian financial and banking systems continued to function steadily, which even allowed the NBU to take some foreign exchange liberalisation measures. Of course, exchange rate dynamics remained sensitive to external troubles, but after the exchange rate shock in mid-September, which the NBU "extinguished" with massive interventions, over the next two months the hryvnia even rose, which reduced the imported inflationary pressure.

According to IMF estimates, in 2023 Ukraine will need about \$3.5 billion per month to provide basic services to the population and support the economy. So far, Ukraine's negotiations with the IMF on a large-scale program remain inconclusive, and the IMF itself is in no hurry to provide financial assistance. Thus, it remains to be hoped that the leading developed countries will remain the main financial donors of Ukraine. Until now, their promises have been firm and effective.

Today, there are reasons to expect that peaceful restoration of the country will be successful, including thanks to partner countries. This is what we all hope for.

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У збірнику представлено погляди науковців з різних країн щодо вирішення актуальних питань, пов'язаних із фундаментальними зрушеннями у гео економічній системі світу в останні роки. Наукові статті дають комплексне уявлення про результати досліджень ключових чинників і потенційних фінансово-економічних, соціальних, демографічних та екологічних наслідків глобальних трансформацій. Зокрема, висвітлено вплив на динаміку нинішньої геополітичної та гео економічної фрагментації таких факторів, як COVID-19, цифровізація, кліматичні зміни, війна в Україні та формування нового світового порядку. Запропоновано шляхи зменшення економічної невизначеності та волатильності на фінансових ринках, вирішення проблем «зеленого» та цифрового переходів, подолання руйнівних наслідків російської воєнної агресії та забезпечення реконструктивного відновлення України у післявоєнний час.

Збірник наукових праць представляє інтересів для науковців, експертів, осіб, залучених до формування та реалізації державної політики, викладачів і студентів, а також усіх, хто цікавиться питаннями сучасних міжнародних економічних відносин.

Наукове видання

# **ФУНДАМЕНТАЛЬНІ ЗСУВИ ГЕОЕКОНОМІЧНОЇ СИСТЕМИ СВІТУ**

**Збірка міжнародних наукових праць**

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