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CONTENTS

No 3(3) 2023

UNEQUAL DEVELOPMENT OF COUNTRIES AND REGIONS

The UN Sustainable Development Goals were adopted in 2015, and their implementation was envisioned by 2030. However, at the midway point of 2023, the successes look modest, and the unresolved challenges require enormous efforts on the part of the global community in terms of consolidation and financing. The complexity of the SDG implementation is largely due to the changes in macroeconomic conditions: the world today is far from the expectations of the global community 8 years ago. At the same time, it was during the intercrisis period (2010-2019) that the global development agenda took shape and the framework conditions for its realization were formed. This paper is devoted to a comparative study of two major crises of recent years and their consequences in the context of solving global problems using the example of SDG 1 (poverty eradication). The fight against poverty is complicated by regional specifics and new external conditions: the crisis of global governance, the growth of sovereign debt, the tightening of monetary policy in developed countries, insufficient investment, growing inequality, as well as the prioritization of other goals with the limited financial resources of the world community. All this puts the realization of SDG 1 and the 2030 Agenda at risk and at the same time creates conditions for revision of the current global development agenda.

ECONOMIC GROWTH AND THE CYCLE

Economic historians nowadays argue that economic growth in the world was extremely slow and unsustainable until the beginning of the Industrial Revolution in the late eighteenth century. This article traces how the efforts of many economists and historians have gradually developed the concept of the "Malthusian trap" to explain the centuries-long relative stagnation of agrarian society. In the case of traditional economies, cliometric studies generally confirm Thomas Malthus's ideas about the compensation of the positive impact of technological progress on per capita income by population growth. Modern scholars supplement them by analyzing the social structure of the society in the Malthusian trap, as well as its inherent institutions of redistribution, and the periodic flourishings and declines of proto-industry and trade that took place in those times. The article shows the logical interrelation of these elements within the Malthusian dynastic cycle. The concept of Malthusian trap is compared with the Marxist vision of the historical process. It is shown that positive insights of the Marxist approach can be implanted in the modern theory.

COUNTRY VIEW

This paper analyzes the labor market in the United States in 2020–2023, with a focus on its unconventional development due to the COVID-19 pandemic. The pandemic resulted in lockdowns and restrictions in various states, which disrupted the traditional business cycle and caused a significant decline in employment, particularly in service industries such as tourism, hospitality, restaurants, and entertainment. The restrictions also impacted consumer spending, resulting in increased savings and pent-up demand. The article analyzes the unemployment trends among various age and racial-ethnic groups and highlights the most challenging segments of the US labor market. It pays special attention to remote work and the changes it brings, such as hybrid work, the rise of Zoom towns, and hiring through digital platforms. The fiscal stimulus of the US government and its implications for the labor market are demonstrated. Additional funding for small businesses has led to record new business start-ups and rapid job growth that has nearly offset the losses associated with COVID-19. Particular attention is paid to inflation, which peaked at 9.1% in June 2022 and the high growth of which is depressing real incomes, forcing people to go to work. The article notes an unusual situation where slow GDP growth is combined with high employment, and that the mechanism behind this phenomenon is yet to be investigated. It cites data from public opinion polls conducted by the Gallup, which reveal the American society's mood regarding their financial well-being. The article examines the activation of American trade unions, using the United Auto Workers Union's September 2023 large-scale strike at several plants of the Big Three (General Motors, Ford, Stellantis) as an example.

ENVIRONMENTAL PROBLEMS AND SUSTAINABLE DEVELOPMENT

Ensuring economic growth in the 21st century is inextricably linked to attempts to address pressing human development challenges, including poverty and inequality, climate change, accelerating ecosystem degradation and other environmental concerns. The concept of corporate social responsibility (CSR) has gradually transformed into an ESG approach, which is largely synchronized with the internationally benchmarked Sustainable Development Goals. The growing popularity of this approach was also reflected in the development of the financial market and financial institutions, which responded with the first issue of green bonds in 2007. One of the drivers of the subsequent growth of this segment of the financial market was a high green premium, which persisted until the crisis events of the early 2020s. The challenges facing the global economy in 2022 had a negative impact on the dynamics and state of the green securities segment and led to the disappearance of the green premium in the fourth quarter of 2022. In the coming years, we can expect the market to recover, as well as its transition to a new state, including through changes in the structure of green bond issuers.

Multilateral Development Banks (MDBs) have long played an important role in resolving of international challenges, including though research cooperation. They are believed to be less politically engaged than bilateral development assistance programs and therefore better positioned to form the global agenda. The New Development Bank (NDB), in its turn, is an especially important player among MDBs, since it is one of the few institutions with the world's largest economies as its co-founders, but without any of the G7 economies. In 2020 it showed its ability to provide well-timed and effective loans to its members during crises, approving the first NDB Emergency Assistance Program in Combating COVID-19 in March 2020. In this article we discuss changes to the global sustainable development agenda and the NDB's contribution to the sustainable development goals (SDGs) in member countries, potential instruments and priority sectors in the longer-term and implications for the global financial architecture, given the changing global economic environment. We have looked at the alignment of NDB projects with the SDGs and concluded that the NDB primarily contributes to SDG 6, SDG 7, SDG 8, and SDG 9, with the latter – with its 49 projects – leading the way. This is consistent with the Bank's mandate, which highlights infrastructure as a primary sector of investment.

INTERNATIONAL TRADE AND INVESTMENT

The article is devoted to the study of current trends in the regulation of foreign direct investment (FDI), caused by ongoing changes in the interaction of individual countries of the world and their groupings. The tools and approaches of Russia and key countries participating in the global FDI market to regulate not only inward but also outward investments that previously did not come to the attention of regulators are explored. Strengthening control over all directions of investment flows, as well as expanding the list of strategically important industries in which participation is limited for foreign investors, leads to the fact that the foreign investment policy of Western countries is turning from a tool for managing the foreign economic activities of companies into a tool for ensuring national security and technological sovereignty. The regulation of FDI in Russia today is a set of single measures and is reactive in nature, which does not allow to support economic growth and the geopolitical interests of the country. There is an obvious need to revise the approaches in order to create a comprehensive regulatory policy that meets new challenges and realities, integrated into Russia's overall foreign economic strategy and its economic security strategy. Based on the results of the study, the goals of the new foreign investment policy of Russia, approaches to regulating inward and outward investments were formulated, and recommendations were given for the tools in the field of FDI regulation.

OPINION

REVIEWS

Progress toward SDG 1. One Step Forward, Two Steps Back in the Poorest Countries' Catching Up?

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The views expressed in this publication are solely those of the author. It does not purport to reflect the views or opinions of the World Bank Group or its members.

Abstract

The UN Sustainable Development Goals were adopted in 2015, and their implementation was envisioned by 2030. However, at the midway point of 2023, the successes look modest, and the unresolved challenges require enormous efforts on the part of the global community in terms of consolidation and financing. The complexity of the SDG implementation is largely due to the changes in macroeconomic conditions: the world today is far from the expectations of the global community 8 years ago. At the same time, it was during the intercrisis period (2010-2019) that the global development agenda took shape and the framework conditions for its realization were formed. This paper is devoted to a comparative study of two major crises of recent years and their consequences in the context of solving global problems using the example of SDG 1 (poverty eradication). The fight against poverty is complicated by regional specifics and new external conditions: the crisis of global governance, the growth of sovereign debt, the tightening of monetary policy in developed countries, insufficient investment, growing inequality, as well as the prioritization

of other goals with the limited financial resources of the world community. All this puts the realization of SDG 1 and the 2030 Agenda at risk and at the same time creates conditions for revision of the current global development agenda.

Introduction

Since the beginning of the 21st century, we have witnessed the formation and transformation of the global development agenda: from the Millennium Development Goals adopted in 2000 to the Sustainable Development Goals adopted in 2015. The two "lists" of the most important global challenges, the solution of which will determine the well-being not only of the present but also of future generations, have been supplemented by agreements in a wide range of sectors, from financial stability and debt settlement to climate change.

The final assessment of the success in realizing the goals set by the global community is still a long way off. But we can already critically examine the period from 2008 to 2021. Two factors justify the importance of such an analysis.

First, during this period that the current global development agenda was formed and formalized, which was expected to determine the points of application of more coordinated efforts of the global community. Its main provisions were formed by 2015 and included the postcrisis financial architecture, the definition of new global objectives–the Sustainable Development Goals (SDGs), as well as the actualization of the climate issue (Paris Agreement). Subsequently, we have seen the development and transformation of this agenda, its adaptation to new conditions, including in the context of the crisis caused by the COVID-19 pandemic.

Secondly, from 2008 to 2021, the global economic landscape and the framework conditions that determine and limit the possibility of achieving the set goals were also changing. Thus, macroeconomic conditions differed significantly from the favorable conditions of the first decade of the 21st century. Despite low interest rates, the growth of the global economy slowed down, the problems related to global governance and priority setting in the context of limited resources allocated to development assistance became more acute. At the same time, procrastination in addressing global challenges leads to further deterioration of the situation and increased demand for resources (primarily financial) thereafter.

To date, a considerable amount of literature on the assessment of the implementation of the 2030 Agenda has been accumulated. Critical articles assessing global development tend to involve assessing the effectiveness of achieving certain quantitative indicators (the most significant of which is economic growth) in individual countries [Diep et al. 2020], regions [Omisore 2018], or at the global level [Janouškova et al. 2018; Wu et al. 2022]. A number of studies focus on the prospects of SDG realization—for example, the work of Crespo Cuaresma et al. (2018) on the prospects of achieving SDG 1 indicators. Quite a lot of attention has been paid to quantitative estimates of the probability of successfully achieving the SDGs, including those taking into account the corona crisis [Babier, Burgess

2020]. We do not aim to identify predictive indicators of success within the framework of the 2030 Agenda or to determine the causes and consequences of the SDGs' realization.

This study analyzes the specifics of global development in 2010-2021, its individual directions, and the factors that influenced it. The first part is devoted to a comparative study of the two major crises of recent decades—the global financial crisis and the coronavirus crisis—from the perspective of their impact on the sustainable development agenda. The second part covers the intercrisis period and critically assesses the challenges associated with the implementation of SDGs, using SDG 1 as an example. The third part of the study is the author's attempt to assess the impact of the pandemic on progress towards global goals and outlines the most significant factors slowing it down.

1. The global financial crisis and the COVID-19 pandemic

The period analyzed in this study (2010-2019) is limited by two major crises since the beginning of the 21st century: the global financial crisis of 2008-2009 and the crisis caused by the COVID-19 pandemic in 2020. Both of these phenomena have largely determined the format or model of global development and its dynamics, as well as revealed internal problems and contradictions hindering the achievement of global goals. Given the fundamentally different nature of the two crises, it seems rational to identify some similarities and differences between them in order to determine the specificity of their impact on the responses to global challenges.

Despite the fact that there has been a significant deterioration of the situation in the subprime market already since 2005 [Pajarskas, Joiene 2014. P. 95], the crisis broke out only in 2007-2009. Following the bankruptcy of Lehman Brothers, which was a turning point for financial markets [Ivashina, Scharfstein 2010. P. 335], the crisis in the US mortgage market resulted in the entire global financial system crisis. Researchers attribute the reasons for its emergence to changes in regulation, weakness of regulatory oversight, and lower lending standards during a period of abnormally low interest rates [Bordo 2008].

Today, a large body of research is being conducted to analyze the global financial crisis from different perspectives. Despite the consensus on the cyclical nature of the crisis, the authors emphasize other factors underlying its occurrence on such a scale. For example, R. Shiller draws attention to behavioral peculiarities and irrationally made decisions, which significantly impact the dynamics of market development [Akerlof, Shiller 2010]. However, this "influence" itself is extremely difficult to quantify. Other researchers, such as J. Stiglitz, pay attention not only to the factors that contributed to the emergence of a crisis of this scale but also to the behavior of financial authorities to combat it, which was aimed primarily at saving large financial actors under the slogan "too big to fail" [Stiglitz 2009].

Amidst a stressful environment in November 2008, the "Group of 20" (G20) adopted a declaration[1] on the causes of the financial crisis ("inconsistent and insufficiently coordinated macroeconomic policies and inadequate structural reforms that led to unstable global macroeconomic outcomes") and on a plan for further steps to strengthen

[1] Declaration of the Summit on Financial Markets and the World Economy. November 15, 2008. Available at: http://www.g20.utoronto.ca/2008/2008declaration1115.html

the financial system, including greater transparency and accountability, strengthening quality regulation, ensuring the coherence of financial markets, reforming international financial organizations, and others.

One of the main consequences of the financial crisis was the Basel Accords, which were designed to "fix" the global financial architecture, as well as the creation of the Financial Stability Board. Basel III implied, among other things, changes in the requirements for the basic capital and special reserves of financial organizations, as well as the levels of leverage and liquidity [Podrugina, Tabakh 2021. P. 282]. This document formed the basis of the framework approach of the world's largest economies to overcome the consequences of the crisis and restructure the financial architecture.

A crisis, which clearly demonstrates the vulnerability of the economic system, is also an opportunity to revise the dominant paradigm. Thus, although the global financial crisis could have become a starting point for the revision of specific approaches to development in terms of industrial policy, the dangers associated with further integration, as well as macroeconomic policy and its regulation [Rogers 2010], a radical revision of positions did not occur, which was expected even after the end of the crisis [McCulloch, Sumner 2009; Makarov, Makarova 2021].

Even though already in 2010 the world GDP grew by 4.5% and surpassed the pre-crisis level, in some regions (primarily in Europe) its echo led to a prolonged recession. The latter, in turn, contributed to the creation of new and transformation of existing institutions [Gocaj, Meunier 2013]. The struggle of financial authorities with the "weaknesses" of the existing system can be called successful: many factors that created the conditions for the financial crisis (especially in the banking sector) were eliminated. However, there was no quick and effective solution to other issues important for global development (first of all, the debt problem in developing countries).

The next crisis of global scale would occur only in 10 years but would not affect the financial sector. The 2020 recession was caused by an external shock—the COVID-19 pandemic, which led to a 3.1% reduction in global GDP (World Bank estimate). The uniqueness of the crisis that occurred was manifested in three of its features: exogeneity, the uncertainty it created, as well as the global nature of the crisis and the simultaneity of countries entering the recession [Borio 2020. P. 181]. In addition, the crisis of 2020 broke out in the phase of "unfinished recovery" of the global economy [Grigoryev, Pavlyushina, Muzychenko 2020; Grigoryev 2023]. The trigger of the new recession was a global health threat. The pandemic led to simultaneous shocks on the supply and demand side: production stoppage was accompanied by a decline in consumer activity [Buklemishev 2020. P. 15-16]. Synchronicity and coverage of the introduced measures prepared the ground for the formation of bottlenecks, which will continue to hamper global development, and measures to support the population and business created prerequisites for future inflation.

To summarize, we can highlight the following key differences between the two major crises of the 21st century. First, the pandemic shock was exogenous, while the global financial crisis occurred due to an imbalance existing in the system. Second, as a consequence, the coronavirus crisis did not require introducing a set of new measures regulating the financial sector. Third, while the 2008-2009 crisis was cyclical, the new

crisis came during the upswing phase, which significantly mitigated its effects. In other words, despite gloomy forecasts at the beginning of the pandemic, the liquidity squeeze did not overlap with widespread lockdowns, and the crisis hardly affected the financial sector. Fourth, the timing of the crisis recovery differed. In 2020, it was driven by the epidemiological situation both globally and in individual countries deciding to lift quarantine measures or resume tourist flows. Finally, the restrictions imposed, which slowed consumer demand, together with financial support from the government, led to an increase in savings in developed countries as well as in many upper-middle-income countries. In high-income countries (e.g., the United States), the crisis period was accompanied by an increase in demand for durable goods [Tauber, Van Zandweghe 2021], primarily in entertainment [Grigoryev et al. 2021], in others (e.g., China)—for real estate.

Due to the different nature of the two crises, the monetary policy aimed at mitigating their consequences was also different. In 2008–2009, there was a gradual reduction of key rates of the ECB and the Fed. The rates were also decreasing in 2020, at the beginning of the coronavirus crisis, but from 2022 onwards, they significantly increased due to the need to combat sharply increased inflation. Note that the 2020 crisis occurred against a backdrop of lower interest rates than in 2008 (see Figure 1, p. 10) and a lower rate of growth in the global economy and developed economies. However, in developing countries, interest rates were far from the low levels of the US and EU, which narrowed the possibilities of fiscal stimulus [Loayza, Pennings 2020] and limited the amount of support for households and businesses.

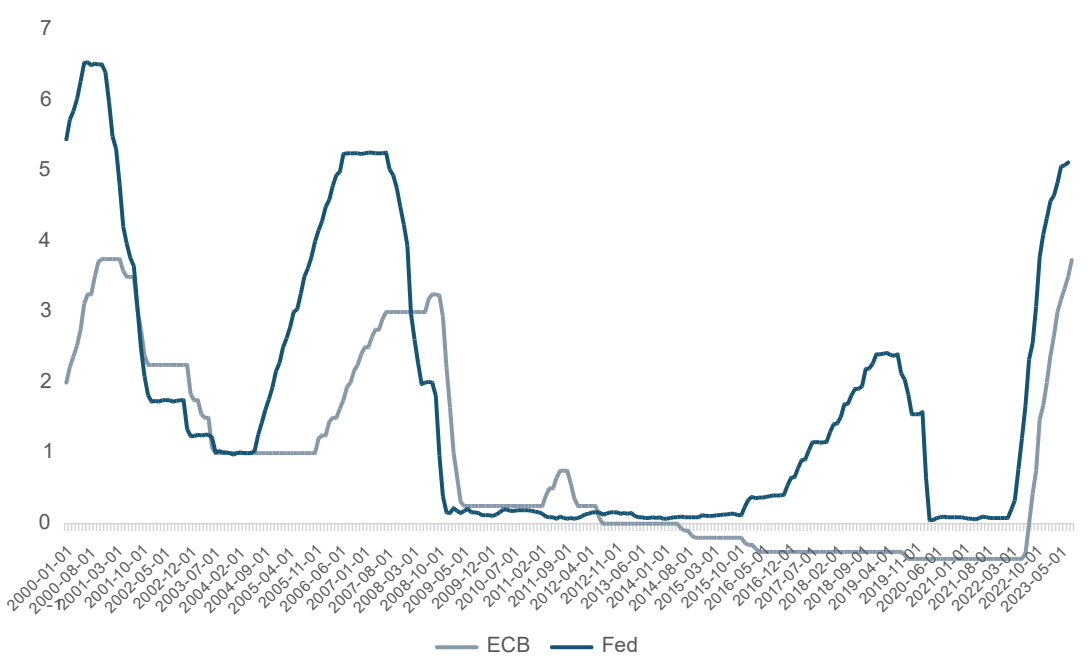

Figure 1. ECB and Fed key rates, 2000-2023, %

Source: FRED.

2. World development between two crises

This study focuses on the global development problems between the two major crises of the 21st century. Even though these crises were of a fundamentally different nature, both in 2009 and in 2020, the high-income economies were more severely affected, with the most significant reduction in GDP (see Figure 2, p. 11), due to the impact of both crises on the service sector. The GDP growth rate of the group of low-income economies in 2020 was positive (0.02%), slightly lower than that of the group of least developed economies (0.7%). Still, the economic recovery in 2021 in these groups was also less pronounced—1.78% and 1.93%, respectively.

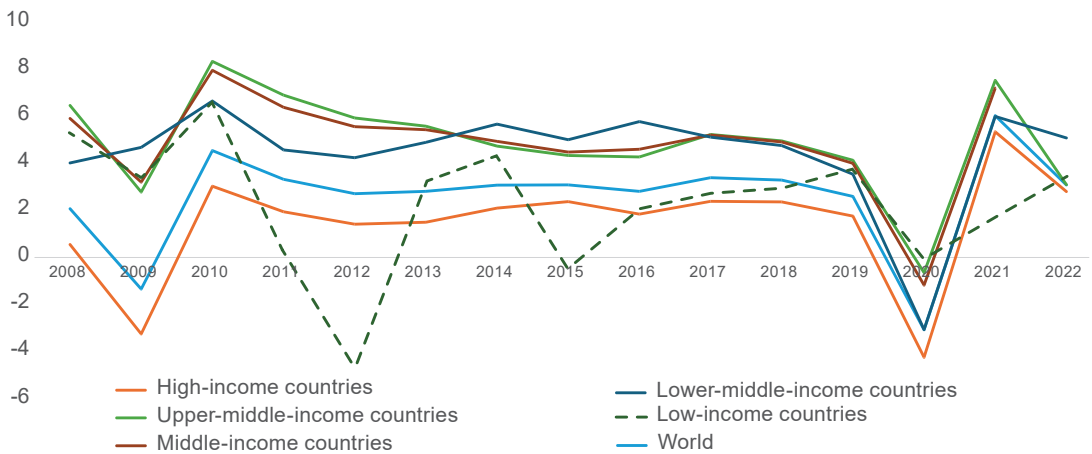

Figure 2. GDP growth, 2008-2021, %

Source: World Bank Group.

The growth rates of the world economy in 2010-2019 were also lower than in the previous pre-crisis decade of 2000-2008 and even in 1991-2000. In addition, there was a process of slowdown in the growth rates of developed economies (primarily the United States and the EU), with high growth rates in middle-income countries (especially upper-middle-income countries). Economic growth in the first decade of the 21st century in China and India led to income growth and poverty reduction, which was of key importance for achieving individual UN Millennium Development Goals. There has also been an improvement in the situation of the poor in developing economies since the global financial crisis [Milanovic 2022]. Cabral and Castellanos-Sosa (2019) conclude in their study that the 2009 crisis led to the expected convergence and narrowing of the GDP per capita gap in Europe, as expected under the neoclassical economic model [Barro, Sala-i-Martin 1992]. However, such results do not indicate an improvement in the situation of the low-income countries but rather a deterioration in the situation of the well-to-do and richer countries. Regarding convergence between developed and developing countries, Johnson and Papageorgiou (2020) show in their paper that in recent decades, despite the high growth rates of developing countries, there has been no actual convergence between the two groups, minus a few large Asian economies.

Ötker-Robe and Podpiera (2013) identify three main channels of transmission of the financial shock: 1) the labor market (reduced employment, falling wages), 2) the financial market (reduced investment, credit squeeze), 3) private and public response strategies (reduced social payments and social spending, reduced household spending, including on health care and education). The authors also note the disproportionate impact of the crisis on the poor (job losses, educational poverty, deepening gender inequality, etc.). It should be noted that in countries where the economic situation before the crisis was difficult (slow growth, structural problems, high unemployment, high debt), the choice of anticrisis package of measures is very limited. The global financial crisis has set humanity back in terms of realizing the global goals of overcoming hunger, reducing poverty, solving health problems, etc. However, the results of MDG realization were quite positive.

However, the impact of the crisis on individual least developed countries (LDCs) was somewhat milder than initially expected due to the (financial) nature of the crisis itself and their lower integration into the global economy [Audiguier 2012]. Pre-crisis economic growth, which improved the overall situation in the countries, was also an important factor. Finally, the volume of development assistance was not reduced, providing the necessary resources for anticrisis measures. The most serious challenge, however, was the reduction in global demand.

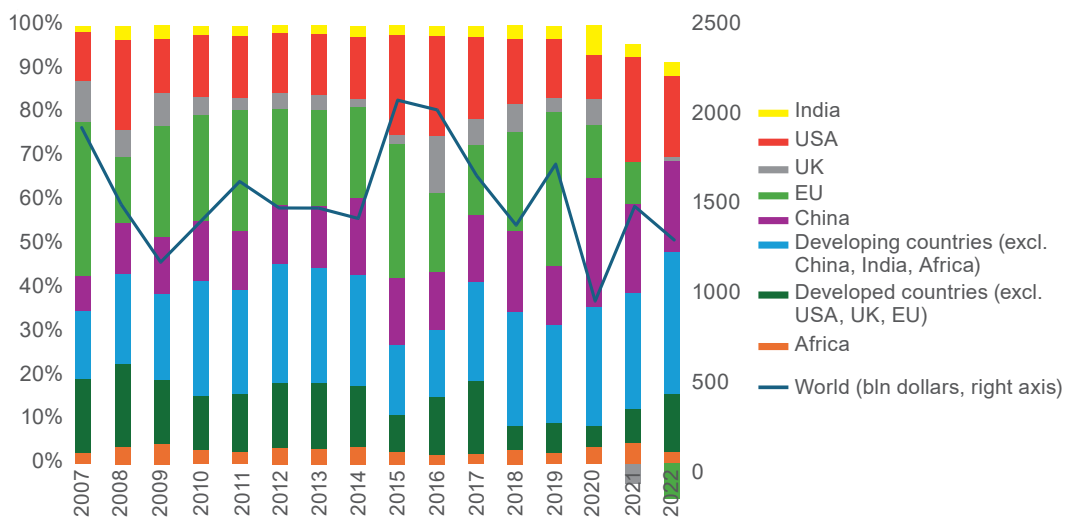

Figure 3. Structure of foreign direct investment inflow, %

Source: compiled by the author on the basis of UNCTAD data.

In the context of global development, it is difficult to overestimate the importance of crisis events, especially if they are structural, as it happened in 2008, or deep crises (record GDP decline in 2020). A decline in global GDP usually leads to a decline in foreign direct investment (FDI) [Dornean and Oanea 2015], which in turn affects the pace of economic development of countries. The crisis can also act as a trigger for the transformation of investment flows [Stoddard, Noy 2015]. In 2008-2009, according to UNCTAD, the volume

of FDI in the world decreased by 38% in aggregate, and it surpassed pre-crisis levels only in 2015. In developed countries, FDI inflows in the postcrisis decade never recovered to 2007 levels, while in developing countries, this threshold was already crossed in 2010. The impact of the coronavirus crisis was also more pronounced for developed countries, where the indicator fell by 68% in 2020 (almost 9% in developing countries). Nevertheless, FDI is unevenly distributed, with the United States accounting for more than 26% of global FDI in 2021 and African countries only 5.4% (see Figure 3, p. 12).

Current estimates suggest that developing countries need an increase in financing of $4 trillion annually to achieve the SDGs [UNCTAD 2023b], more than three times the global FDI stock in 2022. The intercrisis period, as we have already noted, was characterized by low interest rates in developed countries, while the post-pandemic recovery is associated with a tightening of monetary policy by central banks in developed countries, which does not facilitate the redirection of financial flows from developed to developing countries [Bitzenis, Vlachos 2016]. Thus, recessions exacerbate existing economic problems, contributing to both the reduction of investment in developing countries and limited access to financial markets for this group of countries due to deteriorating credit ratings, increased debt, and rising borrowing costs in the context of high demand for concessional financing.

3. The new stage of world development: The 2030 Agenda and the Paris Agreement

The revision of the global development agenda was not a direct consequence of the financial crisis but rather the result of individual events that determined the key approaches to solving global problems.

The UN came to define the problems, the solution of which requires the efforts of all mankind at the beginning of the 21st century with the emergence of the Millennium Development Goals (MDGs). The world community established eight global goals and defined a 15-year period until 2015 for their realization. Since then, the goals, indicators, and agenda of the MDGs have been repeatedly criticized for various reasons: due to the narrowness of the approach to poverty assessment (only absolute poverty is taken into account) and neglect of the problem of inequality (both within and between countries), overly broad coverage, vague wording and underestimated target indicators with regard to some issues [Saith 2006; Bhagwati 2010; Amin 2006; Oya 2011; Fukuda-Parr 2010; Fukuda-Parr et al. 2013]. Nevertheless, the articulation of key world problems, the development of indicators reflecting progress in their solution, and the formation of the world development agenda as a whole can be assessed positively in the context of recognizing the importance of consolidating efforts for their further solution.

The intercrisis period saw several major events, the most significant of which, in the context of this paper, are the emergence of the UN General Assembly document "Transforming Our World: The 2030 Agenda for Sustainable Development" and the adoption of the Paris Agreement in 2015. The first document delineated the world development agenda for the next 15 years, emphasizing 17 global challenges that need to be tackled for the well-being of humankind. The second document focused on the single

issue of global climate change, defining as a goal the containment of rising temperature within 2°C with due efforts to contain temperature within 1.5°C [United Nations 2015].

The climate agenda has become a priority for developed countries and the foundation for the fourth energy transition [Makarov, Stepanov 2018], largely overshadowing other global issues. We can identify the following factors accompanying the actualization of the climate agenda: 1) the reduction in financing of projects in the field of fossil fuel extraction, which was observed until 2021, 2) the active development of projects related to renewable energy sources, primarily solar and wind power generation, 3) the introduction of commitments to reduce greenhouse gas emissions (primarily carbon dioxide) in the development strategies of countries, 4) the emergence of new financial instruments related to climate finance (including debt), 5) the development of carbon markets and the introduction of a carbon price in many countries, as well as the emergence of frontier carbon regulation—first in the EU.

The results were mixed. As the crisis in the EU gas market has shown, weather anomalies can have a significant impact on renewable electricity generation. In the absence of cheap and capacitous energy storage capacity, fossil fuels remain essential for baseload supply [Leonard et al. 2020], and a complete phaseout at the global level and even at the level of developed countries without further technological innovations is not yet possible. The positive consequences include not only the active restructuring of the electricity generation mix in developed countries and China, the reduction of greenhouse gas emissions in the EU (compared to 1990 or 2005 levels), and the development of the electric vehicle market but also the slow movement towards helping developing countries. For example, the Partnership for a Just Energy Transition in 2021 pledged $8.5 billion in financial support to South Africa to overcome its dependence on fossil fuels (primarily coal).[2] In 2022, the Partnership announced support to Vietnam and Indonesia in the sums of $15.5 billion and $20 billion, respectively. The 27th Conference of the Parties to the UN Framework Convention on Climate Change decided to establish a Loss and Damage Fund to compensate developing countries for damage caused by natural disasters. By the beginning of 2024, the Fund amounted to US$700 million.[3] However, it will take time to assess the effectiveness and feasibility of the proposed measures. It is worth mentioning that in 2009, political commitments for climate finance by 2020 (later moved to 2025) amounted to $100 billion annually [UNCTAD 2023c].

Despite the attention of the world community, especially in the EU, to the climate agenda, the latest report of the Intergovernmental Panel on Climate Change emphasizes that humanity is still far from realizing the goal of curbing temperatures by even 2°C: all other things being equal, the temperature increase by 2100 could be more than 2.5°C [IPCC 2023]. Between 2016 and 2030, the difference between the commitments made by businesses and governments and the investments needed to achieve zero emissions by

[2] Kramer, K., 2022. Just Energy Transition Partnerships: An opportunity to leapfrog from coal to clean energy. *IISD*. Dec. 7. Available at: https://www.iisd.org/articles/insight/just-energy-transition-partnerships

[3] Lakhani, N., 2023. $700m pledged to loss and damage fund at Cop28 covers less than 0.2% needed. *The Guardian*. Dec. 6. Available at: https://www.theguardian.com/environment/2023/dec/06/700m-pledged-to-loss-and-damage-fund-cop28-covers-less-than-02-percent-needed

mid-century will exceed $1.6 trillion annually [IEA 2021]. If current emissions levels continue, this disparity will only widen as we approach the tipping points of temperature rise. Finally, there is an imbalance in the investments in mitigation and adaptation. Further combating climate change will require a significant increase in not only public but also private investment, technology development (hydrogen energy, carbon capture and storage, etc.), and changes in consumer behavioral habits.

This article is not intended to assess humanity's achievements in the fight against climate change, but we can already talk about the implications of the climate agenda for global development. First, the prioritization of the climate change problem, the nature of which is genuinely global since changes affect a wide range of countries, comes into conflict with traditional development problems: fighting poverty, eradicating inequality, eliminating hunger, etc., characteristic of developing countries [Grigoryev, Medzhidova 2020]. The existence of preferences belonging to creditor (or donor) countries makes its own adjustments in allocating limited financial resources. Second, since mitigation is closely related to the introduction of renewable energy sources, this issue becomes part of trade and industrial policy and intensifies competition between countries.[4] Third, taking action to combat climate change requires a high level of coordination at both the country level and the level of international institutions and global funds, which will help avoid duplication of work and allow for synergies. Finally, the lack of financing for adaptation policies and the resulting lack of infrastructure in climate-vulnerable countries in the face of increasing natural disasters can only exacerbate development challenges. In 2019/2020, "climate" finance amounted to $632 billion, but only 10% was allocated to adaptation,[5] while the funding need is $160-340 billion annually until 2030 and $315-565 billion annually between 2030 and 2050 [UNEP 2022].

4. Sustainable Development Goals: The challenge of implementation using SDG 1 as an example

Achievement of the Sustainable Development Goals, solution of the problems of hunger, poverty, lack of access to water and energy, maternal and child mortality, inequality, etc. is difficult to imagine without high rates of economic growth in lower-middle and low-income countries.

Differences between countries are more pronounced when analyzing individual indicators. In the context of the Sustainable Development Goals, low-income countries (26 countries) are of greatest research interest. For example, SDG 1, poverty eradication, includes several targets, including reducing the proportion of people living in poverty in all its manifestations by "at least half."[6] Statistics confirm the significant progress

[4] Martina M. et al., 2021. U.S. bans imports of solar panel material from Chinese company. Reuters. Jun. 24. Available at: https://www.reuters.com/business/us-restricts-exports-5-chinese-firms-over-rights-violations-2021-06-23/

[5] Buchner B. et al., 2021. Global Landscape of Climate Finance 2021. CPI. Dec. 14. Available at: https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2021/

[6] Goal 1: Eradicate poverty in all its forms everywhere. Available at: https://www.un.org/sustainabledevelopment/ru/poverty/

against poverty that humanity has made in the 21st century: the number of people living in absolute poverty (less than $2.15/day PPP 2017) has been reduced from 1.8 billion (29.3% of the world population) in 2000 to 697 million (9%).

In 2017, the share of the population living in absolute poverty globally was 10.8%, and in 2020, this number is estimated to increase by 11% to 719 million people [World Bank 2022]. At the same time, the group of low-income countries, despite the high level of average annual GDP growth in 2010-2019, the growth of GDP per capita in this period was negative (see Table 1, p. 16)—due to the fact that the population growth during this period was almost twice as high as the world average.

Table 1. Development indicators by income groups, 2010-2019

	World	High-income countries	Upper-middle-income countries	Lower-middle-income countries	Low-income countries
Gross income per capita, USD	—	>13205	4256–13205	1086–4255	<1085
Average annual GDP growth, %	3.0	2.0	5.1	1.6	4.8
Average annual growth of GDP per capita, %	1.8	1.4	4.3	3.3	-1.1
Population, million people, 2019	7743	1237	2753	3075	649
Average annual population growth, %	1.2	0.5	0.8	1.5	2.7
Share of the population with income below $2.15/day, 2019, %	8.5	0.7	1.8	11.1	45
Share of the population with income below $3.65/day, 2019, %	24.1	0.8	7	39.9	72.1
Share of the population with income below $6.85/day, 2019, %	46.9	1.7	26.6	77.3	92.2

Source: compiled by the author according to the World Bank Group.

The picture of poverty alleviation, apparently successful at the global level, has its own specifics in the context of the income groups of countries. Thus, despite the significant reduction of poverty in the world as a whole, in the group of low-income countries, its average annual growth in 2011-2018[7] amounted to 2.3%. A higher increase in the designated period (2011-2019) was observed only in high-income countries (2.6%), and the total number of people living in absolute poverty in the world amounted to 7.4 million. The most significant decline was in upper-middle-income countries (average annual rate exceeded 17%), primarily in China. It should be noted that between 1990 and 2015. China made the largest contribution to poverty reduction, which amounted to 63.9%, and in 1990-2005 its contribution exceeded 93% [Wan, Hu, Liu 2021]. Thus, the realization of the

[7] Data for 2019 are not yet available.

poverty-related MDGs would not have been achievable without China's contribution [Darvas 2019], but in the context of achieving SDG 1, its contribution is limited to the progress made earlier.

More than half of the population living on less than $2.15 a day lives in sub-Saharan Africa (see Figure 4, p. 17). In the intercrisis period, the number of poor people here has remained stable and even increased. Another important region in this context is South Asia, where the number of poor people in 2021 amounted to almost 208 million, of which more than 167 million lived in India. India's economic growth rate and current projections suggest a China-like scenario with a sharp decline in the number of poor people. However, it remains to be seen whether progress in India will enable the achievement of SDG 1 globally or whether significant intensification of poverty reduction will be required in other parts of the world, particularly in Africa.

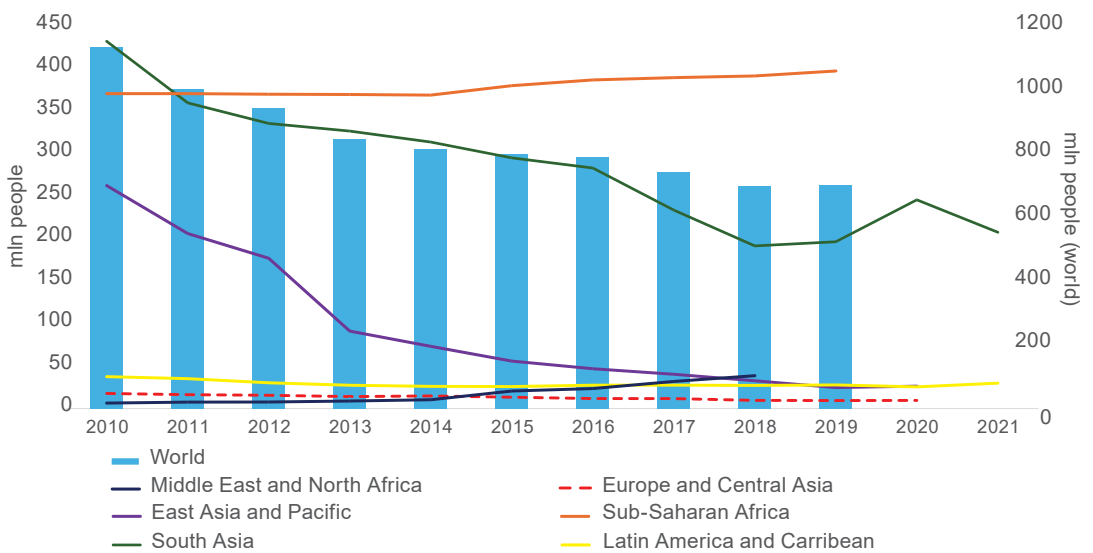

Figure 4. Population living in absolute poverty (PPP 2017)

Source: compiled by the author based on the World Bank data.

The situation in Sub-Saharan Africa is more complex for several reasons. As the region is critical not only for poverty eradication but also for other SDGs, we will elaborate on this issue. Africa suffers from a chronic lack of investment: in 2022, foreign direct investment globally was $1.3 trillion, but in Sub-Saharan Africa it was only $30 billion. Morrissey (2012) notes that even the investments that do come into the region do not create significant preconditions for economic growth, both for domestic reasons (low levels of human capital, underdeveloped financial markets, low investment productivity, weak institutions, high levels of corruption) and because of the nature of the investments: they do not have positive externalities because they are not aimed at building an industrial base in the region.

In addition, public debt in the region has increased from 30% of GDP in 2013 to 60% of GDP by the end of 2022.[8] Debt service costs are rising, reducing the ability of countries to borrow in external markets to invest in development and increasing dependence on development assistance from international development banks and on a bilateral basis. At the same time, investment needs continue to grow. Financing is needed for infrastructure construction (transport corridors), industrialization, development of local industries, support for health and education systems, climate change adaptation, and agricultural development and expansion, among other things. Poverty alleviation (as well as increasing investment attractiveness) is also directly related to institutions, the formation of which is a long process that requires the support of regional elites and local populations. Finally, the countries of the region are characterized by high levels of multidimensional poverty, i.e., absolute poverty combined with a lack of access to water supply and sanitation, health, and education services. For example, in Burundi, the share of the population in multidimensional poverty is 85.2%; in South Sudan, 84.9%; in Madagascar, 82.9%; in Niger, 80%.[9]

The global fight against poverty is further complicated by the fact that, according to the World Bank estimates, by 2030, 59% of the population living in absolute poverty will be in post-conflict and fragile countries.[10] Diwakar (2023) identifies the following factors that exacerbate the well-being of populations in such contexts: shocks, displacement (within or across countries), instability (in the context of the performance of state institutions), security, and decentralization of power. Such a context poses additional challenges for poverty eradication. In addition, it requires investments in building institutions, preventing conflict escalation, and building peaceful lives, which in the medium term until 2030 is a complex and difficult task even without taking into account external factors that may have an even more negative impact on this group of countries.

To summarize, the implementation of SDG 1 is regionally specific, making it difficult to achieve due to both the challenges inherent to the region and the global economic situation, which directly impacts the regional situation as it is vulnerable to macroeconomic shocks. The achievement of a similar MDG target was once largely driven by the success of China, and India can make a significant contribution in the current context, but a lack of progress or deterioration in sub-Saharan Africa could put SDG 1 at risk.

5. 2021: A convulsive new recovery?

In 2021, global GDP growth amounted to 6%, and its volume exceeded the pre-crisis level. However, the recovery was uneven, with the production of goods far outpacing the production of services, partly constrained by the still-existing restrictions on flights and recreation [Grigoryev et al. 2021].

[8] Comelli, F. et al., 2023. How to Avoid a Debt Crisis in Sub-Saharan Africa. IMF. Sept. 26. Available at: https://www.imf.org/en/News/Articles/2023/09/26/cf-how-to-avoid-a-debt-crisis-in-sub-saharan-africa

[9] World Bank data.

[10] Fragility, Conflict & Violence. Available at: https://www.worldbank.org/en/topic/fragilityconflictviolence/overview

In recent years, the world economy has faced both a global crisis caused by a pandemic and crises in individual commodity markets. In 2018, the UN estimated that achieving the Sustainable Development Goals by 2030 required an annual investment of $3.3-4.5 trillion, but for 2023, it has increased significantly and ranges between $5.4-6.4 trillion.[11] The challenges facing the global community are intensifying. Climate change is causing an increase in natural disasters, including floods and droughts, which undermine food security in the most vulnerable regions of the planet. The UN estimates that the number of people facing hunger will average 735 million in 2021-2022, 122 million more than in pre-crisis 2019 [FAO, IFAD, UNICEF, WFP, WHO 2023]. The number of people without access to electricity (living predominantly in low-income countries) was 675 million in 2021, to clean and safe fuels and cooking technologies—2.3 billion [IEA, IRENA, UNSD, World Bank, WHO 2023]. As recently as 2019, the educational poverty rate in developing countries was 57% and is estimated to rise to 70% in 2022,[12] leading to a 10% drop in income for this generation. Halfway to achieving the SDGs, only 15% are on track and 37% are making no progress or have regressed [United Nations 2023]. Such a picture signals the need for rapid consolidation of the global community to achieve global development goals, without which their successful implementation cannot be expected [Yuan et al. 2023].

In the context of post-pandemic global challenges and the threat of non-compliance with the UN SDGs, there has been an increase in "world" total public debt, which in 2022 amounted to US$92 trillion. Developing countries account for only 30% of the total, of which China, India and Brazil account for about 70%. However, low-income countries have higher public debt-to-GDP ratios, which has increased the number of countries in debt distress from 22 in 2011 to 59 in 2022 [UNCTAD 2023a]. After the global financial crisis, public debt has been growing steadily against the background of low interest rates, and the most significant increase was observed during the coronavirus crisis due to fiscal and monetary measures taken by the authorities to support the population and businesses [Makin, Layton 2021]. Thus, in 2020, the global public and private debt growth amounted to 28%. The "debt landscape" is also changing: the number of creditors is increasing (including non-Paris Club creditors), the volume of non-concessional debt lending is increasing, as well as the volume of domestic debt; new debt instruments are used [Chuku et al. 2023]. The G20 Common Framework for Debt Treatments is constantly criticized,[13] because achieving debt settlement through this channel is a protracted process, and only one country managed to achieve the result. The Paris Summit on transforming the

[11] Annual cost for reaching the SDGs? More than $5 trillion. United Nations. Sep. 19, 2023. Available at: https://www.un.org/sustainabledevelopment/blog/2023/09/annual-cost-for-reaching-the-sdgs-more-than-5-trillion/#:~:text=The%20cost%20of%20achieving%20ambitious,UN%20economists%20said%20on%20Tuesday

[12] Learning in Crisis: Prioritizing education & effective policies to recover lost learning. World Bank. August 19, 2022. Available at: https://www.worldbank.org/en/news/immersive-story/2022/09/16/learning-in-crisis-prioritizing-education-effective-policies-to-recover-lost-learning#:~:text=These%20learning%20losses%20are%20are%20expected,have%20also%20been%20greatly%20affected.&text=The%20new%20estimate%20shows%20that,are%20now%20out%20of%20reach

[13] Georgieva, K., Pazarbasiogli, C., 2021.The G20 Common Framework for Debt Treatments Must Be Stepped Up. // IMF. Dec. 2. Available at: https://meetings.imf.org/en/IMF/Home/Blogs/Articles/2021/12/02/blog120221the-g20-common-framework-for-debt-treatments-must-be-stepped-up

global financial architecture, held in June 2023, also failed to produce any meaningful results, except for the announcement of debt restructuring for Zambia, which defaulted in 2020. Thus, it is difficult to conclude about the effectiveness of the existing system in case the debt crisis affects many middle-income countries [Essers, Cassimon 2021]. For example, in August 2023, the IMF approved a tranche of $7.5 billion for Argentina,[14] whose outstanding loans to the organization amount to more than $31 billion, or 28.2% of total outstanding loans.[15]

As we have already noted, the coronavirus crisis has played an important role in exacerbating global challenges and has had a negative impact on the prospects for the realization of all SDGs. Cheng et al. (2021. P. 15-17), in their analysis of the consequences of the pandemic, draw attention to the disproportionate negative impact on the most vulnerable segments of the population (individual countries and the group of least developed countries) in terms of increasing the number of poor people, aggravating the problem of food security, health, education, gender inequality, and others. The authors propose some measures that can help achieve the SDGs: combine individual goals and maximize synergies between individual SDGs, set short- and long-term priorities, strengthen global cooperation, assess and forecast the process of achieving the SDGs in a timely manner, and so on. Despite heterogeneous progress (and regression) at the global level, it can be noted that the Sustainable Development Goals are unlikely to be achieved in their current form.

At the same time, the global community could benefit from the current situation: revising the SDGs from the perspective of the value of human capital [Bobylev, Grigoryev 2020], forming a single clear consolidating agenda with the prioritization of individual SDGs, or forming new unifying SDGs. Regardless of the details of the "rethinking" SDGs, to which a body of work by foreign and domestic researchers is devoted, the global SDG agenda should not only change the discourse of global development by shifting the emphasis but also serve as a realistic goal achievable in the foreseeable future, rather than a speculative construct of the most desirable future.

The actual agenda for 2023 is radically different from the 2015 picture of the future: economic growth has slowed down, coordination and partnership have been replaced by geo-fragmentation, sovereign debt of developing countries is growing, depriving them of access to financial resources for independent solutions of domestic issues. Even the issue of climate change, despite the enormous attention of politicians, nonprofit organizations, international institutions, and civil society, remains as acute as ever. Finally, the impact of the pandemic has yet to be assessed, but it is already clear that COVID-19 has set back the implementation of the SDGs by years, if not decades. A recent IMF report shows a new trend: the medium-term slowdown in developing economies is slowing convergence between developed and developing countries [IMF 2023], something that is no closer to

[14] IMF Executive Board Completes the Combined Fifth and Sixth Reviews of the Extended Arrangement Under the Extended Fund Facility for Argentina. IMF. Aug. 23, 2023. Available at: https://www.imf.org/en/News/Articles/2023/08/23/pr23290-argentina-imf-executive-board-completes-combined-fifth-sixth-rev-extended-arr-under-eff

[15] Total IMF Credit Outstanding. Available at: https://www.imf.org/external/np/fin/tad/balmov2.aspx?type=TOTAL

resolving global problems, the consequences of which affect middle- and low-income countries to a greater extent.

Conclusions

The crises of the last 15 years have had a significant impact on global development. The global financial crisis has largely determined the paradigm of global development for the next decade, including the formation of the UN's Agenda 2030 and the development of the climate agenda. The intercrisis period 2010-2019, which is the focus of this paper, has a number of distinctive characteristics, including low growth rates (relative to previous periods), low interest rates, rising public debt in developing countries, slow progress or even regression in the realization of global goals (e.g., rising poverty in sub-Saharan Africa). In addition, there is increasing "competition" between different development goals in resource-limited settings, in particular between the goal of combating climate change and other goals related to economic growth and development in low-income countries. Post-crisis recovery has been slowed by high inflation, rising interest rates, and high commodity prices (especially food and fuel). Each year of slow progress or even regression in achieving the SDGs means the need to intensify global efforts in the remaining period, which, in turn, is impossible without a significant increase in financing.

Halfway to the 2030 Sustainable Development Goal target date, progress remains modest: the gains made on many fronts (poverty, hunger, education poverty, etc.) have been reversed by the pandemic, and the likelihood of achieving them within the target date is, all other things being equal, extremely low. The midway point is an important point, a good time to reflect not only on the obstacles to realizing the SDGs but also on their very nature. A reassessment of current priorities is also required: quantitative indicators related to economic growth should not be more important than improving the quality of life and human capital development, and the prioritization of quantitative indicators related to economic growth over human capital development and improving the quality of life should be reconsidered.

Bibliography

Akerlof, G. A., Shiller, R. J., 2010. *Animal spirit: How human psychology drives the economy, and why it matters for global capitalism*. Princeton University Press.

Amin, S., 2006. The millennium development goals – A critique from the South. *Monthly Review – an Independent Socialist Magazine*. 57(10). Available at: https://monthlyreview.org/2006/03/01/the-millennium-development-goals-a-critique-from-the-south/

Audiguier, C., 2012. *The impact of the global financial crisis on the Least Developed Countries*. FERDI Working Paper No 50. FERDI.

Babier, E. B., Burgess, J. C., 2020. Sustainability and development after COVID-19. *World Development*. 135. Available at: https://doi.org/10.1016/j.worlddev.2020.105082

Barro, R. J., Sala-i-Martin, X., 1992. Convergence. *Journal of Political Economy*. 100 (2). P. 223-251.

Bhagwati, J., 2010. Time for a Rethink. *Finance & Development*. 47 (3). Available at: https://www.imf.org/external/pubs/ft/fandd/2010/09/pdf/25hagwati.pdf

Bitzenis, A., Vlachos, V., 2016. Editorial: Foreign direct investment in the light of the recent crisis. *Global Business and Economics Review*. 18 (2). P. 115-123.

Bobylev S., Grigoryev L., 2020. In search of the contours of the post-COVID Sustainable Development Goals: The case of BRICS. *BRICS Journal of Economics*. 2(1). P. 4–24. Available at: https://doi.org/10.38050/2712-7508-2020-7

Bordo, M. D., 2008. *An historical perspective on the crisis of 2007-2008*. National Bureau of Economic Research. Working Paper 14569. Available at: https://www.nber.org/system/files/working_papers/w14569/w14569.pdf

Borio, C., 2020. The Covid-19 economic crisis: dangerously unique. *Business Economics*. 55. P. 181-190. Available at: https://doi.org/10.1057/s11369-020-00184-2

Buklemishev, O., 2020. Coronavirus crisis and its effects on the economy. *Population and Economics*. 4 (2). P. 13-17. Accessed: https://doi.org/10.3897/popecon.4.e53295

Cabral, R., Castellanos-Sosa, F. A., 2019. Europe's income convergence and the latest global financial crisis. *Research in Economics*. 73 (1). P. 23-34. Available at: https://doi.org/10.1016/j.rie.2019.01.003

Cheng, Y., Liu, H., Wang, S., Cui, X., Li, Q, 2021. Global Action on SDGs: Policy Review and Outlook in a Post-Pandemic Era. *Sustainability*. 2021. 13. Available at: https://doi.org/10.3390/su13116461

Chuku, C., Samal, P., Saito, J., Hakura, D., Chamon, M., Cerisola, M., Chabert, G., Zettelmeyer, J., 2023. *Are We Heading for Another Debt Crisis in Low-Income Countries? Debt Vulnerabilities: Today vs. the pre-HIPC Era.* IMF WP/23/79. IMF.

Crespo Cuaresma, J., Fengler, W., Kharas, H. et al., 2018. Will the Sustainable Development Goals be realized? Assessing present and future global poverty. *Palgrave Communications*. 4. P. 29. Available at: https://doi.org/10.1057/s41599-018-0083-y

Darvas, Z., 2019. Global interpersonal income inequality decline: The role of China and India. *World Development*. 121. P. 16-32. Available at: https://doi.org/10.1016/j.worlddev.2019.04.011

Diep, L., Martins, F. P., Campos, L. C., Hofmann, P., Tomei, J., Lakhanpaul, M., Parikh, P., 2020. Linkages between sanitation and the sustainable development goals: A case study of Brazil. *Sustainable Development*. 29 (2). P. 339-352. Available at: https://doi.org/10.1002/sd.2149

Diwakar, V., 2023. *Ending extreme poverty amidst fragility, conflict, and violence.* DEEP Thematic Paper 2. Data and Evidence to End Extreme Poverty Research Program. Oxford. Available at: https://doi.org/10.55158/DEEPTP2

Dornean, A., Oanea, D.-C., 2015. Impact of the Economic Crisis on FDI in Central and Eastern Europe. *Review of Economic and Business Studies*. 8 (2). P. 53-68.

Essers, D., Cassimon, D., 2022. Towards HIPC 2.0? Lessons from past debt relief initiatives for addressing current debt problems. *Journal of Globalization and Development*. 13 (2). P. 187-231. Available at: https://doi.org/10.1515/jgd-2021-0051

FAO, IFAD, UNICEF, WFP and WHO, 2023. *The State of Food Security and Nutrition in the World 2023. Urbanization, agrifood systems transformation and healthy diets across the rural-urban continuum.* Rome: FAO. Available at: https://doi.org/10.4060/cc3017en

Fukuda-Parr, S., 2010. Reducing inequality—The missing MDG: A content review of PRSPs and bilateral donor policy statements. *IDS Bulletin-Institute of Development Studies*. 41 (1). P. 26-35. https://doi.org/10.1111/j.1759-5436.2010.00100.x

Fukuda-Parr, S., Greenstein, J., Stewart, D., 2013. How should MDG success and failure be judged: Faster progress or achieving the targets? *World Development*. 41. P. 19-30. Available at: https://doi.org/10.1016/j.worlddev.2012.06.014

Gocaj, L., Meunier, S., 2013. Time Will Tell: The EFSF, the ESM, and the Euro Crisis. *Journal of European Integration*. 35 (3). P. 239-253. Available at: https://doi.org/10.1080/07036337.2013.774778

Grigoryev, L. M., 2023. The Shocks of 2020-2023 and the Business Cycle. *Contemporary World Economy*. No 1 (1). Available at: https://doi.org/10.17323/2949-5776-2023-1-1-8-32

Grigoryev, L. M., Pavlyushina, V. A., Muzychenko, E. E., 2020. Fall into the global recession 2020. *Voprosy ekonomiki*. 2020. 5. P. 5-24. Available at: https://doi.org/10.32609/0042-8736-2020-5-5-24 (in Russian).

Grigoryev, L. M., Yolkina, Z. S., Mednikova, P. A., Serova, D. A., Starodubtseva, M. F., Filippova, E. S., 2021. "Perfect storm" of personal consumption. *Voprosy ekonomiki*. 2021. 10. Available at: https://doi.org/10.32609/0042-8736-2021-10-27-50 (in Russian).

Grigoryev, L. M., Medzhidova, D. D., 2020. Global energy trilemma. *Russian Journal of Economics*. 6 (4). P. 437-462. Available at: https://doi.org/10.32609/j.ruje.6.58683

IEA, 2021. *World Energy Outlook 2021*. Accessed: https://www.iea.org/reports/world-energy-outlook-2021

IEA, IRENA, UNSD, World Bank, WHO, 2023. *Tracking SDG 7: The Energy Progress Report*. Washington, DC: World Bank.

IMF, 2023. *Navigating global divergences*. 2023. Accessed: https://www.imf.org/en/Publications/WEO/Issues/2023/10/10/world-economic-outlook-october-2023

IPCC, 2023. *AR6 Synthesis Report. Climate Change 2023*. Accessed: https://www.ipcc.ch/report/ar6/syr/

Ivashina, V., Scharfstein, D., 2010. Bank lending during the financial crisis of 2008. *Journal of Financial Economics*. 97(3). P. 319-338. Available at: https://doi.org/10.1016/j.jfineco.2009.12.001

Janoušková, S., Hák, T., Moldan, B., 2018. Global SDGs Assessments: Helping or Confusing Indicators? *Sustainability*. 10(5). P. 1540. Available at: https://doi.org/10.3390/su10051540

Johnson, P., Papageorgiou, C., 2020. What Remains of Cross-Country Convergence? *Journal of Economic Literature*. 58(1). P. 129-175. Available at: https://doi.org/10.1257/jel.20181207

Leonard, M. D., Michaelides, E. E., Michaelides, D. N., 2020. Energy storage needs for the substitution of fossil fuel power plants with renewables. *Renewable Energy*. 145. P. 951-962. Available at: https://doi.org/10.1016/j.renene.2019.06.066

Loayza, N., Pennings, S. M., 2020. *Macroeconomic Policy in the Time of COVID-19: A Primer for Developing Countries.* World Bank Research and Policy Briefs No. 147291. World Bank. Available at: https://ssrn.com/abstract=3586636

Makarov, I. A., Makarova, E. A., 2021. Ringing the bell without consequences. Learned and unlearned lessons of the Great Recession. *Russia in Global Affairs*. 2021. No 1. Available at: https://doi.org/10.31278/1810-6439-2021-19-1-62-79 (in Russian).

Makarov, I. A., Stepanov, I. A., 2018. Paris agreement on climate change: Its impact on world energy sector and new challenges for Russia. *Current Problems of Europe*. 1. P. 77-100 (in Russian).

Makin, A. J., Layton, A., 2021. The global fiscal response to COVID-19: Risks and repercussions. *Economic Analysis and Policy*. 69. P. 340-349. Available at: https://doi.org/10.1016/j.eap.2020.12.016

McCulloch, N., Sumner, A., 2009. Will the Global Financial Crisis Change the Development Paradigm? *IDS Bulletin*. 40. P. 101-108. Available at: https://doi.org/10.1111/j.1759-5436.2009.00078.x

Milanovic, B., 2022. After the Financial Crisis: The Evolution of the Global Income Distribution between 2008 and 2013. *Review of Income and Wealth*. 68 (1). Available at: https://doi.org/10.1111/roiw.12516

Morrissey, O., 2012. FDI in Sub-Saharan Africa: Few Linkages, Fewer Spillovers. *The European Journal of Development Research*. 24. P. 26-31. Accessed: https://doi.org/10.1057/ejdr.2011.49

Omisore, A. G., 2018. Attaining Sustainable Development Goals in sub-Saharan Africa; The need to address environmental challenges. *Environmental Development*. 25. P. 138-145. Available at: https://doi.org/10.1016/j.envdev.2017.09.002

Ötker-Robe, İ., Podpiera, A., 2013. *The Social Impact of Financial Crises: Evidence from the Global Financial Crisis*. World Bank Policy Research Working Paper No. 6703. World Bank.

Oya, C., 2011. Africa and the millennium development goals (MDGs): What's right, what's wrong and what's missing. *Revista De Economia Mundial*. 27. P. 19-33.

Pajarskas, V., Jočienė, A., 2014. Subprime Mortgage Crisis in the United States in 2007-2008: Causes and Consequences (Part I). *Ekonomika*. 93 (4). P. 85-118.

Podrugina, A., Tabakh, A., 2022. Financial regulation in the XXI century. In: *World economy in the period of great shocks*. Moscow: INFRA-M. Chap. 11. P. 274-294 (in Russian).

Rogers, F. H., 2010. *The Global Financial Crisis and Development Thinking*. World Bank Policy Research Working Paper No. 5353. World Bank.

Saith, A., 2006. From Universal Values to Millennium Development Goals: Lost in Translation. *Development and Change*. 37 (6). P. 1167-1199. Available at: https://doi.org/10.1111/j.1467-7660.2006.00518.x

Stiglitz, J. E., 2009. *The Financial Crisis of 2007/2008 and its Macroeconomic Consequences*. Initiative for Policy Dialogue Working Paper Series. Initiative for Policy Dialogue. Available at: https://doi.org/10.7916/D8 Q Z2HSG

Stoddard, O., Noy, I., 2015. Fire-sale FDI? The Impact of Financial Crises on Foreign Direct Investment. *Review of Development Economics*. 19 (2). P. 387-99. Available at: https://doi.org/DOI:10.1111/rode.12149

Tauber, K., Van Zandweghe, W., 2021. Why Has Durable Goods Spending Been So Strong during the COVID-19 Pandemic? *Economic Commentary*. 2021. Available at: https://doi.org/10.26509/frbc-ec-202116

UNCTAD, 2023a. *A world of debt. A growing burden to global prosperity*. Accessed at: https://unctad.org/publication/world-of-debt

UNCTAD, 2023b. *World Investment Report*. United Nations.

UNCTAD, 2023c. *Considerations for a New Collective Quantified Goal Bringing accountability, trust and developing country needs to climate finance*. Available at: https://unctad.org/system/files/official-document/gds2023d7_en.pdf

UNEP, 2022. *Adaptation Gap Report 2022*. Available at: https://www.unep.org/resources/adaptation-gap-report-2022

United Nations, 2015. *Paris Agreement*. Available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf

United Nations, 2023. *The Sustainable Development Goals Report. Special Edition.* Available at: https://unstats.un.org/sdgs/report/2023/#:~:text=According%20to%20the%20report%2C%20the,hindered%2 0progress%20towards%20the%20Goals

Wan, G., Hu, X., Liu, W., 2021. China's poverty reduction miracle and relative poverty: Focusing on the roles of growth and inequality. *China Economic Review.* 68. Available at: https://doi.org/10.1016/j.chieco.2021.101643

World Bank, 2022. *Poverty and shared prosperity 2022. Correcting Course.* Available at: https://openknowledge.worldbank.org/server/api/core/bitstreams/b96b361a-a806-5567-8e8a-b14392e11fa0/content, https://doi.org/10.1596/978-1-4648-1893-6

Wu, X., Fu, B., Wang, S. et al., 2022. Decoupling of SDGs followed by re-coupling as sustainable development progresses. *Nature Sustainability.* 5. P. 452-459. Available at: https://doi.org/10.1038/s41893-022-00868-x

Yuan, H., Wang, X., Gao, L. et al., 2023. Progress towards the Sustainable Development Goals has been slowed by indirect effects of the COVID-19 pandemic. *Communications Earth & Environment.* 2023. 4. 184. Available at: https://doi.org/10.1038/s43247-023-00846-x

Toward a Theory of the Malthusian Trap. Part 1

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Abstract

Economic historians nowadays argue that economic growth in the world was extremely slow and unsustainable until the beginning of the Industrial Revolution in the late eighteenth century. This article traces how the efforts of many economists and historians have gradually developed the concept of the "Malthusian trap" to explain the centuries-long relative stagnation of agrarian society. In the case of traditional economies, cliometric studies generally confirm Thomas Malthus's ideas about the compensation of the positive impact of technological progress on per capita income by population growth. Modern scholars supplement them by analyzing the social structure of the society in the Malthusian trap, as well as its inherent institutions of redistribution, and the periodic flourishings and declines of proto-industry and trade that took place in those times. The article shows the logical interrelation of these elements within the Malthusian dynastic cycle. The concept of Malthusian trap is compared with the Marxist vision of the historical process. It is shown that positive insights of the Marxist approach can be implanted in the modern theory.

Introduction

For now-living individuals, economic growth is not merely a figure of speech; it is a tangible phenomenon. People perceive a consistent increase in their incomes not merely as a desirable outcome but rather as a natural process. In case of a deviation from this norm, they are inclined to make claims to those in power. Moreover, over medium-term intervals (20-30 years), not just an increase in the level of income, but also a change in the way of life itself, which is facilitated by technological innovations, takes place. The absence of such changes is considered to be a sign of stagnation.

Hence the understandable temptation to extend this perception of present reality to the past and to view the entire history of mankind as a sequence of progressive changes. It is obvious that such views have taken root more firmly in Russia than in any other country, due to the long-standing influence of Marxist ideology on the collective consciousness. As is well known, the Marxist paradigm distinguishes a number of successive stages (socio-economic formations) in history. These stages are characterized by shifts in technology (productive forces) that cause transformation of institutions (production relations). This ultimately leads society to a qualitatively higher level and does so by means of social revolution, which is defined as a transition to a more advanced state of affairs (new formation). It is argued that such changes of formations have occurred several times in history.

It should be noted, however, that modern economic history, in general, does not support such claims. In recent decades, this field of knowledge has become no less mathematical than other branches of economic science. Thanks to the efforts of economic historians and, above all, A. Maddison, we now have a retrospective dynamic series of macroeconomic indicators for the period starting from 1 AD. These findings do not support the hypothesis of linear progressive movement with sharp accelerations, which could be indicative of multiple changes in development stages.

1. A research agenda

Maddison's calculations indicate that from 1 to 1500 AD, the absolute GDP's growth rate in most countries of sedentary, agricultural civilization did not exceed 0.2-0.3% per year on average. Moreover, in the period between 1 and 1000 AD, the global growth rate was only 0.01% per year, and in Western Europe it was negative. The population growth was proceeding by a mere hundredth of a percent, with the world population increasing insignificantly from 225.8 million to 267.3 million between 1 and 1000 AD.

In other words, the gross output of a country and the number of people living there grew at almost the same rate. Consequently, per capita GDP increased at a slow pace. It should be recalled, that the dynamics of economic growth are determined by changes in this indicator, not in the absolute value of GDP. In 1–1000 AD, there was no growth in per capita GDP globally. In 1000–1500, the growth rate in some countries reached at best 0.1% per year. Differences between countries in per capita GDPs (and, consequently, in living standards) have always existed. However, up to 1500, they were not particularly pronounced.

Thus, the common feature of traditional agrarian economies throughout the world was a relative stagnation, rather than a consistent ascent from the lowest to the highest stages of development. J. Mokyr, an authoritative expert on the history of technology, observes that in the context of the entire history of humanity, episodes of scientific and technological progress do not appear to be frequent. Rather, they emerge as exceptions when, as a result of a rare coincidence of circumstances, the usual tendency of societies to slide into a stagnant equilibrium is broken [Mokyr 1992].

The contrast with the events of the last two and a half centuries is striking. While some acceleration of economic growth in Western Europe began around 1000, according to Maddison's data, it was purely gradual over the next eight centuries.[1] GDP growth rates in this region began to exceed the 1% per year only after 1820. This is usually attributed to structural changes in economies, commonly referred to as the "Industrial Revolution." A fundamentally new situation emerged since the rate of GDP growth started to steadily and noticeably exceed the rate of population growth. As a result, there was a steady increase in per capita GDP (or, as it is also called, per capita income). Such a process is commonly referred to as "modern economic growth" (MEG).

The first area of MEG emerged in the zone of Euro-Atlantic civilization, but then its impulses began to spread around the world. The growth of prosperity achieved by many countries on this basis is noteworthy in light of the dramatic acceleration in world population growth during the 18th and 19th centuries. In 1700, the world population stood at 603.2 million, increasing to 1.04 billion in 1820 and 1.79 billion in 1913. By 2003, this figure had risen to 6.28 billion. If we do not examine the specific dynamics of demographic processes within individual countries, but rather consider the global population as a whole, it can be argued that the population has grown to a greater extent not due to an increase in birth rates, but due to a decrease in mortality. Consequently, in Western countries, the life expectancy of a newborn increased from 36 years in 1820 to 76 years in 2003, while in the rest of the world, it increased from 24 to 63 years during that period [Maddison 2007].

Nevertheless, the MEG was conducive to the Great Divergence, which meant the world split into successful and underdeveloped countries. Inequality of per capita GDPs and differences in living standards reached unprecedented levels. According to O. Galor, the ratio of per capita incomes in the richest and poorest regions of the world was only 1.1:1 in 1000, and it was 2:1 in 1500. By 1820, it had increased to 3:1. By 1870, it had reached 5:1. By 1950, it had risen to 15:1, and by 2001 it had grown to 18:1 [Galor 2005]. Consequently, some MEG-impacted individuals experienced an improvement in their economic status, while it was not the case for many others.

The mechanism of transition from a stagnant equilibrium to the MEG is one of the most discussed topics in the theory of economic development, also known as development

[1] According to Maddison's estimates, England and some other European countries had already surpassed China, the former leader of the world economy, in terms of per capita GDP by 1500. But there are other points of view. Historians of the "Californian school" argue that technological and institutional changes similar to the European ones in the late Middle Ages and the Modern Age took place in the East as well. For example, K. Pomeranz believes that even in the middle of the 18th century the levels of prosperity in England and the Yangtze Delta (the most developed part of China) were approximately equal. The divergence between them became noticeable only by 1800 [Pomeranz 2000].

economics. This branch of economic theory was born after the Second World War. Generalizing the experience of both the developed countries and modern developing countries, the theory is supposed to offer recommendations for the latter on the implementation of economic policy.

However, due to the unresolved fundamental issues, development economics is still a science without a paradigm. It has a number of schools that argue with each other, which makes very difficult for it to fulfill its practical function. This article traces the evolution of a concept describing the regularities inherent in traditional, pre-industrial societies in the framework of development economics. It also reveals the differences between this concept and the Marxist paradigm.

2. In the labyrinth of traditional society

The founder of Marxism and his followers were vehement in their condemnation of the views of T. Malthus, which they regarded as not only pseudoscientific but also misanthropic. But it should be acknowledged that in the modern realm of economic science, the attitude towards Malthus is one of respect. It is believed that he correctly described the basic regularities inherent in traditional societies, although he did so at a historical time at the turn of the 18th and 19th centuries when the trends outlined by him began to fade into the past.

The stagnation that preceded the MEG period is, for this reason, usually called "Malthusian trap." Yet this does not mean that Malthus's ideas are accepted by modern science as absolute truth. His original model has undergone significant modifications, and it has been repeatedly tested on actual materials by econometric methods.

Malthus proceeded from the realities of a stratified, predominantly agrarian society, where the majority of the population lived in poverty. The logic of his reasoning was based on the fact that human beings have a natural tendency to procreate (for survival in the biological sense) and to derive material and psychological utility from children, who are perceived as one of the values of life. Hence, there is always a tendency to maintain a high birth rate in society. However, this tendency is limited by the amount of available resources (in rural societies, these are primarily land resources).

Furthermore, due to pervasive poverty and inadequate healthcare, mortality rates are high in such societies. Nevertheless, population growth will persist until the intensification of resource constraints results in a decline in per capita income alongside demographic expansion. Ultimately, incomes reach a subsistence level, thereby creating risks of increased mortality and extinction. Yet the overpopulation can be mitigated by the "positive checks" identified by Malthus. That implies a competition for resources, which gives rise to social conflicts, internal and external wars, and uprisings. Additionally, the crowding of people in limited territories facilitates the spread of diseases, which will, in turn, lead to population decline.

The situation may undergo a temporary change due to the utilization of additional land and/or the emergence of new, more effective technologies. Such positive shocks may indeed lead to an increase in per capita income and living standards. However, fertility will increase, per capita land endowment will decline again, and population growth

will eventually devalue the gains in wages and other incomes of the unprivileged social strata. Per capita income will return to a long-run equilibrium level close to subsistence, although this will occur at a higher level of technology than before.

It is also possible that the increase in mortality (for example, as a result of an epidemic) will result in a growth of per capita income. But it will disappear as the population aggrandizes after the epidemic. In essence, the original, so called absolute version of the Malthusian model posited that fertility and mortality would eventually reach equilibrium, resulting in minimal population growth once all available land areas in the country were occupied. Despite potential fluctuations, society would ultimately survive near a subsistence level [Malthus 2022].

This hypothesis aligns with the long-term macroeconomic trends identified by Maddison. The logic of the Malthusian model helps to understand the differences in the demographic potential of individual countries, both in the past and in the present. It implies that a technologically more developed country will not enjoy a higher standard of living than other countries, but will have a larger population than theirs. Accordingly, China's primacy in the number of inhabitants, which dates back to the Middle Ages, confirms that this country was long holding the world's technological leadership. But the disparities in living standards between countries prior to 1800 were relatively minor, despite significant technological gaps.

The Malthusian perspective, when applied to agrarian societies, is also consistent with the tenets of modern microeconomic theory, which posits that when the stock of some factor of production is fixed in volume, the returns to scale when other factors are employed will tend to diminish. It is evident that if the cultivated agricultural area is constrained, the marginal product of labor will diminish over time, resulting in a decline of per capita income as the population expands. Consequently, the concentration of labor and other resources in agriculture was a primary reason contributing to the fragility and instability of economic growth in traditional societies.

In response to Malthus's predictions about the periodic emergence of a "surplus" population, numerous scholars of modern development economics have identified the chronic underutilization of labor resources in traditional economies. W.A. Lewis attributed this phenomenon to the fact that, in villages, overpopulation results in land plots being too small to support the cultivation of a plot by a full peasant family. Moreover, in urban areas, a significant proportion of individuals employed in the service sector receive casual wages or remain idle for the bulk of their working day (such as small traders who conduct only a few transactions per day) [Lewis 1954].

R. Nelson, who was the first to formalize the Malthusian trap as a system of equations, wrote that economies in this trap were characterized by underutilization not only of labor but also of capital stocks (to which he also included a land). The volume of production in such economies could be increased simply by a fuller utilization of available resources, even without the use of new technologies [Nelson 1956].

J. Mokyr emphasized that underemployment in traditional agrarian societies could not be equated with involuntary unemployment in capitalist economies. In the latter, a sufficient number of jobs are not created for those willing to work due to a lack of aggregate demand for goods and services. The causes of underemployment in

traditional economies are different. Large seasonal variations in labor demand and high transportation costs made labor migration difficult. Thus, it is more akin to frictional unemployment [Mokyr 1977].

Nevertheless, the results of more comprehensive econometric tests of the relevance of the Malthusian model are inconclusive. The majority of economic historians confirm that population growth in traditional societies followed the increase in income. However, there is no consensus about the extent to which population growth (i.e., the growth of household demand for children) was income-elastic.

J. Madsen, P. Robertson, and Ye Lunfen calculated data on 16 European countries and Japan for the period between 900 and 1870 and concluded that the "absolute" version of the Malthusian model was realistic. The increase in wages due to technological innovations or the expansion of arable land, within 10–30 years (i.e., during the active life of one generation), was being dampened by reciprocal demographic processes, and per capita income was returning to the level of long-term equilibrium [Madsen, Robertson, and Ye 2019].

However, plenty of other works argue that the population response to income growth was weak. It could take several centuries (up to three ones) for wages to converge back to the equilibrium level predicted by Malthus [Crafts and Mills 2009; Lee and Anderson 2002]. In other words, the Malthusian regularities did take place but with deviations and over very long time only.

What's more, if we consider the statistics presented by Maddison and his colleagues, which indicate that both per capita GDP and population were growing over time, albeit at a slow pace, it becomes evident that the "relative" version of the Malthusian model is a more realistic assumption. This implies that in traditional societies, there are certain mechanisms of equilibrium (i.e., the trends of income growth are balanced by countertrends, and the results of their interaction are not predetermined), and the reduction of per capita income to the subsistence level is only a marginal case, rarely observed in reality.

T. Lueger, a researcher and proponent of Malthus's views, asserts that this is how the classical economist himself understood it: he regarded the periodic return of per capita income to the level of physical survival as a probability, not as a rigid regularity. This was merely a deductively derived logical connection upon which an analysis of reality could be based. In the actual world, this connection may or may not be realized. Malthus himself outlined what could prevent it: he wrote not only about "positive checks," i.e., increasing mortality, but also about "preventive checks," i.e., birth control [Lueger 2018].

Economic historians have proved that such practices did exist in medieval societies. N. Voightlander and H.J. Voth posit that a consistent growth in per capita income is indeed feasible under the Malthusian framework. Specifically, they argue that this phenomenon occurred in Western Europe between the 14th and 18th centuries [Voightlander and Voth 2009]. The loss of lives due to the plague epidemic (Black Death) of the late 1340s in some countries was significant, with estimates ranging from one-third to one-half of the total population. This decline in population led to an increase in incomes, which, in turn, stimulated the growth of an urban craft production. Additionally, the political

fragmentation of Europe resulted in frequent wars, while urban growth created opportunities for monarchs to raise revenues through taxation.

Consequently, the mortality rate was persistently elevated, not only due to direct war losses, but also due to war-related epidemics and the destruction of the agricultural production base.[2] In other words, wars and pestilence were themselves largely consequences of the income growth. However, they, in turn, generated high mortality rates, which eased anthropogenic pressure on limited land resources. The per capita income was maintained at a higher level than before the Black Death. So, Voigtlander and Voth offer an explanation for this phenomenon that is Malthusian in nature.

The most frequently cited example of "preventive check" is the marriage practice that emerged in Western Europe during the late Middle Ages. It can be demonstrated that in the territories west of the conditional line "St. Petersburg—Trieste," women entered their first marriage relatively late (usually at the age of 24-26). Furthermore, a significant proportion of women (ranging from 10 to 25%) remained unmarried throughout their lives, and the number of out-of-wedlock births was very small (ranging from 3 to 4% of all children born) [Cambridge Economic History of Europe in the New and Modern Times 2014].

There are various explanations of this model of marriage. J. de Vries attributes its formation to the fact that social security in Western Europe during the Middle Ages was provided by the church and community, rather than by the extended family [de Vries 2008]. N. Voigtlander and H.J. Voth posit that this model unfolded in the mid-15th century, following the Black Death epidemic, since incomes increased and the demand for goods such as meat, cheese, wool, and urban craft products began to grow. With a relative scarcity of labor, more women were hired in the industries that produced these goods, and they began to postpone marriage [Voightlander and Voth 2009].

Therefore, regardless of the number of children born into families, certain constraints on fertility were in effect in Western European societies. According to G. Clark, the result of indirect birth control was that in economies that were in the Malthusian trap, per capita income was significantly higher than the level of physical survival, simply because fertility did not rise to biologically possible values [Clark 2007].[3] Counting on this idea, N. Voightlander and H.J. Voth state that "preventive checks" allowed for the stabilization of per capita income without destructive consequences for the potential of economic growth. In contrast, "positive checks" (famine, natural disasters, and social upheavals) were prone to irrecoverable losses of resources, including human ones [Voightlander and Voth 2005].

Hence, those "relative" versions of the Malthusian model that have been created in the first decades of the 21st century posit the possibility of an upward shift in the equilibrium points of per capita GDP and volume of population due to technological

[2] Voigtlander and Voth as well as G. Clark note that the development of long-distance trade also contributed to the widespread pestilence. Poor sanitary conditions in European cities also contributed to the spread of epidemics, due to the crowding of the population inside the city walls in cases of frequent wars [Clark 2007].

[3] Clark and historians of the "Californian school" generally tend to believe that birth control was characteristic of all Malthusian societies, not only of Western European ones. But, in China and other East Asian countries, where early marriages prevailed, it was carried out in a different way, in particular, through infanticide of newborn girls. Yet this thesis still looks very controversial, it is criticized by many specialists [Bryant 2006].

progress [Madsen, Robertson and Ye 2019] or of reaching equilibrium when births exceed deaths and wages rise from their previous levels in the absence of technological innovation [Crafts and Mills 2009].

However, a common shortcoming of many models is that they describe traditional society using the concepts typically employed in the studies of modern market economies, without defining institutional specifics of the former. O. Galor's concept is noteworthy in this regard. He set himself the laudable task of demonstrating that both the Malthusian state and the MEG were successive stages of a single process of economic growth. Galor incorporates into the model the observation that, at a certain point, per capita income begins to exceed the "Malthusian frontier," or the level of physical survival. Thus, surplus product emerges. But Galor deliberately abstracts from land property rights and assumes a zero land rent.

Otherwise saying, he does not address the problems of the social structure of traditional society and the distribution of income between its "tops" and "bottoms" (or redistribution, to use K. Polanyi's term) at all. Consequently, Galor's description of the Malthusian world reminds either a protracted primitive commune or a world of atomized rural households, where individuals think about such stuff as "salaries," "educational opportunities," etc. [Galor 2005].

But there are researchers who contemplate differently. K. Tisdell and S. Svizzero regard traditional society as one where the peasant majority lived at a subsistence level (as Malthus' theory suggests), and the surplus product in the form of rent was taken from the peasants by a small number of aristocratic elites who specialized in managerial and power functions. Tisdell and Svizzero emphasize that for a society in a Malthusian trap, deep social inequality is a necessary attribute. It is evident that the cessation of rent withdrawals and a corresponding increase in peasant incomes would have led to an increase in birth rate and population growth. This would subsequently result in a new decline in peasant incomes to a stationary level. The surplus product would then simply disappear as such, dissipating among the increased population.

In Malthusian society, the very technological innovations and economic progress were enabled by the seizure of surplus product. This was evidenced by the construction of irrigation and other complex infrastructural facilities, urbanization, and the accumulation of scientific knowledge. It appeared that the ruling stratum, having satisfied its consumer appetites and defense needs, directed a portion of rent income towards investment, with the expectation of incremental growth of a surplus product in the future.[4] Thus, social inequality was not merely a consequence of differences in

[4] M. Elvin showed how the mechanisms of scientific and technological progress in traditional society looked like in China during the Song Dynasty (10-13th centuries). The demand for new medical technologies and replenishment of pharmacopoeia was created by the growth of morbidity in the cities and detection of new diseases due to the development of the southern regions of the country. The use of coal in metallurgy was expanding as forests were leveled off in the northern provinces. New methods of mining iron ore and copper emerged due to the increased demand for weapons and metallic money. The invention and spread of printing was facilitated by the missionary activities of the Buddhists. The compass appeared initially as a tool of geomancy, i.e., the art of placing buildings in harmony with the wishes of supernatural forces. The needs of government and the expansion of commercial calculations accelerated research in mathematics. Astronomy progressed under the influence of the state policy of establishing a regular calendar [Elvin 1973].

individuals' abilities (to manage, to specialize in violence, etc.), it was also a source of steady, albeit slow, development of the traditional economy.[5]

The precondition for the normal functioning of such a redistributive system is to maintain a balance between population and land resources by means of "positive and preventive checks." Tisdell and Svizzero argue that the functions of both were fulfilled by the very land rent seizure. The magnitude of the elites was maintained at a manageable level due to the fact that the "ruling class" deprived the "lower classes" of opportunities to enhance their standard of living. This led not only to high infant mortality but also to the extinction of the elderly and all those who were deprived of the means of subsistence by the elites [Tisdell and Svizzero 2015].

The imbalance between labor resources and the land ones, i.e., the emergence of severe overpopulation, was the fundamental cause of periodic crises of the society based on redistribution. The land holdings were shrinking, the peasants' incomes were falling, and the collection of taxes and private landlord rents pushed the peasants to the brink of physical survival. In the event of crop failure, famine struck the country. A significant portion of the population was unable to find work in agriculture or to feed themselves from the land.[6] However, the crisis also had an impact on non-agricultural sectors of the economy and the sphere of monetary relations connected with them.

In general, the analytical scheme that takes the separation of crafts from agriculture as a root cause of trade and money to emerge may be a suitable conceptual framework, but it requires numerous caveats. K. Polanyi demonstrated that commodity exchange emerged initially as long-distance trade (interstate or interregional), rather than a commerce within individual communities. The motivation for trade was not a profit-making but an interest in goods that could only be obtained from afar, it was an interest in imports [Polanyi 1957]. Tisdell and Svizzero clarify that those were primarily goods for prestige consumption of elites, their importation was supposed to emphasize the high status and sacral role of potentates [Tisdell and Svizzero 2015].

Such trade was primarily the work not of individuals but of groups or corporations authorized by the rulers. The exports that balanced the imports were the goods that the "upper classes" of society received from their subjects in forms of taxes or private land rents. Thus, foreign trade was essentially conducted only with those goods that were designated for this purpose by the government.

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[5] D. Acemoglu and J. Robinson divided economic and political institutions of all times and nations into "inclusive" (protecting property rights, ensuring impartiality of justice, guaranteeing equal opportunities to enter markets and choose a profession) and "extractive" (aimed at squeezing maximum income from one part of society and directing it to enrich another part). Acemoglu and Robinson argue that "extractive" institutions cannot ensure long-term, sustainable economic development [Acemoglu and Robinson 2012]. The logic of Tisdell and Svizzero's model adds arguments to those who believe that Acemoglu and Robinson's concept is extra-historical and suffers from strong simplifications.

[6] E. Boserup showed that the acute phase of the crisis could be postponed if there was a transition to more intensive land use. Land allocation for fallow (which was also used for grazing) was stopped, it increased the area of simultaneously cultivated land and for some time created a counterbalance to the decline in crop yields. At the same time, the risks of soil erosion increased, and, therefore, more labor was needed for weed and vermin control and irrigation. Specialized cultivation of fodder crops for livestock was also needed. Employment grew, agriculture was becoming more labor-intensive [Boserup 1975].

As for money, the maturation of its separate functions took place at different speeds. The emergence of money as a measure of value was driven by the necessity to regulate the utilization of food stocks and other natural products collected during the redistribution process, as well as to quantify the value of various products taken as taxes. This created a vehicle for financing public projects, including irrigation, through both in-kind and cash payments.

The evolution of money as a means of circulation was shaped by the need to facilitate a series of unrelated transactions. However, this need did not manifest itself in the spontaneous barter exchange of individual private counterparties. Rather, it emerged in foreign trade organized by states. Money as a means of payment emerged only when long chains of mutual settlements were formed, as otherwise mutual obligations could be repaid by in-kind payments. Such obligations could arise not only from commodity transactions but from the payment of taxes and private land rent as well [Polanyi 1957].

In turn, handicrafts and internal trade did not originate simply because the natural process of specialization unfolded sooner or later; rather, it was itself largely a consequence of demographic processes. In modern literature, it is almost universally recognized that centers of non-agrarian activity were formed primarily in overpopulated areas.

Since the 1970s, historians have been using the term "proto-industry" to describe pre-factory forms of industrial organization. It should be noted that F. Mendels, who introduced the concept, defined it in a relatively narrow manner. He considered proto-industry to be the job of rural homeworkers, which was organized by an urban merchant. The entrepreneur provided the homeworkers not only with orders but also with raw materials for their fulfillment. This is usually referred to in Russian literature as a "scattered manufacture."

Mendels argues that the subordination to urban commercial capital and the marketing of products outside the region of production, and often even beyond national borders, distinguished proto-industry from traditional rural handicrafts that catered to local needs. He also notes the specific relationship between proto-industry and commercial agriculture. Within regions, each village had households that specialized in industrial products, on the one hand, and farms that produced surplus food, which they sold on the market, on the other. Moreover, there was also a specialization of regions. In some of them, peasants who were unable to feed themselves from small plots of land made industrial products or were hired for seasonal labor on large farms. In other regions, farming was the primary economic activity.

Mendels draws from the archetypes of proto-industry that proliferated in the countries of Western Europe in the 16th-17th centuries. However, he considers their emergence as the beginning of a special stage of development ("proto-industrialization"), which was inherent in all parts of the world. According to Mendels, the conditions for the subsequent Industrial Revolution were prepared by proto-industrialization through the accumulation of capital, as well as of technological and managerial knowledge, the formation of markets, and other such processes [Mendels 1972].

The concept of Mendels and his followers is vulnerable to criticism due to the very combination of universalist claims and a high degree of specificity. The concept is tautological because, in the basic definitions of proto-industry, there are in fact references

to the subsequent mature state of the economy: proto-industrialization is deliberately attributed with features of industrialization. These include symbiosis of proto-industry with commercial agriculture, its connection with urban business, regional specialization, and access to foreign markets.

Even the chronological framework of proto-industrialization in Europe established by Mendels can be questioned at the empirical level. By and large, the experience of England would have provided the most compelling evidence to support Mendels's claims. However, historical sources indicate that rural textile production in England, which was oriented towards foreign markets, emerged as early as in the 13th century and thereafter it experienced periods of growth and decline over the six centuries. These facts demonstrate that there was no automatic transition from proto-industrialization to industrialization. Some European regions where rural proto-industries were prevalent then experienced deindustrialization after the Industrial Revolution [Coleman 1983].

Mendels's understanding of rural cottage manufacturing as proto-industry excluded urban centralized manufactories entirely, and the relationship between these two phenomena was not even addressed. In contrast, if we consider the economic history of China, we will find that both rural commodity crafts and urban guilds, as well as a diverse sector of centralized manufactures, existed for thousands of years, but overthere it did not lead to an Industrial Revolution.

One potential solution to these epistemological difficulties is the reinterpretation of the very term "proto-industry" to include urban craft and manufactures, at least those that were oriented at market. This approach acknowledges the evolution of pre-factory industry from simple craft forms to more complex manufactory ones. In fact, this understanding of proto-industrialization has already spontaneously unfolded in the literature.

Indeed, the connection between crafts and trade was not an immediate phenomenon. Rather, it intensified over time. T. Lueger, in explaining how different types of industrial activities historically sprang from agriculture, draws analogies between the world of humans and the realm of animals. If overpopulation existed, individuals who felt themselves superfluous went into new spheres in order to provide themselves with niches for survival. Not all such attempts were successful, but those that were lucky increased the productive potential of society. Innovators who prospered had many children, it made new attempts at specialization not just likely, but even inevitable [Lueger 2018].

K. Pomeranz's interpretation of proto-industry simply points to the fact that in areas with high population density and low incomes caused by it, people needed part-time jobs. They worked not only on the land but also in crafts. However, counter-arguments to this explanation were presented as early as in the 1980s by D. Coleman, who highlighted that the rise of proto-industry in England during the 13th to 17th centuries occurred concurrently with both rising and declining peasant incomes [Coleman 1983].

K. Tisdell and S. Svizzero clarify that the unfolding of crafts and their concentration in cities did not lead to a rapid surge of trade because craftsmen mainly served the powerful. The more pronounced the specialization of craft was, the more its participants depended

on vertical rather than horizontal social ties. However, over time, market exchanges developed [Tisdell and Svizzero 2015].

E. Boserup attributed this to the fact that as the transition to labor-intensive farming (reduction and then elimination of fallow periods and, consequently, the filling of spaces between villages) occurred, the conditions for the emergence of small market towns appeared. Previously, food deliveries to the cities were irrational because of the high transportation costs involved. Yet, as population density increased, commercial agriculture with sales in urban markets became profitable. In other words, for a portion of the population, the issue of food supply was resolved in a novel manner: these individuals were employed in handicrafts, did not cultivate food crops themselves, but received them as part of a commodity exchange. The conditions for this were created by reducing the "transportation bridge" between food production and consumption [Boserup 1975].

F. Mendels himself identified the root cause of proto-industrialization as the seasonality of agricultural work. In his view, the function of proto-industry was to smooth out the imbalances in peasant employment throughout the year. Still, he acknowledged that those working in proto-industry were the most disadvantaged part of the peasantry. This was because they were often people who did not have enough land to support their families after paying rent and taxes.

In general, the cause-and-effect relations in Mendels' interpretation can be described as follows. Proto-industry emerged in response to seasonal fluctuations in the demand for labor in agriculture, as a means of utilizing the redundant labor force. Its development was, therefore, especially likely in overpopulated areas, where there was also a relatively high demand for manufactured goods. In the short term, the receipt of wages by workers in proto-industry could result in an increase in per capita income. However, after this initial increase, the birth rate grew, which subsequently led to a decline in per capita income to its previous level. What's more, the additional growth of the population necessitated a new expansion of proto-industry, and the cheap labor, in turn, created favorable environment for this [Mendels 1972].

The advancement of proto-industry in Malthusian societies was sometimes very remarkable. Crafts became diversified, manufactories with thousands of workers were established, market relations permeated almost the entire society, and the commutation of taxes and rents took place. On this basis, economies could experience episodes of Smithian growth, when the benefits of specialization ensure higher productivity and lower costs, and per capita income increases with population growth.

M. Kelly elucidated why such growth was explosive rather than gradual. Until a high density of horizontal ties was achieved, the economy was fragmented into numerous isolated regional markets. Yet, when those were integrated, the opportunities for specialization increased dramatically, leading to a significant acceleration of economic growth. This explanation is contrary to the common sense logic that suggests the establishment of market links to be gradual, and, therefore, Smithian growth to be slow by definition [Kelly 1997].

J. Goldstone refers to such periods of economic growth in traditional societies as "efflorescences." However, he specifies that Smithian growth was pulsating and

asymptotic. It was not associated with fundamental technological improvements, so its benefits were modest.[7] These were soon offset by population growth, and Smithian growth itself was relatively brief, ceasing when the potential for trade expansion was exhausted [Goldstone 2002].

K. Pomeranz argues that the Malthusian economy ultimately tended to reach a "proto-industrial crux." The rationale behind this assertion is as follows. Proto-industrialization primarily occurred in areas with high population density, and the boom of proto-industry led to an increase in demand for agricultural raw materials for the production of industrial goods. Consequently, competition for land resources within agriculture intensified between food crop production, the cultivation of technical crops for processing in proto-industry, and forestry (wood in those times was used both as a material for processing and as an energy resource). The intensification of land use and deforestation quickly led to severe environmental consequences, further reducing agricultural productivity, aggravating food shortages and problems with the nutritional structure and health of people as well.

At the same time, earning wages in non-agrarian activities contributed to a temporary increase in population growth in rural areas, which subsequently reinforced the downward trend in per capita income. As the demand for raw materials for the proto-industry expanded or the demand for food for the growing population increased, the dynamics of prices for food and other agricultural commodities surpassed those of wages, resulting in further impoverishment.

Eventually, as a consequence of the shortage of natural resources, the terms of trade (the ratio of prices for the products of the agrarian sector, on the one hand, and for the goods of proto-industry, on the other) were changing in favor of agriculture, and non-agrarian industries were becoming unprofitable. Handicraft and manufactory activities declined and were being curtailed [Pomeranz 2000].

Thus, the processes of proto-industrialization and marketization of the economy did not result in resolving the periodic crises of the redistributive society; rather, they served to exacerbate them.[8] Fluctuations in population size, land endowment, and per

[7] Quite in the tradition of the "Californian school," looking for parallels everywhere and anywhere, J. Goldstone argues that the "efflorescences" could have reasons unrelated to the development of proto-industry and trade, such as the construction of irrigation facilities and pyramids in the course of public works organized by the state; reconstruction of the economy after social cataclysms; intensification of international contacts, etc. The "efflorescences" themselves are interpreted by him as an escape from Malthusian constraints, although his own analysis rather suggests that the "efflorescences" were parts of the Malthusian dynamics.

[8] However, there is no shortage of those willing to prove the contrary and thus provide a simple explanation of the exit from the Malthusian trap. According to T. Lueger, the Industrial Revolution happened because demographic pressure required further deepening of specialization, it was a logical continuation of the processes that were going on within the traditional society. The difference between the Industrial Revolution and the Neolithic Revolution (the transition from hunting and gathering to settled agriculture) is only quantitative—in the speed of change [Lueger 2018]. M. Kelly deduces the Industrial Revolution from the progress of specialization under the influence of the establishment of more and more horizontal connections and thereby exploiting the potential capacity of the market [Kelly 1997]. T. Kogel and A. Prskawetz explain the beginning of industrialization by the Engel effect (low income elasticity of demand for food). According to their logic, with the increase in household incomes, nutritional needs are saturated, the demand shifts towards non-food products, and this creates conditions for the movement of labor and other resources to non-agrarian spheres of activity [Kogel and Prskawets 2001].

capita income were accompanied by "pulsating" expansions and contractions of proto-industry and commerce. Although it seems that the conditions for the formation of an industrialized, market economy were being prepared, in fact, the economy and society were not transformed into a qualitatively new state of affairs.[9]

K. Tisdell and S. Svizzero argue that the socio-ecological crisis of Malthusian society usually transformed into a socio-political one when another condition of systemic equilibrium was violated. The number of elites was typically constrained from increasing by endogenous (the principle of nobility) and exogenous (wars, state repressions) restrictions. But as the size of the "ruling class" expanded and its members became accustomed to luxury and wastefulness, rent incomes were redistributed in favor of their prestigious consumption. This resulted in an underinvestment in the economy, the exhaustion of potential for increasing productivity, and a reduction in the possibilities of extracting surplus product.

In attempts to stabilize fiscal incomes, the elites increased taxes on peasants, who were already on the verge of survival. However, the ruling stratum was also experiencing a depletion of resources for maintaining its power. This was due to the growth of its prestige consumption, which was affecting the financing of the army. As the elite grew in size, the struggle for drying up rents intensified [Tisdell and Svizzero 2015].

Eventually, when desperate peasants revolted, they were usually joined by parts of the ruling class, hoping to remove their rivals in this way. The state's descent into chaos, and turmoil could be exploited by neighboring enemies. This could result not only in the collapse of the ruling dynasty but also in the disintegration of the country.

Yet, in the course of rebellions, wars, starvations, and epidemics, a significant proportion of the population was dying, and some land was becoming vacant. Consequently, when one of the contending forces emerged triumphant, i.e., a new dynasty ascended to the throne or a new state was established in place of an ousted one, then the population and per capita income exhibited a concurrent growth for a period of time due to the exploiting of uninhabited lands. But when a certain demographic density was reached, the per capita income declined once more, and proto-industry and trade were on rise again. So, the process of societal evolution was characterized by the repetition of similar patterns.

By and large, in traditional societies, economic growth, which can be described as "Malthusian," did occur. It was driven primarily by extensive factors, such as population growth and the expansion of cultivated land. However, the tendency for per capita GDP to increase was limited and unsustainable. Malthusian growth was slow and intermittent, punctuated by severe crises. The intermissions of Smithian growth did not result in a qualitative leap in economic development; in fact, they served to exacerbate the Malthusian crises. The social dynamics exhibited a clear circular movement.[10]

[9] N. Voightlander and H.J. Voth write about the "false starts" of the Industrial Revolution that took place many times before 1750 in different countries: economic growth accelerated due to the development of proto-industry, the standard of living increased for a while, but such growth did not become sustainable [Voightlander and Voth 2005].

[10] The description of traditional (dynastic) cycles in the history of China, which can be called classical, was given by A. Mugruzin. But he interpreted such dynamics as a specific feature of this country and tried to fit his findings into the framework of the Marxist paradigm [Mugruzin 1986]. S. Nefedov provides a review of the literature on the Malthusian regularities in the economic history of Europe and offers his own model of the cycle inherent in traditional societies [Nefedov 2012].

W. Rostow defined the psychological expectations of people living in traditional societies as "long-term fatalism" [Rostow 1971], and R. Nelson called them a "sociocultural inertia" [Nelson 1956]. G. Clark observed that the communities of the Malthusian era were "spendthrift, violent, impulsive and leisure loving" [Clark 2007]. However, K. Polanyi contended that the conduct of individuals in traditional societies was, in fact, quite rational. It was merely based on a distinct logic, shaped by the skills required to navigate the redistributive system [Polanyi 1944].

In a more contemporary manner, C. Azariadis and J. Stachurski used the term "path dependency." They observed that the Malthusian trap could be attributed to the incomplete rationality of individuals' behavior, resulting from institutional inertia. Individuals may reject innovations, even if those promise greater welfare, merely because they risk finding themselves in a situation they have never been in before. They don't have relevant experience and, therefore, lack the knowledge to behave in a way that is beneficial to them. In other words, inadequate expectations are formed because getting out of stagnation is a journey towards the unknown [Azariadis and Stachurski 2005]. That is why it is additionally challenging to elucidate how, despite millennia of relative stagnation, the normality of change associated with MEG has become the norm. The theory of economic development offers alternative explanations for this phenomenon, though it is beyond the scope of this article to discuss them.

The article continues in the next issue of Contemporary World Economy.

Bibliography

Acemoglu, D., Robinson, J., 2012. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. N.Y.: Crown Publishers.

Afanasyev, V.S., 1988. *Stages of Development of Bourgeois Political Economy: Essay of Theory*. Moscow: Ekonomika (in Russian).

Azariadis, C., Stachurski, J., 2005. "Poverty Traps." In: Aghion, Ph., Durlauf, S. (eds.). *Handbook of Economic Growth. Vol. 1A*. Amsterdam, etc.: Elsevier. P. 295-384.

Boserup, E., 1975. The Impact of Population Growth on Agricultural Output. *Quarterly Journal of Economics*. Vol. 89. No. 2. P. 257-270.

Bryant, J., 2006. The West and the Rest Revisited: Debating Capitalist Origins, European Colonialism, and the Advent of Modernity. *Canadian Journal of Sociology*. Vol. 31. No. 4. P. 403-444.

Cambridge Economic History of Europe in the New and Modern Times, 2014. Vol. 1: 1700-1870. Moscow: Gaidar Institute Publishing House (in Russian).

Chirot, D., 1985. The Rise of the West. *American Sociological Review*. Vol. 50. No. 2. P. 181-195.

Clark, G., 2007. *A Farewell to Alms: A Brief Economic History of the World*. Princeton: Princeton Univ. Press.

Coleman, D., 1983. Proto-Industrialization: A Concept Too Many. *Economic History Review*. Vol. 36. No. 3. P. 435-448.

Crafts, N., Mills, T., 2009. From Malthus to Solow: How Did the Malthusian Economy Really Evolve? *Journal of Macroeconomics*. Vol. 31. No. 1. P. 68-93.

de Vries, J., 2008. *The Industrious Revolution: Consumer Behavior and the Household Economy, 1650 to the Present*. N.Y.: Cambridge Univ. Press.

Elvin, M., 1973. *The Pattern of the Chinese Past*. Stanford: Stanford Univ. Press.

Engels, F., 1986. Anti-Dühring. Herr Eugen Düring's Revolution in Science. In: Marx, K., Engels, F. *Selected Works. Vol. 5*. M.: Politizdat. P. 1-302 (in Russian).

Gaidar, Ye.T., 2005. *A Long Time. Russia in the World: Essays on Economic History*. Moscow: Delo (in Russian).

Galor, O., 2005. "From Stagnation to Growth: Unified Growth Theory." In: Aghion, Ph., Durlauf, S. (eds.). *Handbook of Economic Growth. Vol. 1A*. Amsterdam, etc.: Elsevier. P. 171-293.

Goldstone, J., 2002. Efflorescences and Economic Growth in World History: Rethinking the "Rise of the West" and the Industrial Revolution. *Journal of World History*. Vol. 13. No. 2. P. 323-389.

Ilyushechkin, V.P., 1990. *Exploitation and Property in Pre-Capitalist Class Societies* (Experience of System-structural Research). Moscow: Nauka (in Russian).

Kelly, M., 1997. The Dynamics of Smithian Growth. *Quarterly Journal of Economics*. Vol. 112. No. 3. P. 931-964.

Kobishchanov, Y.M., 1992. Theory of a Large Feudal Formation. *Voprosy Istorii*. No. 4-5. P. 57-72 (in Russian).

Kogel, T., Prskawetz, A., 2001. Agricultural Productivity Growth and Escape from Malthusian Trap. *Journal of Economic Growth*. Vol. 6. No. 4. P. 337-357.

Lee, R., Anderson, M., 2002. Malthus in State Space: Macroeconomic-demographic Relations in English History, 1540 to 1870. *Journal of Population Economics*. Vol. 15. No. 2. P. 195-220.

Lewis, W.A., 1954. Economic Development with Unlimited Supplies of Labor. *The Manchester School of Economic and Social Studies*. Vol. 22. No. 2. P. 139-191.

Lucas, R., 2004. *Lectures on Economic Growth*. Cambridge, MA: Harvard Univ. Press.

Lueger, T., 2018. *The Principle of Population vs. the Malthusian Trap. A Classical Retrospective and Resuscitation*. Available at: https://ideas.repec.org/p/zbw/darddp/232.html (accessed September 12, 2023).

Maddison, A., 2007. *Contours of the World Economy, 1-2030 AD: Essays in Macro-Economic History*. Oxford: Oxford Univ. Press.

Madsen, J., Robertson, P., Ye Longfeng, 2019. Malthus Was Right: Explaining a Millennium of Stagnation. *European Economic Review*. Vol. 118. No. C. P. 56-68.

Malthus, T., 2022. *The Principle of Population*. Moscow: Nashe Zavtra (in Russian).

Marx, K., 1978. *Theories of Surplus Value. (4th volume of "Capital"). Part 2*. Moscow: Politizdat (in Russian).

Marx, K., 1980. *Economic Manuscripts 1857-1861 (the original version of "Capital"). Part 1*. Moscow: Politizdat (in Russian).

Marx, K., 1983. *Capital. Critique of Political Economy. Vol. 1*. Moscow: Politizdat (in Russian).

Meliantsev, V.A., 1996. *East and West in the Second Millennium: Economy, History and Modernity*. M.: Moscow State Univ. Press (in Russian).

Mendels, F., 1972. Proto-industrialization: The First Phase of the Industrialization Process. *Journal of Economic History*. Vol. 32. No. 1. P. 241-261.

Mokyr, J., 1977. Demand vs. Supply in the Industrial Revolution. *Journal of Economic History*. Vol. 37. No. 4. P. 981-1008.

Mokyr, J., 1992. *The Lever of Riches. Technological Creativity and Economic Progress*. Oxford: Oxford Univ. Press.

Mugruzin, A.S., 1986. *The Role of Natural and Demographic Factors in the Dynamics of the Agrarian Sector of Medieval China (To the Question of Cyclicality of Pre-Capitalist Production). Historical Factors of Social Reproduction in the Countries of the East*. Moscow: Nauka. P. 11-44 (in Russian).

Nefedov, S.A., 2012. Economic Laws of History. *Voprosy Ekonomiki*. No. 12. P. 118-134 (in Russian).

Nelson, R., 1956. A Theory of the Low-level Equilibrium Trap in Underdeveloped Economies. *American Economic Review*. Vol. 46. No. 5. P. 894-908.

Nureev, R.M., 1979. *Antique Polis: A Brief Political and Economic Characterization. The Economic Role of the State in the Conditions of Antagonistic Modes of Production*. Moscow: Moscow State Univ. Press. P. 33-55 (in Russian).

Petrov, A.M., 1986. *Foreign Trade of Ancient and Medieval Asia in Russian Oriental Studies (Literature Review and an Attempt of a New Approach to the Study of the Problem). Historical Factors of Social Reproduction in the Countries of the East*. Moscow: Nauka. P. 149-183 (in Russian).

Polanyi, K., 1944. *The Great Transformation: The Political and Economic Origins of Our Time*. Boston: Beacon Press.

Polanyi, K., 1957. "The Economy as Instituted Process." In: *Trade and Market in the Early Empires. Economies in History and Theory*. Glencoe: Free Press. P. 243-270.

Pomeranz, K., 2000. *The Great Divergence: China, Europe and the Making of the Modern World Economy*. Princeton: Princeton Univ. Press.

Rostow, W., 1971. *The Stages of Economic Growth. A Non-Communist Manifesto*. Cambridge, MA: Cambridge Univ. Press.

Tisdell, C., Svizzero, S., 2015. *The Malthusian Trap and Development in Pre-Industrial Societies: A View Differing from the Standard One*. Available at: https://www.researchgate.net//publication/ (accessed September 12, 2023).

Tokei, F., 1975. *Toward a Theory of Social Formations*. Moscow: Progress (in Russian).

Utchenko, S.L., 1977. *Political Doctrines of Ancient Rome III-I Centuries BC*. Moscow: Nauka (in Russian).

Vasiliev, L.S., 1998. *History of the East. Vol. 1*. Moscow: Higher School (in Russian).

Voightlander, N., Voth, H.J., 2006. Why England? Demographic Factors, Structural Change and Physical Capital Accumulation during the Industrial Revolution. *Journal of Economic Growth*. Vol. 11. No. 4. P. 319-361.

Voightlander, N., Voth, H.J., 2009. Malthusian Dynamism and the Rise of Europe: Make War, Not Love. *American Economic Review: Papers and Proceedings*. Vol. 99. No. 2. P. 248-254.

Zarin, V.A., 1991. *West and East in World History XIV-XIX Centuries: Western Concepts of Social Development and the Formation of the World Market*. Moscow: Nauka (in Russian).

The Extraordinary Development of the Labor Market in the United States during 2020-2023

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Abstract

This paper analyzes the labor market in the United States in 2020–2023, with a focus on its unconventional development due to the COVID-19 pandemic. The pandemic resulted in lockdowns and restrictions in various states, which disrupted the traditional business cycle and caused a significant decline in employment, particularly in service industries such as tourism, hospitality, restaurants, and entertainment. The restrictions also impacted consumer spending, resulting in increased savings and pent-up demand. The article analyzes the unemployment trends among various age and racial-ethnic groups and highlights the most challenging segments of the US labor market. It pays special attention to remote work and the changes it brings, such as hybrid work, the rise of Zoom towns, and hiring through digital platforms. The fiscal stimulus of the US government and its implications for the labor market are demonstrated. Additional funding for small businesses has led to record new business start-ups and rapid job growth that has nearly offset the losses associated with COVID-19. Particular attention is paid to inflation, which peaked at 9.1% in June 2022 and the high growth of which is depressing real incomes, forcing people to go to work. The article notes an unusual situation where slow GDP growth is combined with high

employment, and that the mechanism behind this phenomenon is yet to be investigated. It cites data from public opinion polls conducted by the Gallup, which reveal the American society's mood regarding their financial well-being. The article examines the activation of American trade unions, using the United Auto Workers Union's September 2023 large-scale strike at several plants of the Big Three (General Motors, Ford, Stellantis) as an example.

Introduction

The theoretical foundations of labor processes were established by several economists, including A. Smith, J. Keynes, K. Marx, and A. Pigou. The works of the classics clearly outlined the policy of non-interference of the state in the market economy. However, in his work "The General Theory of Employment," J. Keynes aimed to demonstrate the fallacy of the classical theory's postulate that the market economy naturally returns to a state of full employment of resources after temporary shocks. This work was written at a time when the unemployment rate in the capitalist countries of the world reached 25%. The reason outlined for economic crises is the inequitable distribution of wealth and income, which results in a lack of suitable employment opportunities for the population. In other words, the internal causes of crisis situations in the state, including the inability of the economic system to be a self-regulating mechanism, lead to unemployment. J. Keynes' theory completely refutes the laws of market equilibrium of the classics. For instance, it criticizes the thesis that supply forms demand. State support is proposed as the solution to any crisis problem in the field of labor. This support should be aimed at forming effective demand, which will ensure the utilization of production capacity. The regulation of the economy is proposed through the fiscal sphere. The work describes the expected mechanisms that could function effectively, taking into account the limited factors of impact on the economy from the global environment. It is important to note that J. Keynes did not take into account the issues of technological progress, population migration, and the concentration and specialization of production on a global scale.

In the late 1950s and early 1960s, studies analyzed cyclical behavior and relationships between macro indicators of the labor market. As a result, Phillips curve[1] [Phillips 1958] and Beveridge curve [Dow, Dicks-Mireaux 1958] were created, and Okun's law [Okun 1962] was formulated. These dependencies can be used by the government to conduct monetary policy with confidence [Semenkov 2017].

In 1976, the American economist M. Friedman was awarded the Nobel Prize for his monetarist concept, which is based on classical theory and advocates for a self-regulated economy without state intervention. The theory emphasizes the self-sufficiency of market instruments. Criticism has been directed towards the state's policy of providing grants and subsidies to support vulnerable segments of the population. This type of support has

[1] For a certain period of time, the Phillips curve became a reference point for politicians in choosing the economic policy of the state (1960s). Moreover, criticism of the theory began already in the 1970s.

been shown to be harmful to the economy, as it can lead to an increase in unemployment and dependency on subsidies.

During the late 1970s and early 1980s, several articles were published that examined the negotiation process between employees and employers at the micro level and its impact on macroeconomic indicators in the labor market. One such study was conducted by P. Diamond, who analyzed the effect of the negotiation process between job seekers and employers on fluctuations in the unemployment rate [Diamond 1982]. D. Mortensen and C. Pissarides have both contributed to the understanding of frictional unemployment at the macro level. Mortensen's explanation centers on the need for workers to maximize their utility in wage negotiations [Mortensen 1982], while Pissarides found a relationship between unemployment, vacancies, and wages in response to positive and negative shocks [Pissarides 1985]. The latter explained that shocks primarily affect microeconomic indicators such as employer's costs of vacancy and the strength of employee bargaining power, which in turn leads to cyclical fluctuations at the macro level. These studies have stimulated the development of a methodology for collecting data on job dynamics [Davis, Haltiwanger 1992], which has expanded the statistical base of the US Bureau of Labor Statistics. As a result, in 2010, the Nobel Prize in Economics was awarded to P. Diamond, D. Mortensen, and K. Pissarides for their contributions to the methodology and analysis of cyclical fluctuations in the labor market.

The development of employment theories is often divided into two main directions: classicists and monetarists (free market and the formation of the supply of goods) and Keynesians and neo-Keynesians (state control and the creation of a demand market). Other theories criticize either classicism or Keynesianism. However, it is important to consider the challenges of progress faced by the global world.

The employment issues of the 21st century differ from those of the past. It is important to thoroughly review employment issues, considering the impact of new forms of economic activity on social development. For instance, the introduction of new technologies and automation in production processes has significantly altered the employment landscape. These changes are expected to persist due to the rapid pace of scientific and technological progress.

The study of the labor market is a popular topic, as evidenced by the over 27,000 articles found on RSCI[2] when searching for the keyword combination "рынок труда" ("labor market"). Interest in this topic is growing, with 2,644 articles published in 2020, 2,753 articles in 2021, and 2,666 articles in 2022. Similarly, a search for the keyword "США" ("USA") yields approximately 32,000 articles, with an average of about 2,000 articles published per year.

1. The 2020 COVID-19 shock

The period between 2020 and 2023 is marked by numerous unusual phenomena in the business cycle, particularly in the labor market. Understanding the development of the US economy requires consideration of changes in worker

[2] Russian Science Citation Index, a bibliographic database of scientific publications in Russian.

behavior, even though the mechanisms and consequences of these changes are only beginning to emerge and be analyzed in scientific literature. In his article titled "The Shocks of 2020-2023 and the Business Cycle," Prof. L. Grigoryev identifies four shocks that occurred between 2020 and 2023. These include: (1) the COVID-19 pandemic shock in the form of lockdowns and its impact on the healthcare sector; (2) the shock of unique (in scale and time) anti-crisis responses by governments and central banks in 2020–2021, employing fiscal and monetary incentives; (3) an early recovery in the commodity markets and rising raw material prices under (1) and (2) in 2021–2022; and (4) the sanctions shock in 2022 as a global economic issue and the EU energy collapse as a key component of it or as an individual shock [Grigoryev 2023]. It is important to note that each shock had its own unique impact on the economy.

Business cycles in the United States have been observed for almost 170 years, since 1854. GDP level and employment indicators have traditionally been the key factors influencing them. The National Bureau of Economic Research (NBER) Business Cycle Dating Committee identified three cycles in the 21st century, each of which ended in a crisis [NBER 2023]. The latest economic cycle set a new record for duration, lasting 128 months from the recession in June 2009 until February 2020, almost 11 years.

Real consumer spending between 2019 and 2023 exhibits significant fluctuations, as shown in Figure 1 on page 46. The decline in April 2020 was significant, likely due to the start of the lockdown. In March 2022, there was a sharp increase in real consumer goods, followed by a subsequent decline, another increase, and then a continuation of swings with a smaller amplitude. This situation is not solely due to inflation, but also to the rising prices of food and fuel.

Figure 1. Percent Change from Preceding Period in Prices for Personal Consumption Expenditures by Major Type of Product, Monthly

Source: [BEA 2023a].

Speaking at the 75th session of the UN General Assembly, Secretary General António Guterres assessed the consequences of COVID-19: "We face simultaneously an epochal health crisis, the biggest economic calamity and job losses since the Great Depression, and dangerous new threats to human rights" [Guterres 2020].

As of April 1, 2020, the United States Census Bureau reported a population of 331.4 million people. From March 2020 to May 2023, the United States experienced over 104.5 million cases of COVID-19, resulting in more than 1.138 million deaths [CDC 2023]. These numbers are twice the losses suffered by the US in the two World Wars and the Vietnam War combined. The pandemic caused millions of workers to lose their jobs, hundreds of thousands of businesses to cease operations, supply chains to be severed, and schools to close. It is important to note that quarantine measures varied in duration and type across different states. Lockdowns were implemented for the longest period of time in California, New York, and Illinois. Although non-medical disease control measures have been used for centuries, the scale of those implemented in 2020 is considered unprecedented. The introduction of quarantine measures has had profound negative economic consequences and has been met with protests in several regions.

As of September 1, 2023, the US population was 335.3 million. Every 8 seconds a new person is born, every 11 seconds one person dies. The increase in the US population is due to immigration, with a new migrant added every 31 seconds [United States Census Bureau 2023d]. The median age of the population is 38.8 years [United States Census Bureau 2022], with nearly 17% being 65 years or older and just over 22% being children under the age of 18. As of 2022, the working-age population is approximately 264 million. There has been a decline in the participation of Americans in the nation's labor force. According to BLS (2023a), the participation rate was 67.1% in 2000, 62.9% in 2008, 61.7% in 2020, 61.7% in 2021, and 62.2% (or 164.3 million people) in 2022. This decline is due to both supply and demand factors. The most significant factor reducing participation in recent years has been the aging of the labor force. The oldest members of the baby boomer generation retired at the onset of the global financial crisis. As labor market participation tends to decline with age, an aging population can reduce the proportion of active workers in the total population. This can have an impact on per capita output if not accompanied by capital investment or productivity gains. Strong per capita economic growth has been a major driver of rising living standards in the past century. Therefore, an aging population could have a negative impact on future living standards in the United States [Economic Report of the President 2023]. It is important to consider that the economy can adapt to a reduction in available labor by stimulating productivity.

The COVID-19 pandemic started in early 2020 and proved to be the most dangerous for the elderly. It caused a shock and led to significant changes in the labor market. Since the start of the pandemic, the number of retirements among baby boomers has increased dramatically, as older workers faced new and potentially serious health risks on the job. At the beginning of the pandemic, quarterly retirement rates increased by 5 percentage points, which is a much larger increase than during the financial crisis [McEntarfer 2022]. Retirements increased significantly among workers age of 65 and older, as well as among Whites compared to Blacks and Hispanics, and among those with a college

education compared to those without [Montes, Smith, and Dajon 2022]. In response to declining demand, some employers have encouraged early retirement among workers.

The number of claims for unemployment benefits began to rise rapidly as soon as the pandemic began. By the end of March 2020, the number of claims had exceeded 3.28 million, the highest number since 1967 when the US Department of Labor began publishing reports. By the end of April 2020, the number of applications had totaled more than 26 million.

Table 1 on page 48 presents data on unemployment rates for different age and racial-ethnic groups. In March through April 2020, 38 million Americans had no regular earnings. Unemployment reached its peak in April 2020 at 14.7%, with higher rates for women (15.5%), African Americans (16.8% in May 2020), and Hispanics (18.8%). Unemployment rates for low-educated, low-skilled individuals, Hispanics, African Americans, and the youngest labor market participants have traditionally been significantly higher. This is consistent with global trends and rates for other OECD countries [Petrovskaya 2018].

Table 1. Unemployment dynamics by different age and racial-ethnic groups in the period 2020-2023, %

Month	Share of unemployed, %	Men, 20 years and older	Women, 20 years and older	Young people aged 16 to 19 years	Whites	African Americans	Asians	Hispanics
2020								
January	3.5	3.2	3.2	12.3	3.1	6.3	3.0	4.3
February	3.5	3.2	3.1	11.4	3.0	6.0	2.6	4.4
March	4.4	4.1	4.0	14.1	3.9	6.8	4.2	6.0
April	**14.7**	**13.0**	**15.5**	**32.7**	**14.1**	16.6	14.5	**18.8**
May	13.2	11.6	13.8	30.4	12.3	**16.8**	**14.9**	17.6
June	11.0	10.1	11.2	22.4	10.0	15.4	13.7	14.5
July	10.2	9.3	10.5	19.2	9.2	14.4	11.9	12.8
August	8.4	7.9	8.3	16.6	7.4	12.8	10.6	10.6
September	7.9	7.4	7.8	16.0	7.0	12.1	8.9	10.4
October	6.9	6.7	6.5	13.8	6.0	10.9	7.5	8.9
November	6.7	6.6	6.2	13.8	5.9	10.4	6.7	8.6
December	6.7	6.4	6.3	15.8	6.1	10.0	6.0	9.3
2021								
January	4.3	6.1	6.0	14.7	5.7	9.2	6.6	8.5
February	4.4	6.0	5.9	14.0	5.6	9.8	5.2	8.4
March	6.0	5.9	5.7	12.8	5.4	9.6	6.0	7.7
April	18.8	6.0	5.6	11.7	5.3	9.9	5.7	7.7
May	17.6	5.9	5.3	9.7	5.1	9.1	5.6	7.1
June	14.5	5.9	5.5	11.2	5.2	9.2	5.7	7.2
July	12.8	5.4	5.0	10.6	4.8	8.2	5.2	6.4
August	10.6	5.1	4.8	11.4	4.5	8.6	4.5	6.1

Month	Share of unemployed, %	Men, 20 years and older	Women, 20 years and older	Young people aged 16 to 19 years	Whites	African Americans	Asians	Hispanics
September	10.4	4.7	4.3	11.2	4.2	7.8	4.2	6.2
October	8.9	4.3	4.3	11.6	4.0	7.7	4.2	5.7
November	8.6	3.9	3.9	10.9	3.7	6.5	3.8	5.2
December	9.3	3.6	3.6	11.0	3.3	7.0	3.8	4.8
2022								
January	4.0	3.8	3.6	10.9	3.4	6.9	3.5	4.8
February	3.8	3.5	3.6	10.3	3.3	6.6	3.0	4.5
March	3.6	3.4	3.3	10.1	3.2	6.2	2.8	4.2
April	3.6	3.5	3.2	10.2	3.2	5.9	3.1	4.2
May	3.6	3.4	3.4	10.5	3.2	6.2	2.4	4.4
June	3.6	3.4	3.3	11.0	3.3	5.9	3.0	4.3
July	3.5	3.2	3.1	11.4	3.1	6.0	2.6	4.0
August	3.7	3.5	3.3	10.4	3.2	6.4	2.8	4.5
September	3.5	3.3	3.1	11.3	3.1	5.9	2.5	3.9
October	3.7	3.3	3.4	11.0	3.3	5.9	2.9	4.2
November	3.6	3.3	3.3	11.3	3.3	5.7	2.6	4.0
December	3.5	3.1	3.2	10.4	3.0	5.7	2.4	4.1
2023								
January	3.4	3.2	3.1	10.3	3.1	5.4	2.8	4.5
February	3.6	3.3	3.2	11.1	3.2	5.7	3.4	5.3
March	3.5	3.4	3.1	9.8	3.2	5.0	2.8	4.6
April	3.4	3.3	3.1	9.2	3.1	4.7	2.8	4.4
May	3.7	3.5	3.3	10.3	3.3	5.6	2.9	4.0
June	3.6	3.4	3.1	11.0	3.1	6.0	3.2	4.3
July	**3.5**	3.3	3.1	**11.3**	3.1	5.8	2.3	4.4

Source: [BLS 2023b].

The duration of job search is an important aspect. According to BLS (2023b), the number of long-term unemployed individuals (those who had been out of work for 27 weeks or more) peaked in March 2021 at 4.2 million. As of June 2021, the median job search duration was nearly 32 weeks, while median unemployment peaked in the spring of 2021 at just under 20 weeks. This chronic inability to find work not only affects individuals' finances but also their psycho-emotional state.

Youth employment is the most problematic segment. Young people face challenges in finding employment due to lack of practical experience and rapidly changing job requirements. The unemployment rate for individuals aged 16-24 is 2-3 times higher than the national average, and they are often the first to lose their jobs during economic downturns. In April 2020, the national unemployment rate peaked at 14.7%, while the rate for young people was 32.7%. Even three years after the pandemic, the

overall unemployment rate remains low at 3.5%. However, youth unemployment remains a concern with a rate of 11.3% (see Table 1 on p. 49). It is important to note that unemployment rates for this group are decreasing, but some are still entering lower-paying jobs or jobs that do not match their education. Additionally, approximately 15% of 16-19 year olds in hourly wage employment are paid at or below minimum wage. One of the employment issues faced by this age group is the lack of practical skills gained through education. Additionally, living in small communities with limited job opportunities and no prospects for upward mobility exacerbates the problem. Another issue is the poor development or absence of programs for professional orientation, employment, and training of young people.

In the United States, as is well known, the service sector dominates the manufacturing sector in terms of both contribution to GDP and employment. It was the service sector that was most affected by the pandemic. The greatest number of people lost their jobs due to the lockdowns, leading to a sharp decline in demand for various services [The White House 2021c] (see Figure 2 on p. 50).

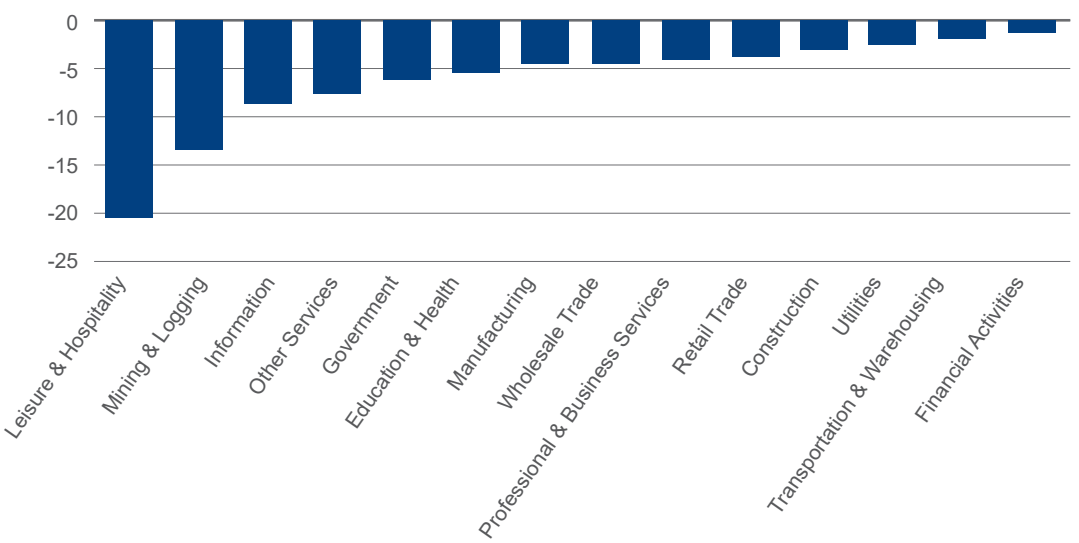

Figure 2. Dynamics of employment decline by industry in the period from February 2020 to March 2021, in %

Source: [The White House 2021c].

The pandemic and quarantine measures have led to a rise in flexible forms of employment, with many individuals losing their jobs. According to the International Labour Organization (ILO), 557 million workers worldwide worked from home in the second quarter of 2020, which accounted for 17.4% of global employment. In the United States, 33% of workers reported switching to remote work due to the coronavirus pandemic in May-June 2020, and this number decreased to 22% in Q4 2020, which was still significant [Hassel 2021; Petrovskaya 2022].

During the COVID-19 pandemic, many workers started working remotely for the first time. Research by J.I. Dingel and B. Neiman shows that remote work primarily benefits skilled workers, with wages for remote work being significantly higher. In fact, remote work accounts for 46% of all wages in the United States [Dingel, Neiman 2020]. Expanding on their study, Dey et al. (2021) estimated that the average wage in occupations suitable for telework is $35.22, compared to $20.31 in unsuitable occupations. Additionally, households earning over $100,000 per year are more than twice as likely to work remotely as those earning less than $50,000 per year. Finally, education level also affects the ability to work remotely. The remote work rate for bachelor's degree holders in remote work suitable occupations was 53%, while the rate for academic degree holders was 62% [Florida, Ozimec 2021]. As of September 2021, 45% of full-time US employees worked partially or fully remotely. This percentage was significantly higher among white-collar workers at 67%, and in education and healthcare, it was 48% and 35%, respectively [Gallup 2021].

Remote workers are often motivated by the satisfaction of certain life needs that can be fulfilled through this type of work organization. Telecommuting has been shown to significantly improve physical and mental health, as well as allow for more time spent with loved ones. Additionally, telecommuting can lead to significant cost savings on fuel, food, and childcare. Finally, many remote workers report increased productivity due to reduced stress from commuting. The estimated time savings due to reduced commute time is in the billions of hours per year.

The shift to telecommuting has led to internal migration, with remote employees moving to find more affordable and spacious housing, resulting in the transformation of small towns and communities into larger cities. These towns, which have seen a significant increase in remote workers, are now commonly referred to as Zoom towns. These are popular vacation destinations and small towns near attractions, such as Aspen (Colorado), Bellevue (Washington), Bethel (Maine), Bozeman (Montana), Cape Cod (Massachusetts), and Carlsbad (California) [Lewis 2023; Petrovskaya 2022]. The population growth in these cities has had significant economic consequences, particularly in the form of rising housing prices.

The COVID-19 pandemic has expedited the transition to on-demand labor hiring models. Due to the increasing gaps in the supply and demand for specialized skills, companies have been compelled to adopt a more innovative approach to workforce management and talent acquisition. The pandemic has also necessitated the acquisition of new management skills by business leaders, including remote team management and adaptability to unpredictable circumstances. Finally, solving the problems during the early months of the COVID-19 rollout led to two unexpected results. First, it forced companies to adapt their traditional ways of surviving a crisis, breaking away from the past. Remote work, previously viewed with suspicion, became the norm. Second, it accelerated companies' technology adoption, propelling them into the future. Prior to the COVID-19 pandemic, managers were often advised against collaborating with external specialists, including highly skilled freelancers, due to various legal concerns. However, in the wake of the pandemic, companies have become more adept at managing change and implementing contingency plans during crises [Fuller, Raman,

and Palano 2020]. As a result, there has been a rise in the number of US companies hiring freelancers through digital labor platforms. Additionally, there is a trend of the Global North outsourcing work to the Global South. The labor market is undergoing a global transformation, which is expanding employment opportunities while also creating challenges for work organization, such as minimum wages, working hours, and social security [Petrovskaya 2021].

It is worth noting that the prevalence of telecommuting varies by occupational field, with some professions being more suitable for remote work than others. For instance, remote work is feasible for programmers, designers, writers, and analysts, as their primary tasks involve computer work and internet access. However, traditional occupations that require physical presence, such as doctors, cooks, daycare providers, or construction workers, cannot be entirely replaced by remote employment. Therefore, the implementation of telecommuting may be restricted in certain occupational fields.

At the beginning of the COVID-19 pandemic, the decrease in labor market participation among working-age individuals was mainly caused by pandemic-related disruptions. Layoffs, illness, and caregiving responsibilities forced many participants out of the labor market [Garcia, Cowan 2022; Goda, Soltas 2022; Cajner et al. 2020]. As businesses and schools reopened and vaccines were introduced, the participation of older adults rebounded quickly [Forsythe, Kahn, Lange, Wiczer 2022; Hansen, Sabia, and Schaller 2022]. Remote employment has enabled individuals with disabilities to increase their labor market participation from pre-pandemic levels [Ne'eman, Maestas 2022]. Despite wage growth, employment growth slowed significantly in the second half of 2022. One of the main factors influencing people's behavior was the government's unprecedented fiscal measures, which included direct cash payments. The slowdown in labor supply growth is concerning as it implies a slowdown in economic growth.

Despite the upheaval caused by the COVID-19 pandemic, the US labor market remained tight throughout 2022. For most of the previous year, there were twice as many job openings as there were unemployed individuals, creating an unprecedented gap between labor supply and demand. This shift in power between workers and businesses resulted in a surge in hiring, enabling many workers to switch jobs and careers, with a significant number experiencing substantial wage increases [Economic Report of the President 2023].

2. US government fiscal stimulus in 2020-2021

The COVID-19 pandemic has reduced real GDP as early as the first quarter of 2020. GDP contracted by a record 29.9% in the second quarter, the largest decline in 70 years, followed by an unprecedented 35.3% increase in the third quarter, for a total for 2020 of a 1.5% decline in real GDP (see Table 2 on p. 53).

In FY 2020, the US government faced a record budget deficit of $3.1 trillion, which accounted for 14.9% of GDP.

Table 2. Quarterly GDP dynamics in the United States from Q1 2020 to Q2 2023, %

	GDP
2020	
Q1	-4.6
Q2	-29.9
Q3	35.3
Q4	3.9
Total	**-1.5**
2021	
Q1	6.3
Q2	7.0
Q3	2.7
Q4	7.0
Total	**5.7**
2022	
Q1	-1.6
Q2	-0.6
Q3	3.2
Q4	2.6
Total	**0.9**
2023	
Q1	2.0
Q2	2.4

Source: [BEA 2023b].

To address the crisis, the government implemented a combination of fiscal stimulus and assistance programs for those affected by the pandemic. The 45th Presidential administration, under D. Trump, took several measures to combat the crisis.

- The first aid package, Phase 1 (Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020), was signed into law on March 6, 2020, with a total allocation of $8.3 billion.
- On March 18, 2020, the Families First Coronavirus Response Act (FFCRA) was signed into law as the second aid package (Phase 2), allocating $192 billion, including $1 billion in additional funds for unemployment insurance.
- Also on March 18, 2020, a moratorium on foreclosures and evictions of homeowners whose mortgages were insured was enacted.
- The Coronavirus Aid, Relief, and Economic Security Act (CARES Act), the third and largest aid package in US history, was signed on March 27, 2020. It allocated $2.3 trillion for various activities, including direct cash payments to citizens ($1,200 per person and $500 per child).
- In addition, an extra stimulus package (Phase 3.5) was signed on April 24, 2020. A total of $484 billion has been allocated.

- The tax deadline for both individuals and businesses was extended in March 2020, and interest accrual and student loan payments were also suspended at that time.
- On August 10, 2020, Trump signed four executive orders aimed at providing additional payments to the unemployed, extending the moratorium on student loan payments and interest, offering temporary assistance to homeowners and renters, and deferring taxes for those earning less than $100,000 per year (Lost Wages Assistance (LWA), Student Loan Interest, Temporary Assistance to Homeowners and Renters, and Payroll Tax Deferment).
- The fourth aid package was passed on December 27, 2020, and totaled $915 billion. It included several measures, such as direct payments of $600 for individuals earning less than $75,000 per year, expanded unemployment benefits, and aid for small businesses, among others.

The presidency of the 46th President of the United States, J. Biden, began on January 20, 2021. He inherited a challenging economic situation, including the ongoing COVID-19 pandemic. In the first 100 days of his presidency, he signed 42 executive orders, which is more than any president in the last 75 years.

Biden rescinded executive orders issued by D. Trump that banned citizens of certain Muslim and African countries from entering the US and canceled plans to build a wall on the border with Mexico. In February 2021, the Domestic Policy Council was directed to develop a naturalization program and restore confidence in the legal immigration system. Since the borders opened in late 2021, the number of immigrants, both legal and illegal, has increased. According to the Center for Immigration Studies (CIS), the number of illegal immigrants in January 2022 was 11.35 million. The ongoing debate regarding illegal immigrants and their potential legalization, which could add 11 million individuals to the labor force, continues with varying intensity. The current administration's relaxed policies have resulted in an increase of over 1.2 million illegal immigrants in the past year. The Center for Immigration Studies has expressed concern, stating that "in a very real sense, America has lost control of its borders" [Camarota 2022].

The American Rescue Plan Act of 2021, a $1.9 trillion stimulus bill signed into law on March 11, 2021, was one of the first major pieces of legislation to address economic problems. Its major accomplishment was the creation of 1 million new jobs in March 2021, bringing unemployment down to 6.1% (refer to Table 1 on page 48). The Act provided direct cash payments of $1,400 for individuals earning less than $75,000 per year, as well as $1,400 for each dependent. Additionally, payments were provided for individuals earning less than $100,000, but in smaller amounts.

The American Rescue Plan Act provided funding to small businesses, resulting in a significant increase of 5.4 million new businesses opening in 2021, which is 20% higher than the previous several years. In 2021 and 2022, the US experienced record numbers of small business applications and the fastest new job growth in recent years. Job growth in 2021 nearly offset job losses from COVID-19 in 2020.

Another important labor market law is the Infrastructure Investment and Jobs Act. On November 15, 2021, a bipartisan agreement passed the Act, which aims to modernize and repair America's roads, bridges, and railways, expand access to clean drinking water

and broadband internet, and address environmental concerns. The law is expected to create 1.5 million jobs per year over the next decade [The White House 2021a].

Regarding the pandemic and the US government's support measures, it is noteworthy to mention the Supplemental Nutrition Assistance Program, commonly referred to as SNAP. This program is one of the largest welfare programs in the country and has been in existence for almost 60 years. The amount of assistance households receive under SNAP depends on the number of family members, their age, medical conditions, and the amount of combined monthly income. To be eligible for the program, the total monthly income must not exceed 130% of the federal poverty line. For a family of four in 2023, this amount is $3,007 per month.

The program's parameters are directly impacted by the level of poverty resulting from the financial crisis, unemployment, and other factors. In March 2020, Congress authorized additional payments and significantly relaxed recipient eligibility requirements due to the COVID-19 quarantine. As a result, the number of recipients immediately began to grow and in September 2020, it reached over 43 million, which is 13% of the nation's population [USDA 2023]. Despite the passage of more than three years since the pandemic began, the number of food stamp recipients remains high. In April 2023, approximately 42 million individuals in 22.2 million households continued to receive supplementary food assistance.

The pandemic-induced economic downturn resulted in significant job losses, exacerbating the financial situation of low-income individuals. The most vulnerable to COVID-19 were those with limited access to healthcare, low wages, and the inability to work remotely. These individuals faced challenges in obtaining necessary medical care and financial assistance. Simultaneously, the surplus money supply and extensive budgetary expenditures resulted in an increase in stock and housing prices, which greatly benefited wealthier asset owners. According to L. Grigoryev, the affluent class had to forgo their customary lifestyle, including dining out, vacationing, and attending cultural events, as they received additional funds to invest in financial assets and real estate. This income trend and shift in spending patterns evidently exacerbate asset-based inequality [Grigoryev, Grigoryeva 2021. P. 105]. The Federal Reserve System (FRS) report on household wealth shows that the total wealth of the richest 1% reached a record $45.9 trillion at the end of the fourth quarter of 2021. Their fortunes increased by more than $12 trillion, or more than a third, during the pandemic [Federal Reserve Bank of St. Louis 2020].

When critically assessing state policy measures in the labor market during the COVID and post-COVID periods, it is important to note that while the government was able to maintain purchasing power and stimulate investment activity, public debt and inflation increased, leading to rising prices. Additionally, it is worth noting that some individuals are hesitant to return to work when the government is providing financial assistance. However, the increase in prices reduces real income and stimulate the employment. Additionally, direct cash payments may create a dependency among individuals, discouraging them from taking initiative to improve their own financial situation. Therefore, while direct cash transfers may be intended to stimulate the economy and mitigate the effects of economic crises, they can also have negative consequences. It is

important to consider alternative solutions and carefully weigh the potential benefits and drawbacks of each option. The labor market situation in 2023 raises several questions for further analysis. The slow GDP growth and high employment were significant outcomes of the extraordinary events of recent years.

3. Market impact on inflation 2021-2022

Huge budgetary injections to support the economy led to a rapid rise in inflation in March 2021. By June 2022, it peaked at 9.1%, the highest rate in 40 years (see Figure 3 on page 56).

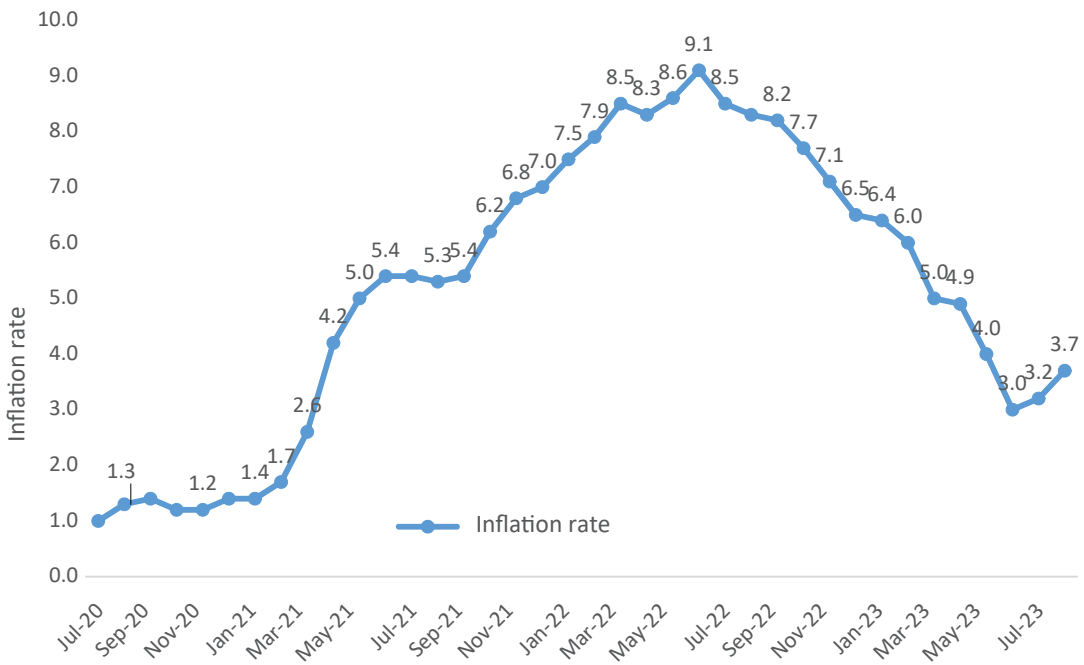

Figure 3. US inflation dynamics between July 2020 and July 2023

Source: [Statista 2023].

Inflation has become a more significant concern for Americans than it has been in the past three decades. According to a March 2022 Gallup poll, 83% of respondents expressed concern about inflation, with 58% indicating that they were "very concerned" [Gallup 2022]. The percentage of individuals who were "strongly concerned" about inflation was almost as high among those earning $100,000 or more (58%) as among those earning less than $40,000 (63%). By comparison, there is a 44 percentage point difference in concern about inflation between Republicans (79%) and Democrats (35%), with independents (63%) being closer to Republicans.

On August 16, 2022, President J. Biden signed the Inflation Reduction Act into law, which provides $737 billion in appropriations over the next 10 years. The act

aims to curb inflation by reducing the budget deficit, lowering prescription drug prices, and investing in domestic energy production. The proposed law claims to create 9 million jobs and save the average American consumer up to $220 per year in energy costs [Carlson 2022]. The White House believes that implementing this law will help reduce the federal budget deficit by $300 billion over the next 10 years and reduce inflation.

To regulate inflationary processes, the Fed began raising the base refinancing rate, increasing it from 0.25% in May 2022 to 5.5% in August 2023. The Fed expects the rate to be at 5.6% by the end of 2023 and 4.6% by the end of 2024 [FRED 2023a].

As the wage trends presented in Table 3 (p. 57) show, average wages in the United States are rising, but at the current rate of inflation, this increase is not enough.

Table 3. Dynamics of labor remuneration in 2007-2022

years	Average weekly hours	Average hourly earnings (in current dollars)	Average weekly earnings (in current dollars)
2007	34.4	20.92	719.74
2008	34.3	21.56	738.96
2009	33.8	22.17	749.92
2010	34.1	22.56	769.57
2011	34.3	23.03	790.79
2012	34.5	23.49	809.43
2013	34.4	23.95	825.08
2014	34.5	24.46	844.77
2015	34.5	25.02	864.10
2016	34.4	25.64	881.09
2017	34.4	26.32	906.19
2018	34.5	27.11	936.37
2019	34.4	27.99	963.06
2020	34.6	29.35	1014.38
2021	34.7	30.60	1063.08
2022	34.5	32.25	1113.99

Source: [The White House 2023].

Figure 4 on p. 58 presents the dynamics of real weekly wages since 1980. The presented data shows that wages have remained nearly constant for the past 40 years. This slow and uneven growth is a result of the increasing disparity between productivity growth and the wages earned by the average worker. From 1979 to 2013, hourly wages increased by

only 8.2%, while productivity increased by 64.9%. Therefore, labor productivity grew almost eight times faster than hourly wages.

Significant changes in real wage growth occurred between 1995 and 2000, facilitated by the increase in the minimum wage at the end of 1990. The minimum hourly wage was introduced in the United States in 1938 by the Fair Labor Standards Act and was set at 0.25 cents. Most of the increase in minimum hourly wage occurred between 1978 and 2009. The last increase to $7.25 per hour was made on July 24, 2009 and has not been implemented since then.

It should be noted that the wages of the top 1% have been consistently increasing over the past few decades, while the wages of 90% of workers have remained stagnant. In 1965, the wage gap between CEOs and workers was 20 times, but in 2022 it was over 300 times. This indicates a growing income inequality.

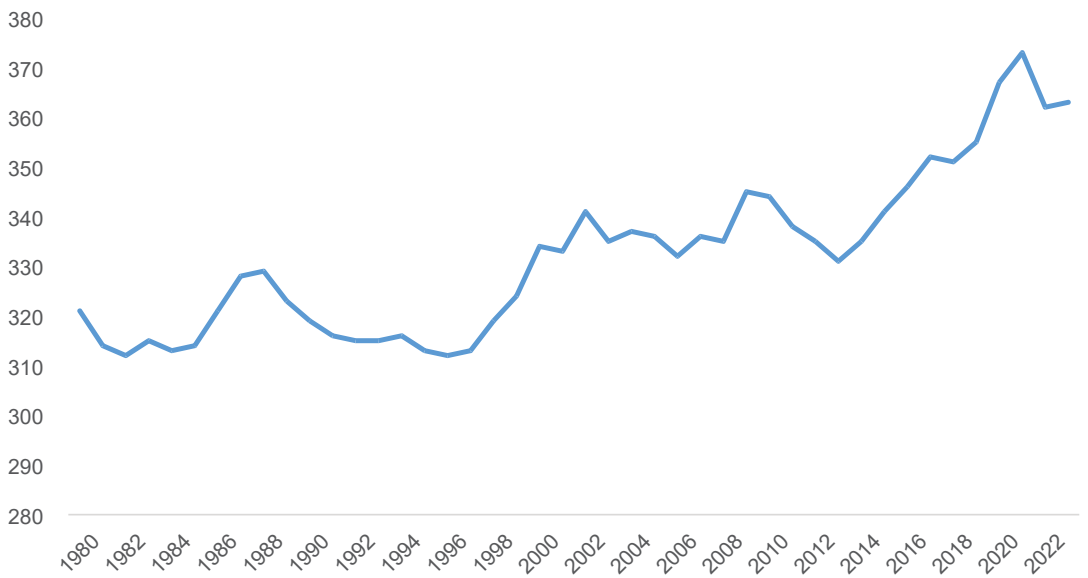

Figure 4. Trends in real weekly wages in 1980–2023 (in constant 1982–1984 dollars)

Source: [FRED 2023b].

According to Gallup polls, in May 2023, 50% of respondents believed that their financial situation was worsening, while 37% believed it was improving [Gallup 2023]. These views are generally consistent with past polls, but contrast with the 2021 data, when Americans were optimistic about their finances (see Figure 5 on p. 59).

The key financial problem Americans cite is inflation. Although inflation has declined over the past year, it is still higher than before the pandemic, and food and gasoline prices remain high. Americans' concerns about maintaining their standard of living, paying monthly bills, covering housing costs, and saving for retirement are increasing, not decreasing (see Figure 6 on page 59).

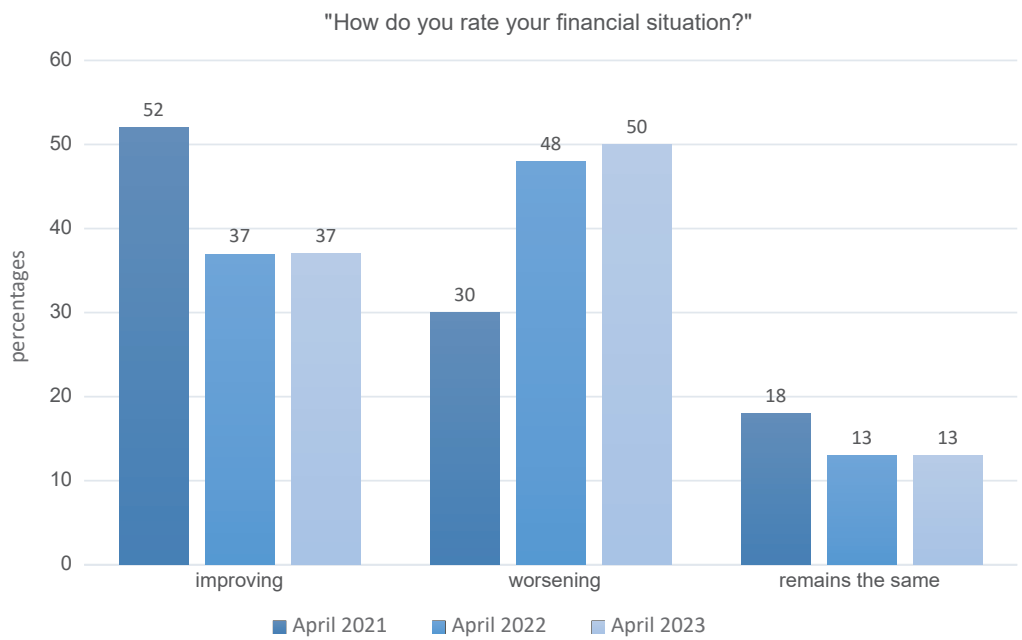

Figure 5. A public opinion poll on the financial health of Americans

Source: [Gallup 2023].

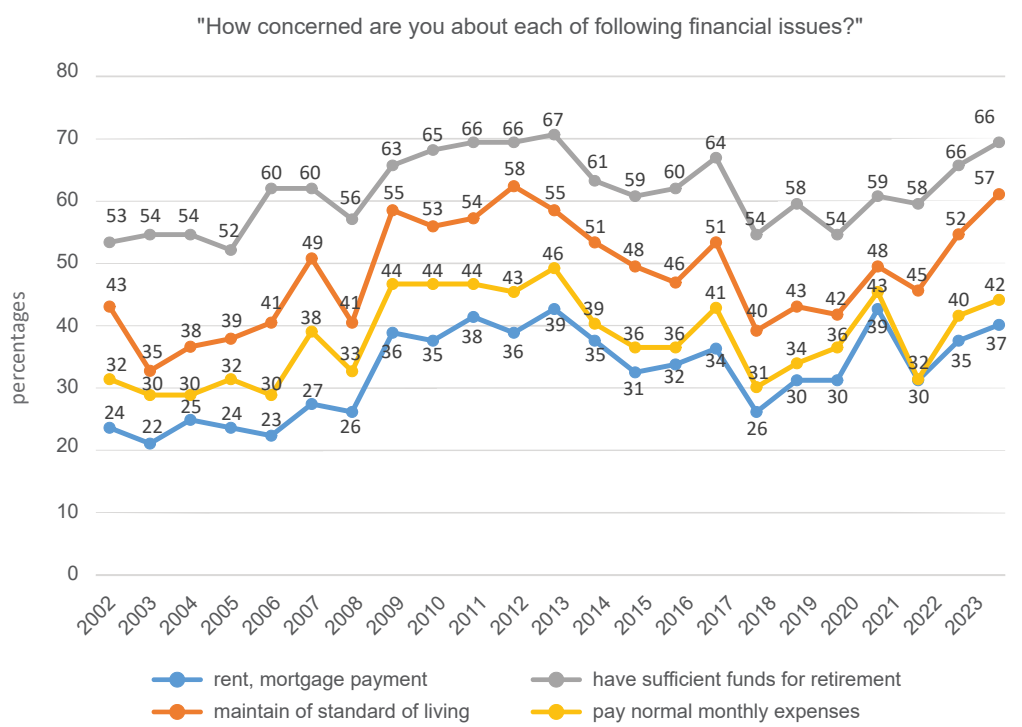

Figure 6. Dynamics of changes in Americans' public perceptions of their concern about financial issues in 2001–2023

Source: [Gallup 2023].

As usual, there are sharp differences in how families of different income levels rate their financial situation and comfort level. Satisfaction among low- and middle-income Americans reaches a new low in 2023 (see Figure 7 on p. 60).

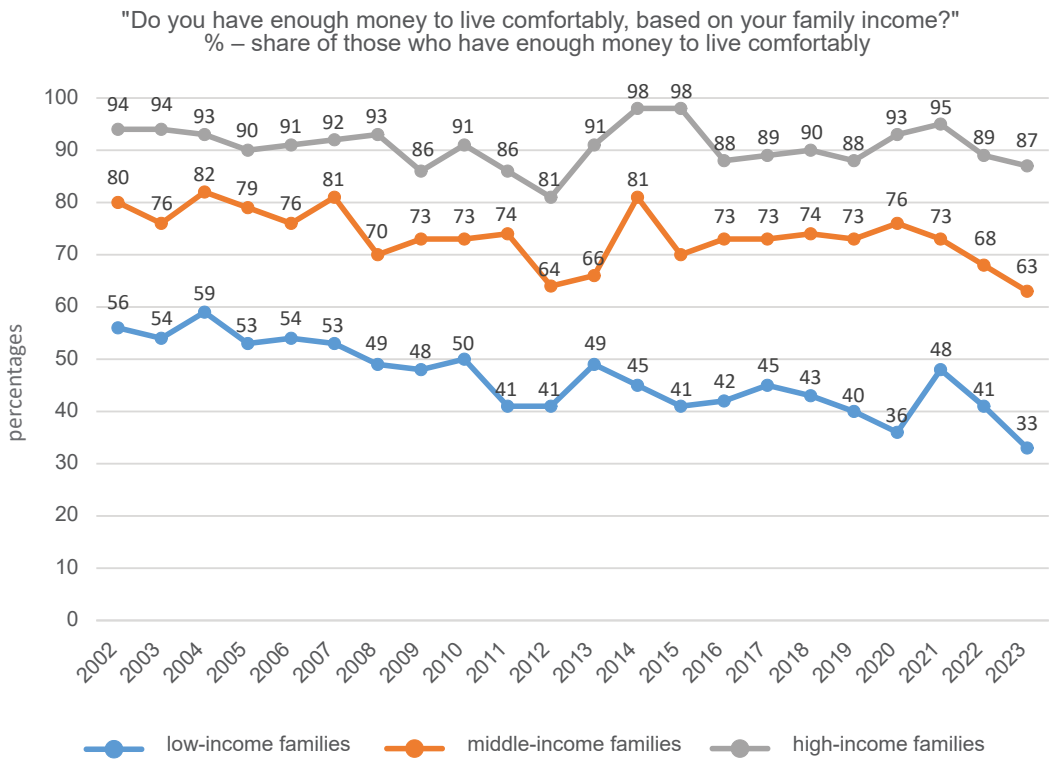

Figure 7. Dynamics of changes in the public opinion of Americans of different income levels about their financial situation in 2002–2023

Source: [Gallup 2023].

Income inequality in the United States has risen sharply since the 1970s. Between 1979 and 2019, a 40-year period, inequality increased by 25 percent [CBO 2022] (see Table 4 on p. 60).

Table 4. Household income in the US (over 15 years old, thousand dollars/family) in 2022

Household income	Population	White (non-Hispanics)	Asians	Hispanics	African Americans
Median income	74	81	109	63	53
Median family income after taxes	64	67	90	56	47

Source: [U.S. Census Bureau 2023b].

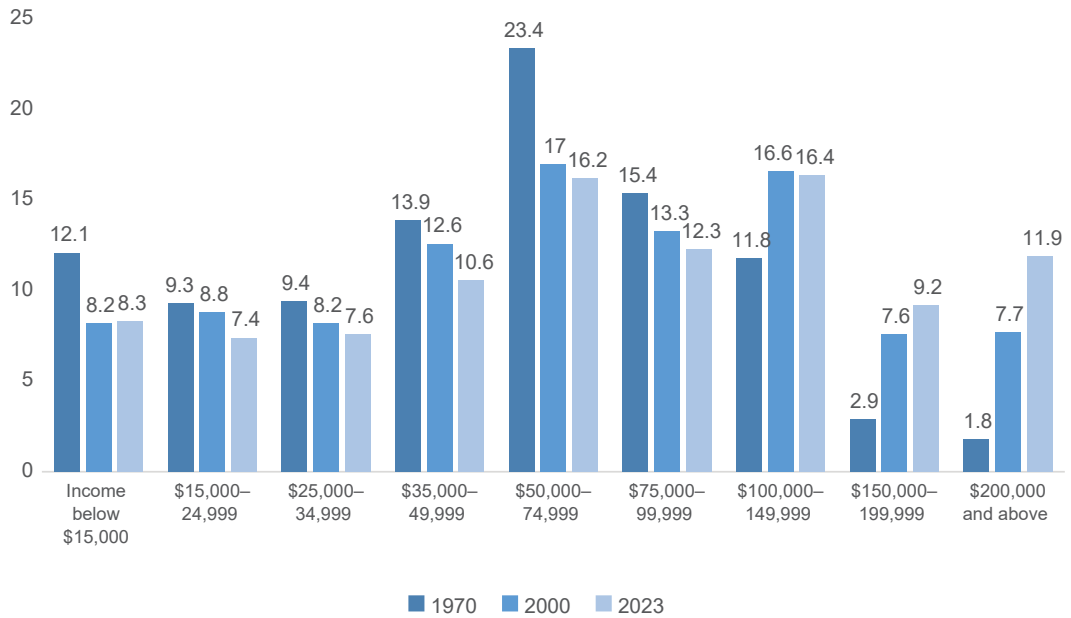

Figure 8. Distribution of households by income in 1970, 2000, and 2023, %

Source: [U.S. Census Bureau 2023b].

The income disparity is closely tied to race. Asian citizens have the highest income levels, while African American and Hispanic households in the US have approximately half the median income of Asian households. According to the 2019 Federal Reserve Board survey, the average white household has 10 times more wealth than the average black household. Additionally, the 400 wealthiest American billionaires possess more total wealth than all 10 million black households combined.

The number of middle-income families in the US continues to decline. The middle class was formed from the end of World War II through 1970. However, since then, despite the continued growth of the US economy, the middle class has significantly shrunk. Figure 8 (p. 61) illustrates the transformation of household income, showing the sharp decline of the middle class and the growth of households with incomes of $150,000 per year and above. As of 2022, there are 131.4 million households[3] in the United States.

The data presented shows that the percentage of households with incomes between $50,000 and $100,000 per year decreased from 38.8% in 1970 to 28.5% in 2023. In contrast, the percentage of households with incomes of more than $150,000 increased significantly from 4.7% to 21.1%, indicating a clear polarization of society.

It is noteworthy that in the United States, 11.5% of the population, or 37.9 million people, live below the poverty line. The poverty line for one person in 2022 was $15,225, for two people was $19,597, and for a family of four was $30,186 per year. Emergency

[3] A household is a statistical unit; according to the United States Census Bureau, the average number of people in households was about 2.55.

one-time payments from the budget have been a significant support for the population. Although the proportion and size of the population with income below the poverty threshold increased from 2019 (33.9 million), it remained lower than in 2018 (38.1 million) [United States Census Bureau 2023a].

As of April 2022, the homeownership rate stood at 65%[4] [United States Census Bureau 2023c]. In the first quarter of 2022, the fixed mortgage rate was 4%, and the median home price was $368,000. To purchase a home, the median household income would need to be $76,000, which is nearly $9,000 higher than the national median income. Due to the widening income gap in the United States, many people find the rental market to be a more appealing option, especially as prices gradually decrease.

4. Trade union activity in the context of labor market recovery

Labor unions in the United States have a long history of advocating for workers' rights. The first labor unions emerged in the late 18th century and became a powerful political and social movement in the first half of the 20th century. By the late 1940s and early 1950s, the two largest labor unions were the American Federation of Labor and Congress of Industrial Organizations, which represented over 22% of all workers and employees in the country. Over the past 70 years, the membership of American labor unions has declined, with only about 10% of workers being members in 2020. This decline is attributed to the anti-union policies of the authorities and businesses.

However, the processes taking place in American society in the third decade of the 21st century are changing this trend. A striking example of this change is the situation in the fall of 2023 in the auto industry. On September 14, 2023, the United Auto Workers (UAW) union[5] initiated a strike that involved over 10,000 workers across three auto plants owned by General Motors (GM's midsize truck plant in Wentzville, Missouri), Ford (Ford plant in Bronco, Michigan), and Stellantis (Jeep plant in Toledo, Ohio).

The UAW has a long history of accomplishments. In 1950, the UAW reached an agreement with General Motors for employee pensions, wage indexing, and subsidized health insurance. An agreement was also reached in 1955 for additional severance pay upon layoff. The union secured many other important benefits for workers. However, no significant labor improvements have occurred in the last 10 years in the so-called Big Three (General Motors, Ford, Stellantis). In the autumn of 2023, the contracts between the union and the Big Three, which concern 150,000 workers, expired. The union was unable to reach an agreement with the auto companies, resulting in a strike. It is noteworthy that the factories where the strike began are critical to the production of some of the Big Three's most profitable cars. A strike against all three companies simultaneously is unprecedented in the union's history.

The union, led by Shawn Fain, made several demands including wage increases, reduction of working hours from 40 to 32 hours per week, indexation of pensions (the last increase was in 2003), increased paid vacation, the right to strike in connection with plant closures, and payments to laid-off workers for public works (Working Family

[4] Share of owner-occupied houses.

[5] The union of the automotive, aerospace and agricultural workers in the United States.

Protection Program) in the event of plant closures. According to representatives of the automakers, fulfilling the requirements would cost $80 billion. They argue that renewing the contract would jeopardize the very existence of the companies and claim that it cannot be implemented.

The current bargaining tactics differ from previous ones. The union is promoting maximum openness by publishing video messages on its official website and social media, and communicating its position to union members and the Big Three. The union leadership cites statistics on lost profits, including an estimated $10.7 billion revenue loss due to production cuts of 280,000 vehicles, a $3.4 billion decrease in profits, and a drop in profitability (EBIT-Adj Margins) from 10% to 7.7% [UAW 2023].

Additionally, the US auto industry employs approximately 1.013 million people with an average hourly wage of $27.18. It should be noted that there is a two-tier system of remuneration, with different rates for permanent and temporary workers. Individuals are typically hired as temporary workers and may work in this capacity, with lower wages, for 10-12 years before being offered permanent full-time employment.

The union leadership has called for a strike due to the significant wage gap between the Big Three management and the workers (refer to Table 5 on page 63). They believe it is necessary to change the terms of cooperation.

Table 5. Ratio of Big Three CEOs' earnings to median plant worker wages in 2021 and 2022

	General Motors	**Ford**	**Stellantis**
	M. Barra (CEO since January 2014)	J. Farley (CEO from October 2020)	C. Tavares (CEO from January 2021)
Compensation amount for 2021, $ mln	29.1	22.8	21
Ratio to median employee salary	420:1	356:1	328:1
Compensation amount for 2022, $ mln	29	21	24.8
Ratio to median employee salary	362:1	281:1	365:1

Source: [UAW 2023].

Over the past 3.5 years, US inflation has increased by 18.3%, while wage increases in the auto industry have only reached 6.1%.

It is worth noting that over 100 years ago, in 1914, H. Ford raised a worker's wage to $5 per day, which enabled the latter to purchase his own Model T automobile after 16 weeks of work. This initiative became a crucial factor in the economic growth of the US and the formation of a consumer society. The median salary of a worker at the Big Three is currently around $52,000 per year. The crossovers they produce are sold at prices starting from $55,000.

The state's current focus is on "green energy" and the development of electric vehicles, which is why subsidies are being allocated, including for the opening of battery

production plants. Currently, five plants have been opened, and approximately twenty more are planned. The country is currently transitioning to electric cars, with dozens of plants being built. The union's objective is to ensure worker protection and improve working conditions. Currently, workers are offered $16.5 per hour with the potential for an increase to $20 per hour over the next seven years. The union representatives argue that this is unjust and inequitable, as companies receive billions of dollars in government subsidies (which are, in fact, funded by these very employees' taxes) to carry out this large-scale transition.

One of the primary objectives of the union and Big Three negotiations is to ensure that the transition to electric vehicles does not further undermine the standards of workers in the auto industry.

A significant event occurred when President J. Biden arrived at the strike and expressed his support for it. In early November 2023, following a six-week strike, the union tentatively reached agreements with all three of the Big Three, resulting in record wage increases for workers and several other improvements.

It is important to note that in 2023, the National Labor Relations Board (NLRB) issued two landmark decisions to protect unionization rights.

(1) If a majority of a company's employees join a union and the employer has not filed a request with the National Labor Relations Board for a unionization vote, the union is automatically considered active. Previously, it was the workers' responsibility to arrange a vote, which employers could sabotage in every way possible. Now, however, it is the employer's responsibility to challenge the union. If the employer fails to do so, the union is automatically considered effective.

(2) If an employer engages in any form of union-busting, such as unlawfully firing union organizers, during a vote for a union, the union is considered active. This has been a common occurrence in almost every such election over the past forty years. The National Labor Relations Board will require the employer to immediately recognize the union and enter negotiations.

In the United States, the process for forming a union has shifted from permissive to notification-based. If a majority of employees have received membership cards, the union becomes active and the employer is obligated to negotiate with it.

If an employer wishes to prevent the formation of a union without a vote, they must file a request with the National Labor Relations Board. If the employer attempts to prevent a vote in any way, the union becomes active, and the employer must negotiate with it. This decision is a significant victory for the labor movement, comparable to F.D. Roosevelt's New Deal. The labor movement has reemerged after an absence of nearly a century from the historical process [Meyerson 2023].

Conclusion

In 2023, the US labor market faces challenges such as skills shortages, wage inequality, and rising wages due to low unemployment and a high vacancy rate. When unemployment is low, workers may demand higher wages, leading to increased costs for businesses and higher inflation. Additionally, worker motivation is another important factor to consider.

When companies struggle to fill vacancies, they may end up hiring less motivated workers, which can negatively impact productivity and work quality.

The COVID-19 pandemic has caused instability and uncertainty in the US labor market from 2020 to 2023. In summary, the following key deviations can be highlighted:

- Lockdowns implemented in the spring of 2020 have limited spending on services, resulting in savings and pent-up demand.
- Direct cash payments did create a sense of financial stability and reduced the desire to work (until they were eliminated).
- However, due to high inflation, the real incomes of the population are decreasing, forcing people to seek employment. This has resulted in a situation of low unemployment but slow GDP growth, the nature of which requires further study.
- The COVID-19 pandemic has accelerated the shift to remote work, which has in turn facilitated the transition to hybrid work for many organizations. Questions have arisen regarding the certification of remote workplaces and occupational health and safety. These labor market transformations may lead to the abandonment of many office buildings.
- The rise of digital labor platforms is transforming the labor market, as companies in the Global North seek to cut costs by hiring workers from the Global South.
- Government fiscal policies aimed at supporting small businesses have led to the creation of numerous new enterprises and jobs.
- After 80 years, labor unions are experiencing a resurgence in strength. It is suggested that they will be able to exert influence on employers and advocate for higher wages and social protections. This includes support from the current Biden-Harris administration [The White House 2021b].

Bibliography

ApolloTechnical, 2022. Statistics on Remote Workers That Will Surprise You. Available at: https://www.apollotechnical.com/statistics-on-remote-workers/#2-what-percentage-of-jobs-are%C2%A0-remote-%C2%A0

BEA (Bureau of Economic Analysis), 2023a. National Income and Product Account. Table 2.8.7. Percent Change from Preceding Period in Prices for Personal Consumption Expenditures by Major Type of Product, Monthly. Available at: https://apps.bea.gov/iTable/?reqid=19&step=3&isuri=1&1921=survey&1903=84#eyJhcHBpZCI6MTksInNN0ZXBzIjpbMSwyLDMsM10sImRhdGEiOltbIk5JUEFfVGFibGVfTGlzdCIsIjg0Il0sWyJDYXRlZ29yaWVzIiwiU3VydmV5Il0sWyJGaXJzdF9ZZWFyIiwiMjAxOSJdLFsiTGFzdF9ZZWFyIiwiMjAyMyJdLFsiU2NhbGUiLCIwIl0sWyJTZXJpZXMiLCJNIl1dfQ

BEA (Bureau of Economic Analysis), 2023b. National Income and Product Account. Table 1.1.1 Percent Change From Preceding Period in Real Gross Domestic Product. Available at: https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey#eyJhcHBpZCI6MTksInN0ZXBzIjpbMSwyLDNdLCJkYXRhIjpbWyJjYXRlZ29yaWVzIiwiU3VydmV5Il0sWyJOSVBBX1RhYmxlX0xpc3QiLCIxIl1dfQ==

BLS (Bureau of Labor Statistics), 2023a. The Employment Situation — February 2023. Available at: https://www.bls.gov/news.release/archives/empsit_03102023.pdf

BLS (Bureau of Labor Statistics), 2023b. Overview of BLS Statistics on Unemployment. Available at: https://www.bls.gov/bls/unemployment.htm

Cajner, T., Crane, L. D., Decker, R. A., Grigsby, J., et al., 2020. The U.S. Labor Market during the Beginning of the Pandemic Recession. NBER Working Paper 27159. Available at: https://doi.org/10.3386/w27159

Camarota, S., 2022. America Has Lost Control of Its Borders. Center for Immigration Studies. June 6. Available at: https://cis.org/Oped/America-has-lost-control-its-borders

Carlson, T., 2022. New Climate Law Has Bipartisan Roots — We Need Leadership from Both Parties to Realize Its Potential. Available at: https://thehill.com/opinion/energy-environment/3618019-new-climate-law-has-bipartisan-roots-we-need-leadership-from-both-parties-to-realize-its-potential/

CBO (Congressional Budget Office), 2022. The Distribution of Household Income, 2019. Available at: https://www.cbo.gov/system/files/2022-11/58353-HouseholdIncome.pdf

CDC (Centers for Disease Control and Prevention), 2023. COVID Data Tracker. Atlanta, GA: U.S. Department of Health and Human Services. Available at: https://covid.cdc.gov/covid-data-tracker/#maps_deaths-total

Davis, S., Haltiwanger, J., 1992. Gross Job Creation, Gross Job Destruction, and Employment Reallocation. *The Quarterly Journal of Economics*, Vol. 107, Issue 3, August. Available at: https://doi.org/10.2307/2118365

Dey, M., Frazis, H., Piccone, D., Loewenstein, M., 2021. Teleworking and lost work during the pandemic: new evidence from the CPS. BLS (Bureau of Labor Statistics). Available at: https://doi.org/10.21916/mlr.2021.15

Diamond, P. A., 1982. Aggregate Demand Management in Search Equilibrium. *Journal of Political Economy*. No 90 (5). P. 881-894. Available at: http://www.jstor.org/stable/1837124

Dingel, J. I., Neiman, B., 2020. How Many Jobs Can Be Done at Home? NBER Working Paper No. 26948. Available at: https://www.nber.org/system/files/working_papers/w26948/w26948.pdf

Dow, J. C. R., Dicks-Mireaux, L. A., 1958. The Excess Demand for Labor. A Study of Conditions in Great Britain, 1946-56. *Oxford Economic Papers*. No 10 (1). P. 1-33. Available at: http://www.jstor.org/stable/2661871

Economic Report of the President, 2023. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/03/erp-2023.pdf

Federal Reserve Bank of St. Louis, 2022. Has Wealth Inequality in America Changed over Time? Here Are Key Statistics. Available at: https://www.stlouisfed.org/open-vault/2020/december/has-wealth-inequality-changed-over-time-key-statistics

Florida, R., Ozimec, A., 2021. How Remote Work Is Reshaping America's Urban Geography. *The Wall Street Journal*. Available at: https://www.wsj.com/articles/how-remote-work-is-reshaping-americas-urban-geography-11614960100

Forsythe, E., Kahn, L., Lange, F., Wiczer, D., 2022. Where Have All the Workers Gone? Recalls, Retirements, and Reallocation in the COVID Recovery. NBER Working Paper No. 30387. Available at: https://www.nber.org/system/files/working_papers/w30387/w30387.pdf

FRED, 2023a. Federal Funds Target Range — Upper Limit. Available at: https://fred.stlouisfed.org/series/DFEDTARU

FRED, 2023b. Employed Full Time: Median Usual Weekly Real Earnings: Wage and Salary Workers: 16 Years and Over. Available at: https://fred.stlouisfed.org/series/LES1252881600Q

Fuller, J., Raman, M., Palano, J., et al., 2020. Building the On-Demand Workforce. Harvard Business School, BCG. Available at: https://www.hbs.edu/managing-the-future-of-work/Documents/Building_The_On_Demand_Workforce.pdf

Gallup, 2021. Top U.S. Insights from Gallup in 2021. Available at: https://news.gallup.com/opinion/gallup/358421/top-insights-gallup-2021.aspx

Gallup, 2022. Inflation Dominates Americans' Economic Concerns in March. Available at: https://news.gallup.com/poll/391220/inflation-dominates-americans-economic-concerns-march.aspx

Gallup, 2023. Americans Remain Discouraged About Personal Finances. Available at: https://news.gallup.com/poll/506012/americans-remain-discouraged-personal-finances.aspx

Garcia, K. S., Cowan, G.B., 2022. The Impact of U.S. School Closures on Labor Market Outcomes during the COVID-19 Pandemic. NBER Working Paper No. 29641. Available at: https://www.nber.org/papers/w29641

Goda, G. S., Soltas, E., 2022. The Impacts of COVID-19 Illnesses on Workers. NBER Working Paper No. 30435. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4216221

Grigoryev, L.M., 2023.The Shocks of 2020-2023 and the Business Cycle. *Contemporary World Economy*. Vol. 1. No 1. Available at: https://doi.org/10.17323/2949-5776-2023-1-1-8-32

Grigoryev, L.M., Grigorieva, N.L., 2021. U.S. Economy and Social Structure Before the Change of Eras. *Voprosy Ekonomiki*. No 1. P. 98-119. Available at: https://doi.org/10.32609/0042-8736-2021-1-98-119 (in Russian).

Guterres, A., 2020. Address to the Opening of the General Debate of the 75th Session of the General Assembly. September 22. Available at: https://www.un.org/sg/en/content/sg/speeches/2020-09-22/address-the-opening-of-the-general-debate-of-the-75th-session-of-the-general-assembly

Hansen, B., Sabia, J., Schaller, J., 2022. Schools, Job Flexibility, and Married Women's Labor Supply. NBER Working Paper No. 29660. Available at: https://www.nber.org/papers/w29660

Hassel, A., 2021. Teleworking can make work more balanced — but it needs a sound regulatory framework. Available at: https://www.oecd-forum.org/posts/eleworking-can-make-work-more-balanced-but-it-needs-a-sound-regulatory-framework

Lewis, M. W. What Is a Zoom Town? *GeoCurrents*. Available at: https://www.geocurrents.info/population-geography/migrations/what-is-a-zoom-town

McEntarfer, E., 2022. Older Workers, Retirement, and Macroeconomic Shocks. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4169082

Meyerson, H., 2023. Biden's NLRB Brings Workers' Rights Back from the Dead. *The American Prospect*. Aug. 28. Available at: https://prospect.org/labor/2023-08-28-bidens-nlrb-brings-workers-rights-back/

Montes, J., Smith, C., Dajon, J., 2022. "The Great Retirement Boom": The Pandemic-Era Surge in Retirements and Implications for Future Labor Force Participation. Available at: https://www.federalreserve.gov/econres/feds/files/2022081pap.pdf

Mortensen, D., 1982. Property Rights and Efficiency in Mating, Racing, and Related Games. *American Economic Review*. No 72. P. 968-979.

NBER (National Bureau of Economic Research), 2023. US Business Cycle Expansions and Contractions. Available at: https://www.nber.org/research/data/us-business-cycle-expansions-and-contractions

Ne'eman, A., Maestas, N., 2022. How Has COVID-19 Impacted Disability Employment? NBER Working Paper No. 30640. Available at: https://www.nber.org/papers/w30640

Okun, A. M., 1962. *Potential GNP, Its Measurement and Significance*. Cowles Foundation. Yale University.

Petrovskaya, N.E., 2018. U.S. Unemployment: Trends and Structural Peculiarities. *Regional Economics: Theory and Practice*. No 8 (455). P. 1445-1456. Available at: https://doi.org/10.24891/re.16.8.1445 (in Russian).

Petrovskaya, N.E., 2021. Digital Platforms as the Dominant Vector of the Global Labor Market Development. *Upravlenie / Management*. 2021. Vol. 9. No 2. P. 103-113. Available at: https://doi.org/10.26425/2309-3633-2021-9-2-103-113 (in Russian).

Petrovskaya, N.E., 2022. Development of Flexible Forms of Employment in the USA. *Economics and Entrepreneurship*. No 9 (146). P. 131-136. Available at: https://doi.org/10.34925/EIP.2022.146.9.022 (in Russian).

Phillips, A. W., 1958. The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957. *Economica*. Vol. 25. Issue 100. Available at: https://doi.org/10.1111/j.1468-0335.1958.tb00003.x

Pissarides, C. A., 1985. Short-Run Equilibrium Dynamics of Unemployment, Vacancies, and Real Wages. *The American Economic Review*. No 75 (4). P. 679-690. Available at: http://www.jstor.org/stable/1821347

Semenkov, A.V., 2017. Cycles in The Russian Labor Market: Theoretical Aspect of the Analysis. *Bulletin of Moscow University*. 2017. Ser. 6. No 6. P. 125-142 (in Russian).

Statista, 2023. Monthly 12-Month Inflation Rate in the United States from August 2020 to August 2023. Available at: https://www.statista.com/statistics/273418/unadjusted-monthly-inflation-rate-in-the-us/

The White House, 2021a. Fact Sheet: The Bipartisan Infrastructure Deal. Available at: https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/06/fact-sheet-the-bipartisan-infrastructure-deal/

The White House, 2021b. Statement by President Joe Biden on the House Taking Up the PRO Act. Available at: https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/09/statement-by-president-joe-biden-on-the-house-taking-up-the-pro-act/

The White House, 2021c. The employment situation in March 2021. Available at: https://www.whitehouse.gov/cea/written-materials/2021/04/02/the-employment-situation-in-march/

The White House, 2023. Hours and earnings in private nonagricultural industries, 1977-2022. Table B-30. Available at: https://www.whitehouse.gov/wp-content/uploads/2023/03/erp-2023.pdf

UAW (United Auto Workers), 2023. Available at: https://uaw.org/

United States Census Bureau, 2023a. Poverty in the United States: 2022. Available at: https://www.census.gov/content/dam/Census/library/publications/2023/demo/p60-280.pdf

United States Census Bureau, 2023b. Income in the United States: 2022. Available at: https://www.census.gov/content/dam/Census/library/publications/2023/demo/p60-279.pdf

United States Census Bureau, 2023c. Quarterly residential vacancies and homeownership, second quarter 2023. Available at: https://www.census.gov/housing/hvs/files/currenthvspress.pdf

United States Census Bureau, 2023d. U.S. and World Population Clock. Available at: https://www.census.gov/popclock/

United States Census Bureau. Data, 2022. Available at: https://data.census.gov/profile/United_States?g=010XX00US

USDA (U.S. Department of Agriculture), 2023. Supplemental Nutrition Assistant Program Participation and Costs. Available at: https://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap

Green Bond Market in the New Context: A Financial Bubble or an Effective Financing Tool?

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Abstract

Ensuring economic growth in the 21st century is inextricably linked to attempts to address pressing human development challenges, including poverty and inequality, climate change, accelerating ecosystem degradation and other

environmental concerns. The concept of corporate social responsibility (CSR) has gradually transformed into an ESG approach, which is largely synchronized with the internationally benchmarked Sustainable Development Goals. The growing popularity of this approach was also reflected in the development of the financial market and financial institutions, which responded with the first issue of green bonds in 2007. One of the drivers of the subsequent growth of this segment of the financial market was a high green premium, which persisted until the crisis events of the early 2020s. The challenges facing the global economy in 2022 had a negative impact on the dynamics and state of the green securities segment and led to the disappearance of the green premium in the fourth quarter of 2022. In the coming years, we can expect the market to recover, as well as its transition to a new state, including through changes in the structure of green bond issuers.

Introduction

The growing concern about climate change and the active environmental efforts of economic agents at various levels, from international to local, have led to the emergence of the concept of "green projects" [ICMA 2021b]. These initiatives aim to reduce the negative impact of economic activity on the environment and, most importantly, to decrease greenhouse gas emissions. Implementing such projects requires substantial financial resources. One financial instrument used to attract investors is green bonds. According to the International Capital Markets Association (ICMA), green bonds are defined as debt instruments whose proceeds or equivalent amounts are exclusively used to finance or refinance green projects. It is important to note that this definition covers not only climate-related projects but also other environmental initiatives. The perception of green bonds as climate bonds is often due to the fact that the first issue of this type of security in 2007 aimed to reduce greenhouse gas emissions and ensure environmental sustainability. These securities were called "climate awareness bonds" [Financial Research Institute 2016]. The International Bank for Reconstruction and Development became an issuer of green bonds a year later in 2008 [World Bank 2022], and the development of this new financial instrument has been very active since then.

Currently, green bonds are classified as part of the World Bank's targeted or thematic bonds, which also include blue bonds for marine and water projects, social bonds for financing socially-oriented initiatives, gender-related bonds, sustainable bonds for projects that combine social and environmental objectives or contribute to the realization of the SDGs [Chase 2021], green sukuks, and sustainable development bonds. The latter ones are different, as their focus is on achieving a specific, predetermined goal and the greater flexibility that comes from not being tied to a specific project [Ul Haq, Doumbia 2022]. Additionally, the term "ESG bonds" is increasingly being used as a synonym for thematic bonds.

The green bond system is quite diverse and includes various types of bonds, such as corporate and sovereign bonds, direct issue and securitized bonds, project bonds,

and others. The International Capital Markets Association [ICMA 2021b] proposes a division of bonds based on the use of proceeds in the "Principles of Green Bonds." Thus, the proceeds of green bonds should finance projects related to renewable energy and energy efficiency, pollution prevention and control, sustainable natural resource management and land use, biodiversity conservation, clean transportation, sustainable water and wastewater management, climate change adaptation, circular economy, and green buildings [ICMA 2021a]. Thus, when analyzing green bonds, we consider a broad range of debt securities that meet the aforementioned requirements and aim to raise funds for sustainable development and green economy projects. This study is dedicated to identifying the overall development trends of such bonds.

The purpose of this paper is to identify and explain the changes in incentives for issuing and purchasing green bonds from their inception to the present. The following section provides a literature review that highlights these incentives. The second section examines the impact of the 2020-2022 crisis on these incentives. The third section supplements this analysis with an empirical study. Finally, the last section discusses a potential trajectory for the future development of the green bond market.

1. Green premium as a growth driver of green bonds: A review of studies

The nature of green bonds explains their focus on obtaining economic benefits as well as achieving altruistic goals of improving environmental quality and solving global problems. While such goals are relevant for states and international institutions, commercial organizations prioritize financial results.

Despite the higher price and lower yields of green bonds compared to conventional issues with long durations (over 3 years) [Agliardi and Agliardi 2019], they are increasingly popular in international markets. The factors driving interest in this financial instrument have changed over time. Previously, the popularity of green securities was attributed to their potential to diversify portfolios, enhance a company's image through participation in environmental projects, and minimize reputational and regulatory risks [Maltais and Nykvist 2020]. Currently, their popularity is determined by their high credit rating (A and above), tax benefits, and the reduction of investment risks for companies that transfer from the issuer to the investor [Khmyz 2019; Flammer 2021]. Certification is considered a factor in the increasing demand for green bonds [Daubanes, Mitali and Rochet 2021]. Estimates of premiums and costs for issuers and bondholders suggest that the attractiveness of the security decreases if the issuer is responsible for certification [Emets 2020]. When issuers shift the costs of certification to investors, the price of green bonds increases compared to conventional securities. This suggests that investors have greater confidence in third-party certification of green bonds. Secondary market studies indicate that the yields of green and conventional bonds are gradually equalizing. This may be due to the gradual distribution of the cost of bond certification, as well as the participation in market transactions of investors who are not willing to overpay for the special status of a green bond.

The literature reveals that divestment from dirty industries has led to relatively low investment risks, which has contributed to the increase in green bond issuance. This trend is linked to the long-term goal of sustainability [Maltais and Nykvist 2020]. Additionally, Alonso-Conde and Rojo-Suárez (2020) note that the lower interest rate of green bonds compared to bank loans is due to the lower cost of capital for financing green projects relative to other debt securities. This effect can be especially noticeable in the case of bullet repayments. Assuming all other factors are equal, the shorter maturity of green bonds compared to conventional bank loans results in a lower internal rate of return. However, the lower rate on green bonds, relative to a simple loan, compensates for this effect and leads to an increase in the internal rate of return on the borrower's equity.

The studies mentioned above indicate that the main reason for issuing green bonds is the presence of a financial premium which is commonly referred to as the green premium or greenium. It is characterized by a reduced yield [MacAskill et al. 2021] or an increased price of green bonds compared to conventional issues [Emets 2020]. It can also be defined as a "yield discount [...] to the common senior debt of the same issuer" [Hilinsky 2023]. Greenium can be viewed as a premium to the cost of capital, indicating progress in the development and deployment of low-carbon solutions. A higher green premium in an industry necessitates more innovation to make the energy transition accessible to different social classes [Gates 2021]. In their analysis of China's Belt and Road Initiative, Zhang, Fang, and Zhao (2022) found that government green bonds are particularly associated with greenium. MacAskill et al. (2021) studied the social, economic, and environmental factors affecting the growth of green securities yields and concluded that the green premium exists in both primary and secondary stock markets. At the same time, there is a shift from financial to non-financial drivers. For instance, investors are becoming increasingly aware of environmental issues, and there is a change in the value paradigm and patterns of consumer behavior towards conscious consumption.

Researchers and analysts cite several reasons for the emergence of the green premium. One reason is the increasing tendency of investors to select companies and financial instruments that exhibit a commitment to sustainable business practices and ESG strategies. It is noteworthy that this trend is not only characteristic of retail investors, but also of institutional players who influence the situation in global and national financial markets. For instance, a 2018 report from Edelman, the American international public relations and strategic communications agency, revealed that 90% of institutional investors have altered their investment selection process to prioritize sustainable development principles [Edelman 2018]. This trend has increased demand for sustainable financial instruments and subsequently raised their yields, impacting the cost of capital. A study of the green bond market between 2016 and 2019 shows that the credit rating and institutional status of the issuer are the determining factors. Large companies with high credit ratings have lower capital costs, while small and medium-sized issuers have higher costs due to the presence of a green premium for investors [Dorofeev 2020].

The emergence of greenium can also be explained by the use of green bonds as a means to diversify investment portfolios. Han and Li (2022) conducted a study analyzing US and EU market data and found that portfolios with green bonds have better risk-adjusted return metrics than those with only common bonds [Han, Li 2022]. This is due

to less correlation of returns between green bonds and other asset types compared to common bonds. This could be explained by the fact that holders of green bonds are less inclined to sell securities during stock market shocks. This tendency promotes the growth of demand for green bonds.

The correlation between a company's ESG rating and the emergence of a green premium is evident. Babkin and Malevskaia-Malevich (2021) analyzed the share price dynamics of several companies and concluded that there is a positive correlation between a company's environmental performance and its financial growth. The authors note that the cost of capital for implementing green initiatives is comparatively lower for projects that are not linked to a sustainable agenda. In such cases, the costs of green initiatives are offset by an increase in greenium as companies improve their environmental performance.

There are a number of endeavors that investigate greenium from the perspective of the supply-demand balance of the relevant industry [Azevedo et al. 2022]. For instance, McKinsey estimates that there may be a shortage of low-carbon steel and recycled plastic in 2025-2030 due to the growing demand for their use in producing components and parts for renewable energy equipment in Europe and China. This is expected to result in a high green premium in these segments. Meanwhile, materials with abundant supply, such as green aluminum and low-carbon copper, will have little to no green premium.

The presence of the green premium can also be explained by investors' perception of the risk associated with these types of bonds. This includes the company's moral capital, which evaluates its philanthropic activities [Godfrey 2005]. In this case, investors associate actions taken to reduce or prevent negative environmental impact or implemented as part of the policy to achieve the Sustainable Development Goals with a reduced probability of default. That is, turning to green long-term investments signals a company's confidence that it has the necessary resources and capabilities to continue its operations over the long term. The presence of moral capital can impact the perception of default risk for the entire company. If the market is efficient, this impact should be consistent across all debt instruments. However, differences in approaches to company valuation by different categories of investors can lead to varying yields, which can affect the appearance of the greenback.

Thus, the factors mentioned above determine the possibility for companies to offer investors lower yields when issuing green debt and thereby reduce their future costs. Empirically, many researchers have confirmed the existence of the green premium, including Ivashkovskaya and Mikhaylova (2020), MacAskill et al. (2021), and Pietch and Salakhova (2022). Partridge and Medda (2018) concluded, based on yield curve analysis, that there is a presence of greenium in the primary and secondary markets at the municipal level in the United States. This is consistent with the improved performance of climate and green indices of US companies during the period under review (2013-2017). Based on the Climate Bond Initiative study, the authors suggest that green bond yield curves with multiple maturity points can serve as a benchmark for pricing new green bonds. This can help reduce capital expenditure on green infrastructure in the primary market [MacAskill 2018].

Partridge and Medda (2018) analyzed municipal green bond issues and found that they are becoming increasingly popular. City governments and municipalities use them

to raise funds for green building projects, transportation, water treatment plants, and energy efficiency. They also refinance and improve existing projects to make them more environmentally friendly [Chhachhar et al. 2023]. One reason for the increasing number of green initiatives at the city level is the need to compensate for underfunding by regional and federal governments. This has become more common in recent years due to increased social spending resulting from COVID-19. Municipal issues are often considered a reliable investment instrument. The issuer, typically a city, guarantees loan repayment with its own resources, which are often backed by public federal funds [Hilbrandt and Grubbauer 2020]. Municipal green bonds enable cities to diversify their resource base and invest in projects that meet local demand [Gorelick 2018]. In addition to financial incentives, the increasing prevalence of these securities in the stock market is due to the potential for greater public and investor participation in local environmental and resource conservation initiatives [García-Lamarca and Ullström 2022].

2. Disappearance of greenium

There has been a significant increase in the issuance of green bonds, with financial commercial organizations experiencing a growth rate of +154.2% per year and non-financial organizations experiencing a growth rate of +117.3%. Accordingly, this growth coincided with an increase in the green premium in 2021 [Ando et al. 2023]. The change in issuance can be attributed to the recovery of business activity after the pandemic and increased investment in green projects. The spread between green and "brown" (ordinary) bonds grew, indicating that players were more enthusiastic about purchasing green financial instruments compared to their traditional counterparts.

However, in 2022, there was an annual decline in issuance, marking the first time in the history of green bonds. S&P Global reports a 25.6% decrease in investment issuance from $596.3 billion in 2021 to $443.7 billion in 2022. The decline was largely driven by decreases in green investment issuance in Europe (-32.5%) and North America (-43.2%), which accounted for approximately 74% of issuance in 2021. Meanwhile, the decline in the Asia-Pacific region was less significant, amounting to approximately 2.5% [Wass et al. 2022; Wass et al. 2023].

Behind the reasons for the sharp decline, it was the destabilization of the world economic system in 2022 caused by the energy crisis, imbalances in energy supply and demand, aggravation of the geopolitical situation, and increased use of sanctions as a foreign policy instrument. The rise in hydrocarbon prices has prompted both developing and developed countries to invest in energy sources that reduce dependence on external shocks. As a result, investment in renewable energy sources increased by 17% in 2022, according to Bloomberg data. Similarly, investment in electric transportation has increased due to rising gasoline costs. This sector showed an unprecedented 54% growth in 2022 [BloombergNEF 2023]. More than half of the investment was made in China. The US and Europe, which were previously the main players in the green investment market, have experienced a significant decline in activity due to several factors that have weakened green investment flows. The primary factor was the inflationary surge, which was associated with both post-quota output growth and excessive government stimulus.

Additionally, markets experienced price shocks in food and energy due to restrictions on hydrocarbon imports from Russia and disruptions in agricultural production chains. Macroregulatory policies that raised interest rates resulted in an increase in the weighted average cost of capital, leading to a general decline in the profitability of investments in leveraged finance instruments, including green finance. At the same time, the profitability of green projects was negatively affected by the general increase in costs due to the inflationary wave. As a result, green projects with lower internal rates of return due to high investments required for insufficiently developed technologies and infrastructure, and relatively small positive cash flows in the near term, often become unprofitable for companies. This significantly reduces the interest of players in such projects. For instance, in 2022, there was a 47% reduction in demand for wind turbines in Europe [Windflix 2023].

Environmentally responsible construction was another green industry affected by global shocks. In 2022, housing affordability decreased significantly, and the volume of mortgage programs also declined. Across Europe, mortgage demand fell by 10% year-on-year in the second quarter [European Central Bank 2023b], followed by declines of 42% and 74% in the subsequent quarters [European Central Bank 2023a]. The current situation, despite the growing trend towards energy efficiency and decarbonization, has led to a freeze in investment plans for green building and a decline in the issuance of related green bonds.

Demand for green bonds has also decreased. Investors, faced with increasing uncertainty and rising inflation expectations, have stopped considering green bonds as a way to diversify their portfolios. Furthermore, the crisis has led to a reallocation of resources towards more stable and conventional financial instruments. Consequently, the discount for green securities is decreasing or disappearing, resulting in a reduction of the greenium to zero.

3. Empirical analysis: In search of the vanishing green premium

Ivashkovskaya and Mikhaylova (2020) propose a methodology for quantitatively analyzing the presence of the green premium. The methodology can be used to analyze the EU and US debt capital markets as of the fourth quarter of 2022, when the debt market dynamics were at their worst. The methodology of Ivashkovskaya and Mikhaylova (2020) was modified by excluding the simultaneous inclusion of modified duration and number of years of paper to maturity in the model due to their expected high correlation. The analysis was conducted for the secondary market with the assumption that if a premium exists in the secondary market, it should also exist in the primary market [Partridge and Medda 2018]. The statistical analysis was conducted solely on European green corporate bonds. The focus on European green bonds is justified because this region was most affected by the energy crisis related to geopolitical instability. The rapid withdrawal of Russian energy resources disrupted the energy balance, causing inflationary pressures and worsening economic growth prospects. This could significantly affect investor sentiment in the debt markets. The source of all bond issue information is the Cbonds platform.

The null hypothesis (H0) that green bonds do not have a green premium during an inflationary crisis is accepted.

The dependent variable used was the G-spread (SPREAD) of the bonds. For the given date, we calculated the difference between the bond yield and the interpolated values of the zero-coupon yield curve of government bonds in the corresponding countries of issue for the remaining life of the bond. The zero-coupon yield curve was constructed using a polynomial model based on the available discrete values. Table 1 (p. 77) displays the list of independent regressors.

Table 1. Independent regressors

Variable	Description
Y_fr_is	number of years since the bonds were issued
Cp	amount of annual coupon on the bond in percent
l_am_out	logarithm of value in circulation at outstanding par value*
MD	modified duration of the bond
Ask_bid_sp	spread between ask and bid prices
Ratin	bond credit rating [1]
GB	a dummy variable that takes the value "1" if the bond is classified at listing as "green," "0" if not
CPI	annual inflation rate in the month prior to issue
GDP	GDP growth in annualized terms in the previous month

* *Note:* The logarithm was originally taken in euros (in the case of Swiss francs, it was translated according to the exchange rate on the date under study). Logarithmization was necessary to normalize the data.

Thus, the original model equation takes the following form:

$$SPREAD = \beta_0 + \beta_1 \times Yfris + \beta_2 \times Cp + \beta_3 \times lamout + \beta_4 \times MD + \beta_5 \times Ratin + \beta_6 \times Ask\_bid\_sp + \beta_7 \times GB + \beta_8 \times CPI + \beta_9 \times GDP$$

The null hypothesis would be rejected if the coefficient in front of the GB variable is statistically significant. The model utilized data from 4 November 2022, which was almost in the middle of the fourth quarter, showing the most pessimistic dynamics in the debt market in 2022. This is because the expectations of the energy crisis and the EU economy entering stagflation have peaked. We limited ourselves to modeling using cross-sectional data for a single day. This was due to the low liquidity of green European instruments, which could cause their value to fluctuate significantly each day. Including variables related to the news background would be necessary in an

[1] Based on data from Moody's, Fitch, and S&P rating agencies. Each rating was assigned integer values in ascending order from best to worst.

alternative time-series scenario. However, creating accurate news-related numerical indices to explain the variation within the time series is problematic due to the presence of bonds linked to different countries and industries. Additionally, the heterogeneity of issuers and issues themselves would result in a different cyclical autocorrelation component, making the t-statistics of coefficient estimates for the variables included in the model inadequate.

A total of 293 green bond issues were analyzed. For each bond, two common bonds with similar remaining periods to maturity from the same company were selected. However, sometimes only one common bond was included in the analysis due to the limited number of similar issues.[2] In the end, the sample of common bonds consisted of 564 issues. To ensure the accuracy of the analysis, only fixed coupon bonds without call and put options were included in the sample. The sample only included bonds denominated in euros and Swiss francs, excluding Eurobonds.

A linear regression model was constructed using the least squares method (LSM) (see Table 2 on p. 79). The variables that were found to be significant in the model after backward selection were the volume of bond issue (l_am_out), modified duration (MD), bond rating (Ratin), GDP growth rate (GDP) in the previous period, and the size of the ask spread (Ask_bid_sp). All of these variables were significant at a level of less than 1%. It was observed that bonds with lower duration exhibited a larger spread compared to more common variants. The relationship between modified duration and spread is typically positive, as shorter durations are associated with lower investor risk. Additionally, the model demonstrated a positive relationship between the Ratin variable and bond spread, indicating that higher levels of risk result in higher required returns and spreads. Regarding the GDP variable, there was a positive relationship indicating a specific trend in the markets at that time. The more positive dynamics the country's economy showed in terms of gross product or business activity indices, the more restrictive measures of fiscal and monetary policy were expected by investors investing in instruments from the issuers of this country [Akitaka, Kenichi 2023]. In other words, the positive news for them may actually indicate future market deterioration and increased risks.[3] The negative relationship between the ask-bid spread and G-spread can be explained by the fact that investors have higher confidence in more actively traded instruments. This means that in case of new risks, they will be able to sell these securities quickly, reducing the level of risk and the required return of the instrument.

The GB variable was already not a significant variable at this stage. However, the White's test revealed heteroscedasticity, which could potentially distort the results, so the weighted least squares method was further applied to minimize the sum of squared deviations and obtain effective estimates (see Table 3 on p. 79).

[2] For some issues, no more than one was found.

[3] For this situation, the authors of the review of the European economy from the Central Bank of Japan use the phrase "good news is bad news" (see: [Akitaka, Kenichi 2023]).

Table 2. Results of linear regression, least squares method

Dependent variable: SPREAD

Robust estimates of standard errors (adjusted for heteroscedasticity), variant HC1

	Coefficient	Standard error	t-statistics	p-value
const	0.0183609***	0.00457702	4.012	<0.0001
l_am_out	–0.00108069***	0.000197881	–5.461	<0.0001
MD_pog	0.00112167***	0.000123501	9.082	<0.0001
Ratin	0.00115298***	0.000200460	5.752	<0.0001
GDP	0.0177479***	0.00391678	4.531	<0.0001
ask_bid_sp	–0.222031***	0.0709039	–3.131	0.0018
GB	–3.14729e-05	0.000501429	–0.06277	0.9500

Average dependent variable	0.013244	St. deviation of dependent variable	0.008857
Residual sum of squares	0.047928	St. model error	0.007518
R-squared	0.284596	Adjusted R-squared	0.279534
F(6, 848)	40.44305	P-value (F)	2.08e-43
Log. plausibility	2971.668	Akaike information criterion (AIC)	–5929.337
Schwartz criterion (SC)	–5896.079	Hannan–Quinn information criterion (HIC)	–5916.601

Note: *** – significance at the 0.01 level.

Table 3. Linear regression results, weighted least squares method

Observations 1-857 (n = 855) were used

Excluded missing or incomplete observations: 2

Dependent variable: SPREAD

Robust estimates of standard errors (adjusted for heteroscedasticity), variant HC1

Weighted variable: WE2

	Coefficient	Standard error	t-statistics	p-value
Const	0.0144423***	0.00510832	2.827	0.0048
l_am_out	–0.000822464***	0.000205848	–3.995	<0.0001
MD_pog	0.000763001***	0.000145808	5.233	<0.0001
Ratin	0.00174806***	0.000176502	9.904	<0.0001
GDP	0.0140203***	0.00417568	3.358	0.0008
ask_bid_sp	–0.225129***	0.0721957	–3.118	0.0019
GB	0.000257615	0.000451179	0.5710	0.5682

Note: *** – significance at the 0.01 level.

Statistics derived from weighted data:

Residual sum of squares	1753.048	St. model error	1.437802
R-squared	0.430104	Adjusted R-squared	0.426071
F(6, 848)	48.23366	P-value (F)	5.08e-51
Log. plausibility	–1520.142	Akaike information criterion (AIC)	3054.283
Schwartz criterion (SC)	3087.541	Hannan–Quinn information criterion (HIC)	3067.019

Statistics derived from the raw data:

Average dependent variable	0.013244	St. deviation of dependent variable	0.008857
Residual sum of squares	0.050156	St. model error	0.007691

When constructing the new model, all significant variables from the model constructed by means of LSM also turned out to be significant. The signs at the coefficients remained the same, which confirms the correctness of the specification. The GB variable here also turned out to be insignificant. Thus, the null hypothesis was not rejected, which means that in Q4 the green premium of corporate green bonds could disappear.

4. Conclusion: Is there a future for green bonds?

Based on the study of changes in external factors and regression analysis, it has been illustrated that corporate borrowers in developed countries had little incentive to issue green bonds in Q4 2022. This can be attributed to macroeconomic and geopolitical instability, as well as a lack of willingness to pay a green premium. However, it is still uncertain whether this means the end of green bonds and their gradual infusion into the stream of brown bonds.

The green bond market exhibited characteristics of a financial bubble. In 2021, there was a post-crisis recovery and a natural increase in investment. Sustainable development is increasingly viewed as a potential source of growth for the new economy, given the significant efforts to decarbonize and transition to new production and consumption patterns, as well as the growing involvement of the corporate sector in the ESG agenda. In 2021, a historic milestone of one trillion dollars was recorded for the green bond market [Climate Bonds Initiative 2022]. Positive investor expectations drove activity so strongly that in the first 18 days of 2022, cumulative global bond issuance, according to Bloomberg data, totaled $572.2 billion [Bloomberg 2023], surpassing the values achieved by green bonds in all of 2021. The explosive growth in issuance led to a build-up in the green premium as well. From 2014 to 2022, green bonds accounted for over 45% of all corporate bond issuances, making them a popular tool for portfolio diversification [Climate Bonds Initiative n.d.].

The changes in the key conditions of the global economy and the debt capital market, which occurred in 2022, have had an impact on the green finance segment. In this vein, the decline in absolute green bond issuance rates and the simultaneous flattening of the greenium is a distressing trend. However, despite the recent crisis in the green bond

market, it is important to note that the sustainable development agenda and focus on green production and consumption remain a priority. This crisis can be seen as a period of turbulence caused by external shocks and a stage of transition to a new development paradigm.

In 2023, the green bond market showed signs of recovery as the global economy adapted to new conditions and recession risks decreased. This is evidenced by an 18.6% increase in the issuance of ESG debt instruments and a 22.2% increase in the volume of green bond sales in the first half of 2023 compared to the same period in 2022 [Gardiner and Freke 2023]. Green debt financing is expected to become even more widespread in the near future, especially in developed economies. For instance, in Europe, after enduring the 2022 shock, there is a growing desire to strengthen energy security by accelerating the green transition. The increase in geopolitical tensions in the Middle East region since the fall of 2023 may lead to a new oil and gas crisis in the next few years.

Additionally, changes in the structure of issuers in the green bond market are expected, including an increase in the share of sovereign issues by actors from developing countries. The transition to a new stage of growth, from extensive to intensive production, will facilitate the importance of investments in the preservation of natural and human capital. China, currently the world's second-largest issuer of green bonds after the United States, is ahead of Germany and France [Climate Bonds Initiative n.d.] in this regard. Developing countries may become a new center of attraction for green bonds and could contribute to a new wave of greenium growth.

The municipal sector shows promise for green bond development. Currently, municipal green bonds account for about 1% of total sustainable securities issuance [Capital Monitor 2022]. However, many green projects are implemented at the city level, including initiatives for green construction, waste management, and transportation, which are frequently included in municipal development strategies, just as often as at the corporate level. Successful examples of municipal bond issues can be found worldwide, including in cities such as New York, Paris, Moscow, Cape Town, and Mexico City. Investing in municipal bonds not only diversifies financial portfolios but also allows individuals to participate in the life of their city, increasing loyalty and reducing expectations for financial returns. The latter is critically important given high level of financial risk in conditions of macroeconomic and geopolitical instability.

Bibliography

Agliardi, E., Agliardi, R., 2019. Financing environmentally-sustainable projects with green bonds. *Environment and Development Economics*. No 6. Available at: https://www.cambridge.org/core/journals/environment-and-development-economics/article/abs/financing-environmentallysustainable-projects-with-green-bonds/AF17C83137370EC47C500414468EDEC6 (accessed 26 June 2023).

Akitaka, T., Kenichi, S., 2023. *Recent Characteristics of Long-Term Interest Rates and Stock Prices in the United States and Europe: With a Focus on the Effects of Increased Attention to Inflation Indicators.* Available at: https://www.boj.or.jp/en/research/wps_rev/rev_2023/data/rev23e06.pdf (accessed 08 September 2023).

Alonso-Conde, A.-B., Rojo-Suárez, J., 2020. On the Effect of Green Bonds on the Profitability and Credit Quality of Project Financing. *Sustainability*. Available at: https://www.mdpi.com/2071-1050/12/16/6695 (accessed 21 June 2023).

Ando, S., Roch, F., Wiriadinata, U., Fu, C., 2023. *Sovereign Climate Debt Instruments: An Overview of the Green and Catastrophe Bond Markets*. Available at: https://www.imf.org/en/Publications/staff-climate-notes/Issues/2022/06/29/Sovereign-Climate-Debt-Instruments-An-Overview-of-the-Green-and-Catastrophe-Bond-Markets-518272 (accessed 04 August 2023).

Asian Development Bank, 2022. *Carbon pricing for energy transition.*

Azevedo, M. et al., 2022. *Capturing the green-premium value from sustainable materials.* McKinsey & Company. Available at: https://www.mckinsey.com/industries/metals-and-mining/our-insights/capturing-the-green-premium-value-from-sustainable-materials#/ (accessed 19 July 2023).

Babkin, A. V., Malevskaia-Malevich, E. D., 2021. Impact of socially responsible investment on the cost of innovatively active industrial enterprises. *St.Petersburg State Polytechnical University Journal. Economics.* No 4. P. 82-94 (in Russian).

Bloomberg, 2023. Global Bond Sales Off to Record Start of Nearly $600 Billion. Available at: https://www.bloomberg.com/news/articles/2023-01-19/global-bond-sales-surge-to-record-start-of-year-at-586-billion#xj4y7vzkg (accessed 21 June 2023).

BloombergNEF, 2023. Global Low-Carbon Energy Technology Investment Surges Past $1 Trillion for the First Time. 26 January 2023. Available at: https://about.bnef.com/blog/global-low-carbon-energy-technology-investment-surges-past-1-trillion-for-the-first-time/ (accessed 21 June 2023).

Capital Monitor, 2022. Where Europe's cities are putting their green money. Aug.1. Available at: https://capitalmonitor.ai/sdgs/sdg-11-sustainable-cities-and-communities/sustainable-bonds-europes-municipals-green-money/ (accessed 21 June 2023).

Chase, M., 2021. Simplifying Sustainable Finance – Explaining Green Bonds, Green Loans, Sustainability-Linked Loans and Bonds and More. *Sustainalytics*. Available at: https://www.sustainalytics.com/esg-research/resource/corporate-esg-blog/simplifying-sustainable-finance-green-loans-vs-green-bonds-vs-sustainability-linked-loan-and-more (accessed 01 August 2023).

Chhachhar, V., Niharika, Singh, R.K., Mishra, S., Tiwari, I.D., Singh, A., 2023. Exploring the Role of Municipalities in Promoting Sustainable Development with Special Reference to Green Bonds in India. *International Journal of Environmental Sciences.* Vol. 9. No 2. P. 31-44.

Climate Bonds Initiative, 2022. $500bn Green Issuance 2021: social and sustainable acceleration: Annual green $1tn in sight: Market expansion forecasts for 2022 and 2025. Available at: https://www.climatebonds.net/2022/01/500bn-green-issuance-2021-social-and-sustainable-acceleration-annual-green-1tn-sight-market (accessed 27 July 2023).

Climate Bonds Initiative, n.d. Available at: https://www.climatebonds.net/market/data/ (accessed 21 June 2023).

Climate Bonds Initiative. *Explaining Green Bonds*. Available at: https://www.climatebonds.net/market/explaining-green-bonds

Daubanes, J. X., Mitali, S. F., Rochet, J. C., 2021. *Why do firms issue green bonds?* Swiss Finance Institute Research Paper. 2021. No 21-97. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3996238 (accessed 05 July 2023).

Dorofeev, M. L., 2020. Distinctive Features of Cost of Capital on Green Bond Market . *ECO*. No 5. P. 62-76 (in Russian).

Edelman, 2018. Edelman Trust Barometer. Available at: https://www.edelman.com/sites/g/files/aatuss191/files/2018-11/Edelman_Trust_Baromter_Institutional_Investor_US_Results_0.pdf (accessed 21 August 2023).

Emets, M. I., 2020. Green bond premium: literature review and perspectives. *Bulletin of Eurasian Science*. No 2. P. 39-47 (in Russian).

European Central Bank, 2023a. *The euro area bank lending survey - Fourth quarter of 2022*. Available at: https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/ecb.blssurvey2022q4~e27b836c04.en.html (accessed 13 July 2023).

European Central Bank, 2023b. *The euro area bank lending survey*. Available at: https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/ecb.blssurvey2022q2~ce6d1a4597.en.html (accessed 21 June 2023).

Financial Research Institute, 2016. Comparative analysis of financing mechanisms for "green" and "dirty" investment projects. Available at: https://minfin.gov.ru/common/upload/library/2018/06/main/2016_part_1.pdf (accessed 21 June 2023) (in Russian).

Flammer, C., 2021. Corporate green bonds. *Journal of Financial Economics*. No 2. Available at: https://www.sciencedirect.com/science/article/pii/S0304405X21000337 (accessed 15 July 2023).

García-Lamarca, M., Ullström S., 2022. "Everyone wants this market to grow": The affective post-politics of municipal green bonds. *Environment and Planning E: Nature and Space*. Vol. 5(1). P. 207-224.

Gardiner, J., Freke, T., 2023. Green bonds boom in first half of 2023. July 27. Available at: https://www.bloomberg.com/professional/blog/green-bonds-boom-in-first-half-of-2023/

Gates, B., 2021. A green premium. *Time*. Vol. 18. No 4. P. 90-92.

Geels, F., Pereira, G., Pinkse, J., 2021. *Public investments in COVID-19 green recovery packages: A comparative analysis of scale, scope, and implementation in France, Germany, and the United Kingdom*. The Productivity Institute. Available at: https://www.productivity.ac.uk/wp-content/uploads/2021/06/Public-investments-in-COVID19-green-recovery-packages-FINAL.pdf (accessed 19 June 2023).

Godfrey, P.C., 2005. The relationship between corporate philanthropy and shareholder wealth: A risk management perspective. *Academy of Management Review*. No 4. P. 777-798.

Gorelick, J., 2018. Supporting the future of municipal bonds in sub-Saharan Africa: the centrality of enabling environments and regulatory frameworks. *Environment & Urbanization*. Vol. 30(1). P. 103-122.

Han, Y., Li, J., 2022. Should investors include green bonds in their portfolios? Evidence for the USA and Europe. *International Review of Financial Analysis*. Available at: https://www.sciencedirect.com/science/article/abs/pii/S1057521921003136 (accessed 19 June 2023).

Hilbrandt, H., Grubbauer, M., 2020. Standards and SSOs in the contested widening and deepening of financial markets: The arrival of Green Municipal Bonds in Mexico City. *EPA: Economy and Space*. Vol. 52(7). P. 1415-1433.

Hilinsky, E., 2023. How ESG factors affect bond prices and yields. Available at: http://review.cbonds.info/article/magazines/5409/ (accessed 03 July 2023) (in Russian).

ICMA, 2021a. Green Bond Principles Voluntary Process Guidelines for Issuing Green Bonds. Available at: https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-BondPrinciples-June-2021-140621.pdf (accessed 08 July 2023).

ICMA, 2021b. Principles of green bonds. Available at: https://www.icmagroup.org/assets/documents/Sustainable-finance/Translations/Russian-GBP_2021-06v2-100222.pdf (accessed 15 June 2023) (in Russian).

Ivashkovskaya, I., Mikhaylova, A., 2020. Do Investors Pay Yield Premiums on Green Bonds? *Journal of Corporate Finance Research*. Vol. 14. No 2. P. 7-21.

Jian, J., Fan, X., Zhao, S., 2022. The green incentives and green bonds financing under the belt and road initiative. *Emerging Markets Finance and Trade*. No 5. Available at: https://www.tandfonline.com/doi/full/10.1080/1540496X.2021.1887726?scroll=top&needAccess=true (accessed 01 July 2023).

Khmyz, O. V., 2019. *International experience of issuing "green" bonds*. Available at: https://cyberleninka.ru/article/n/mezhdunarodnyy-opyt-vypuska-zelenyh-obligatsiy (accessed 17 July 2023) (in Russian).

MacAskill, S. et al., 2021. Is there a green premium in the green bond market? Systematic literature review revealing premium determinants. *Journal of Cleaner Production*. No 280. P. 1-12.

Maltais, A., Nykvist, B., 2020. Understanding the role of green bonds in advancing sustainability. *Journal of Sustainable Finance & Investment.* Available at: https://www.tandfonline.com/doi/full/10.1080/20430795.2020.1724864 (accessed 19 July 2023).

Miller, N., Spivey, J., Florance, A., 2008. Does green pay off? *Journal of Real Estate Portfolio Management*. No 4. P. 385-400.

Partridge, C., Medda, F., 2018. Green premium in the primary and secondary US municipal bond markets. SSRN. Available: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3237032 (accessed 04 August 2023).

Pietch, A., Salakhova, D., 2022. Pricing of green bonds: drivers and dynamics of the greenium. ECB Working Paper No. 2022/2728. Available at: https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2728~7baba8097e.en.pdf

Ravina, A., 2022. On bond returns in a time of climate change. *The Energy Journal*. No 1. P. 139-159.

Ul Haq, I., Doumbia, D., 2022. *Structural Loopholes in Sustainability-Linked Bonds.* The World Bank. Available at: https://documents1.worldbank.org/curated/en/099237410062223046/pdf/IDU0e099a50307f86045a80b33201d0b7057cedf.pdf (accessed 06 July 2023).

Wass, S., Isjwara, Wu, J., Ahmad, R., 2022. Europe's dominance in green bond market fades amid record growth in China. Available at: https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/europe-s-dominance-in-green-bond-market-fades-amid-record-growth-in-china-71321575.

Wass, S., Wu, J., Yamaguchi, Y., Ramos, M., 2023. Global green bond issuance poised for rebound in 2023 amid policy push. Available at: https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/global-green-bond-issuance-poised-for-rebound-in-2023-amid-policy-push-73931433 (accessed 04 August 2023).

Where Europe's cities are putting their green money. *Capital Monitor*. 2022. Aug. 1. Available at: https://capitalmonitor.ai/sdgs/sdg-11-sustainable-cities-and-communities/sustainable-bonds-europes-municipals-green-money/ (accessed 21 June 2023).

Windflix, 2023. Investments in wind energy are down — Europe must get market design and green industrial policy right. Available at: https://windeurope.org/newsroom/press-releases/investments-in-wind-energy-are-down-europe-must-get-market-design-and-green-industrial-policy-right/ (accessed 21 June 2023).

World Bank, 2017. *Green Sukuk*. Available at: https://www.worldbank.org/en/news/infographic/2017/09/19/malaysia-green-sukuk (accessed 06 July 2023).

World Bank, 2022. Sovereign green, social and sustainability bonds: unlocking the potential for emerging markets and developing economies. Available at: https://thedocs.worldbank.org/en/doc/4de3839b85c57eb958dd207fad132f8e-0340012022/original/WB-GSS-Bonds-Survey-Report.pdf (accessed 30 June 2023).

Zhang, Y., Umair, M., 2023. Examining the interconnectedness of green finance: an analysis of dynamic spillover effects among green bonds, renewable energy, and carbon markets. *Environmental Science and Pollution Research*. No 30. P. 77605-77621.

The NDB and SDGs: Does the Bank Fulfill Its Mandate?

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As an innovative institution, NDB has to permanently be up to the challenge of being always new.

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K**eywords:** NDB, SDGs, Multilateral Development Banks, financing for development, SDG reporting, inequality.

Abstract
Multilateral Development Banks (MDBs) have long played an important role in resolving of international challenges, including though research cooperation. They are believed to be less politically engaged than bilateral development assistance programs and therefore better positioned to form the global agenda. The New Development Bank (NDB), in its turn, is an especially important player among MDBs, since it is one of the few institutions with the world's largest economies

as its co-founders, but without any of the G7 economies. In 2020 it showed its ability to provide well-timed and effective loans to its members during crises, approving the first NDB Emergency Assistance Program in Combating COVID-19 in March 2020.

In this article we discuss changes to the global sustainable development agenda and the NDB's contribution to the sustainable development goals (SDGs) in member countries, potential instruments and priority sectors in the longer-term and implications for the global financial architecture, given the changing global economic environment. We have looked at the alignment of NDB projects with the SDGs and concluded that the NDB primarily contributes to SDG 6, SDG 7, SDG 8, and SDG 9, with the latter—with its 49 projects—leading the way. This is consistent with the Bank's mandate, which highlights infrastructure as a primary sector of investment.

Introduction

The shocks of the last years severely disrupted global sustainable development plans and require a serious reconsideration of the 2030 agenda. One of the main outcomes of this crisis is increased inequality, within and between countries. As developed countries have been focusing on their own paths out of recession, and their domestic fiscal stimuli have increased on an unprecedented scale, their assistance to developing countries in need was far more modest.

Total official development assistance (ODA) from the Development Assistance Committee (DAC) countries increased by 11% [OECD, n.d.] to USD 206 billion in 2022. However, the scope and complexity of global needs have increased dramatically during the COVID-19 pandemic: as per OECD estimates, the SDG financing gap increased up to USD 3.7 trillion in 2020 [OECD 2021a. P. 15]. Both these trends—a small increase in assistance and a large increase in development financing needs—have led to a decline in the relative capacity of the ODA. The situation looks especially unfair when one looks at the geographical distribution of assistance: the share of low-income countries as recipients fell by 3.5 per cent to USD 25 billion in 2020 in comparison to 2019 [OECD 2021a. P. 8]. As one might expect, the ODA's priorities had shifted to healthcare and medical needs (especially vaccination) during the pandemic [IHME 2021].

Disruption of the SDGs and a relative decrease in financing has led to a change in the type of challenges faced by international society, from short-term analysis and measures to deeper layers of problems in terms of adaptation to current and possible future crises and the long-term development agenda. The same applies to development cooperation: the key issue is how to provide support for a number of small countries that have been affected, or less developed countries with significant losses in income. But in the longer term, the key problem is the restoration of growth and a return to the path of development, as well as resolving issues pertaining to

adaptation to crises. Regional or systemic banks are expected to follow the deep changes in the global agenda.

The bilateral and multilateral assistance agenda has been shifting in recent years. The 2020 pandemic took the world aback, and all countries had to find their own ways to fight the disease with limited international assistance, rather than it being united international effort. The global agenda started to include more healthcare issues, "new poverty," etc. [Grigoryev, Morozkina 2022]. At the same time, the issue of energy security started to grow in importance [Grigoryev, Medzhidova 2020]. In 2020-2022, global political and economic processes started running ahead of the capability of response of the multilaterals and national governments. The recovery of 2021 came at the same time as the early commodity cycle and was characterized by a delayed recovery in services, but fast growth in consumer demand. Energy and commodity prices have been growing much faster than consumer inflation in general, and there was a danger of stagflation from the 1980s returning. Before any remedies were found and employed, Russia's special military operation (which began on 24 February 2022) received a dramatic response in the shape of sanctions from NATO and the EU countries. It is probably fair to say that the traditional development agenda, global governance, and the path of global economic growth may never be the same as in previous decades.

In these difficult circumstances, multilateral development banks, as both research institutions and participants in the system of development assistance, have to play a decisive role in shaping the new framework. They are believed to be less politically engaged [Morozkina 2019] and thus have a more balanced position in terms of global development and its financing.

This article considers the potential role of the multilateral development banks (MDBs) and the New Development Bank (NDB) in particular in updating the sustainable development agenda globally. In the first section, the most recent trends in sustainable development framework and long-term implications are analyzed, while in the second section, the theoretical role of MDBs in sustainable development are examined. In the third part, the data sources and evaluation methodology of the NDB's role in sustainable development are explained. In the fourth section we look at the activities of the NDB in the field of sustainable development, and in the final section we give some recommendations on the development of NDB policies.

Latest trends in SDGs

The shock of the COVID-19 pandemic severely disrupted global sustainable development plans in 2020-2022 and affected all the sustainable development goals (SDGs). Until 2019, the international community appeared optimistic about the then course of events (based on the UN National Voluntary SDG reports). Discussions relating to the achievement of the SDGs commonly focused on the expected success of the implementation of the SDG agenda by 2030, although, at the same time, achievements on the ground were not impressive in many respects. The recent Global Sustainable Development Report shows pathways for critical transformations needed to accelerate global efforts in terms

of development [UN 2023]. The shock caused by the COVID-19 pandemic changed the anticipated early trajectory, disrupted the SDGs, and created a new list of problems to address. For example, the year 2020 demonstrated the unsustainability of some of the results that had been achieved thus far [Sachs et al 2021]. Further, the global average index measuring the performance of countries in terms of the SDGs declined in 2020 for the first time since 2015, and the pandemic and following shocks have already severely affected the first goal (SDG 1, End poverty in all its forms everywhere) as the number of the people living on less than USD 1.90 per day has increased by more than 75-95 million people, while at the same time their proportion of the world population grew from 8.7% in 2019 to 9.6% in 2020 [World Bank n.d.]. Other goals were surely also severely affected, as is shown by the UN [UN 2023]. The proportion of undernourished people increased from 8% in 2019 to 9.8% in 2021 [UN 2023. P. 10]. SDG 3 (Good health and well-being) seems to be no longer achievable with the decline in life expectancy during 2020 in most European countries [EC 2021]. Target 3.3, "By 2030, end... epidemics... and other communicable diseases" appears to be inconsistent with present realities [UN 2015], especially given the growing number of COVID-19 deaths from 1.8 million in 2020 to 4.8 million in 2021 [Our World in Data n.d.].

SDG 4 (Quality education) will also require correcting given the mass school closures in 2020 and the effects on education, which are yet to become clear. For example, in April 2020, schools in 173 countries were closed due to lockdowns, and in 7 more countries schools were kept only partially open [UNESCO 2021]. Given the differences in access to digital education, school closures also increased inequality within and between countries depending on access to online education during lockdowns (Goal 10, Reduced inequalities).

In addition to the above, SDG 8 (Decent work and economic growth) showed a negative performance with rising global unemployment, up from 5.4% in 2019 to 5.8% in 2022 [UN 2023. P. 14].

SDG 7 (Affordable and clean energy) and SDG 13 (Climate action) were, at first, seen as having gained from the lockdowns. But they did not fare better than the other SDGs in the end, with daily CO_2 emissions eventually increasing and overcoming pre-crisis levels no later than the beginning of 2021, and in sum being much higher than expected. Total CO_2 emissions in 2020 were only 5.4% lower than in 2019 [Liu et al. 2021]; GHG emissions in 2021 had surpassed the 2019 level not only in China, but in many other countries, and globally. Coal returned in 2021, even in EU countries. That was a negative signal for the UN Climate Change Conference in Glasgow in November 2021, which was to set new, advanced goals on the climate agenda. There is no shortage of energy globally and, for the most part, regionally.

While high prices for traded energy materials reached new heights at the beginning of 2022, sanctions, and later, the partial embargo for Russia energy exports (also metals and fertilizers) brought the prices to even higher, and rigid, levels. The same should be said about grain prices, dependent also on energy and transportation costs, which in turn depend on policies for cargo shipping and the use of ports. In terms of strategic planning in the development context, we can highlight the key three current challenges: (1) the challenging situation during 2022; (2) the long-term limitation on financing, logistics

and management on the SDG agenda; (3) the change of priorities in the long run for many governments and multilaterals.

The overall effect of the 2020 crisis has been described as "catastrophic" [UN 2021]. It has increased the financing gap for developing countries to overcome the crisis and also to achieve the SDGs by at least 50%, amounting to USD 3.7 trillion in 2020 [OECD 2021a]. The IMF has also voiced concerns regarding the vaccination gap [IMF 2021. P. 2-3].

Given the potential for present conditions to become endemic, and ultimately creating a "new normal," scholars such as Bobylev and Grigoryev (2020), Grigoryev and Medzhidova (2020), and Grigoryev et al. (2021) have proposed some amendments to the SDGs. They suggest that it is necessary to strengthen the concept of the value of human life in the SDGs and propose two options: first, transforming SDG 3 (Good health and well-being) to include health-related indicators from other SDGs, e.g. redistributive impact of fiscal policies (target 10.4), which, among other things, means access to healthcare facilities; second, creating an additional SDG in light of the concept of the value of human life and the risk of epidemics and new diseases [Bobylev and Grigoryev 2020].

For a long time, the differences between national healthcare systems reflected the institutional settings of societies and taxation systems. Since the COVID-19 pandemic, it is concerning that despite the uneven performance of healthcare systems in developed countries (and we are not talking about developing countries here) at the time of the pandemic, there have been no public calls for reviewing the above-mentioned financial and institutional healthcare framework in the new environment. Of course, it is hard to launch this kind of overhaul in the midst of an ongoing crisis. But the absence of debate on creating more adequate systems in the future looks puzzling, though it is understandable from the viewpoint of vested interests in the existing healthcare systems: the state (state budgets); private financing; companies providing medical drugs, etc. From this viewpoint, and as seen in Table 1 below, there are more questions than answers. Huge differences in healthcare expenditures per capita among the global community have protected people from COVID-19 infections. All countries and medical organizations were doing their best to combat the pandemic, while social and financial problems now look deeper than just managerial and budgeting issues. Unexpectedly, the US and UK also have relatively high rates of deaths during these two years, which are close to the COVID-19 mortality rates reported in Brazil and Mexico. Such correlations are worthy of a call for a review of traditional views on healthcare systems as they relate to the SDGs. At the same time, such adverse results partly explain the difference between the scale of domestic and international reactions of donor countries, as advanced economies struggled with their own difficulties. Multilateral development institutions may play a significant role in such discussions of the ways to increase the sustainability and resilience of social systems, given their expertise and more neutral role.

Table 1. Differences in healthcare systems, latest available data* (2020 for expenditures and March 2022 for the COVID-19 effect)

	Healthcare expenditures, current USD per capita, 2020	Cumulative number of COVID-19 deaths, % of population	Cumulative number of confirmed COVID-19 cases, % of population	Share of people fully vaccinated, % of population, March 2022
High-income ountries, *incl.*	**6176**	**0.19**	**22.3**	**74**
US	11702	0.30	24.3	66
UK	4927	0.25	31.5	72
France	4492	0.21	37.8	78
Germany	5930	0.16	25.4	75
Upper-middle-income countries, *incl.*	**527**	**0.10**	**4.9**	**76**
Russia	774	0.25	12.2	50
China	583	0.00	0.0	86
Mexico	539	0.25	4.4	61
Brazil	701	0.31	14.1	75
South Africa	490	0.17	6.3	30
Lower-middle-income countries, *incl.*	**95**	**0.04**	**2.7**	**50**
India	57	0.04	3.1	60
Ukraine	270	0.25	11.4	35
Philippines	165	0.05	3.4	59
Low-income countries, *incl.*	**34**	**0.01**	**0.3**	**11**
Ethiopia	29	0.01	0.4	18

* All countries in the World Bank database by income groups (and averages)
Source: World Bank (n.d.), Our World in Data (n.d.)

MDBs in sustainable development

The role of multilateral development banks in sustainable development agenda has long been recognized by scholars. There are four key groups of MDB activities in relation to sustainable development recognized by researchers: increase of financing for development; incorporating SDGs in operational process (project requirements and evaluation); promotion of the agenda and norm setting; the mobilization effect on private financing.

Although sometimes MDBs are seen as marginal sources of financing for development in comparison to bilateral financing [Kenny 2019], generally, international society sees

them as an important source of development financing [Avellan et al. 2022; Griffith-Jones 2016]. The role of development banks is particularly important in crises, when multilateral finance usually plays a more counter-cyclical role [Griffith-Jones 2016, Griffith-Jones and Gottschalk 2012] than bilateral financial flows. This phenomenon was once more justified in 2020, when six key MDBs (the World Bank, Asian Development Bank (ADB), African Development Bank (AfDB), Inter-American Development Bank (IADB), Asian Infrastructure and Investment Bank (AIIB), NDB) quickly stepped in with a large increase in disbursements. Their collective disbursements increased by 34% in 2020, whereas ODA bilateral disbursement by the Development Assistance Committee rose by only 10% during the same period (Figure 1). For example, the high rating and access to finance allowed the International Bank for Reconstruction and Development (IBRD, part of the World Bank Group) to raise USD 15 billion through sustainable development bonds over a three-day period [World Bank 2021]. Of course, in absolute terms, bilateral ODA from DAC countries is by no means comparable to total disbursements of MDBs, because not all of the latter flows are counted as ODA.

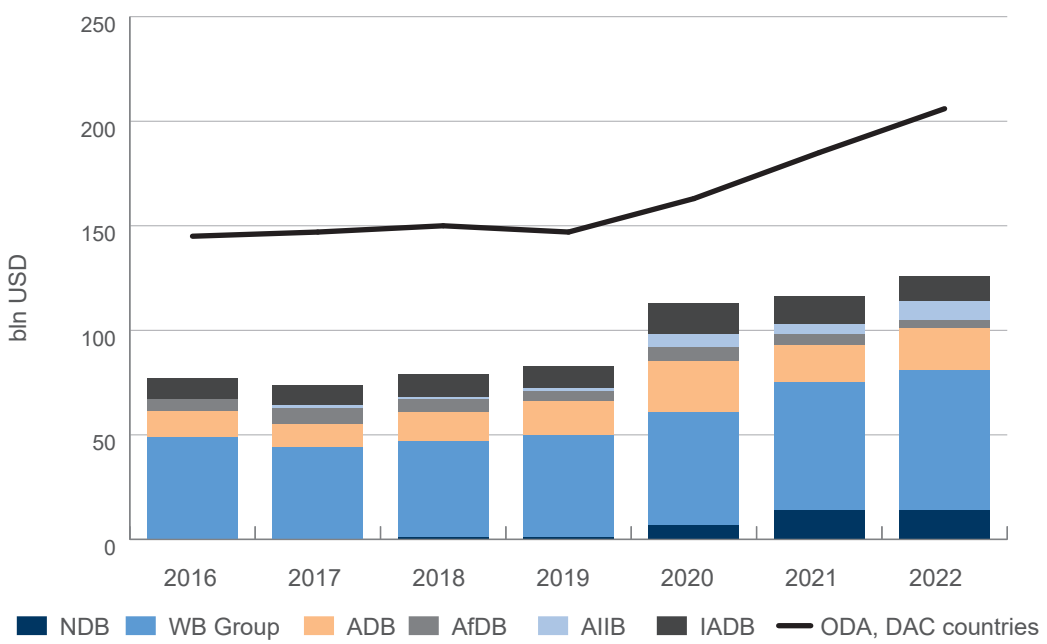

Figure 1. Disbursements of the key MDBs and ODA of Development Assistance Committee (DAC) Countries, 2016-2022, bln USD

Source: World Bank (2023), NDB (2023), ADB (2023), AfDB (2023), IADB (2023), AIIB (2023), OECD (n.d.)

The second way to support sustainable development is to align the operations of the bank with it. Günther Handl concludes that multilateral development banks have the ability and "international legal obligation to take sustainable development considerations into account" [Handl 1998. P. 665]. For example, the New Development Bank publishes its

contribution to the SDGs in its annual report [NDB 2021] and takes the sustainability of a project into consideration as one of the criteria for approval [NDB 2022]. MDBs also use innovative financial instruments and play a role in scaling them. Mendez and Houghton (2020) highlight the role of MDBs in promotion of green bonds and emphasize that "MDBs (and other supranational agencies) were green bonds' only issuer before 2012" [Mendez, Houghton 2020. P. 13].

Some researchers highlight the role of MDBs in development banking as norm promoters [Mendez, Houghton 2020] and agenda-setters: "the development banks have shaped thinking about what development means and how to go about it" [Bazbauers, Engel 2021. P. 2]. MDBs have carried out substantial pioneering research in the sustainable development sphere [Bhattacharya et al. 2018], publish reports on sustainable development [Gable et al. 2015], and maintain databases. The NDB does not have any publicly available reports or databases in the sphere, however, it made an important step as promoter of the local currency bond market with bond programs in Chinese renminbi, South African rand, and Russian rubles, and 20.8% of loans made in local currencies of member countries (cumulative share, NDB, 2023).

And the great majority of researchers stress the mobilization effect of MDBs in sustainable finance [Broccolini et al. 2020, Avellan et al. 2022, Artecona et al. 2019, Bhattacharya et al. 2018]. This function has even been placed at the center of the sustainable development financing system. For example, the World Bank states that projects should be financed with public funding only if there is no sustainable private sector solution [OECD 2021b. P. 372], and international organizations increasingly use the term "blended finance" defined as "the strategic use of development finance for the mobilization of additional finance towards sustainable development in developing countries" [OECD 2018]. It is estimated that development bank-backed blended finance can be leveraged at 9:1 ratio [Kenny 2019. P. 1]. The NDB also contributes to the mobilization of sustainable finance: for example, based on the data for projects where the total value of a project is available, authors calculated that USD 33 billion provided by the NDB was allowed to finance projects totaling more than USD 80 billion. At the same time we must note that some of the finance was added by local government entities, so one has to be cautious when talking about the mobilization effect and only take into account the attraction of private finance, rather than just the total project cost.

Overall, MDBs, and the BRICS' NDB in particular, play an important role in global development, especially given the challenges associated with global governance in the current geopolitical circumstances. They are obligated to participate and possibly take the lead in resolving a new set of problems amid limited resources and shifting priorities. Disruption of global logistics and supply chains—for various reasons and in various different ways—will inevitably lead to countries making new attempts to achieve autonomy and independence.[1]

The new hybrid format is coming, with the high intensity of trade regionalization, friend-shoring, and the trend toward self-sufficiency with regards to essential commodities and technologies. Investment projects will reflect not only development needs, financing and

[1] For example, establishment of independent mechanisms such as new financial settlement mechanisms, bilateral and multilateral trade agreements, climate-related country-specific goals etc.

technologies, but also issues regarding sanctions, compliance and export market restrictions. The development objectives will be extremely difficult to reach in such a tough environment.

Data and methodology

The New Development Bank has a special role in sustainable development. From the beginning, it was mandated to "mobilize resources for infrastructure and sustainable development projects in BRICS and other emerging and developing countries" [BRICS 2014]. As the previous section showed, it contributes to all four areas of MDB support to sustainable development.

Moreover, each one of the NDB's projects can be aligned with sustainable development goals. The Bank itself has developed a special evidence-based method to monitor and report on the alignment of the Bank's financing with the SDGs, and published these results in its annual report. This constitutes a major difference as compared with other key development banks such as the World Bank and three large regional banks (ADB, AfDB, IADB). Though they mention SDGs in annual reports, all these banks have adopted various social and environmental strategies and align their operations with the SDGs, and they do not regularly publish the direct contribution to SDGs of their projects in their reports or project descriptions.

In this research, we have improved the methodology proposed by the New Development Bank. The Bank aligns each project only with one primary goal, whereas other projects have a number of goals, such as the Pará Sustainable Municipalities Project,[2] which develops municipalities in three areas: road paving, sanitation improvement and enhancement of digitalization. As a consequence, this contributes to three different SDGs, all of which are equally important. Thus, we aligned each of the projects approved by the NDB with all of the goals it can contribute to.

In order to calculate the contribution of NDB projects to the SDGs, we analyzed the list of projects publicly available on the NDB website. The list contains 126 projects. Of these, there are 94 approved projects, 27 proposed and 5 cancelled. For the purposes of our analysis we took only the approved projects, totaling USD 33 billion. After that we used the following scheme:

- First, we selected only approved projects, including technical assistance;
- Second, we aligned each of the 94 approved projects with the SDGs it can contribute to, using publicly available project description and SDG targets and indicators. We counted only direct impact, not taking into account, for example, potential economic benefit for rural households from improved road connection, or effect of improved sanitation on community health.
- Third, we summarized the number of projects and the loan amounts in the table. Since one project may be attributed to a number of goals, the sum of the projects' value exceeds USD 33 billion, and the number of projects exceeds 94. In case of loan currencies other than USD, we used the exchange rate on the date of project approval to convert the loan value into USD.

[2] New Development Bank. Pará Sustainable Municipalities Project https://www.ndb.int/project/para-sustainable-municipalities-project-brazil/

Sector breakdown might be a primary draft of projects' contribution to the SDGs, except for the COVID-19 emergency loans and multisector loans. This primary analysis shows the large number of infrastructure projects, including transport, social and sustainable infrastructure. In second place we can see clean energy with 14 projects and USD 4 billion. Thus we might deduct that the main goal that NDB contributes is Goal 9 (Industry, Innovation and Infrastructure) and Goal 7 (Affordable and Clean Energy). At the same time, the sector cannot be used as a precise evaluation of projects' contributions to an SDG, as some projects may contribute to several SDGs within one sector. For example, the Sorocaba Mobility and Urban Development Project[3] contains measures aimed at both improvement of urban planning (Goal 11) and road infrastructure (Goal 9). Another challenge with the sectorial breakdown is related to indirect association of the sector with the SDG. For example, as two out of three social infrastructure projects are related to education (Teresina Educational Infrastructure Program[4] and Development of Educational Infrastructure for Highly Skilled Workforce[5]), measures provided by the Judicial System Support Project[6] are contributing more to the upgrade of physical ICT infrastructure in the judicial sphere. In the next part we will look into the alignment of the bank's operations with the SDGs in more detail.

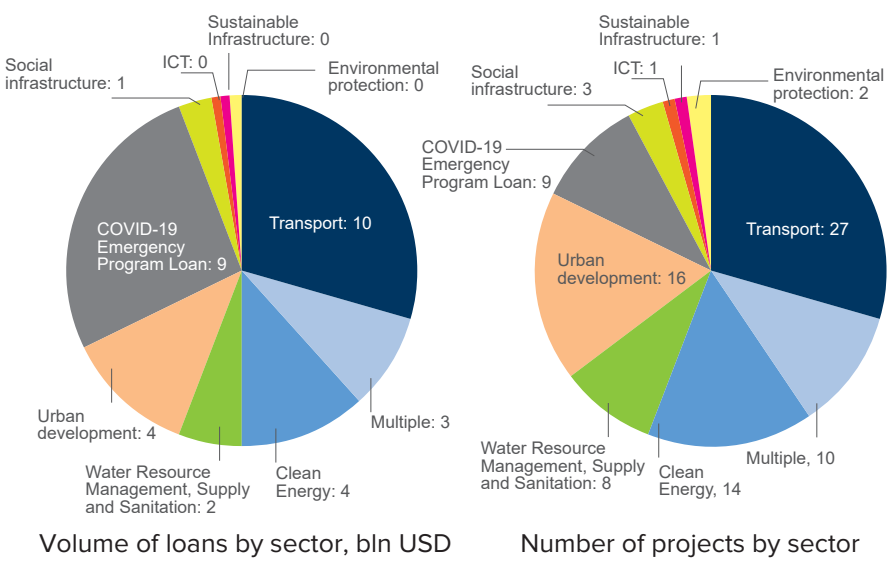

Figure 2. NDB projects by sector, number and volume (USD bln), 2023

Source: NDB (n.d.)

[3] New Development Bank. Sorocaba Mobility and Urban Development Project. https://www.ndb.int/project/xian-xianyang-international-airport-phase-iii-expansion-project/

[4] New Development Bank. Teresina Educational Infrastructure Program. https://www.ndb.int/project/brazil-teresina-educational-infrastructure-program

[5] New Development Bank. Development of Educational Infrastructure for Highly Skilled Workforce. https://www.ndb.int/project/russia-development-educational-infrastructure-highly-skilled-workforce/

[6] New Development Bank. Judicial System Support Project. https://www.ndb.int/project/judicial-support-russia/

The NDB in sustainable development

The New Development Bank has approved a set of documents governing its environmental and social activities, including: Environmental and social framework, environmental and social guideline, sustainable financing policy framework. These ensure the environmental and social soundness and sustainability of operations and support integration of these aspects into the decision-making process, including project approval and the usage of green and sustainability instruments. The basic document is the "Environment and Social Framework" [NDB 2016], which sets the categories for projects according to their social and environmental impact: A - significant adverse impact; B - less adverse than A; C - minimal or no impact. This information is publicly available for all of the projects on NDB's portal. Also there is a rule that if the project is conducted using the financial intermediary (e.g. the loan is given to another bank or fund), and has a significant negative impact (category A), it has to be approved directly by the NDB's Board of Directors [NDB 2016. P. 8].

The NDB's portfolio directly contributes to achieving 12 out of 17 SDGs (Table 2). We can see that as we expected, a large portion of NDB investment contributes to SDG 9, with 49 projects containing at least one measure related to this goal. This is consistent with the bank's mandate, which highlights infrastructure as a primary sector of investment. Also, the next largest goal by the number of projects is Goal 7, as the sectorial breakdown showed, whereas by the project volume the second place is held by SDG 8.

Table 2. The NDB's cumulative project approvals by primary SDG alignment

SDG Alignment	Number of projects	Cumulative approvals (USD mln)	Share of total project value (%)
SDG 1. No poverty	3	3,000	8.9
SDG 2. Zero hunger	1	300	0.9
SDG 3. Good health and well-being	6	4,214	12.6
SDG 4. Quality education	3	650	1.9
SDG 6. Clean water and sanitation	17	4,406	13.1
SDG 7. Affordable and clean energy	20	5,990	17.8
SDG 8. Decent work and economic growth	14	8,476	25.2
SDG 9. Industry, innovation and infrastructure	49	15,293	45.5
SDG 11. Sustainable cities and communities	15	4,942	14.7
SDG 13. Climate action	2	600	1.8
SDG 16. Peace, justice and strong institutions	1	460	1.4

Source: Author's calculations based on NDB (n.d.)

These results are somewhat different from the SDG alignment published in the annual report. The first and main reason behind this is the methodology, which allows us to count more projects as related to a particular goal. For example, the NDB's results

show 24 projects contributing to Goal 9 with USD 8 billion in investment. However, there are projects with a minor contribution to this goal, which are not counted, so our estimations show a much higher number, 49 projects. Unfortunately, there is no publicly available information on the financing of the sub-projects, which means we cannot be more precise in estimations of financial contributions to particular SDGs. Thus, the whole project cost is included in each goal it contributes to. The second reason is the updated data in our research, as the results in the annual report do not count 10 projects in this field approved in 2022-2023.

As a part of its sustainability strategy, the NDB publishes SDG-related targets and planned results in its annual report (Table 3). These expected results are available only for those targets where the alignment with the SDGs and potential impact is clear and quantifiable. For example, three projects identified as having an impact on SDG 1 (No poverty) are the COVID-19 Emergency Loans.[7] One of their goals was stated as strengthening social safety nets, which coincides with targets 1.3 (Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable) and 1.5 (By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters) [UN 2015]. However, there were no specific estimates of the number of people affected in project documentation.

Table 3. Expected SDG impact of the NDB's operations

Development indicators	Expected outcome	SDG alignment
Schools to be built or upgraded	58	SDG 4. Quality education
Sewage treatment capacity	535,000 m^3/day	SDG 6. Clean water and sanitation
Drinking water supply capacity to be increased	159,000 m^3/day	SDG 6. Clean water and sanitation
Water tunnel/canal infrastructure to be built or upgraded	1,300 km	SDG 6. Clean water and sanitation
Renewable and clean energy generation capacity to be installed	2,800 MW	SDG 7. Affordable and clean energy
Roads to be built or upgraded	15,300 km	SDG 9. Industry, innovation and infrastructure
Bridges to be built or upgraded	820	SDG 9. Industry, innovation and infrastructure
Urban rail transit networks to be built	230 km	SDG 11. Sustainable cities and communities
Cities to benefit from NDB's urban development projects	40	SDG 11. Sustainable cities and communities
CO_2 emissions to be avoided	5.5 mln tons/year	SDG 13. Climate action

Source: NDB (2021) Annual report 2020, p. 9. https://www.ndb.int/governance/transparency-reporting/

[7] New Development Bank. COVID-19 Emergency Program for South Africa https://www.ndb.int/news/ndb-board-directors-approves-usd-1-billion-covid-19-emergency-program-loan-south-africa/

Thus, our analysis show that the NDB primarily contributes to the goals that raise the least number of questions in terms of changed circumstances, such as SDG 6, SDG 7, SDG 8, and SDG 9. Similar results with highlighting SDGs 7 and 9 were obtained using a case study approach based on 5 NDB projects [Braga, de Conti, Magacho 2022]. Other researchers also highlight the share of projects classified as sustainable infrastructure (60.4 per cent by the end of 2019), which is a strong signal of the NDB's commitment to sustainability [Humphrey 2020].

However, as research on the effect of the crisis on the SDGs primarily shows, the main challenges are associated with goals 1, 2, 3, 4, 8, and 10. In order to be an important player in global sustainable development, the NDB must pay special attention to these fields. It is true that the bank already has some projects aimed at these particular goals, and that they are mostly directly associated with the COVID-19 Assistance Program. For example, three projects with SDG 1 association are the three first COVID-19 Emergency Programme Loans to Brazil,[8] South Africa[9] and India.[10] In all the programs there are measures aimed at maintenance of minimum income levels for vulnerable groups and improvement of social safety nets (Goal 1.3). SDG 2 becomes particularly important in the current crisis under rising agriculture prices, however, there is only one project associated with this goal, but only with a limited impact as this is a contribution to "Indian National Investment and Infrastructure Fund: Fund of Funds (FoF)".[11] FoF focuses on key socioeconomic areas of the Indian economy, however, NDB does not have a direct influence on the project themes, and there might be no contribution to SDG 2 in the end. Five projects are associated with the extremely important SDG 3; however, they include the already discussed investment in FoF and COVID-19 Emergency Program Loans in South Africa and India, adding two COVID-19 Emergency Program Loans in China[12] and Russia[13] supporting the countries' healthcare sectors. SDG 10 is not present in NDB's projects, however, the bank's activities may have an indirect impact on those living in vulnerable rural and remote communities by improving infrastructure and therefore minimizing transfer costs.

Micro-level analysis of NDB projects and their contribution to the SDGs showed the prevalence of infrastructure and growth effect of the bank's activities. At the same time, the bank quickly stepped in during the pandemic in 2020 and provided loans aimed at social issues such as social protection, education, and healthcare.

However, at the moment, the NDB and overall system of global development assistance are facing unprecedented challenges. Multilaterals are running the crisis

[8] New Development Bank. Emergency Assistance Program in Combating COVID-19. Brazil. https://www.ndb.int/project/brazil-emergency-assistance-program-combating-covid-19/

[9] New Development Bank. COVID-19 Emergency Program. South Africa. https://www.ndb.int/project/south-africa-covid-19-emergency-program/

[10] New Development Bank. Emergency Assistance Program in Combating COVID-19. India. https://www.ndb.int/project/india-ndb-emergency-assistance-program-combating-covid-19/

[11] New Development Bank. National Investment and Infrastructure Fund: Fund of Funds—I

[12] New Development Bank. NDB Emergency Assistance Program in Combating COVID-19. https://www.ndb.int/project/india-ndb-emergency-assistance-program-combating-covid-19/

[13] New Development Bank. COVID-19 Emergency Program Loan for Supporting Russia's Healthcare Response. https://www.ndb.int/project/covid-19-emergency-program-loan-for-supporting-russias-healthcare-response/

management and stabilization of the global economy. Increasingly probable stagflation keeps the IMF and the World Bank busy. The UN is busy dealing with the effect on the developing world and corresponding SDGs. Meanwhile we would stress the urgency of creating some practical approaches for these new, difficult and mostly unexpected challenges to humanity.

As the BRICS countries often position themselves as centers of expertise for the developing world, they are able to develop ambitious solutions aimed at countries in the global South and propose new ways of catching up.

Conclusions and recommendations

In the article we have examined the current state of the SDGs and some specific challenges to sustainable development, including the need to review some of the goals and adapt to a new global framework. In particular, there is an urgent need to develop SDG 3 and review the approaches to sustainable and resilient healthcare systems. There are several channels though which multilateral development banks could facilitate this process, including direct financing aligned with the SDGs, norm setting and agenda developing, and expertise in the field of the current challenges.

The New Development Bank, as an important player in this field and the only global multilateral bank with only developing countries as members, is in unique position to become a global rule-maker. We analyzed the relationship between the bank's operations and the SDGs and showed the already significant contribution of the bank toward 12 out of 17 goals, especially SDG 6, SDG 7, SDG 8, and SDG 9. However, there are several potential ways to strengthen the NDB's role in sustainable development.

First, currently, the NDB's role as a norm setter and agenda developer might be enhanced greatly. Right now it is limited to promotion of local bond markets, whereas it might take an active role in shaping the new SDG agenda, taking into account the current challenges uncovered by the latest global crises, including inequality, poverty, food security, and healthcare. Publishing reports on the SDGs, and best practices of projects alignment to the SDGs are only a few possibilities in terms of playing a larger role in the field.

Second, our analysis showed that there is scope for increased transparency on NDB financing by sub-projects, including different parts of the projects aimed at different SDGs. Since the NDB positions itself as a bank aimed at promotion of sustainable development, it may more clearly articulate projects' contributions to the SDGs. In some projects this happens, but most lack this kind of data.

Third, the NDB should pay more attention to contemporary challenges facing global society, including rising inequality. SDG 10 is a critical junction—2020-2021 and 2022 have brought more inequality inside and between countries [World Inequality Lab 2022]. Only if we pay special attention to these critical aspects of global development might the future of the world look brighter.

Bibliography

The Asian Development Bank (ADB), 2023. *ADB Annual Report 2020.* Available at: https://www.adb.org/documents/adb-annual-report-2020

African Development Bank (AfDB), 2023. *African Development Bank Group Annual Report 2022*. Available at: https://www.afdb.org/en/annualreport

The Asian Infrastructure Investment Bank (AIIB), 2023. *2022 AIIB Annual Report.* Available at: https://www.aiib.org/en/news-events/annual-report/overview/index.html

Artecona, R., Bisogno, M., Fleiss, P., 2019. Financing development in Latin America and the Caribbean: the role and perspectives of multilateral development banks. *Studies and Perspectives series - ECLAC Office in Washington, D.C.*, No. 19.

Avellan, L., Galindo, A. J., Lotti, G., Rodriguez, J.P., 2022. Bridging the gap: mobilization of multilateral development banks in infrastructure. *IDB Working Paper Series* No 1299.

Bazbauers, A.R., Engel, S., 2021. *The Global Architecture of Multilateral Development Banks: A System of Debt or Development?* Abingdon: Routledge.

Bhattacharya, A., Kharas, H., Plant, M., Prizzon, A., 2018. The New Global Agenda and the Future of the Multilateral Development Bank System. *International Organizations Research Journal*, 13(2), pp.101 - 124. DOI: 10.17323/1996-7845-2018-02-06

Bobylev, S.N., and Grigoryev, L.G., 2020. In search of the contours of the post-COVID Sustainable Development Goals: The case of BRICS. *BRICS Journal of economics,* 1(N2). https://doi.org/10.38050/2712-7508-2020-7

Braga, J. P., De Conti, B., Magacho, G., 2022. The New Development Bank (NDB) as a mission-oriented institution for just ecological transitions: a case study approach to BRICS sustainable infrastructure investment. *Revista Tempo do Mundo*, (29), pp.139 - 164. DOI:10.38116/rtm29art5

BRICS, 2014. *Agreement on the New Development Bank*. Available at: https://www.ndb.int/wp-content/themes/ndb/pdf/Agreement-on-the-New-Development-Bank.pdf

Broccolini, C., Lotti, G., Maffioli, A., Presbitero, A., Stucchi, R., 2020. Mobilization Effects of Multilateral Development Banks. *World Bank Policy Research Working Paper* #9163. Available at: https://openknowledge.worldbank.org/handle/10986/33395

EC, 2021. Life expectancy decreased in 2020 across the EU. Available at: https://ec.europa.eu/eurostat/web/products-eurostat-news/product/-/asset_publisher/VWJkHuaYvLIN/content/id/12645457/pop_up

Gable, S., Lofgren, H., Rodarte, I.O., 2015. Trajectories for Sustainable Development Goals: Framework and Country Applications. World Bank, Washington, DC. Available at: https://openknowledge.worldbank.org/handle/10986/23122

Griffith-Jones, S., 2016. Development Banks and their key roles: Supporting investment, structural transformation and sustainable development. *Discussion Paper 59, Bread for the World*. Available at: https://www.stephanygj.net/papers/Development_banks_and_their_key_roles_2016.pdf

Griffith-Jones, S., Gottschalk, R., 2012. *Exogenous Shocks: Dealing with the only Certainty: Uncertainty* (The Initiative for Policy Dialogue, Policy Brief No 8). Paper prepared for the Commonwealth Secretariat, September 2012, for the Commonwealth Finance Ministers' Meeting, Tokyo, 10 October 2012. Available

at: https://policydialogue.org/publications/policy-briefs/exogenous-shocks-dealing-with-the-only-certainty-uncertainty/

Grigoryev, L.M., and Medzhidova, D.D., 2020. Global energy trilemma. *Russian Journal of Economics* 6 (2020), pp. 437-462. DOI: 10.32609/j.ruje.6.58683

Grigoryev, L.M., Elkina, Z.S., Mednikova, P.A., Serova, D.A., Starodubtseva, M.F., and Filippova, E.S. 2021. The perfect storm of personal consumption. *Voprosy Ekonomiki*. 2021. No. 10), pp.27-50. (in Russian). Available at: https://doi.org/10.32609/0042-8736-2021-10-27-50

Grigoryev, L.M., Morozkina, A.K., 2022. Pandemic shock and recession: the adequacy of anti-crisis measures and the role of development assistance. In *COVID-19 and Foreign Aid: Nationalism and Global Development in a New World Order*, Eds: Jakupec, V., Kelly, M., de Percy, M. Routledge, 344 P. (forthcoming).

Handl, G., 1998. The Legal Mandate of Multilateral Development Banks as Agents for Change Toward Sustainable Development. *The American Journal of International Law*, Vol. 92, No. 4, pp.642 - 665

Humphrey, C., 2020. From drawing board to reality: the first four years of operations at the Asian Infrastructure Investment Bank and New Development Bank. Available at: https://doi.org/10.3929/ethz-b-000411422

Inter-American Development Bank (IADB), 2022 . *Annual Report 2022. Financial Statements*. Available at: https://publications.iadb.org/en/inter-american-development-bank-annual-report-2022-financial-statements

Institute for Health Metrics and Evaluation (IHME), 2021. *Financing Global Health 2020: The impact of COVID-19*. Seattle, WA. Available at: https://www.healthdata.org/sites/default/files/files/policy_report/FGH/2021/FGH_2020_full-report.pdf

IMF, 2021, *Economic Outlook. Recovery During a Pandemic. Health Concerns, Supply, Disruptions, and Price Pressures*. Washington, DC, October. Available at: https://www.imf.org/en/Publications/WEO/Issues/2021/10/12/world-economic-outlook-october-2021

Kenny C., 2019. Marginal, Not Transformational: Development Finance Institutions and the Sustainable Development Goals. *CGD Policy Paper 156*. Washington, DC: Center for Global Development. Available at: https://www.cgdev.org/publication/marginal-not-transformational-development-finance-institutions-and-sustainable

Liu Z. et al, 2021. *Global Daily CO_2 emissions for the year 2020*. Researchgate. Available at: https://www.researchgate.net/publication/349759072_Global_Daily_CO_2_emissions_for_the_year_2020

Mendez, A., Houghton, D.P., 2020. Sustainable Banking: The Role of Multilateral Development Banks as Norm Entrepreneurs. *Sustainability*. 12, 972; DOI: 10.3390/su12030972

Morozkina, A.K., 2019. Official Development Aid: Trends of the Last Decade. *World Economy and International Relations*, 2019, 63(9), pp. 86-92. DOI: 10.20542/0131-2227-2019-63-9-86-92 (in Russian)

NDB, 2016. *Environment and Social Framework*. Available at: https://www.ndb.int/wp-content/uploads/2017/02/ndb-environment-social-framework-20160330.pdf

NDB, 2021. *Annual Report 2020*. Available at: https://www.ndb.int/data-and-documents/annual-reports/

NDB, 2023. *Investor Presentation*. Available at: https://www.ndb.int/wp-content/uploads/2023/04/Investor-Presentation_2023.pdf

NDB, n.d. *List of all projects* [dataset]. NDB. Available at: https://www.ndb.int/projects/list-of-all-projects/

OECD, 2018. OECD DAC Blended Finance Principles: Unlocking Commercial Finance for the Sustainable Development Goals. Available at: https://web-archive.oecd.org/2022-08-19/469783-OECD-Blended-Finance-Principles.pdf

OECD, 2021a. Development co-operation during the COVID-19 pandemic: An analysis of 2020 figures and 2021 trends to watch, in *Development Co-operation Profiles*, OECD Publishing, Paris. https://doi.org/10.1787/e4b3142a-en.

OECD, 2021b. *Development Co-operation Report 2021: Shaping a Just Digital Transformation*, OECD Publishing, Paris. DOI: 10.1787/ce08832f-en.

OECD, n.d. *International Development Statistics (IDS) online databases* [dataset]. OECD. Available at: https://www.oecd.org/dac/financing-sustainable-development/development-finance-data/idsonline.htm

Our World in Data, n.d. *Our World in Data* [database]. Available at: https://ourworldindata.org/

Sachs, J.D., Kroll, C., Lafortune, G., Fuller, G., and Woelm, F. 2021. *Sustainable development report 2021*. Cambridge, Cambridge University Press. DOI: 10.1017/9781009106559

UN, 2015. *Transforming our world: the 2030 Agenda for Sustainable Development*. UN. Available at: https://sdgs.un.org/2030agenda

UN, 2020. UN Secretary-General appoints 15 independent scientists to draft the second quadrennial Global Sustainable Development Report. Available at: https://sdgs.un.org/news/un-secretary-general-appoints-15-independent-scientists-draft-second-quadrennial-global

UN, 2021. *The Sustainable Development Goals Report*. NY: United Nations Publications. Available at: https://unstats.un.org/sdgs/report/2021/The-Sustainable-Development-Goals-Report-2021.pdf

UN, 2023. *Global Sustainable Development Report 2023*. NY: United Nations Publications. Available at: https://sdgs.un.org/gsdr/gsdr2023

UNESCO, 2021. *Education: From Disruption to Recovery*. UNESCO. Available at: https://en.unesco.org/covid19/educationresponse.

World Bank, 2023. *The World Bank Annual Report 2022*. A New Era in Development. http://documents.worldbank.org/curated/en/099092823161580577/BOSIB055c2cb6c006090a90150e512e6beb

World Bank, n.d. *World Development Indicators Database* [dataset]. World Bank. Available at: https://databank.worldbank.org/source/world-development-indicators

World Inequality Lab, 2022. World Inequality Report 2022. Available at: https://wir2022.wid.world/

New Approaches to FDI Policy: Initiatives of the World's Largest Countries and Lessons for Russia

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Abstract

The article is devoted to the study of current trends in the regulation of foreign direct investment (FDI), caused by ongoing changes in the interaction of individual countries of the world and their groupings. The tools and approaches of Russia and key countries participating in the global FDI market to regulate not only inward but also outward investments that previously did not come to the attention of regulators are explored. Strengthening control over all directions of investment flows, as well as expanding the list of strategically important industries in which participation is limited for foreign investors, leads to the fact that the foreign investment policy of Western countries is turning from a tool for managing the foreign economic activities of companies into a tool for ensuring national security and technological sovereignty. The regulation of FDI in Russia today is a set of single measures and is reactive in nature, which does not allow to support economic growth and the geopolitical interests of the country. There is an obvious need to revise

the approaches in order to create a comprehensive regulatory policy that meets new challenges and realities, integrated into Russia's overall foreign economic strategy and its economic security strategy. Based on the results of the study, the goals of the new foreign investment policy of Russia, approaches to regulating inward and outward investments were formulated, and recommendations were given for the tools in the field of FDI regulation.

Introduction

Economic relations between countries in the current stage of global economic development are shaped by geopolitical tensions and are accompanied by changes in both their content (intensity, direction, structure) and approaches to regulation. When talking about regulation, economists primarily focus on trade policy of countries and changes in foreign trade flows resulting from the introduction of new trade policy instruments. Less attention is paid to the investment activities of companies, the so-called foreign direct investment (FDI), in approaches to regulating flows of which new trends are currently forming and strategic changes are announced.

FDI is a major form of international economic relations, associated not only with great economic benefits but also with risks, the level of which is growing. The presence of foreign companies in the national market, their deep integration into national markets and their interaction with local companies and consumers are attracting increasing attention, and often apprehension, from FDI recipient countries. Simultaneously, unregulated international expansion of domestic companies may result in the outflow not only of capital, but also of technology and equipment that are crucial for economic security and creating competitive advantages for unfriendly nations.

The study of current approaches to the foreign investment policy of the world's largest countries, which foreign economic strategies, as a rule, serve as a benchmark for the rest, is a highly relevant and important task for Russia. Understanding the essence of changes in these approaches will make it possible to take them into account in the country's new foreign economic strategy, the priorities of which are still formulated only in terms of foreign trade. The Strategy of Economic Security of the Russian Federation, developed for the period up to 2030 and adopted in 2017 [Decree of the President of the Russian Federation No. 208], also requires revision. Although it mentions the issues of foreign investment in the context of creating a favorable investment climate and control over participation in strategically important enterprises for the country's defense and security, it does not sufficiently take into account the current realities.

The presented research contains the results of studying and identifying new trends in FDI regulation in the largest countries of the world (the United States, China, EU countries) and is aimed at developing recommendations for formulating new directions of Russia's foreign investment policy.

1. Overview of the main trends

In the context of foreign investment policy, one should distinguish between the regulation of inbound foreign direct investment and the regulation of outbound foreign direct investment. Conventionally, this allows us to distinguish two groups of countries—recipient countries and donor countries—which regulatory tools have different emphases. Developing countries are mostly recipients and have traditionally been interested in stimulating the inflow of foreign capital and technology. Developed countries are perceived as donors, having large financial resources and making them available on the world market. They also have large flows of inbound investments, but the FDI balance of Western countries is positive or slightly negative, and until recently they practically did not limit foreign expansion of their companies, including investment expansion. In general, the key players in the global FDI market, the US, China, Germany, Japan, are both the largest donors and recipients of FDI, which leads to their use of more complex and diverse regulatory tools.

Foreign direct investment in terms of theory and practice has traditionally been viewed as a source of economic benefits. Inbound investments carried with them technology, capital, and modern management practices, created jobs, stimulated the growth of tax revenues, etc. The main risks that have been emphasized are: (1) withdrawal of profits abroad rather than reinvestment in the recipient country's economy and (2) absorption of obsolete rather than advanced technologies within the framework of FDI. But in general, regulatory practices over the past decades have been quite liberal in both developing and developed countries and consisted in stimulating investment inflows with unconditional full or partial exemptions for strategically important industries (military, space industry, financial sector, information and communication, natural resource extraction, etc.). Outward investment meant diversification, development of global markets by national companies, access to advanced technologies and production, and strengthening of economic power in general, in connection with which international expansion was not controlled but took place on the basis of the laws of market economy and was sometimes stimulated within the framework of intergovernmental agreements.

In general, the global trend toward stimulating FDI is still in place. Thus, according to UNCTAD's analysis, in 2022 both developed and developing countries intensified the imposition of investment-stimulating measures and significantly increased their number, bringing them to the pre-pandemic level in response to the expected economic downturn [World Investment Report 2023. P. 56]. The focus in developed countries is on attracting "green" investments, while in developing countries it is on stimulating growth in a wide range of economic sectors.

However, in the conditions of modern geopolitical tension, sanctions policy, and economic and technological disconnection between the US and China, involving other countries, foreign investment is increasingly perceived not as a source of economic benefits but as a source of technological and political risks. Countries that have increased controls on inbound FDI and introduced stricter screening mechanisms accounted for 71% of total global FDI in 2022, up from 66% a year earlier. At the same time, the number of mega-deals withdrawn for political and regulatory reasons increased by a third, and

their total value increased by 69% [World Investment Report 2023. P. 68].

As a result, the rather liberal view of most countries on foreign investments is being replaced by a more rigid policy of regulators, which has the following distinctive features:

- Investment policy from a tool for regulating the foreign economic activity of companies becomes a key component of the economic security strategy.
- If earlier FDI regulation was focused mainly on inward investment, now the instruments are being reoriented toward strengthening control over inward FDI and ensuring the safety of outward FDI.
- The focus of FDI regulation is beginning to be on ensuring the country's technological sovereignty rather than economic efficiency.

2. Trends in FDI regulation in leading countries

The key players in the FDI market[1] are the United States, China, and the European Union countries.

The largest recipient countries in terms of accumulated inward investment as of the beginning of 2022 are the US, China, the UK, the Netherlands, Hong Kong, and Singapore (see Figure 1 on p. 106). The cumulative investments in the EU countries put the region in the first place. It should be noted that China has taken the lead over the last decade: until 2011 the country was in the second ten countries in terms of accumulated inward FDI, but for two decades it has regularly been among the top three in terms of annual investment inflows, which has put it in the lead.

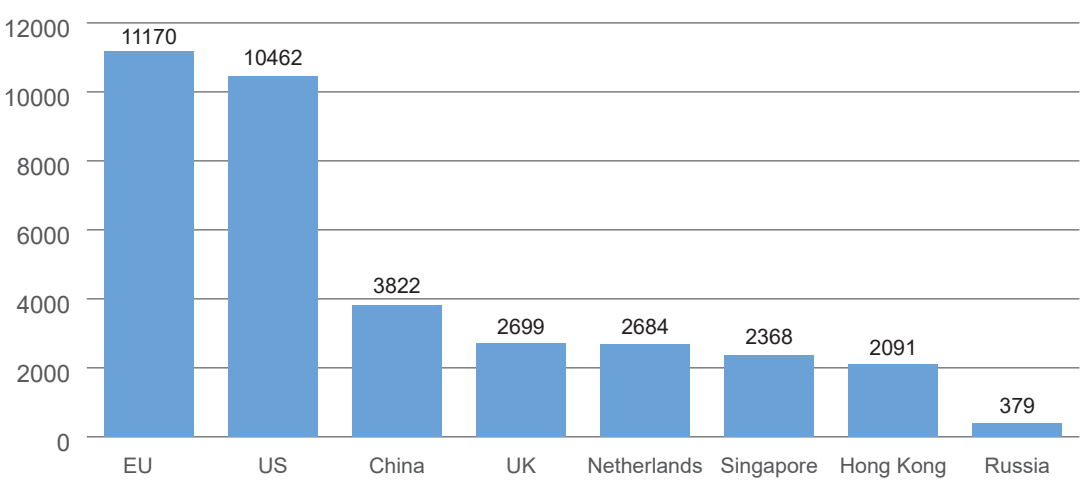

Figure 1. Accumulated inward FDI in the EU, the largest recipient countries, and Russia as of the beginning of 2022, bln USD

Source: UNCTAD (https://unctad.org/topic/investment/world-investment-report) .

[1] In statistical accounting, FDI is defined as an ownership interest of more than 10% in a company that is foreign to the investor, allowing for effective management and control.

The largest donor countries in terms of accumulated FDI abroad are the United States, the Netherlands, China, the UK, Hong Kong, and Canada (see Figure 2 on p. 107). The total outward investment of the EU countries is more than 1.5 times higher than that of the leading country, the United States. China also entered the top three leading countries in a short period of time. Until 2011, the country was in the second and until 2007 in the third ten countries in terms of accumulated outward FDI, but over the last decade and a half it has been making large-scale investments abroad every year.

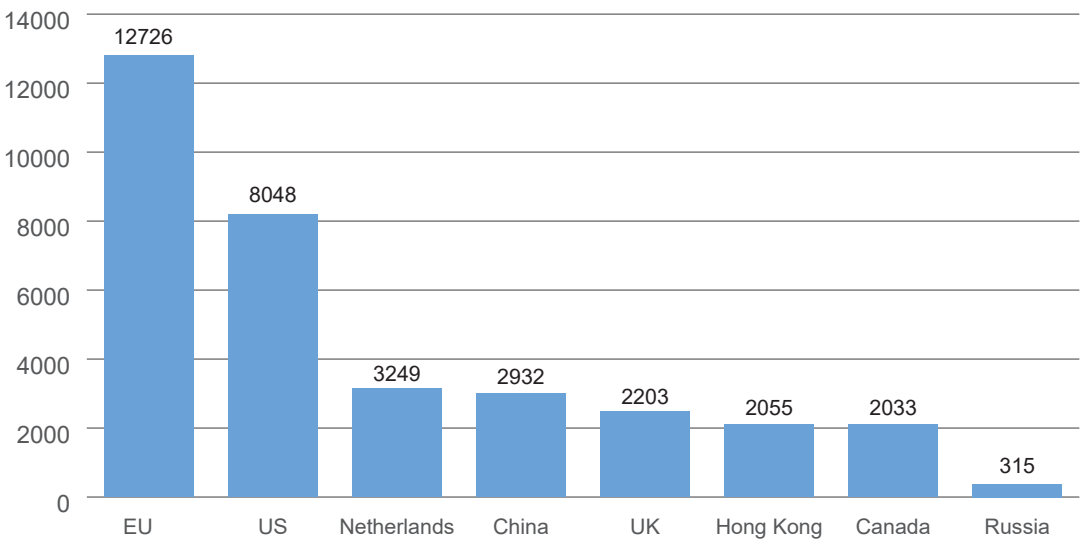

Figure 2. Accumulated outward FDI in the EU, major donor countries, and Russia as of the beginning of 2022, bln USD

Source: UNCTAD (https://unctad.org/topic/investment/world-investment-report).

The tone in the transformation of approaches to foreign investment policy, which consists in expanding the scope of FDI control, is set by the United States. Historically, the rather liberal approach to FDI regulation in the major economies has been accompanied by inward-only controls to limit the presence of foreign capital and management in strategically important national industries, of which there were few. The main essence of the changes is the tightening of controls on inward FDI as well as the announced readiness to impose restrictions on outward investment and apply screening procedures on capital outflows to certain unfriendly countries. Let us consider this trend in more detail using the example of the US and EU countries and examine the experience of China and Russia.

2.1. Restrictive policies of major FDI players

US. The US liberal approach to inward FDI was to encourage investment inflows at various levels, including through the negotiation of bilateral investment agreements and free trade area agreements that include mutual investment promotion. This approach began to tighten in 2018 with the passage of the Foreign Investment Risk

Review Modernization Act (FIRRMA), which strengthened controls and national security screening of transactions [Aksenov 2019]. The law was initially aimed at preventing the expansion of China. It expanded the powers of the main regulator, the Committee on Foreign Investment in the United States (CFIUS), which previously controlled only mergers and purchases of controlling stakes in US companies and was given the ability to block all transactions for national security reasons [NYT 2018]. The number of deals undergoing deeper analysis in the US began to grow exponentially, including as a result of the introduction of new rules into the law in 2020. At the same time, the list of special status countries to which the application of the new rules will be limited included only Australia, Canada, and the UK, with a promise to expand the list in the future [GTSL 2020].

US outbound investments were not subject to control until 2023, but the technological confrontation with China led to plans to develop a new regulatory system that would prohibit investment in advanced technologies abroad that could pose a threat to national security. In August 2023, a presidential executive order was issued blocking US businesses from investing in Chinese companies developing advanced technologies such as microelectronics, artificial intelligence, chip manufacturing, etc. [Investment Policy Monitor 2023]. It supplemented the export controls in these areas introduced a year earlier. US companies are now required to notify about certain transactions with China, and a number of deals will be blocked [Cleary & Gottlieb 2020].

European Union. FDI regulation in the European Union is predominantly at the level of member states, is focused on attracting inbound FDI, and is still relatively liberal. In recent years, there has been a tightening of inward FDI controls, initiated, as in the United States, as a result of concerns about Chinese companies.

Germany is the most active in this process. Since 2016, the country has several times expanded the powers of regulators in relation to incoming investments [Jaeger 2023]. As a result, transactions in sensitive industries (infrastructure, military, computer technology, information and communications, etc.), the list of which has been updated and expanded, are subject to mandatory screening. Other transactions may be subject to the verification procedure only if the buyer is a non-EU resident company. There are also targeted plans: In mid-2023, Germany announced its China strategy with a specific focus on the treatment of inbound Chinese FDI, which, however, has not yet translated into regulatory measures. In general, Germany's attention to FDI is so great that plans have already been announced to develop a single law on the control of foreign direct investment, including outward FDI, which is now being implemented through several separate pieces of legislation [Handelsblatt 2023]. Other EU countries are also introducing new investment regimes aimed at strengthening the screening of inward FDI—during 2023, such regimes have been introduced in Slovakia, Denmark, Belgium, Sweden, Ireland, and Luxembourg.

At the European level, a coordinated FDI policy began to take shape in 2019 with the adoption of the FDI Screening Regulation. The legislation affects inward investment and obliges member states to notify of FDI screening actions, establishes procedures, and may also develop requirements for the implementation of controls at the national level. Special mention should be made of the EU Foreign Subsidies Regulation, which entered into force in July 2023 and, as of 12 October 2023, introduces a mandatory notification

regime for mergers and acquisitions of European companies by firms that have received financial support from non-EU countries [Bloomberg 2023].

With regard to outward investment, the EU is adopting the US approach—the European Commission's 2023 Work Programme notes that the European Commission is ready to review the rules regulating FDI in the EU and will examine the need to introduce additional tools to control outward investment. Given the positive balance of accumulated EU investment (+1.56 trillion USD at the end of 2022 = 12.73 trillion USD of inward FDI - 11.17 trillion USD of outward FDI) and the FDI donor[2] (not recipient) role of the major countries of the association, the vulnerability of European companies and their international supply chains to external risks, including technology leakage, is assessed as very high. Geopolitical tensions have shifted the importance of these risks from the level of financial losses of individual companies to ensuring national and regional economic stability. At the level of member states, there are separate initiatives to create a legal framework for outbound FDI screening, and the European Commission has also announced that by the end of 2023, the new EU Economic Security Strategy will outline ideas for a new regime for outbound investments involving sensitive technologies.

China. FDI has played a huge role in China's economic development, primarily due to the policy of opening up and encouraging inbound investment. In 2020, the Foreign Investment Law came into force, which is the first comprehensive source of law unifying approaches to regulating inbound FDI in the country [Jia Shaoxue 2023]. The law was adopted to expand the policy of openness, encourage FDI, and protect the rights of foreign investors (the principle of national treatment is established), including by strengthening the protection of intellectual property and trade secrets. As in other countries, the law contains a list of restrictions, which is closed and represents a "negative list" in the form of an exhaustive list of special restrictive measures applied in certain industries. China has not departed from the policy of openness and stimulation so far, despite the restrictions adopted by the US and the EU. China certainly announces and introduces retaliatory measures, but they do not fall into the area of FDI regulation. Openness and efforts to stimulate investment inflows are emphasized by China's publication in August 2023 of a new concept for attracting foreign investment. It is planned to give a number of preferences, relax rules on data transfer abroad, facilitate registration of foreign employees, ensure fair competition in public procurement, etc. [Vedomosti 2023].

In terms of outbound investment, there are no changes due to the current global challenges in China's investment policy. The restrictions imposed by the state on capital exports in 2017 should be mentioned here. Their main purpose is to prevent capital outflows and improve the efficiency of overseas investment. The notification regime was replaced by a permissive regime for ultra-large acquisitions (10 billion USD and above) and investments worth more than 1 billion USD in real estate by state-owned companies and any company in a foreign asset unrelated to its core business [RIAC 2017].

[2] The balance of accumulated FDI at the end of 2022 amounted to Germany +921, Netherlands +566, France +593, Luxembourg +471, Belgium +150, Sweden +128, Denmark +118, Italy +83 billion USD, according to UNCTAD data.

2.2. Incentive policies of major FDI players

FDI incentive policies have not changed significantly. It has become more intensive in the last year and a half, as mentioned above, due to the economic downturn, but in general it is back to pre-pandemic levels in terms of the number and frequency of instruments and measures applied. Unlike foreign trade, foreign investment lacks a global level of regulation. There are only such platforms as the International Centre for Settlement of Investment Disputes (ICSID), which does not include Russia, and the Multilateral Investment Guarantee Agency (MIGA) [Makarova 2022]. The international practice consists of signing bilateral investment treaties (BITs) as well as of investment liberalization, usually partial, when regional integration associations establish free trade zones.

At the national level, a variety of tools to stimulate FDI, long-established in international practice, are used. With regard to outward investment, states use insurance, including insurance against political risks (expropriation, nationalization, military actions, etc.), preferential lending, information and technical support. The tools to stimulate inward FDI are traditional and, as a rule, based on recommendations developed by UNCTAD: tax, financial (government subsidies, loans, insurance, etc.) and other incentives (information support, preferential contracts, etc.).

3. Specifics of FDI regulation in Russia

Russia is among the FDI recipient countries: the negative balance of accumulated FDI, according to UNCTAD data, amounted to 63.8 billion USD at the end of 2022 (see Table 1 on p. 110). Russia's peculiarity is the high share of investments from offshore, offshore conducting, and quasi-offshore countries (70% for accumulated inward FDI and 64% for accumulated outward FDI as of the beginning of 2022[3]), while experts estimate that about a quarter of FDI in the country is not actually foreign, but represents Russian capital invested through foreign jurisdictions [Damgaard, Elkjaer, Johannesen 2019], so-called circular investments.

Table 1. Volume of accumulated outward and inward FDI and Russia's investment position, 2013-2022, bln USD

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Accumulated outward FDI	385.3	333.0	290.1	342.8	388.7	346.6	407.3	381.1	374.6	315.3
Accumulated inward FDI	471.5	290.0	262.7	393.9	441.1	408.1	493.2	449.1	497.7	379.1
Investment position	**–86.2**	**43.0**	**27.4**	**-51.1**	**-52.4**	**-61.5**	**-85.9**	**-68.0**	**-123.1**	**-63.8**

Source: Calculated on the basis of UNCTAD data (https://unctad.org/topic/investment/world-investment-report).

[3] Author's calculations based on the data of the Central Bank of the Russian Federation.

Despite the large-scale tightening of sanctions by Western countries, which started in February 2022, Russia's role in the global inward and outward FDI market remains notable, 22nd and 23rd place in 2022, respectively. In 2021, Russia ranked 19th in terms of accumulated inward FDI and 21st in terms of accumulated outward FDI. Undoubtedly, these positions do not correspond to the potential of the country, which is one of the largest economies in the world by size—Russia ranked 8th in terms of GDP by the end of 2022. Today, the country's inward and outward FDI is 27 and 25 times less than that of the US, respectively, and 25 and 9 times less than that of China. Given the above trends and continued sanctions pressure from the West, Russia's position in the global FDI market is likely to deteriorate.

The industry structure of investments in the Russian economy has historically been determined by the market potential and resource base of the Russian economy—foreign investors were most interested in industries that generate mass consumer demand (automotive industry, food industry, retail trade, etc.) and the extractive industry. As a result, Russia has an inefficient structure of incoming FDI (see Figure 3 on p. 111): more than a quarter of investment is in mining, 18% is in manufacturing, and in the services sector, investment in the trade and financial sectors prevails. In the manufacturing sector, the main investment flows were directed to industries related to the extractive sector—oil refining and metallurgy. Among the high-tech industries, we can single out only the automobile industry complex, where foreign manufacturers either sold their assets (Renault, Nissan, Toyota, Volkswagen) or stopped production (Mitsubishi, Hyundai, BMW) during 2022-2023 [RIA Novosti 2023]. Chinese companies are replacing the departed auto giants, but there is no full-fledged technological development and utilization of opportunities from integration into global supply chains. All the more so in other high-tech segments of the manufacturing industry.

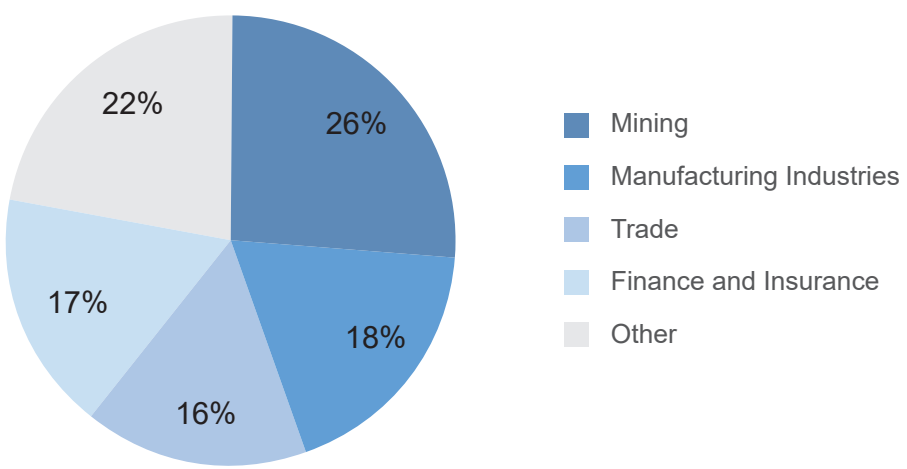

Figure 3. Industry structure of FDI accumulated in Russia as of 01 January 2022, %

Source: Author's calculations based on the data of the Central Bank of the Russian Federation.

Russian outward FDI, if offshore and circular investments are excluded, was formed mainly as a result of international expansion of Russian oil companies. It had the character of strategic development of the core business, including by integrating the activities of Russian and foreign assets and obtaining synergy effects. The foreign assets of this sector were hit by the Western sanctions: in 2022-2023, they had to be either sold at a significant discount or lost completely, which, however, did not lead to irreversible consequences for the business as a whole. In other sectors, the purchase of foreign assets was often either noncore, not related to core activities (financial sector), or inefficient, sometimes accompanied not just by a lack of economic benefits, but by a loss in periods of shocks and subsequent sale (metallurgy, telecommunications). The main reasons are the complexity of direct foreign investment as a strategy of international expansion compared to export-import operations and the lack of experience of Russian businesses in its effective implementation. Despite this, active foreign investment of Russian business in the 21st century is evident, and even after 2014 it slowly but continued [Kuznetsov 2023. P. 37].

The specifics of Russian inward and outward FDI have long determined the peculiarities of the country's regulatory policy: (1) attracting investments with traditional restrictions for strategically important industries and (2) preventing capital outflow to offshore zones.

In the context of the first direction of regulation the Federal Law No. 160-FZ of 09 July 1999 "On Foreign Investments in the Russian Federation," the Federal Law No. 57-FZ of 29 April 2008 "Procedures for Foreign Investments in the Business Entities of Strategic Importance for Russian National Defence and State Security", and the Federal Law No. 164-FZ of 29 October 1998 "On Financial Lease (Leasing)" are in force (all laws with subsequent amendments). In the second direction, starting from 2012, Russia has been actively introducing a number of measures aimed at deoffshorization of the economy: innovations in the Tax Code on transfer pricing (2012); the Law on Controlled Foreign Companies (2015); creation of domestic offshore areas, so-called special administrative districts (2018); a number of tax amnesties; Russia participated in the development and in 2016 signed a multilateral agreement on automatic exchange of financial information.[4] However, no significant effect in the form of a reduction in capital outflows has been achieved over the past decade.

Since the beginning of the special military operation in Ukraine and the unprecedented expansion of sanctions against Russia, changes have been introduced into the country's legislation, including those affecting the activities of foreign investors, which act both as retaliatory measures and as measures aimed at ensuring national security. Actions of Western states against Russian companies abroad (seizure and blocking of assets), as well as mass announcement of withdrawal from the Russian market and actual steps of foreign companies in this direction, led to the formation of new legislation.

On the one hand, new legislative initiatives on FDI affect the processes of market exit. Starting from March 2022, a number of legislative acts[5] have been adopted that

[4] A number of countries, including offshore countries, have suspended the exchange of tax information with Russia starting from March 2022.

[5] Presidential Decrees No. 81 of 01 March 2022, No. 520 of 05 August 2022, No. 618 of 08 September 2022, No. 737 of 15 October 2022, Government Order No. 430-r of 05 March 2022, extracts from the minutes of the meeting of the subcommittee of the Government Commission for Control over Foreign Investments in the Russian Federation, letters of the Ministry of Finance, etc.

consistently tighten the procedure and conditions for the exit of persons of "unfriendly jurisdictions" from the Russian market—mandatory prior approval, an outright ban on transactions in certain industries, discounted sales, exit fees, etc. On the other hand, the new legislation is aimed at controlling and restricting the activities of companies from unfriendly countries on the territory of the Russian Federation. Thus, in the spring of 2023, by Presidential Decree No. 302 of 25 April 2023, a new special economic measure (countersanction) was introduced, consisting in temporary management of assets owned by persons from unfriendly countries, which was perceived in the West as the creation of a legislative basis for nationalization. Later, restrictions on the work of foreign investors in Russia were expanded by two legislative acts: Federal Law No. 422-FZ "On Amendments to Certain Legislative Acts of the Russian Federation" was adopted on 4 August 2023, allowing the blocking of finances and property of companies from unfriendly countries (effective from 1 February 2024), and Federal Law No. 470-FZ "On Peculiarities of Regulation of Corporate Relations in Business Companies that Are Economically Significant Organizations," which provides for the possibility of restricting the corporate rights of a foreign holding company (effective from 4 September 2023).

Certain actions are continuing to be taken with regard to offshores. In July 2023, the Ministry of Finance doubled the list of offshore zones to include unfriendly countries [Order of the Ministry of Finance of Russia No. 86n 2023] in order to motivate taxpayers to reorient their business to Russia and friendly jurisdictions. In the special administrative districts created in 2018, the so-called domestic offshore areas, the list of tax benefits for "relocating" companies has been expanded several times since March 2022. In general, these steps are aimed both at combating offshoring and supporting Russian companies, operations of which in the markets of Western countries have been jeopardized. These measures will attract capital into the economy and help companies retain their business. Undoubtedly, there will be economic losses due to the withdrawal from Western markets, but given Russia's low integration into global supply chains, they can be compensated in the medium term by the development of other forms of foreign economic activity and with other foreign economic partners.

4. Recommendations for improving Russia's FDI policy

The measures taken today in Russia to regulate foreign direct investment are reactive in nature and do not represent a toolkit aimed at ensuring stable and long-term economic growth in the current geopolitical and economic environment. There is a clear need to revise and create new approaches that take into account a whole range of both internal and external factors.

Taking into account the global economic and technological decoupling aggravating between the US and China and involving an increasing number of countries, the long-term nature of the sanctions confrontation between Russia and Western countries and, as a consequence, the global trend of tightening control over FDI, the following objectives can be set for Russia's foreign investment policy:

1. Promoting the stimulation of technological development, formation, and protection of technological sovereignty.

2. Strengthening ties with potential leaders of global economic growth that are friendly countries.
3. Ensuring industry diversification of the country's economy as a whole and its foreign economic relations.

Approaches to Russia's new FDI policy can be formulated depending on the direction of investment flows:

1. *Inward FDI:* Stimulating the inflow of investments from friendly and neutral countries, while maintaining restrictions on activities in strategically important industries with an emphasis on the formation of technological independence and the development of supply chains.
2. *Outward FDI:* Restrict and control investments in unfriendly countries, including offshore; encourage and diversify investments in countries with low geopolitical risks.

The main recommendations for the development of Russia's new foreign investment policy can be formulated as follows:

- Conducting a comprehensive assessment of potential opportunities and risks associated with FDI attraction and outflow at the level of individual industries / countries / technologies. If there are risks (non-market behavior, information leakage, etc.) at the systemic level, including disruption of industry supply chains, government intervention is required, which can be both stimulating and restrictive depending on the situation.
- Stimulating the inflow of foreign investments from friendly and neutral countries that hold leading or high positions in the global technological development—China, Hong Kong, India, Israel, UAE, etc. The main instruments could be: conclusion of comprehensive investment treaties, creation of free trade zones or revision of existing trade agreements to include/expand provisions on investment cooperation (including sectoral aspects).
- Creation of a common FDI regulatory space within the EAEU, coordination of EAEU investment policy.
- Coordination and stimulation of investment activity at the regional level: identification of the need to attract FDI in key sectors for the economic growth of the region; development of an investment map containing information on investment objects; implementation of incentive measures by regional administrations and local governments.
- Further limitation of interaction with unfriendly countries while maintaining a dialog aimed at achieving common global interests (environmental, social, humanitarian, etc.).

Conclusion

Today's global economy is undergoing a transformation and rebalancing process in which trends in the regulation of foreign direct investment demonstrate the efforts applied by leading countries to create new growth zones around them. The formation of new

investment linkages and institutions, as well as foreign trade regulation, is used at the present stage not so much to create economic benefits for companies and consumers, but rather to ensure technological autonomy, which ultimately limits economic growth and development.

Russia's foreign investment policy today is a set of disparate measures and is reactive in nature, which does not allow to ensure economic growth and geopolitical interests of the country. There is a clear need to revise, refine, and optimize it in order to create a comprehensive regulatory toolkit that meets the new challenges and realities. New approaches to regulating inbound and outbound FDI cannot be developed and implemented in isolation. They should be closely linked to the country's policy in the field of entrepreneurship development, trade policy and tax regulation, import substitution strategy, strategy of Russia's regional development, taking into account the significant economic differentiation of regions, and a number of other areas of state regulation. Foreign investment policy should become a part of Russia's foreign economic strategy, the priorities of which are discussed almost exclusively in terms of foreign trade. In addition, Russia's clear position on both inbound and outbound foreign direct investment should be integrated into the content of the Strategy of Economic Security of the Russian Federation, which was adopted back in 2017 and certainly requires adjustments.

Bibliography

Aksenov, P.A., 2019. The US Foreign Investment Regulation: Trade War Restrictions. *International Trade and Trade Policy*. No 4. P. 31-41 (in Russian).

Bloomberg, 2023. Europe's Foreign Subsidy Rules Have China in Its Sights. 12 October 2023. Available at: https://www.bloomberg.com/news/newsletters/2023-10-12/europe-s-foreign-subsidy-rules-have-china-in-its-sights (accessed 01 October 2023).

Cleary & Gottlieb, 2020. CFIUS blocks joint venture outside the United States, 2020. Available at: https://www.clearytradewatch.com/2020/06/cfius-blocks-joint-ventureoutside-the-united-states-releases-2018-2019-data-and-goes-electronic/ (accessed 20 September 2022).

Damgaard, J., Elkjaer, T., Jihannesen, N., 2019. *What Is Real and What Is Not in the Global FDI Network?* IMF Working Paper, December 2019.

Decree of the President of the Russian Federation No. 302 dated 25 April 2023 "On Temporary Management of Certain Property" (in Russian).

Decree of the President of the Russian Federation No. 208 dated 13 May 2017 "On the Strategy of Economic Security of the Russian Federation for the Period Up to 2030" (in Russian).

Federal Law No. 422-FZ dated 04 August 2023 "On Amendments to Certain Legislative Acts of the Russian Federation" (in Russian).

Federal Law No. 470-FZ dated 04 August 2023 "On Peculiarities of Regulation of Corporate Relations in Business Companies that are Economically Significant Organizations" (in Russian).

Global Trade and Sanctions Law (GTSL), 2020. Key Takeaways from CFIUS Final Rules Implementing FIRRMA. 15 December 2020. Available at: https://www.globaltradeandsanctionslaw.com/takeaways-cfius-final-rules-firrma/ (accessed 18 August 2023).

Handelsblatt, 2023. Habeck will Investitionsprüfung verschärfen. 20 August. Available at https://www.handelsblatt.com/ (accessed 01 October 2023).

Investment Policy Monitor, 2023. The United States Introduces Outbound Investment Controls on Certain Transactions. 9 August 2023. Available at: https://investmentpolicy.unctad.org/ (accessed 25 August 2023).

Jaeger, M., 2023. *A More Strategic Approach to Foreign Direct Investment Policy* (DGAP Policy Brief, 1). Berlin: Forschungsinstitut der Deutschen Gesellschaft für Auswärtige Politik e.V. Available at: https://nbn-resolving.org/urn:nbn:de:0168-ssoar-85178-7

Jia Shaoxue, 2023. Evolution and Prospects of the Foreign Investment Law of the People's Republic of China. *Siberian Law Review*. Vol. 20. No 1. P. 37-47 (in Russian).

Kuznetsov, A.V., 2023. Outward and Inward Foreign Direct Investments: History of Major Russian Losses Since the Beginning of the 20th Century. *Studies on Russian Economic Development*. No 4 (199). P. 32-41 (in Russian).

Makarova, A.A., 2022. Russia in the Global Governance of Foreign Direct Investment. *Economics. Law. Society*. Vol. 7. No 3 (31). P. 93-97 (in Russian).

Order of the Government of the Russian Federation No. 430-r of 5 March 2022 "On Approval of the List of Foreign States and Territories Committing Unfriendly Acts against the Russian Federation, Russian Legal Entities and Individuals" (in Russian).

Order of the Ministry of Finance of Russia No. 86n of June 5, 2023 "On Approval of the List of States and Territories Providing a Preferential Tax Regime and (or) Not Providing for the Disclosure and Provision of Information in the Course of Financial Transactions (Offshore Zones)" (in Russian).

RIA Novosti, 2023. Three foreign automobile companies have not yet decided on the fate of plants in Russia. 15 July 2023. Available at: https://ria.ru/20230715/avtokontsern-1884325036.html?ysclid=lpwa2jgub2427990060 (accessed 15 September 2023) (in Russian).

RIAC, 2017. Less is Better: Why China is Tightening Requirements for Foreign Investment. 26 May 2017. Available at: https://russiancouncil.ru/analytics-and-comments/analytics/menshe-da-luchshe-pochemu-kitay-uzhestochaet-trebovaniya-k-zarubezhnym-investitsiyam-/?ysclid=lk982tm23i981833173 (accessed 10 September 2023) (in Russian).

The New York Times (NYT), 2018. In New Slap at China, U.S. Expands Power to Block Foreign Investments. 10 November 2018. Available at: https://www.nytimes.com/2018/10/10/business/us-china-investment-cfius.html (accessed 01 August 2023).

Vedomosti. China published a new concept on attracting foreign investment. 14 August 2023. Available at: https://www.vedomosti.ru/investments/articles/2023/08/14/990017-opublikoval-novuyu-kontseptsiyu (accessed 10 September 2023) (in Russian).

World Investment Report 2023. New York: United Nations Publications, UNCTAD, 2023.

A BRICS Currency?

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This paper served as the basis for a speech given at the BRICS Seminar on Governance & Cultural Exchange Forum 2023, in Johannesburg, South Africa, on August 19, 2023. The Seminar was organized by the Publicity Department of the CPC Central Committee, the Academy of Contemporary China and World Studies, and the China International Communications Group, with the support of South African institutions.

I would, first of all, like to thank the organizers of this seminar for their kind invitation to briefly present my views on issues faced by the BRICS grouping. I am honored to be here and, in particular, to be sharing this panel with the important authorities of our countries.

The theme of our event is wide-ranging: "Implementing the Global Civilization Initiative and Joining Hands in the March toward Modernization." Given that we have limited time, I have chosen to address only one of the areas for cooperation among our five countries—dedollarization and the possible creation of a currency by the BRICS nations. The matter has been frequently mentioned in the international media and, in general terms, in the declarations of some of the leaders of the BRICS countries, especially Presidents Vladimir Putin and Luiz Inácio Lula da Silva.

Steps have been taken in the recent past to replace the dollar by resorting to national currencies in bilateral trading arrangements between the BRICS countries. These arrangements reduce transaction costs and eliminate political risks. In parallel, central banks, notably the People's Bank of China, have established bilateral swap lines in national currencies, serving increasingly as a source of external liquidity and balance-of-payments support, including for non-BRICS countries, Argentina being a case in point. One possible way forward would be to gradually increase the number and scope of these bilateral arrangements. Another would be to multilateralize these initiatives among our five countries.

These initiatives are relatively straightforward. My focus will be on the more ambitious idea of a common currency, without which, by the way, bilateral or multilateral BRICS trading schemes will remain constrained in their scope. Trading in national currencies cannot become barter-like, implying bilateral equilibrium between the countries involved. There will inevitably be surplus and deficit countries in any given period. The surplus countries will accumulate monetary assets in the currencies of the deficit countries, inconvertible and often prone to depreciation. This will make surplus

countries wary of entering into such bilateral arrangements beyond certain limits. To go beyond these limits, a new reserve currency would need to be created in order to permit surplus countries to accumulate secure reserve assets, and to give debtor countries the assurance that the stocks of their currencies in the hands of the surplus countries will not be simply dumped on the international currency markets in search of safe havens.

Historical background

On Russia's initiative, the idea of a new currency to be established by the BRICS states has been under discussion since 2022, but it is still in its infancy. The background of this possible currency is the growing dysfunctionality of the international monetary system which, since the Second World War, revolves around a hegemonic currency—the US dollar. The fundamental contradiction, as is well known, lies in the fact that the *international* system depends predominantly on a single *national* currency, managed according to the interests of the state that created it. I would also note that this contradiction would not be eliminated if the dollar-based international system were to be replaced by a renminbi-based system or, a more likely scenario, by a multicurrency international system, where the dollar would continue to gradually lose ground to the renminbi and other internationally liquid currencies.

In the last 70 years or so, the dollar has been the world's dominant currency, fulfilling international functions, as a unit of account, currency of denomination of contracts and prices, reserve currency, and means of payment. However, it has always remained a national currency managed by a national central bank. Nothing guarantees that US priorities coincide with the broader interests of the international system that depends on the US dollar.

This problem has always existed and has been the object of severe criticism, including from countries allied with the US. In the 1960s, Charles de Gaulle and his Minister of Finance, Valéry Giscard d'Estaing, complained about the "exorbitant privilege" of the dollar and proposed, with significant repercussions, but with no success, a return to a gold-based system.

The US has always tenaciously resisted any attempt to reduce its currency's international role. They never allowed, to name just one example, the Special Drawing Right (SDR), the currency created within the International Monetary Fund in 1969, to grow and become consolidated as a full currency. They always resorted to their veto right in the institution to prevent the SDR from threatening, even remotely, the dollar as the hegemonic currency. During the years I served on the IMF Executive Board, from 2007 to 2015, our attempts to increase somewhat the role of the SDR invariably met with US resistance. And we achieved little. The IMF currency is mentioned here because, as will be argued, it may give some clues as to how to go about constructing an eventual BRICS currency.

The dollar's biggest enemy

The above-mentioned problems of the current international monetary system are well known. What is new in recent years is that the US has been using its currency more and

more aggressively to pursue political and geopolitical goals. A weaponization of the dollar has taken place, that is, the use of the national/international currency and of the Western financial system to target hostile countries or countries seen as such. Among others, Venezuela, Iran, Afghanistan, and, on a vast scale, Russia were and are targets of sanctions and punitive measures that can only be enforced because the dollar and the US financial system occupy the position they do in the world. Reluctant, since their traumatic experience in Vietnam, to "put boots on the ground" and risk their soldiers in actual wars, the US and its allies have put their currencies to work as proxy warriors and intended weapons of mass economic and financial destruction.

Russia's case is unprecedented. After the start of the military conflict in Ukraine, the US and its European allies decreed the freezing of Russian official reserves invested in dollars and euros to the amount of around US $300 billion, roughly half of Russia's liquid international assets! If this can happen, anything can. Evidently, the use and abuse of the dollar's privileged position leads to a loss of legitimacy of the prevailing international monetary system. It has caused an erosion of confidence in the dollar—and confidence is an indispensable requirement for any currency. In one sentence: the United States is today the main enemy of the dollar as a world currency.

Thus, an environment conducive to discussions on the reform of the monetary system and the dedollarization of international transactions has been created by the US itself. It was in this context that discussions began among the BRICS countries on the convenience of relying less on the dollar and moving perhaps towards a monetary association and eventually a common currency.

Possible paths towards a BRICS currency

What paths could be taken? The issue is complex; it is both financial and political. The terrain is new for the BRICS grouping; it is, as yet, unexplored by us. I will try to address just a few aspects here, without intending to exhaust the subject or even to formulate its general lines in a comprehensive way, not least because it is perhaps too early to present specific and detailed proposals, which would require careful consideration.

A curiosity: Aleksei Mozhin, Executive Director for Russia at the IMF, noticed the following happy coincidence—the currencies of the five BRICS countries all start with the letter "r": real, ruble, rupee, renminbi, and rand. He then proposed that a BRICS currency could be called R5. The R5 would start as a unit of account, taking the form of a basket of the five currencies, constructed in a similar way to the SDR. The weights of the five currencies would roughly reflect the relative weights of the five economies. The renminbi would be more heavily weighted in the basket, followed by the rupee, then by the real and the ruble, with the rand having a lower weight. The Chinese currency could, to give an illustrative example, represent 40% of the basket; the Indian currency, 25%; the Russian and Brazilian currencies, 15% each; and South Africa, 5%. The R5 could begin at par with the SDR and fluctuate from there, reflecting changes in its currency basket relative to the SDR basket.

In this first stage, the R5 could be used as a unit of denomination for certain government transactions and official accounting records, in addition replacing the dollar in the internal accounting of the financial mechanisms created by the BRICS—

the New Development Bank (NDB) and the Contingent Reserve Arrangement (CRA). This step is relatively simple and, if there is consensus among the five countries, could be implemented quickly, without significant costs.

These initial ideas have been under discussion in Russia and in other BRICS countries. The proposals from Russian officials and experts, as far as I know, do not go much further than this first stage. From there, there is vague talk of subsequently backing the R5 with gold and/or other commodities.

As is well known, a currency has to perform not only the functions of a unit of account and denomination of prices and contracts, but also those of a store of value and a means of payment. How may we ensure that the R5 can fulfill all these functions? And who would be responsible for issuing the R5 and putting it into circulation? Would the R5 have a physical existence or would it only be digital? Would it be necessary to create a BRICS Central Bank and unify monetary policy?

For a currency to perform all monetary functions satisfactorily, it is essential that it inspires confidence and thus is widely accepted. In order for it to sow trust and have credibility, its issuance must be solidly regulated. And it needs to be put into circulation in an orderly way.

All these questions would, I repeat, require reflection and planning that have not yet begun. I offer, as a contribution to the debate, some preliminary observations.

First, it is not necessary for R5 to have a physical existence. It could be just a digital currency. Nor would it be necessary or recommendable to create a Central Bank of the BRICS, responsible for conducting monetary policy for the five countries—something impracticable for several reasons. In other words, the purpose is not to create a single currency that would replace the five national currencies.

It would be enough to create an Issuing Bank, in charge of issuing R5 according to predetermined rules without interfering with the actions of the five central banks, who would continue to perform all the typical functions of a monetary authority, that is, the definition of interest rates, the conduct of foreign exchange and open market operations, and the management of international reserves, in addition to financial regulation and supervision tasks. There would be, therefore, no loss of monetary sovereignty for the BRICS countries.

The R5 would only be a virtual currency for international transactions, initially between central banks. It could, as indicated previously, serve as a store of value to allow surplus BRICS countries to maintain, in R5, accumulated balances in transactions carried out with other BRICS countries in bilateral trade arrangements. As the R5 becomes more accepted, it could function more widely as a store of value and a means of applying international reserves. In this sense, it would be similar to the proposal for the creation of the Bancor, formulated by Keynes in the early 1940s, in an unsuccessful attempt to prevent the domination of the dollar in the post-war international monetary system. Conceptually, the R5 is also similar to a proposal for the creation of a common currency in South America that was made in 2022 by the current Brazilian Finance Minister, Fernando Haddad, and one of the directors of the Central Bank of Brazil, Gabriel Galípolo.

The new BRICS currency, it should be stressed, would not replace the five national currencies, not even in the long run. Our five countries are very far from meeting

the minimum criteria, economic and political, required to make a monetary union conceivable. The R5 would be a parallel currency, co-existing with the five national currencies, being used primarily, if not exclusively, for international purposes.

Backing the new currency

How to ensure wide acceptance of R5? Russian officials and experts, have mentioned, as indicated previously, the alternative of a gold backing or some other form of commodity currency. It wouldn't work, in my opinion. Gold may seem an attractive option at first sight, but it is, in reality, a regressive idea—a return to what Keynes called "the barbarous relic."

Technically, backing a currency means basing it on a solid, reliable, and relatively stable asset, which would allow the currency to achieve wide acceptance and circulation. For this backing to have real meaning, it is necessary, strictly speaking, that the backed currency be freely convertible into the backing asset at a fixed exchange rate. Throughout the 20th century, gold performed this backing function with increasing difficulty. This became more and more evident over time, so much so that its role was progressively reduced until it was completely abandoned by the suspension of convertibility of the dollar into gold, unilaterally decreed by the US in 1971.

Today, the gold-backed option would be even less defensible, not to say unfeasible. Adopting this path, the BRICS would be obliged to retain a high amount of gold reserves, the greater the issuance of R5. The price of gold fluctuates sharply, which would cause unpredictable variations in the value of the BRICS countries' international reserves. The value of the R5 would depend on the countless circumstances that affect the world gold market. It would fluctuate along with gold and lose any ability to serve as a benchmark. Any other commodity or basket of commodities would present the same drawbacks as the basis for a new currency. In short, the R5 could not take the form of an old-fashioned commodity currency.

Not by chance, gold has no function in the IMF's currency. The SDR is not backed by gold or other precious metals, but by dollars and other major currencies, meaning that SDR holders have the right to convert them, freely and at any time, into dollars and other currencies with international liquidity. The IMF ensures this convertibility and relies on its reserves and, if necessary, on the commitment of countries issuing internationally liquid currencies to provide additional funds to back the SDR. Confidence in the SDR is high, and countries do not hesitate to hold the IMF currency as an integral part of their official reserves.

Such a convertibility model would not, of course, be a solution for the R5. Theoretically, nothing would prevent making it convertible into internationally liquid currencies. The high international reserves of the BRICS would ensure the R5's conversion into dollars, euros, or yen. But, of course, that would *defeat the whole purpose of the exercise*—a currency created as an alternative to the dollar would have its acceptance assured by its free convertibility into...dollars, euros, yen.

How to proceed, then? How may we ensure trust in and widespread acceptance of the R5? One possibility would be to make the R5 convertible into bonds guaranteed by

the five countries. The R5 Issuing Bank would also be in charge of issuing R5 bonds, at different maturities and interest rates. The R5 would be freely convertible into R5 bonds. "Backed" by assets created by the Issuing Bank itself, the R5 would actually be a fiduciary currency, of the same nature as the dollar and other internationally liquid currencies. The R5 bonds would be the concrete financial expression of the guarantee that the five countries would give to the new currency.

This approach harks back to historically important monetary reforms, notably the German hyperstabilization of 1923, the so-called Rentenmark miracle, in a situation where an alternative to gold and to the dollar had to be sought to credibly back a new currency for Germany. A more recent source of inspiration is the way modern currencies function in their relation to Treasury bonds and the financial system. Most modern currencies are purely fiduciary currencies which are freely convertible, if not into dollars or other internationally liquid currencies, then into obligations issued by the government that are liquid, remunerated, and carry little or no credit risk.

The R5's entry into circulation

The entry into circulation of the new currency would occur through the actions of the five national states. Circulation could start between central banks and gradually extend to other government operations and also to transactions with the central banks of countries which are not in the BRICS grouping. The New Development Bank (NBD), the group's main practical initiative so far, could play a role, as President Putin highlighted in a recent meeting with the bank's current president, Dilma Rousseff.

The NDB could contribute in at least three ways to the process of dedollarization of the world economy. First, and most obviously, by accelerating the dedollarization of its asset and liability operations, issuing bonds and making loans in the national currencies of the bank's member countries. Second, through its research department, by supporting studies and conferences on the reform of the international system and the eventual creation of the R5. Third, at a more advanced stage, by helping to bring the new currency into circulation, extending loans and issuing bonds denominated and payable in R5.

Are the BRICS countries ready to take steps towards a new currency?

It is not clear whether there is a consensus among our countries to discuss the matter in depth and take steps in the direction of establishing a new currency. Under the Russian presidency of the BRICS in 2024, a formal discussion could be initiated and the first initiatives taken, perhaps by creating a BRICS unit of account. If all goes well, the decision to create the R5 could then be taken at the 2025 summit, under the Brazilian presidency.

One final word: expectations have been created, both by the BRICS grouping itself and by other countries. As dissatisfaction with the US dollar and the current international monetary system increases in the countries of the Global South, including our own, people tend to look to the BRICS group in the hope that we will provide trustworthy alternatives to the dollar and the Western financial system. Let us not let them down by shying away from matters that are of global interest.

Overview of the seminar "BRICS Enlargement: Causes, Consequences and Prospects"

On September 25, 2023, the School of World Economy and the Centre for Comprehensive European and International Studies (CCEIS) of the HSE University hosted a seminar titled "BRICS Enlargement: Causes, Consequences and Prospects" as part of the expert discussion of the monthly monitoring "GlobBaro HSE Monitor." Russia's leading experts on BRICS presented and commented on the topic. The participants discussed the current situation and development potential of the alliance, as well as the impact of the BRICS and the enlarged BRICS on the global economy and politics.

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The moderator of the seminar, **Ksenia Bondarenko,** noted the high relevance of the topic of the forthcoming BRICS expansion. According to the expert, the key criterion that guided the current members of the association in selecting candidates was probably the presence of a significant amount of resources: the UAE, Iran and Saudi Arabia are the world's oil exporters, Argentina is the world's second largest producer of rare earth metals, and Egypt controls trade routes from Asia to Europe (including through the Suez Canal). Bondarenko also noted that the invitation of Ethiopia to join the association, at first glance, seems to be out of this logic, but in fact the country has unique characteristics: (1) a high proportion of young population and (2) de facto lack of a colonial past (the latter is unique for Africa). The moderator encouraged colleagues to share their views on whether there were other reasons to attract these countries to BRICS and emphasized two key aspects of the discussion: (1) all candidate countries face a number of challenges—poverty, inflation, and domestic political instability, especially for Argentina, which could potentially refuse to join BRICS as a result of the 2023 elections (which had not yet taken place at the time of the seminar); (2) the issue of introducing a common currency and increasing the economic clout of the BRICS member countries.

Leonid Grigoryev, professor and academic supervisor of the School of World Economy, noted in his speech the political factor as the main criterion for selecting candidate countries. According to the professor, such countries as Argentina, Ethiopia and Iran were invited to join BRICS solely because the countries sympathizing with them are already members. However, this approach does not strengthen the alliance politically because it lacks a centralized administrative apparatus to coordinate internal work. Individual national units, while quite effective, cannot meet the challenge facing all members of the alliance—the problem of poverty, which has been caused by factors that are "not readily curable." As an example, Grigoryev cited the distribution of property in Russia in the 1990s and the fact that the social divide that emerged during this formative period of the Russian Federation has not been bridged to this day.

The key problem of the BRICS countries is low social mobility, the expert believes. Grigoryev cited South Africa, India and Brazil as an example. The former is characterized by the income disparity that has persisted since the beginning of the century: 10% of the population accounts for 52% of income. As of 2020, about 95% of farms are not supplied with piped water, which shuts down any discussion of a quick solution to economic inequality. The situation is exacerbated by an influx of migrants who are "cutting their place in the sun," including at the cost of local lives. This is so common that South Africa has a legal provision for failed murder. As for India, private renting of means of production to illiterate people is common. The landlord receives a marginal income and moves up the social ladder, while the tenant is deprived of this opportunity and remains in the same stratum. But there is a problem with social mechanisms in the upper strata of the population as well: Grigoryev cited data obtained from studies of the social structure of India 10-15 years ago that of children whose parents belong to the top 5% of the population, only 7-10% receive a decent grammar school education. Thus, the social elevator does not work in the upper strata, while in the lower strata there is a paradoxical struggle for a lower social status that entitles one to get into the quotas of municipal administrations. The absence of social elevators is also observed in Brazil. Residents of Brazilian favelas (i.e. slums) have no chance to improve their social status. Despite the fact that the poorest neighborhoods are connected to the Internet and have hospitals and schools, the residents have no legal sources of income—the entire economy of the slums is controlled by gangster groups. Thus, according to Grigoryev, the problem of Brazilian favelas remains eternal for the country's leadership. The professor cited the example of two Brazilian loans from the World Bank at the beginning of the 21th century. Funds from the first one were allocated to establish a network of urban electric trains to improve traffic in Rio de Janeiro, where the foreign loan procedure helped control costs. The second, however, was an unprecedented loan to purchase textbooks for school children in the northeast of the country. The authorities expected that the extra money would be used to improve the quality of education, while the public funds would go to maintain a staff of teachers. Unfortunately for Brazilians, the country's population was actively increasing while the economy was slowing down—as a result, the level of education remained the same. By analogy, the problem of population stratification is also relevant for Saudi Arabia, Ethiopia and Iran, Grigoryev said.

The professor also emphasized a feature of BRICS that few people pay attention to. BRICS is an association of importers and exporters. The main commodity for BRICS is oil, as countries such as India and China are dependent on fossil fuels, and now its supply will be internal to the alliance.

The floor was then passed to **Andrey Mikhaylishin,** Head of the BRICS Payments & Fintech Task Force of the Financial Services Working Group of the BRICS Business Council, a partner in the creation of the BRICS Pay international payment system. The expert agreed with the statement that BRICS is primarily a political alliance of countries torn by social contradictions. Mikhaylishin also noted that the members of the alliance are not connected geographically, historically, and culturally, which makes it difficult to build a strong structure based on BRICS. At the same time, the consolidation of opinions of the alliance members is very important for decision-making, as any initiative is

adopted by consensus. Mikhaylishin cited the position of former Brazilian President Jair Bolsonaro, who blocked ideas related to the development of cross-border settlement systems within BRICS, as an example of poor coordination between the countries. The reason for such actions was the satisfaction of Brazilian officials with the SWIFT system and the fact that all settlements are controlled by the United States. Mikhaylishin also added that in Argentina, both presidential candidates held pro-American positions. The expert suggested that this may result in Argentina refusing to join BRICS in 2024.[1] However, Mikhaylishin believes that it is more profitable for Argentina to become a member of the group and block initiatives it does not like, as BRICS remains more of a political alliance without the prestige of a strong global association. This is hinted at by the low media interest from Western countries in the upcoming expansion of the group, especially compared to the extensive coverage of the visit of North Korean leader Kim Jong-un to Russia.

Further, Mikhaylishin returned to the discussion on the development of cross-border settlements, describing his experience in developing systems analogous to SWIFT. According to the expert, the working groups of the BRICS member countries have two wings: (1) political, which is headed by the Ministries of Foreign Affairs, and (2) business, which in Russia is headed by the Chamber of Commerce and Industry. The first wing is responsible for political decisions and coordinating the work of federal executive bodies, while the second wing is responsible for economic ties and the implementation of joint business projects. It is the preponderance in favor of politics that prevents BRICS from developing, the expert believes. Mikhaylishin recalled the initiative to issue a domestic analog of the IMF Special Drawing Rights (SDR), a mutually convertible reserve payment instrument based on a basket of real currencies. The idea was not pursued due to the issue of distribution of shares of national currencies: the rule of calculation for the IMF SDR from the share in cross-border turnover for the BRICS countries led to the overweighting of the Chinese yuan, and the adoption of a new formula required the agreement and approval of all member countries. However, work towards the creation of a single currency continues: a number of solutions are being discussed, including direct pegging of the unit of payment to gold and indirectly, through a number of goods with a high correlation to the precious metal. According to the expert, Russia expects to make progress on this issue during its BRICS presidency, especially since the state has a successful pre-pandemic experience of establishing ties with Indian and Chinese payment systems. This fact speaks in favor of the fact that it is possible to find solutions in BRICS within the framework of bilateral agreements. In conclusion of his speech, the expert agreed with the assumption about the predominant role of resources in BRICS policy. Mikhaylishin believes that one of the goals of the association is to establish joint control over a huge amount of resources and exert pressure on Western countries through this channel.

The seminar moderator **Ksenia Bondarenko** asked the experts to clarify the situation with bilateral currency payments using the example of the high volume of accumulated rupees in Russia. Active oil exports to India have led to the fact that Russian

[1] In November 2023, an opponent of Argentina's entry into BRICS, extreme right-wing politician Javier Milei, won the presidential election.

banks have accumulated a lot of Indian currency, which does not have high liquidity. **Mikhaylishin** agreed that the problem with accumulated rupees in Russia creates a number of challenges for the national economy, and also spoke about a similar situation with the Egyptian pound: counterparties from Russia are ready to supply more goods in response to high demand from Egyptian companies, but the expansion of trade relations is hindered by the low liquidity of the Egyptian currency. The expert is sure that such situations cannot be solved bilaterally, but there are other ways to overcome currency barriers, for example, the introduction of a universally recognized common unit of settlement similar to the transferable ruble or the establishment of country trade chains leading to a multilateral clearing of payments. Mikhaylishin spoke about the work on closing the Russia-India-UAE triad: The Russian Federation has well-established financial flows with the UAE, and the latter has large trade ties with India. If the initiative comes to fruition, it will be possible to speak of a precedent of economic interests prevailing over political ones, the expert believes.

Alexandra Morozkina, Deputy Dean of the Faculty of World Economy and International Affairs at the HSE University, agreed with her colleagues' arguments, but questioned the assumption that the BRICS expansion would aggravate the situation with the consolidation of the group. Morozkina reminded that BRICS was created as a discussion platform for countries wishing to actively participate in global politics. In addition, representatives of the BRICS countries could promote national interests, consider the prerequisites for certain initiatives and develop common solutions that would be continued in various international initiatives. A successful example of the result of such practice is the establishment of the BRICS New Development Bank (NDB), which was carried out in the context of a common need to create such a structure. Therefore, the expert is confident that increasing the number of votes in the organization is a step in a positive direction for the development of BRICS. In Morozkina's opinion, the group should invite all countries with an active agenda to join its ranks without using selection criteria to broaden the political discourse, and to conduct economic initiatives thereafter.

The expert also touched upon the currency issue, specifying that today we are talking about creating a unit of account, not a common BRICS currency. At the same time, BRICS has already made progress towards increasing settlements in national currencies. First, the NDB's strategy to increase loans in national currencies to 30% remains relevant. The weakness of the implementation of this policy is that the expansion of the share of national currencies is mainly at the expense of the yuan. There is also a mechanism of interbank cooperation, primarily of commercial banks, with a focus on increasing their involvement in international settlements to increase transactions in national currencies and circumvent secondary sanctions. Among the projects, the project of the Sovereign Bond Fund in national currencies, agreed in 2017, was also mentioned. **Andrey Mikhaylishin** added that his working group held successful preliminary talks with representatives of the NDB on the use of the bank as a settlement center for national currencies. The expert noted that the NDB supported projects in Russia, but has now suspended its financing.

The International Bank for Reconstruction and Development (IBRD) is in a difficult situation, as the loans it has invested are not yet generating income, while it is already

necessary to service debts in dollars and euros. Moreover, Western countries prohibit the IBRD from cooperating with Russia under the threat of secondary sanctions. Another international financial institution, the Eurasian Development Bank (EDB), is also facing problems due to the sanctions regime against Russia. Kazakhstan, one of the EDB's largest shareholders, blocked all of the bank's projects related to cross-border settlements in national currencies of the EAEU countries, which went against the bank's long-term strategy to expand settlements in national currencies. However, according to Mikhaylishin, Russia has ways to overcome settlement restrictions, such as international factoring mechanisms, counter flows and even the use of cash currency and bills of exchange. Nevertheless, the seminar participants noted that it is too early to say that business has fully established cross-border payment processes through "workarounds," and the government should make significant efforts to change the situation. Next, the issue of Iran's similar problem in obtaining BRICS financing was raised, as the country is also under pressure from the sanctions regime. Mikhaylishin mentioned that Iran has been in this situation for about 40 years and companies from Iran have achieved great success in terms of cross-border settlement mechanisms.

Natalia Vukovic, Associate Professor at the Faculty of World Economy and International Affairs, raised the issue of a BRICS University, which could, among other things, engage in research in the field of financial issues, which are the most important for the association. The current BRICS Network University, due to the specific interests of such partners as South Africa and India, focuses on agriculture and medicine, and has not yet focused on other issues due to limited funding. This observation led to a discussion among experts about the importance of Russia's future BRICS chairmanship in 2024, during which the country will have the initiative to develop discourse in the financial sphere, including through the Direct Investment Fund.

The experts also discussed the interests of individual BRICS countries and the BRICS as a whole, including the further expansion of the number of member countries of the alliance. It was suggested that, on the one hand, the main beneficiary of the increase in the number of BRICS member countries is China, which, firstly, being dependent on resource imports, mitigates the risks of restrictions on the supply of any commodities, and secondly, being a significant global exporter, finds new and/or expands existing markets. At the same time, China's dominant role can be questioned for the following reasons: (1) the possibility for third countries within the BRICS to initiate discussions on a number of issues, (2) the existence of a consensual decision-making procedure and a number of formal restrictions—for example, equal shares of the countries' contributions to the New Development Bank. At the same time, the essence of the alliance remains purely political, since the BRICS alliance did not establish official socio-economic criteria for selecting new members of the alliance. This circumstance, on the one hand, expanded opportunities for attracting new countries to the alliance, but on the other hand, gave BRICS members the right to subjectively decide which country to accept.

Ksenia Bondarenko further suggested that the admission of resource-rich countries as BRICS members and the sale of these resources on commodity exchanges within the alliance, together with similar approaches of the member countries to global politics and economy, could lead to the end of the petrodollar era, as resources could be

purchased not for US dollars, but for another currency. Other participants noted that such a development is extremely likely, if it is not already happening now. The digital economy today provides the ability to calculate and measure demand for any good, which makes it possible to measure the value of a product through utilitarian goods (a kind of digital barter) rather than through any unit of account.

The final discussion of the seminar was aimed at discussing the effectiveness of BRICS as an international association. Mikhaylishin noted that the BRICS differs from other associations and formats in that it is a "discussion platform." While the SCO and NATO remain rather military-political blocs, the BRICS retains its original nature as a springboard for global initiatives, where, apart from politics, joint economic projects, personal contacts and cultural ties are important. Experts noted that the group in practice fulfills its function as an alliance, for example, Russia's BRICS partners did not support Australia's initiative to exclude Russia from the G20. Among the advantages of BRICS were also mentioned the establishment of horizontal contacts and a deeper understanding of the processes taking place in other countries.

The seminar concluded with **Leonid Grigoryev's** discussion on the cultural component of the BRICS countries. According to the professor, fruitful joint work is impossible without common cultural codes and overcoming language and academic barriers. To solve the problem, it is necessary to bypass bureaucratic frameworks and create a common academic and cultural space for the young generation of the countries to establish an international dialogue.

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