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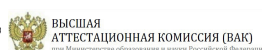
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№ 4, 2022

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National Policy of Black Sea Region Countries Towards Sustainable Development

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ABSTRACT

The authors consider the integration of the concept of sustainability in the member countries of the Organization of the Black Sea Economic Cooperation (BSEC). The concept of sustainable development is viewed through the prism of economic, social and environmental approaches. The **subject** of the study is the Sustainable Development Goals (SDGs) in the BSEC countries. The **purpose** of the research is to study the integration of the goals and indicators of sustainable development in the national policies of the BSEC countries. The **relevance** lies in the international community's growing attention to forming a vector for balanced socio-economic development, taking into account current social, demographic and environmental factors. The **scientific novelty** lies in the analysis of the advancement of the concept of sustainable development in the BSEC countries, as well as the level of integration of the SDGs in the national policies of states. As part of the study, the authors used the **methods** of institutional analysis, system analysis, analysis of statistical data and official documents. Based on the **results** of the analysis, it was revealed that despite the high level of integration of the SDGs within the framework of the BSEC, not all goals and indicators of sustainable development formed by the United Nations (UN) are tracked in countries. The authors **concluded** that the national characteristics of the economy, the social sphere and the environmental situation push states to adapt individual indicators to national specifics.

Keywords: sustainable development; Black Sea region; socio-economic development; interregional cooperation; national policy; monitoring

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ОРИГИНАЛЬНАЯ СТАТЬЯ

Национальная политика стран Черноморского региона в отношении устойчивого развития

П.В. Строев, А.И. Дудник, Е.С. Конищев
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АННОТАЦИЯ

Авторы рассматривают интеграцию концепции устойчивости в странах — членах Организации черноморского экономического сотрудничества (ОЧЭС). Концепция устойчивого развития рассматривается через призму экономического, социального и экологического подходов. **Предметом** исследования являются цели устойчивого развития (ЦУР) в странах ОЧЭС. **Цель** исследования — исследование интегрированности целей и показателей устойчивого развития в национальной политике стран ОЧЭС. **Актуальность** заключается в растущем внимании международного сообщества к формированию вектора на сбалансированное социально-экономическое развитие с учетом актуальных социальных, демографических и экологических факторов. **Научная новизна** состоит в анализе развития концепции устойчивого развития в странах ОЧЭС, а также уровня интеграции ЦУР в национальной политике государств. В рамках исследования авторами использовались **методы** институционального анализа, системного анализа, анализа статистических данных и официальных документов. По **результатам** проведенного анализа было выявлено, что несмотря на

высокий уровень интегрированности ЦУР в рамках ОЧЕС, не все цели и показатели устойчивого развития, формируемые Организацией Объединенных Наций (ООН), отслеживаются в странах. Авторами сделан **вывод** о том, что национальные особенности экономики, социальной сферы и экологической ситуации подталкивают государства к адаптации отдельных показателей к национальной специфике.

Ключевые слова: устойчивое развитие; Черноморский регион; социально-экономическое развитие; меж-региональное сотрудничество; национальная политика; мониторинг

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Introduction

The 2030 Agenda for Sustainable Development was launched in 2015 to end poverty and set the world on a path of peace, prosperity and opportunity for all on a healthy planet. Achieving Sustainable Development Goals (SDGs) requires a transformation of the financial, economic and political systems that govern our societies today to guarantee the human rights of all. The UN Department of Economic and Social Affairs (DESA) prepares every year a “Sustainable Development Goals Report”, which depicts the overall progress made by the UN member-states in the achievement of the 17 SDGs.¹

A mix of data sources is used to assess each country’s progress in the implementation of the Sustainable Development Goals. Five criteria are used to determine suitable metrics for inclusion in the report:

1. Global relevance and applicability to a broad range of country settings (indicators must be internationally comparable).
2. Statistical adequacy (indicators need to represent valid and reliable measures).
3. Timeliness (indicators should be up to date).
4. Data quality (national statistical offices, international organizations, reputable sources).
5. Coverage (must be available for at least 80% of the UN member states with a national population greater than 1 million).

The 2030 Agenda encourages member states to conduct regular and inclusive reviews of progress at the national and sub-national levels, which could be published for the general public in the form of Voluntary National Reviews (VNR). Nowadays, each member state of the Black Sea region

has a focal point responsible for its VNRs which are expected to serve as a basis for the regular reviews by the High-Level Political Forum (HLPF).

Baseline study

Albania

The Albanian government has affirmed its full commitment to Agenda 2030. The coordination and leadership of the process is provided by the Inter-Ministerial Committee on the SDGs, chaired by the deputy prime minister of Albania and comprising key government institutions, as well as other stakeholders from the business community, civil society, academia and international organizations, including the technical support provided by the Department of Development and Good Governance in the Prime Minister’s Office, the SDG Inter-Ministerial Technical Working Group and the contribution of the United Nations (UN) agencies in the country through their direct support, and the accelerators from the MAPS (mainstreaming, acceleration and policy support) mission. Albania’s Parliament has unanimously approved a resolution confirming the country’s commitment to Agenda 2030, as it plays an important role in monitoring the achievement of the SDGs.

To support the implementation of Agenda 2030, Albania has prepared a VNR,² which indicates that 140 SDG targets (83%) are directly tied to specific components of the National Strategy for Development and Integration and NSDI 2015–2020 pillars. The linkages between Albania’s policy goals and the SDG targets in the national strategies and policy documents depict 134 SDG targets (79%) linked to the spe-

¹ The Sustainable Development Goals Report 2020, United Nations, 2020. URL: <https://unstats.un.org/sdgs/report/2020/>

² Voluntary National Review, Albania, 2018. URL: https://sustainabledevelopment.un.org/content/documents/20257ALBANIA_VNR_2018_FINAL2.pdf

cific objectives of the national strategic policy framework. This framework is mostly harmonised with the SDG targets in Goal 3: Good health and well-being, Goal 7: Affordable and clean energy, Goal 8: Good jobs and economic growth, and Goal 9: Industry, innovation and infrastructure, while the least harmonisation is with Goal 14: Life below water [1].

The Albanian Institute of Statistics (INSTAT) is the coordinator of the National Statistical System composed of INSTAT, the Bank of Albania and the Ministry of Finance and Economy.

INSTAT is a member of the Inter-Institutional Working Group established in 2017 with representatives from ministries and led by the Prime Minister's Office. It began work on the SDGs with an approach of aligning the process with the European Union (EU) integration of Albania. The institute volunteered to prepare a statistical annex, which contains a set of 30 indicators, monitoring Albania's progress towards the SDGs as part of the first attempt to gain an overall SDG picture for the country. The annex has been circulated and discussed with the Inter-Institutional Working Group for comments, presented to Civil Society, and made available for public consultation as a part of the VNR for Albania.

Selection criteria

The SDG indicators are selected based on the following criteria:

- Utilize indicators that are relevant for Albania, starting with those already available in the country or at Eurostat.
- Indicators should be independent of each other.
- Indicators should be as close as possible to those on the list proposed by the UN Statistical Commission (UNSC) to monitor progress towards the SDGs.
- Each indicator should have a clear and quantified target, whenever possible related to a strategic document of the country.
- Each indicator should follow the criteria of statistical quality approved by the UNSC.
- Wherever possible, preference should be given to indicators that can be disaggregated by sex, age, income and education level (as requested by UNSC).
- Wherever possible, a comparison should be possible with the European level.

- Wherever possible, preference should be given to indicators that can be disaggregated by region at a later stage.

Armenia

Armenia is a landlocked country with a population of 3 million and a gross domestic product (GDP) per capita \$ 3,872 in 2017. It is bordered by Azerbaijan, Georgia, Iran, and Turkey.

Armenia started a participatory process of SDG nationalization and implementation in 2015 by forming a Post-2015 Task Force in collaboration with stakeholders and the international community.

Armenia, in 2018, the date of publication of the VNR,³ was in the process of designing Armenia Development Strategy (ADS), an overarching strategy document that will benefit from the SDG framework, which provides a comprehensive set of targets and indicators necessary for effective planning and monitoring of development objectives. In this context, the VNR in Armenia was undertaken as a natural and necessary effort and step for pursuing the sustainable development agenda.

The VNR was a good chance for the government to assess work done in the scope of the SDGs and shape opportunities for innovative and impactful solutions towards achieving the vision of "New Armenia".

As indicated, Armenia has had mixed results in implementing the SDGs.

In many areas, Armenia has made good progress towards achieving SDG targets such as:

- (i) health protection in terms of child and maternal health;
- (ii) access to safe and reliable water supply in urban and rural areas;
- (iii) improved sanitation in urban areas;
- (iv) universal access to reliable energy;
- (v) promotion of renewable energy;
- (vi) environmental protection, in terms of enlargement of protected areas and biodiversity.

Nevertheless, there are areas where Armenia has shown slow or mixed progress. These include, particularly:

- (i) poverty, i.e., despite ending extreme poverty;
- (ii) education, due to the high dropout rate from high school;

³ Voluntary National Review, Armenia, 2018. URL: https://sustainabledevelopment.un.org/content/documents/19586Armenia_VNR_2018.pdf

- (iii) gender equality;
- (iv) inefficient use of water;
- (v) environment, due to deforestation risks, land degradation;
- (vi) low access to sanitation in rural areas;
- (vii) inefficiencies in governance;
- (viii) lack of sustainable consumption and production (SCP) practices.

The VNR helped also highlight the fact that there is still a number of key areas and SDG targets/indicators that are lacking effective monitoring and/or control. These are particularly the indicators related to community-level actions or data, and to private businesses' performance or practices. Certainly, these are areas requiring multiplied government efforts to bring positive changes.

Not surprisingly, the data effort was one of the main challenging exercises. The data effort included compiling and analyzing accurate sex, age and diversity-disaggregated data from various sources, including:

- national official statistics;
- sector-specific data and information from ministries and other authorities;
- data from sector-specific strategy documents which involved specific performance indicators;
- information from businesses and other stakeholders through meetings and discussions: this was important, especially for obtaining not only quantitative but also qualitative information, which is often necessary for better understanding of underlying issues.
- data from relevant specialized international organizations, particularly the World Bank; various agencies and organizations and data sources of the United Nations (such as the Food and Agriculture Organization Corporate Statistical Database (FAO STAT), FAO's Global Information System on Water and Agriculture (FAO AQUASTAT), United Nations Economic Commission for Europe (UNECE), International Fund for Agricultural Development (IFAD), United Nations Entity for Gender Equality and the Empowerment of Women (UNWOMEN), United Nations Environment Programme (UNEP) database, United Nations Framework Convention on Climate Change (UNFCCC), International Labour Organization (ILO), International Organization for Migration (IOM), World

Health Organization (WHO), United Nations High Commissioner for Refugees (UNHCR), United Nations International Children's Emergency Fund (UNICEF), Organisation for Economic Co-operation and Development (OECD), European Institute of Gender Equality (EIGE), etc.).

Crucial support and an effective solution to the data challenge was the establishment of the National SDG Statistical Platform in Armenia, with a structure and content based on SDG targets and indicators.

The Platform was developed by the Statistical Committee of Armenia (SCA) with the support of the UN Population Fund (UNFPA) Armenia Country Office. It is maintained by the SCA in close cooperation with relevant state agencies, civil society organizations and the private sector. It conforms with the UN Fundamental Principles of Official Statistics.

Efforts were also dedicated to improving sectorial data, for example, related to migration and development [2]. This way, priorities of Armenia on Migration and Development (M&D) were identified via broad-based discussions among governmental, civic and international stakeholders. Methodology for data collection was developed and discussions were initiated by State Migration Service, SCA and Prime Minister's Office. UNICEF and United Nations Development Programme (UNDP) jointly with the SCA have supported the development of child-related SDG baseline indicators (both international and nationalized) with appropriate levels of disaggregation. The dataset identifies gaps in data on children and identifies ways of data collection to make up for these gaps (both through survey and administrative data), thus creating a monitoring system for child rights in the context of SDGs.

Azerbaijan

The Government of Azerbaijan, through its published VNR in 2019,⁴ is committed to taking lessons learned into account for the planned next phases of SDG localization as well as implementation at large. Azerbaijan called upon the international community to support these efforts through direct SDG funding mecha-

⁴ Voluntary National Review, Azerbaijan, 2019. URL: https://sustainabledevelopment.un.org/content/documents/23411AZERBAIJAN_VNR_Report.pdf

nisms, sharing best international practices, building effective partnerships, addressing challenges, developing capacities and platforms of significant importance for the Republic of Azerbaijan in order to achieve the SDGs by 2030.

The VNR highlighted progress concerning:

- the enabling environment, including national ownership of SDGs;
- participation and awareness raising;
- nationalization of global SDGs and prioritizing relevant targets and indicators thereof;
- mainstreaming of SDGs into the national development agenda;
- integration of three dimensions of sustainable development;
- “Leaving no one behind” principle;
- institutional mechanisms;
- structural issues and implementation tools and resources.

In the frame of the VNR, Azerbaijan nationalized SDGs and prioritized 17 SDG goals, 88 targets and 119 indicators based on joint work with public institutions as well as a series of consultations with the civil society, business community, youth and international organizations.

The preparation of the VNR was led by the Ministry of Economy (MoE) of the Republic of Azerbaijan, which also serves as the secretariat of the National Coordination Council on Sustainable Development (NCCSD) (Fig. 1). The review was conducted in close collaboration with NCCSD SDG Working Groups composed of technical experts and representatives of various state institutions, as well as academia, civil society organizations, the private sector, youth organizations, international partners and think tanks.

Also, four thematic Working Groups were established under the umbrella of the National Coordination Council for Sustainable Development (NCCSD) and have formed a collective approach to not only holding extensive discussions on SDGs but also ensuring the alignment of the state socioeconomic programs and strategies with the SDGs. These four SDG Working Groups: (i) social, (ii) economic, (iii) environment, and (iv) monitoring, are also responsible for providing policy advice to decision makers to better mainstream, implement, monitor and report on the progress made on SDGs. Azerbaijan also identified SDG accelerators with the assistance of the United

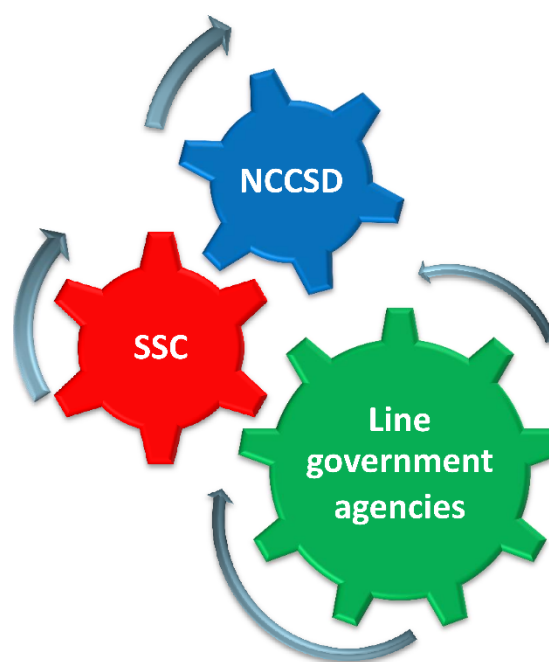


Fig. 1. Interaction towards achieving the SDGs

Source: compiled by the authors.

Nations Mainstreaming, Acceleration and Policy Support (MAPS) mission led by UNDP.

On February 14, 2018, a broad consultation workshop was conducted on the nationalization of SDGs with the participation of the UNDP Regional Bureau for Europe and the Commonwealth of Independent States, the UNDP office in Azerbaijan, the Ministry of Economy, the heads of the UN specialized agencies' country offices in Azerbaijan, as well as the head and representatives of the working groups on SDGs [3].

In addition, a letter of agreement was signed between the FAO and the Centre for Development Research of the University of Natural Resources and Life Sciences, Vienna (BOKU) for the implementation of the project “Supporting capacity development in implementing Sustainable Development Goals in Azerbaijan” in December 2017 as part of the FAO's support to the Government of Azerbaijan for implementation of the SDGs.

Other players identified through the VNR are the IDEA Public Union, the UNICEF Office in Azerbaijan and the State Statistics Committee (SSC) of the Republic of Azerbaijan.

It is worth noting that in the frame of the VNR, there is a call for establishing a UN Database of National SDG Focal Points to facilitate direct contact and dialogue at a national, regional and global level. The launch of this database was

planned for the” 2019 high-level political forum”, where countries would be presenting VNRs.

Bulgaria

The VNR published in 2020,⁵ analyzes and identifies the areas of progress and challenges and proposes possible solutions for all 17 Goals, taking into account economic, social and environmental indicators of particular importance to Bulgaria.

Based on the VNR, the country has to find strong competitive advantages in order to promote sustainable economic growth and, at the same time, prevent leaving behind certain social groups. In order to make progress by 2030, a balance, integration and synergy are sought between a high value-added economy, a circular economy and a social/solidarity economy, as well as the appropriate integration of the three dimensions of sustainable development in Bulgaria.

The VNR outlines the progress on the most important indicators related to poverty and inequality reduction, as well as the care for the most vulnerable in the fields of education, health and social protection. It also presents various examples that in Bulgaria, all stakeholders who have declared the UN SDGs as their commitment are working to achieve them at the local, national, regional and global levels.

The focus will be on public policies on education, poverty, integrated regional development, better management of the agricultural sector and natural resources, enhancing the competitiveness of the economy and strengthening the institutional environment, energy security and better transport connectivity [4, 5]. The priorities formulated within this period are related to the potential for economic growth and the necessity for the effective functioning of public sector safeguards in terms of social inclusion and combating poverty.

The three main strategic goals are: accelerated economic development, demographic upswing and reduction of inequalities. The National Development Programme BULGARIA 2030 outlines 13 national priorities in five development areas (axes). Their implementation will contribute to the achievement of the UN SDGs. The Re-

view also outlines the relation between some of the key priorities set out in the Government’s Programme for the Republic of Bulgaria for the period 2017–2021 and the UN SDGs.

For the purpose of tracking and reviewing individual Goals, the VNR uses data from the National Statistical Institute and statistical bodies, other public institutions and agencies (Social Assistance Agency, Agency for Persons with Disabilities, etc.), international organizations and agencies, as well as by informal surveys of young people, business and the private sector. The VNR uses the statistical information available as of January 31, 2020.

It is worth noting that the National Statistical Institute launched Monitorstat — a web-based platform for tracking SDG progress, containing all indicators of the Eurostat SDG framework and multiple indicators from the global SDG framework.

Moreover, for the purpose of the VNR, the Ministry of Foreign Affairs of the Republic of Bulgaria has taken action to collect relevant information from governmental institutions and other stakeholders on policies and activities related to the implementation of the UN SDGs, as well as on individual indicators. Also, a wide range of stakeholders was consulted: an online survey of non-governmental organizations through the database of the Bulgarian Non-Governmental Organisations (NGO’s) Information Portal; focus groups with business representatives; individual interviews with trade union representatives. The VNR also contains the results of an online survey of Bulgarian Youth Delegates to the UN.

Georgia

In 2020 Georgia published the 2nd VNR⁶ on the implementation of SDGs and expressed commitment to further advance the 2030 Agenda.

The SDGs are of utmost importance for Georgia as they are for the people worldwide. The Government of Georgia has adopted a National Document on the Implementation of the SDGs outlining targets and milestones for each of the 17 Goals. Furthermore, the country managed to strongly embed Agenda 2030 goals, targets, and indicators into the national policy planning sys-

⁵ Voluntary National Review, Bulgaria, 2020. URL: https://sustainabledevelopment.un.org/content/documents/26290VNR_2020_Bulgaria_Report.pdf

⁶ Voluntary National Review, Georgia, 2020. URL: https://sustainabledevelopment.un.org/content/documents/26390VNR_2020_Georgia_Report.pdf

tem as well as to ensure that the government's policies and priorities are designed to fulfill the core pledge — “to leave no one behind”.

Over the past years, Georgia has made significant socio-economic progress. As a result, Georgia has been elevated from lower-middle to upper-middle income countries by the World Bank classification. Despite regional economic shocks, the country managed to sustain stable economic development with an average annual GDP growth rate of 5% during the last three years.

Georgia pays special attention to the increasing quality and accessibility of education, healthcare and social services, which are the key components for achieving sustainable development and improving the well-being of citizens [6]. Education is one of the key priorities, and the country has made significant progress in reforming general education and developing demand-based higher and professional education to reduce the existing skills-mismatch problem in the labor market. To improve health and well-being of the citizens, the ground-breaking Universal Health Care (UNC) program was introduced, enabling full access to healthcare services for each citizen. The Government of Georgia attaches the highest importance to building strong, transparent, and accountable state institutions — the foundation and pre-requisite for sustainable development.

Despite all this progress, it is well recognized that there are still social, economic, environmental, and institutional challenges, and effort is needed to find the best possible solutions based on evidence and analysis.

The key coordination body for implementing the national SDG targets is the Sustainable Development Goals Inter-Agency Council (SDG Council), chaired by the Head of the Administration of the Government of Georgia. Since 2015, the Administration of Government of Georgia has led the nationalization and coordination process of the SDGs. The Council has four thematic working groups:

- Social Inclusion;
- Economic Development;
- Sustainable Energy and Environmental Protection;
- Democratic Governance.

The Council engages stakeholders from the public, civil, international, academic and private sectors in its working groups. The Policy

Planning Unit of the Policy Planning and Coordination Department at the Administration of Government of Georgia serves as the secretariat to the SDG Council. That unit also monitors the implementation of the national SDGs through a special electronic system.

Greece

Greece published the latest VNR in 2018.⁷ The eight Greek National Priorities for the SDGs encompass all 17 SDGs, and reflect, in a balanced and integrated manner, the three dimensions of sustainable development [7]. They include:

- Fostering competitive, innovative and sustainable economic growth (linked to SDGs 8, 9);
- Promoting full employment and decent work for all (linked to SDG 8);
- Addressing poverty and social exclusion and providing universal access to quality health care services (linked to SDGs 1, 2, 3);
- Reducing social and regional inequalities and ensuring equal opportunities for all (linked to SDGs 5, 10);
- Providing high-quality and inclusive education (linked to SDG 4);
- Strengthening the protection and sustainable management of natural capital as a base for social prosperity and transition to a low-carbon economy (linked to SDGs 6, 7, 11, 12, 13, 14, 15);
- Building effective, accountable and transparent institutions (linked to SDGs 16, 17). Enhancing open, participatory, democratic processes and promoting partnerships (linked to SDGs 16, 17).

The General Secretariat of the Government (GSG) and its Office of Coordination, Institutional, International and European Affairs (OCIIEA), in particular, is responsible for monitoring and coordinating the national implementation of the SDGs (*Fig. 2*).

The Hellenic Statistical Authority (ELSTAT), as coordinator of the Hellenic Statistical System (ELSS) aims at the production on a regular basis of official statistics with the target of ensuring and continuously improving their quality. ELSTAT is also responsible for certifying the statistics of the ELSS authorities and organiza-

⁷ Voluntary National Review, Greece, 2018. URL: https://sustainabledevelopment.un.org/content/documents/19378Greece_VNR_Greece_2018_pdf_FINAL_140618.pdf

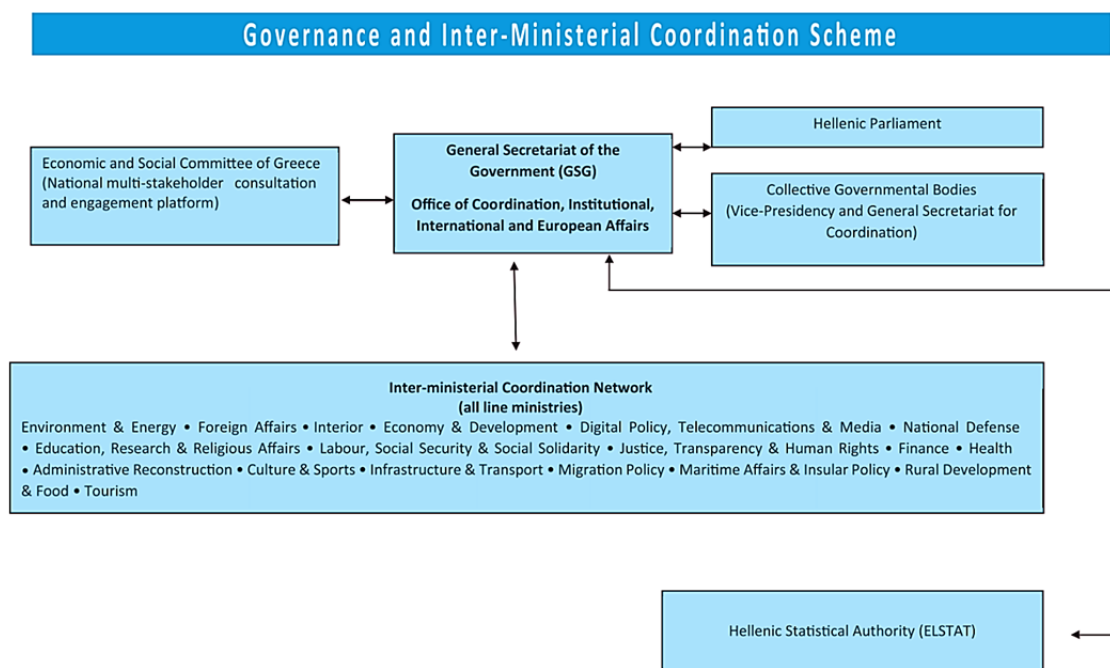


Fig. 2. Governance and inter-Ministerial Coordination Scheme in Greece for achieving the SDGs

Source: compiled by the authors.

tions. This delivers more direct coordination and ensures the quality of official statistics in the country. ELSTAT has conducted three rounds to identify the data required for the SDGs. At the same time, the ELSS is in close cooperation with the custodian agencies either to provide data or to validate the proposed methodology and data.

According to the VNR, priority is given to the development of an Entrepreneurship Observatory that will collect, process and analyze data on the business economy and will allow for a more systematic and effective control of the market, as well as the assessment of proposed and applied legislative and non-legislative interventions, in order to achieve the required coordination among services of different ministries.

Moldova

In its first VNR, published in 2020,⁸ the Republic of Moldova aimed to map progress, challenges, and opportunities with regard to the implementation of the SDGs. At the same time, assessing to what extent implementation of the SDGs is on track will enable possible solutions

to be identified, thereby accelerating progress in the areas that have fallen behind.

In the course of implementing the 2030 Agenda, the Republic of Moldova was one of the first countries to nationalize (in 2016) and then revise (in 2019) a national set of SDG indicators [8]. Both processes were designed to assess the relevance of each indicator and then to classify them. The criteria considered when mapping the global indicators and identifying national ones that are relevant for the nationalized SDG targets include:

- the relevance of the indicator in the context of the nationalized target;
- the existence of a reliable primary data source;
- the indicator is clearly formulated and does not create ambiguities;
- the indicator meets quality criteria such as coherence, accessibility, accuracy and availability of methodology for calculation.

In 2019, specialists from the National Bureau of Statistics revised the SDG indicators in consultation with national data providers to assess the degree of availability of the nationalized SDG indicators and their level of compliance with the global list of SDG indicators and the proposed international calculation methodologies.

⁸ Voluntary National Review, Moldova, 2020. URL: https://sustainabledevelopment.un.org/content/documents/26346VNR_2020_Moldova_Report_English.pdf

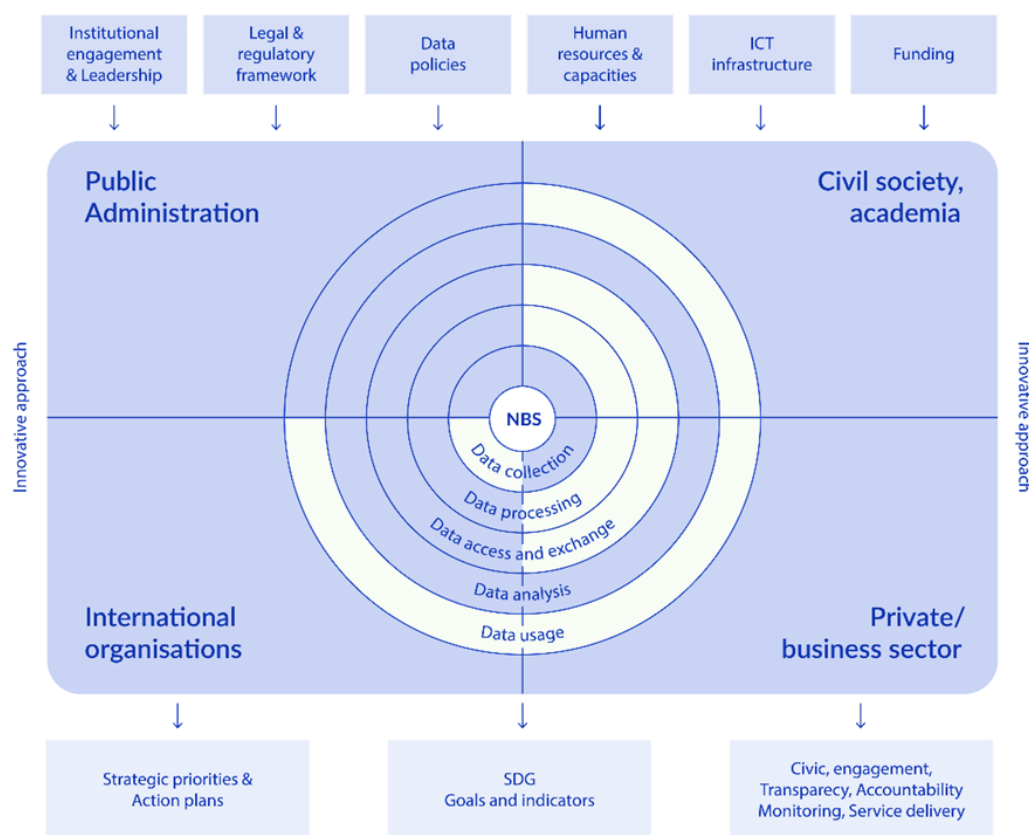


Fig. 3. The data eco-system model of Moldova

Source: compiled by the authors.

The VNR was conducted following an Action Plan approved by the Government of the Republic of Moldova under the supervision of a Joint Steering Committee, including representatives from the presidency, parliament, government, central and local public authorities, civil society, private sector, press and academia.

The VNR was drafted with analytical and informational support from the ministries and other public authorities, United Nations agencies and the National Bureau of Statistics, with the later supplying the statistics needed to assess progress. The State Chancellery coordinated the process.

In 2018, after a round of complex consultations with policymakers, line ministries, public institutions, private organizations, civil society and development partners, and an online questionnaire, a national report was developed to inventorize the data system in the country. Its overall objective was to assess the availability of data and the institutional modernization capacity needed to implement the 2030 Development Agenda.

The produced document recommends that actions are taken at national level to achieve data

revolution. Citizens and civil society need to be empowered with more responsibility and to be involved in decision-making processes. In addition, the number of official statistics data producers should be increased. At the same time, formal and professional education and data literacy are absolutely necessary to enable the development of skills and allow efficient and full use of data (Fig. 3).

Republic of North Macedonia

Since its independence in 1991, the Republic of North Macedonia has made significant progress towards sustainable development and the rational use of natural resources. This process was guided by the fundamental values enshrined in its constitution, legal framework and strategic policy documents such as the National Development Plan 2007–2009, National Strategy for Sustainable Development 2009–2030, Strategy for Regional Development 2009–2019, etc. In 2015, the government reaffirmed its commitment to sustainable development by pledging “to leave no one behind” and agreeing to implement the 2030 Agenda.

In 2018, the Government of the Republic of North Macedonia, through the National Council for Sustainable Development, reaffirmed the commitment to implement the United Nations Agenda 2030. The National Council for Sustainable Development identified SDG 1, SDG 4, SDG 8, SDG 13 and SDG 16 as five priority goals for the period 2018–2020, based on priority activities and measures defined in the government programme (2017–2020) and the five pillars of the United Nations Development Assistance Plan (UNDAF) for the period 2016–2020.

North Macedonia's existing policy framework addresses a number of aspects of sustainable development, while the Rapid Integrated Assessment conducted in 2019 assessed the alignment of 83% with the overall Agenda.

The first Voluntary National Review for North Macedonia, presented in 2020, is an important document prepared with joint effort and fruitful collaboration of multiple stakeholders. It evaluates the performance of the country in terms of the Agenda 2030. Some of the entities involved and the collaborations that were put forward towards the production of the first VNR for the Republic of North Macedonia are:

- Civil Society Organizations (CSO)
- Representatives from the academia, chambers of commerce, civil society and government
 - The Organization for Economic Cooperation and Development and the Swedish Embassy
 - The Youth Forum/Consultation.

To achieve the 2030 Agenda and address challenges, the Government of the Republic of North Macedonia will continue strengthening its institutions and partnerships, thus creating the enabling conditions for prosperity and sustainability for the present and future generations.

The Statistical Office, specifically the Unit for Business Registry and Structured Business Statistics, is the focal point for the country. Moreover, the UNDP-North Macedonia supports the government in building an inclusive society — where everyone has access to services and can participate in making decisions that affect their lives. Support involves developing human and institutional capacities, providing knowledge, demonstrating solutions, building partnerships, and raising funds for development.

Romania

Romania published its VNR in 2018,⁹ focusing on SDG 6, SDG 7, SDG 11, SDG 12, SDG 15 and SDG 17.

Romania has been a very active member of the UN Open Ended Working Group on elaborating the SDGs, as well as member of the Board of the 10-Year Framework of Programs on Sustainable Consumption and Production Patterns (for two mandates).

Sustainable Development in Romania is a shared responsibility between the Inter-ministerial Committee for the Coordination of the Integration of Environmental Protection into Sectoral Policies and Strategies at the National Level (Inter-ministerial Committee) led by the Vice Prime Minister, Minister of Environment and the Department for Sustainable Development, led by a State Counsellor, under the Prime-Minister's Office.

In September 2017, the Inter-ministerial Committee decided that the VNR is conducted by the Secretariat of the Inter-ministerial Committee (Unit for Sustainable Development of the Ministry of Environment), establishing a drafting open working group, that comprises all ministries and institutions, civil society representatives and academia.

The Government of Romania, through the Government Decision No. 313/2017, established a Department for Sustainable Development that coordinates all activities on the implementation of the 17 SDGs at national level.

In breaking the silo approach and effective implementation of the 2030 Agenda and its 17 SDGs, the ownership of SDGs is not dealing with one person or organization. All ministries and institutions, all civil servants from central and local governments, decision makers, and members of parliament should be part of the implementation process [9].

Romania has passed through the process of updating its Sustainable Development indicator set — an essential part of both the National Sustainable Development Strategy and the Action Plan, which seeks to build upon the former by having a more specific, in-depth, character. To achieve this, the Department collaborates closely

⁹ Voluntary National Review, Romania, 2018. URL: https://sustainabledevelopment.un.org/content/documents/19952Voluntary_National_Review_ROMANIA_with_Cover.pdf

with the National Institute of Statistics by bridging both the United Nations', and the European Union's indicator sets to choose the right indicators to address Romania's specificities.

There are three issues that the Department encountered while revising Romania's National Sustainable Development Strategy, which presents a learning experience for other countries which are currently considering ways of incorporating the SDGs in their respective national frameworks. These are: involving all segments of society, having experts and a robust monitoring system.

As stated in the VNR, the elaboration of the Third Environmental Performance Review (3rd EPR) of Romania would start in 2019, carried out by the United Nations Economic Commission for Europe (UNECE) experts' mission in Romania. This process will substantially contribute to the localization of the SDGs, focusing on the environmental dimension of sustainable development. The 3rd EPR was estimated to be completed in 2020. Thus, future submissions of the Voluntary National Reviews of Romania are expected in 2023 and 2029.

Russian Federation

The Russian Federation submitted its first Voluntary National Review (VNR)¹⁰ on the implementation of the 2030 Agenda in 2020.

The VNR was the first official document designed to evaluate the state and the progress in the achievement of SDGs in Russia. The Review was carried out by the Analytical Center for the Government of the Russian Federation by establishing 17 thematic working groups – one for each SDG. These groups included representatives of the legislative branch, federal and regional executive bodies, municipal authorities, the Central Bank of Russia, development institutions, civil society organizations, research organizations, as well as representatives from the business community. More than 200 experts and more than 100 organizations have participated in the preparation of the VNR. The draft Review as well as its chapters have been subject to open public expert discussions. Furthermore, most SDGs are currently present in the main strategic and program documents

adopted in Russia. The ongoing 12 national projects have an actual focus on achieving the SDGs [10, 11].

The preparation of the VNR made it possible:

- to involve a wide range of stakeholders in the process of discussion on the document;
- to establish a fruitful dialogue between the state, civil society, business and academia;
- to study and take on board different opinions on the SDGs, ensure the broad public interest in the implementation of the 2030 Agenda and the SDGs;
- to conduct in-depth analysis of the consistency between national goals and the objectives of the 2030 Agenda and the SDGs and evaluate the interim results of the progress in their implementation.

According to the VNR, Russia focuses its efforts on four aspects:

- (i) support for the poor (economic aspect);
- (ii) support for people with disabilities (social aspect);
- (iii) elimination of inequality between different regions (territorial aspect);
- (iv) support for indigenous and small peoples (national dimension).

Moreover, the Russian Federation has shown tangible progress for each of the individual SDGs. Among the most successful are: SDG 1 "Poverty Eradication", SDG 4 "Quality Education", SDG 8 "Decent Work and Economic Growth". At the same time, a number of targets in certain areas have yet to be achieved by the joint efforts of the state, business and the public.

In order to monitor SDGs, the Federal State Statistic Service processes statistical information on SDGs in the Russian Federation, and the complete database is available on the web portal¹¹ in the subsection "Sustainable Development Goals".

The Russian Federation has shown positive results for each SGD in recent years:

- SDG 1 "No Poverty": In 2018, the share of the population with an income below the poverty line amounted to 12.6%.
- SDG 2 "Zero Hunger": In 2018, the prevalence of malnutrition fell to 1.6%. Meanwhile, acute food insecurity touched only 0.3% of the Russian population.

¹⁰ Voluntary National Review, Russia, 2020. URL: https://sustainabledevelopment.un.org/content/documents/26421VNR_2020_Russia_Report_Russian.pdf

¹¹ Sustainable Development Goals. URL: <https://rosstat.gov.ru/sdg>

- SDG 3 “Good Health and Well-Being”: In 2019, the mortality rate decreased to 12.3 (per 1,000 people) compared to 2015 (13.0) and 2010 (14.2). Life expectancy at birth has a steady upward trend (72.91 years in 2018 compared to 71.39 in 2015).

- SDG 4 “Quality Education”: In 2018, gross enrolment ratio in preparatory, secondary and higher education programmes in Russia was 99.9%.

- SDG 5 “Gender Equality”: In 2019, labor-force participation among women reached 55.45% (among men – 70.6%), the employment rate was 52.9% (67.3% – for men), the unemployment rate was 4.4% (4.8% – for men). According to the assessment of United Nations Development Program (UNDP), Russia has a very high Human Development index rate, wherein the human development index for women was equal to or higher than the index for men (0.823 against 0.808 in 2017).

- SDG 6 “Clean Water and Sanitation”: In 2018, 90.3% of households had a centralized water supply (+3.6% against 2014), 77.4% of the population had access to centralized or individual sewerage (+4.4 against 2014).

- SDG 7 “Affordable and Clean Energy”: In 2018, 100% of the population had access to electricity, 86% of the households were provided with heating. By 2018, energy intensity decreased by 12% with Russia’s GDP growing by 14%.

- SDG 8 “Decent Work and Economic Growth”: During the reporting period, an acceleration of GDP growth rate (from 0.2% in 2016 to 2.3% in 2018) and an increase in the population income (real average monthly wages of employees increased by 0.8% in 2016) were observed.

- SDG 9 “Industrialization, Innovation and Infrastructure”: Freight turnover for all transport modes in Russia increased by 10.3% in 2015–2018 (to 5,635 billion ton-km). Passenger turnover for all types of public transport also rose by 12.1% to 593.6 passenger-km.

- SDG 10 “Reduced Inequalities”: In 2018, the Gini coefficient (income concentration index) for Russia was 0.413 (0.421 in 2010; 0.412 in 2015).

- SDG 11 “Sustainable Cities and Communities”: The Housing Affordability Index

increased in 2006–2018 by 128% in Russia. Moreover, the average concentration of main pollutants in Russian cities decreased by 2018.

- SDG 12 “Responsible Consumption and Production”: In 82% of the Russian cities in which the population exceeds 100,000 people, the infrastructure for separate collection facilities has been created, and in 2019, 18.5% of the country’s citizens had access to this infrastructure (2.5 times more than in 2018).

- SDG 13 “Climate Action”: The Government of the Russian Federation approved a resolution on adopting the Paris Agreement on September 21, 2019. Green financing is still developing; Russia became one of the countries, whose companies issued green bonds in 2018.

- SDG 14 “Life Below Water”: Russia increased the total surface area of specially protected natural territories of federal significance that belong to the maritime space (from 10.9 million hectares in 2016 to 18.9 million hectares in 2018). The biodiversity of fish found in coastal marine waters has increased significantly (from 400 species in 2015 to 1,500 species in 2018).

- SDG 15 “Life on Land”: The surface of specially protected natural territories (without considering marine areas) of federal, regional and local significance increased to 218.2 million hectares in 2015–2018.

- SDG 16 “Peace, Justice and Strong Institutions”: From 2015 to 2018, the number of crimes involving violent acts decreased by 33.1% in the Russian Federation, and the number of registered crimes against the person decreased by 1.4 times.

- SDG 17 “Partnership for the Goals”: Federal budget expenditure classified by OECD methodology as official development assistance reached almost \$ 1 billion in 2018.

The 2030 Agenda implementation is continuing even in emergency times. Russia makes every effort to contain the COVID-19 pandemic and provides medical assistance and healthcare for those who need it in the country as well as abroad. The government implements a wide range of measures to minimize the negative impact of the quarantine on the population and business.

Serbia

Serbia published its VNR in 2019.¹² The Serbian government established six strategic pathways for growing into sustainability:

- Connect, partner and integrate Serbia in Europe and the world;
- Achieve faster, inclusive and sustainable growth based on economic, scientific and innovation resources;
- Render efficient and effective public services;
- Promote human rights and security;
- Education for the twenty-first century;
- Transformative digitalization.

In growing into sustainability, Serbia needs assistance through an increased scope of investments, knowledge and skills, technologies and special partnerships for the development of a generically sustainable, carbon-neutral circular agriculture and industry of sustainable materials, technological processes, products and services, including services in the financial sector, especially encouraging individual entrepreneurship and multiplication of micro, small and medium-sized enterprises in these two fundamental productive sectors of the future for which opportunities have already been created through the digitalization of the necessary activities and strengthened connectivity of the country through the rehabilitated transport, energy, and communications infrastructure [12].

The Inter-Ministerial Working Group for the Implementation of the 2030 Agenda (IMWG) coordinates the work of all ministries and state institutions. The partnering endeavor of the Secretariat for Public Policy in mapping the National Strategic Framework against the SDGs resulted in the Serbia and the 2030 Agenda document. The Statistical Office of the Republic of Serbia diligently maps, produces or collects relevant national indicators to measure SDG progress credibly.

Since the beginning of implementation of the Agenda 2030, the UN Country Team, European Union and the World Bank in the Republic of Serbia cooperated with the government and the IMWG, providing support “in policy planning, monitoring and evaluation”.

The key obligation taken over by the UN Country Team to Serbia under the agreement to support the Government of the Republic of Serbia in “policy planning, monitoring and evaluation” for Agenda 2030 was delivered by the actions of the UN Country Team in Serbia on planning, preparation and organizing the implementation and reporting. The mission consisted of 21 international experts from UN agencies, funds and programs (UNDP, UNICEF, UNESCO, UNECE, UNFPA, ILO, Office of the United Nations High Commissioner for Human Rights (OHCHR), UN-HCR, WHO), and regional offices, including also the Delegation of the EU to Serbia and the World Bank Office in the Republic of Serbia.

Moreover, the “SDGs for All” Platform has been supported by the Swiss and German governments and is being implemented by the German organization for international cooperation – GIZ, within the project “Public Finance Reform – 2030 Agenda” is directly coordinated by six prominent Serbian civil society organizations selected through a competitive process.

Turkey

In 2019, the country published its 2nd VNR report.¹³ The VNR determines areas to be focused on for each goal and examines the targets in a systematic approach. The analysis reveals that most targets have directly or indirectly been incorporated in policy documents, and the legislation provides an adequate framework for implementing SDGs. Furthermore, on an institutional scale, it has been determined that the responsibilities of the institutions in Turkey, which were specified in policies and legislation, have been fully aligned with SDGs [13]. Upon reviewing the projects, the gaps and challenges in implementation have been determined.

In the overall context of SDGs, Turkey stands at an advanced level, particularly in respect of policies, strategies and legislation, while there is room for improvement in practices and projects. To monitor progress, Turkey has assigned responsibilities for 218 SDG indicators to different Ministries, and a Sustainable Development Indicators Set comprised of 83 indicators was published by the Turkish Statistical Institute

¹² Voluntary National Review, Serbia, 2020. URL: https://sustainabledevelopment.un.org/content/documents/23471Serbia_VNR_Report_2019_final.pdf

¹³ Voluntary National Review, Turkey, 2019. URL: https://sustainabledevelopment.un.org/content/documents/23862Turkey_VNR_110719.pdf

(TURKSTAT) in 2019. An overview of progress in this VNR proposes that SDG 1, SDG 3, SDG 6, SDG 7, SDG 9 and SDG 11 stand out as goals towards which significant progress has been achieved. While there is progress on other SDGs, it is required to accelerate efforts to address gaps in implementation and increase quality. In this respect, there is a need to enhance financial and technical capacities for some of the goals.

Immediately after the adoption of Agenda 2030, Turkey designated the responsible and relevant institutions for the 218 indicators that apply to Turkey, and in February 2019, the Turkish Statistical Institute published the SDG Indicators Set, comprised of 83 indicators. While the ratio of produced indicators is higher for SDG 3, SDG 7 and SDG 9, further work is needed for SDG 1, SDG 2, SDG 12, SDG 13 and SDG 14 indicators. The VNR preparation, the current situation and gaps were identified under the supervision of the Presidency of Strategy and Budget (PSB) under the Presidency as the coordinating institution, and future steps and recommendations were elicited in a transparent procedure by local administrations, the private sector, NGOs and academia.

In addition, a National Sustainable Development Goals (SDGs) Best Practices database was developed as a continuous application. With the system, 400 practices by public and private sectors, academia, NGOs and municipalities were collected in the first phase.

Moreover, the United Cities and Local Governments (UCLG) formed a working group named the Global Taskforce of Local and Regional Governments with a view to transpose SDGs at a local level and integrate them into policies. The Working Group aims to build a bridge between the UN and the local administrations. UCLG brings together all local administrations across the world under the same umbrella. One of nine sections of UCLG, namely the Middle East and West Asia Section (UCLG-MEWA), is headquartered in Istanbul.

Ukraine

The country VNR was published in 2020.¹⁴

An inclusive process of the SDGs adaptation, which was tailored to the national development

context, resulted in a national SDGs system consisting of 86 national targets with 183 monitoring indicators.

The Ministry for Development of Economy, Trade and Agriculture of Ukraine (MDETA) initiated the establishment of an Inter-Agency Working Group (IAWG) on SDGs and four expert groups for the VNR preparation (for four main thematic areas — economic, environmental, social and institutional).

The groups included leading experts from ministries, executive authorities, the National Academy of Sciences of Ukraine, M.V. Ptukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine, the UN Resident Coordinator's Office in Ukraine, UNICEF in Ukraine, UNIDO, UN Women, WHO, and other UN agencies in Ukraine, members of the UN Global Compact Network in Ukraine, specialists from analytical centres and NGOs, including the Ukrainian Centre for Social Reforms, O. Yaremenko Ukrainian Institute for Social Research, etc. The groups were working publicly, which enabled consideration of a broad range of public opinions. MDETA performed functions of the technical secretariat of the VNR preparation, including as a coordinator of the consultation process.

The Inter-Agency Working Group on the SDGs performed the functions of coordination, quality control, and approval of decisions (MDETA acted as the technical secretariat and main implementer) [14]. MDETA initiated the establishment of expanded thematic work (expert) groups for four main areas: economic (SDG 2, SDG 8, SDG 9, SDG 12); environmental (SDG 6, SDG 7, SDG 13, SDG 14, SDG 15); social (SDG 1, SDG 3, SDG 4, SDG 10); and institutional (SDG 5, SDG 11, SDG 16, SDG 17) [15].

The SDG targets have been incorporated in 162 governmental regulatory legal acts (4,300 planned actions). In March 2020, the new Cabinet of Ministers adopted its Programme, reaffirming the commitment to the SDGs [16].

Results and discussion

Analytic presentation of the SDGs reported by the UN

The UN provides an overview of the world's implementation efforts to achieve the 17 Sustainability Development Goals, highlighting

¹⁴ Voluntary National Review, Ukraine, 2020. URL: https://sustainabledevelopment.un.org/content/documents/26295VNR_2020_Ukraine_Report.pdf

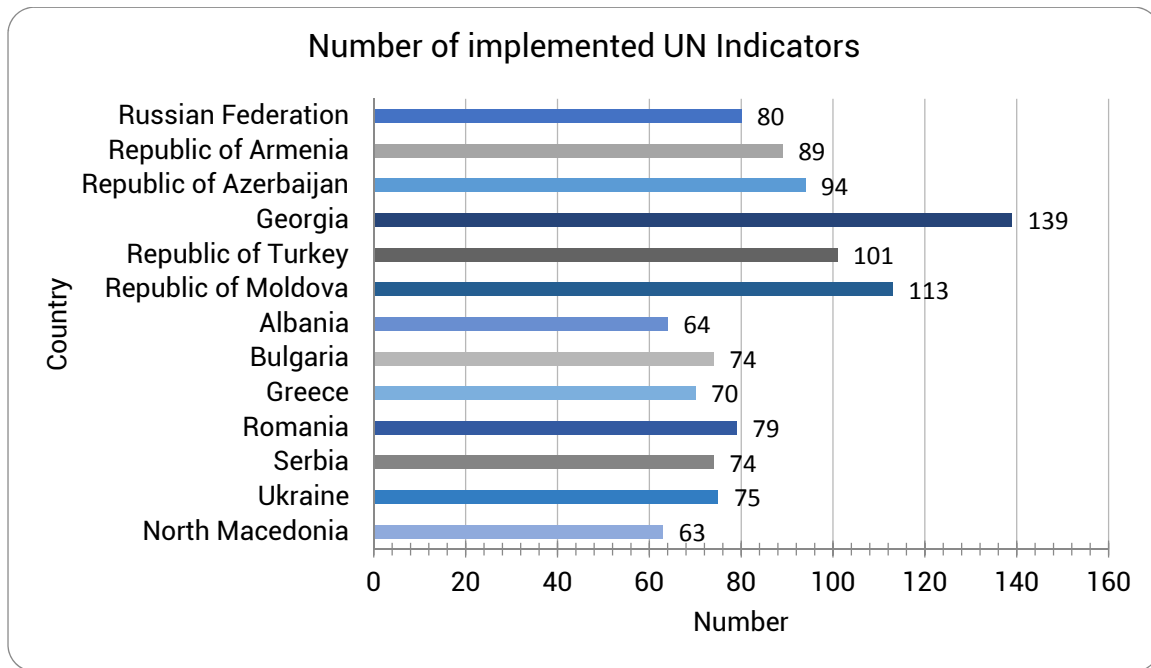


Fig. 4. Number of implemented UN indicators per country

Source: compiled by the authors.

the main areas of progress and where more actions are required. In our analysis, we provide an overview of the reporting efforts according to the UN and based on the proposed indicators since in official statistics, countries track indicators of the UN Sustainable Development Goals and national indicators. Specifically, as seen in Fig. 4, the number of implemented UN indicators is described for each country.

According to Fig. 4, on average, 81% of all indicators monitored by countries in official statistics coincide with the indicators formed by the UN. The average level of standard deviation between the set of monitored indicators of different countries under each SDG is about 15%, which indicates a predominant identity in the sets of core SDG indicators that are calculated by countries. Fig. 5 describes the standard deviation (alignment index) for the different SDGs, while Table provides the specific percentages of UN SDGs indicators reported by each country. As seen in Fig. 4, Georgia is reporting the largest number of UN indicators while North Macedonia the lowest. Most countries report less than 100 indicators, while their reporting patterns seem to be aligned (Fig. 5 and Table) mostly for SDGs 3 (Good Health and Well-Being), 4 (Quality Education), 8 (Decent Work and Economic Growth) and 16 (Peace, Justice and Strong Institutions).

SDGs according to the National Statistic Authorities

At the same time, in some cases, indicators differ; most often, there are differences in levels of detailing (disaggregation), which can complicate the creation of a consolidated database. For example, the indicator declared by the UN implies the calculation of data disaggregated by sex, age and persons with disabilities; in turn, a similar indicator can be calculated by one of the countries e.g., only by sex, etc. Predominantly typical for the indicators of the Republic of Turkey and the Republic of Moldova. A significant number of UN indicators are not tracked by countries when calculating official statistics. Armenia has the smallest share of UN indicators that are not counted (Fig. 5).

Conclusion

As the results of the study show, there are significant deviations between the reporting patterns by each country, not only when it comes to the indicators promoted by the UN but also when it comes to nationally promoted indicators.

Despite the fact that a significant part of the indicators presented by each of the countries coincides with the indicators formed by the UN, even among them, there may be differences, due

Table
Share of UN indicators monitored by countries, by SDGs, %

Goals / Indicators	Russian Federation	Republic of Armenia	Republic of Azerbaijan	Georgia	Republic of Turkey	Republic of Moldova	Albania	Bulgaria	Greece	Romania	Serbia	Ukraine	North Macedonia
1	30.77	46.15	38.46	69.23	38.46	76.92	7.69	23.08	23.08	23.08	38.46	46.15	7.69
2	14.29	35.71	7.14	71.43	42.86	14.29	28.57	28.57	28.57	28.57	28.57	28.57	28.57
3	57.14	75.00	57.14	89.29	71.43	50.00	17.86	32.14	21.43	35.71	25.00	25.00	25.00
4	8.33	8.33	25.00	91.67	50.00	33.33	8.33	8.33	8.33	16.67	0.00	8.33	8.33
5	35.71	35.71	42.86	78.57	42.86	64.29	35.71	35.71	42.86	50.00	35.71	28.57	42.86
6	27.27	45.45	36.36	27.27	45.45	72.73	36.36	36.36	36.36	45.45	36.36	36.36	36.36
7	17.65	23.53	17.65	23.53	17.65	29.41	11.76	11.76	11.76	11.76	5.88	5.88	11.76
8	70.59	52.94	41.18	70.59	58.82	88.24	29.41	29.41	29.41	47.06	35.29	29.41	35.29
9	75.00	66.67	75.00	50.00	75.00	75.00	33.33	33.33	41.67	33.33	33.33	41.67	41.67
10	14.29	21.43	35.71	42.86	42.86	35.71	35.71	42.86	42.86	35.71	42.86	35.71	35.71
11	13.33	13.33	20.00	20.00	26.67	20.00	6.67	20.00	13.33	20.00	33.33	33.33	6.67
12	0.00	30.77	15.38	7.69	7.69	23.08	30.77	38.46	23.08	30.77	30.77	30.77	15.38
13	0.00	11.11	22.22	22.22	11.11	0.00	0.00	11.11	11.11	11.11	33.33	33.33	0.00
14	20.00	10.00	10.00	20.00	20.00	10.00	40.00	40.00	40.00	20.00	40.00	40.00	20.00
15	28.57	7.14	14.29	42.86	35.71	42.86	57.14	57.14	57.14	57.14	42.86	50.00	57.14
16	8.33	12.50	41.67	91.67	25.00	58.33	12.50	8.33	12.50	12.50	8.33	8.33	16.67
17	48.15	37.04	55.56	22.22	22.22	18.52	29.63	29.63	25.93	29.63	29.63	29.63	18.52

Source: compiled by the authors.

Number of non implemented UN Indicators

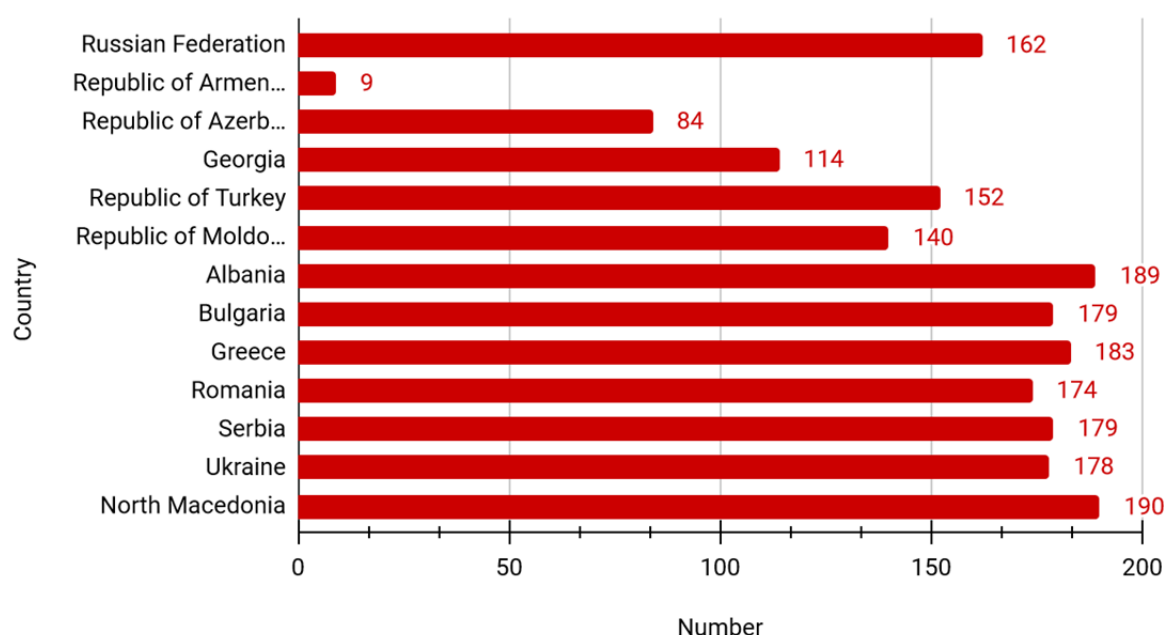


Fig. 5. Number of non-implemented UN indicators

Source: compiled by the authors.

to which the comparison of data will be significantly complicated or even impossible. As noted above, one of the most common type of differences is the discrepancy between the levels of detailing (disaggregation) of the indicator, as a result of which systematization of data for the

corresponding indicator will possibly be presented only by the level of detailing (disaggregation) for all countries [17].

Also, a feature of the system of goals and indicators of sustainable development is that a number of indicators in the UN system are for-

mulated in relation to the international (global) level; subsequently, such indicators are localized by each country at its national level. This feature mainly does not lead to the emergence of different variations of a single indicator and differences in its calculation [18].

A problem for conducting a deeper analysis will be that national indicators practically cannot be correlated and/or systematized with each other due to the fact that such indicators are

introduced by countries to reflect a specific situation (i.e., they are not presented among the indicators of other countries) [19, 20].

The differences in the lists and sets of monitored indicators of the 13 countries, as well as the differences in the monitoring of official statistics on the Sustainable Development Goals, create a number of potential risks and problems that may arise in the process of conducting a comprehensive analysis.

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ORIGINAL PAPER

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Economic Cooperation between Russia and China in the Investment Sphere

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ABSTRACT

The cooperation between Russia and China has been developing successfully in recent years. Both countries have agreed on several strategically important investment projects. The realization of investment projects determines the future expectation for developing Russian and Chinese economies. The article **aims** to investigate the trends and perspectives of economic cooperation between China and Russia in the field of mutual investments. The research **methodology** includes structuring, comparison, generalization, induction, deduction, and synthesis. Based on the research, the author **concludes** that the main segments of Russian-Chinese economic cooperation between state-owned enterprises are the energy sector, nuclear power engineering, agriculture, science, technology, and infrastructure. Also, there are good prospects for the investment segment of economic cooperation between Russia and China in banking, payment systems, and electricity sectors.

Keywords: Russia; China; economic cooperation; investment; banking; energy; infrastructure

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ОРИГИНАЛЬНАЯ СТАТЬЯ

Экономическое сотрудничество России и Китая в инвестиционной сфере

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АННОТАЦИЯ

Сотрудничество России и Китая в последние годы успешно развивается. Страны договорились о нескольких стратегически важных инвестиционных проектах. Реализация инвестиционных проектов определяет будущее развивающихся экономик России и Китая. В статье ставится **задача** исследовать тенденции и перспективы экономического сотрудничества Китая и России в сфере взаимных инвестиций. **Методология** исследования включает структурирование, сравнение, обобщение, индукцию, дедукцию и синтез. На основе исследования автор делает **вывод**, что основными сегментами российско-китайского экономического сотрудничества между государственными предприятиями являются энергетика, атомная энергетика, сельское хозяйство, наука, технологии и инфраструктура. Также хорошие перспективы имеет инвестиционный сегмент экономического сотрудничества России и Китая в банковской сфере, платежных системах и электроэнергетике.

Ключевые слова: Россия; Китай; экономическое сотрудничество; инвестиции; банковское дело; энергетика; инфраструктура

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1. Introduction

The investment segment of economic cooperation between Russia and China is an important research topic. In recent years, economic cooperation has been increasingly included in the system of state priorities of the countries. Russia and China are two bordering states whose economic ties are diverse. The cooperation between these countries has been developing successfully in recent years. Russia and China have agreed on several strategically important investment projects. The realization of investment projects determines the future expectation for the development of the Russian and Chinese economies. In the actual situation, economic cooperation between the two countries is developing under the influence of many factors. China has been taking advantage of the United States for a long time, but these countries have trade wars. The sanctions confrontation between Russia and Western countries in the context of the Ukrainian crisis may affect the implementation of economic cooperation between Russia and China. Moreover, the possibilities of interaction depend on the pace and direction of the reform of the Russian economy and the development of the situation in the international scene in 2022–2023.

The steady intensification of Russia-China cooperation over the past few years has triggered a surge in scholarly interest. However, the existing literature is not focused on the specifics of economic cooperation in the field of mutual investment projects.

The research aims to identify prospects of economic cooperation between China and Russia in the field of mutual investments.

The research objectives of the paper are as follows:

- to review the concept of investment as a foundation for economic cooperation;
- to reveal the role of the state in facilitating economic cooperation between nations;
- to analyze the dynamics of the Russia-China economic cooperation between state-owned enterprises;
- to identify the dynamic of Chinese investment and analysis of Chinese investment projects in the Russian economy, and to identify Russia's main investment activities and analysis of Russian investment projects in the China economy;
- to identify prospects for China and Russia's economic cooperation in the banking sector;

- to propose recommendations and suggestions on improving China and Russia's investment activity in the energy sector.

The rest of the paper is structured as follows. Section 2 reviews the theoretical foundations of economic cooperation between Russia and China. Section 3 analyzes the economic cooperation between Russia and China in the field of investment projects in energy, agriculture, science, and technology. Section 4 considers the prospects for investment segment of economic cooperation between Russia and China in the banking and electricity sectors. The final section presents conclusions.

2. Review of the main concepts of economic cooperation between Russia and China

It is essential to consider the concept of economic cooperation. Today, processes such as globalization, integration, forming a single economic space, internationalization, regionalization, cross-border cooperation, etc. are actively developing. This has an impact on every country in the world and the system of international relations.

It is important to consider the place of investment concept as a foundation for economic cooperation.

Federal law No. 39-FL of 25.02.1999 "About investment activities in the Russian Federation carried out in the form of capital investments" (ed. from 03.14.2022), sets regulations in this area. Article 1 of this Federal law has the following definitions:

- the investment concept includes "cash, securities, other assets, also includes property rights, other rights that we know that have monetary value, invested in objects of entrepreneurial and (or) other activities in order to make a profit and (or) other uses to achieve other beneficial effects";
- the investment activity concept is described as: "investment and implementation of practical actions in order to make a profit and (or) achieve another beneficial effect".¹

At the same time, the concept of "investment" refers primarily to ambiguous economic concepts, as O.E. Levchenko remarks [1]. The variety of approaches to the interpretation of the term "investment" has led to the fact that many different terms and concepts of this economic category can be found

¹ Federal law No. 39-FL of 25.02.1999. URL: https://www.wto.org/english/thewto_e/acc_e/rus_e/WTACCRUS_48_LEG_86.pdf

in the economic literature. Thus, in macroeconomics, according to O.E. Levchenko, investments are understood as investments of funds leading to an increase in GDP (gross national product) [1].

A well-known English economist, the founder of a new direction in political economy, J. Keynes, determined investments as “an increase in the value of capital assets that consist of fixed or liquid capital” [2].

Y.V. Masalev speaks about two dominant approaches to the definition of the “investment”: 1) “investments as a type of tangible assets”, 2) “investments as the distribution of funds for tangible and intangible objects” [3]. The first approach is material; the second is financial.

Foreign investment is a type of investment. The researchers mention various types of investments: stocks, bonds, mutual funds, index funds, exchange-traded funds (ETFs), and options. According to the form of ownership, investments can be public, private, mixed, and foreign. And according to the organizational form of investments, an investment project and an investment portfolio.

The Federal Law dated No. 160-FL 09.07.1999 “About Foreign Investments in the Russian Federation” (ed. 08.24.2021) has a definition of foreign investment: “an investment of foreign capital carried out by a foreign investor directly and independently into an object of entrepreneurial activity on the territory of Russia in the form of objects of civil rights belonging to a foreign investor, if such objects of civil rights are not withdrawn from circulation or are not restricted in circulation in Russia in accordance with federal laws, including money, securities (in foreign currency and currency of Russia), other property, property rights, having a monetary value of exclusive rights to the results of intellectual activity (intellectual property), as well as services and information”.²

Describing various approaches to the concept of foreign investment, G.A. Chikunov identifies three approaches to this concept, such as: foreign investment as a process, foreign investment based on accepted criteria, and foreign investment as property values (objects of civil rights). The author notes that the concept of foreign investments as property values (objects of civil rights) is more objective because the first approach is narrower and does not reveal the concept’s meaning. The ap-

proach to the definition of foreign investment based on the accepted criteria is too broad, which allows recognizing as a foreign investment any activity of foreign persons on the territory of the recipient state as foreign investment. The approach to the definition of foreign investments as property values (objects of civil rights) seems to be more justified since it is supported by many scientists and is also reflected in many international acts [4].

In the context of this study, foreign investments will be considered as a certain type of investment on the territory of Russia or China within the framework of the classification defined above. Also, foreign investments will be considered as an important basis for economic cooperation. This is due to the fact that investment activity is part of the economy, and investment cooperation represents international economic relations, the purpose of which is the rational allocation of resources, the achievement of higher economic results by taking advantage of participation in the international division of labor, updating the technological structure of production, etc. As a result, the division of labor between states is carried out, and the economic structure of the participating industries is updated. The most significant areas of international investment cooperation include the oil extraction industry, metal production, economic field, mining of minerals, and transport.

Therefore, investment is an important aspect of the development of modern states and plays a significant role in economic cooperation. Foreign investments are becoming a factor in the rational allocation of resources; helping countries achieve certain indicators in the economy by taking advantage of participation in the international division of labor, updating the technological structure of production, etc. Investment cooperation is an important part of economic cooperation and international relations in general.

There are many types of investment cooperation. The main types of cooperation include³: international trade, international production cooperation, international scientific and technical cooperation.

All types of international investment cooperation positively impact the economies of both countries that have concluded a specific agreement with each other. The beneficial consequences of such relationships include: raising the economic level of the state,

² Federal law No. 160-FL of 09.07.1999. URL: <https://cis-legislation.com/document.fwx?rgn=1692>

³ Investment cooperation. URL: <https://utmagazine.ru/posts/7839-investicionnoe-sotrudnichestvo> (accessed on 24.04.2022).

bringing existing industries to new levels, creating modern profitable projects, and securing a more significant place in international trade. However, at the same time, all types of international cooperation require an investment of funds. Only successful achievement of the set goals allows the state to get a high profit, which fully covers the previous costs. Improving the investment policy of the state has an important value. The reason for it is a determining factor of competitiveness and efficiency of the country's economy.

The arrival of foreign direct investment in the country is desirable for the recipient country for several reasons. Firstly, the volume of incoming investments increases the possibilities of expanded reproduction. Secondly, new technologies come to the country along with foreign direct investment. Thirdly, capital coming to the country, expects to make a profit. However, various factors that influenced the investment segment of economic cooperation: COVID-19, sanctions, trade wars, etc.

The state influences the economy regardless of the degree of economic development and its type. In a free market economy, the state must constantly change the depth of its influence, does not face the task of direct distribution of goods and services, and loses the right to dispose of resources freely. The state is forced to increase or decrease the degree of its intervention in the economy. The imperfection of market mechanisms explains the need for state regulation. The state corrects this imperfection, which the market is either unable to cope with itself or provides an ineffective solution. A participant in international economic relations can represent various state structures: "governmental and other state bodies of various levels (municipal, regional, central); state organizations; enterprises" [5].

There are the following options for state participation in international economic relations: "1) direct implementation of operations by central departments and ministries, municipal and regional government bodies, including targeted purchases and sales of products on the foreign market; 2) granting powers to individual enterprises, firms, banking and commercial structures, including private ones, to carry out specific operations, perform certain foreign economic transactions; 3) guarantee of export-import operations".⁴

⁴ Investment cooperation. URL: <https://utmagazine.ru/posts/7839-investicionnoe-sotrudnichestvo> (accessed on 24.04.2022).

In international economic relations, states regulate the process of international economic integration in different forms: 1) the conclusion of trade agreements; 2) the creation of a free trade zone; 3) the creation of the customs union; 4) the creation of an economic union.

3. Evaluation of cooperation between China and Russia in various investment fields

3.1. Cooperation in major investment projects between China and Russia

Russia and China are neighbors with a contentious historical relationship and aspirations to create a non-western international order. These countries are not only partners but also competitors. Nowhere does this duality emerge more openly than in Central Asia, a region traditionally dominated by Russia but increasingly becoming part of China's sphere of influence.

In order to evaluate Russian-Chinese economic cooperation between state-owned enterprises, it is important to identify several interacting sectors.

1. The energy sector. Energy is the largest area of cooperation between Russia and China, and the countries continue to strengthen partnership relations. One of the major strategic projects is the construction of the Eastern Gas Pipeline running along the bottom of the Yangtze River. In February 2022, China National Petroleum Corporation (CNPC) and Russian company "Gazprom" signed an agreement on the purchase and sale of gas from the Russian Far East. In accordance with the agreement, Russia will increase the supply of pipeline gas to China by 10 billion cubic meters per year, which, together with the Power of Siberia gas pipeline, will bring the total volume of gas supplies to China to 48 billion cubic meters per year.

Moreover, CNPC and the Russian company Rosneft signed an additional agreement on the purchase and sale of crude oil. According to the agreement, Russia will continue to supply 100 million tons of crude oil to China through the territory of Kazakhstan for ten years. As of January 2022, CNPC imported more than 300 million tons of crude oil and more than 15 million cubic meters of natural gas from Russia via pipeline. Oil and gas cooperation is the largest area of cooperation between China and Russia. Energy exports have always been an important part of Russia's budget revenues, and tensions with Ukraine have reduced the possibili-

ties of Russian energy exports to Europe. In this context, China is a major market for Russian gas and oil, the expert stressed. It is expected that the partnership between the countries will expand as China's demand for Russian oil and gas persist, and both sides can explore the possibility of further cooperation in the field of renewable energy and other areas. Russia is also the main source of coal imports to China. Chinese partners have joined the implementation of another large-scale project in the Russian Arctic, Arctic LNG-2, as well as the creation of the world's largest gas and chemical plant in Ust-Luga.

2. Nuclear power engineering. China and Russia have stepped up cooperation in the field of nuclear energy, including the Tianwan nuclear power plant in Lianyungang, Jiangsu Province, East China, and the Xiudabao nuclear power plant, Huludao, Liaoning Province, Northeast China. In 2021, energy trade between the two countries accounted for about one-third of the total trade volume between China and Russia. Russia has become the second-largest source of oil imports for China, the second-largest source of coal imports, and the largest source of electricity imports.

Russia and China are actively cooperating in the field of renewable energy sources to achieve their climate goals. The Russian side is traditionally interested in cooperation in nuclear and gas energy. Recently, a core catcher of the reactor of the third unit of the Sudapu NPP, which ensures the safety of the nuclear power plant, arrived from St. Petersburg to Liaoning Province by sea. In May 2021, construction work began on the 3rd and 4th power units of "Sudapu" and on the 7th and 8th power units of the Tianwan Nuclear Power Plant.

3. Agriculture, science, technology, infrastructure. China also plans to cooperate with Russia in the fields of agriculture, science and technology, aerospace, digital communications and finance. China has become the third largest export destination for Russian agricultural and food products, opening access to Russian meat products, grains and legumes. In 2021, the volume of agricultural trade between the countries increased by 7%. Moreover, on February 4, 2022, as part of Putin's visit to China, protocols were adopted allowing wheat and barley to be supplied to China from all over Russia and allowing the export of alfalfa to China. Large-scale deliveries of Russian grain to China from the Azov-Black Sea basin may begin as early as in the

2022–2023 agricultural year (starting from July 1) and amount to at least 1 million tons. Cooperation in agriculture is one of the most and important promising cooperation on the bilateral agenda. Especially considering the recent agreement.

Increasing the supply of soy and barley products under long-term contracts may become one of the directions of diversification of supply channels for China. In addition, in 2021, China allowed the import of beef from Russia, and at the end of February 2020, China opened the import of wheat from all regions of Russia. Other products exported from Russia to China include fish, sunflower oil, rapeseed oil, poultry, wheat flour and chocolate.

China is also a buyer of wood from the Russian Far East.

As for technological cooperation, the countries are jointly developing a wide-body passenger aircraft CR 929 and a heavy helicopter with a payload capacity of 40 tons. There are plans to develop special materials and a satellite system in the aerospace field and conduct international research on the Moon station by 2035.

Let us consider the dynamics of the share of China in the total trade turnover of the Russian Federation over the past five years. In 2021, the share was 17.92%. Therefore, for five years, China has always been one of the leaders in the trade volume of the Russian Federation.

It is challenging to analyze the investment activities of the two countries relative to each other because reliable data are unavailable. Data on investment investments and projects provided in this research are based on the information from the Central Bank of Russia,⁵ Trade Representation of the Russian Federation and in the People's Republic of China,⁶ Trade Representation of the Russian Federation in the People's Republic of China,⁷ and also from the National Bureau of Statistics of China.⁸ Due to different methods of calculating and accounting for particular investments, statistical data may vary by organization.

⁵ Central Bank of Russia. Statistics. URL: https://cbr.ru/statistics/?PrId=st_dir-inv

⁶ Trade Representation of the Russian Federation and in the People's Republic of China. Open data. URL: <https://minvr.gov.ru/opendata/>

⁷ Trade Representation of the Russian Federation in the People's Republic of China. URL: <http://www.russchinatrade.ru/ru/ru-cn-cooperation>

⁸ National Bureau of Statistics of China. URL: <http://www.stats.gov.cn/english/>

According to Russian data, China is still among the most significant investors in the Russian economy. The volume of accumulated direct investments from China, after a reduction due to COVID-19 restrictions in 2020 by 41%, to \$ 2.19 billion, increased by 15% to \$ 2.5 billion in the first six months of 2021. According to Chinese data, China's cumulative direct investment in Russia as of September 2021 totaled 113 billion USD.

At the same time, the deepening of Russian-Chinese relations is evidenced by an increase in the share of settlements in national currencies.

Calculations in national currencies are growing more slowly; in particular, for the study period 2015–2021, they have increased 6.6 times. Payments in national currencies are increasing (in dollar terms) but at a significantly slower pace than settlements in traditional reserve currencies, which increased 10.7 times in 2015–2021.

It can be said that the indicator of the volume of accumulated direct investments from the PRC to the Russian economy (according to the PRC) in the period from 2015 to 2021 decreased. This is due to factors that affect the economy: sanctions, trade war and coronavirus infection. The economies of all countries are influenced by these factors. In 2022, the influence of these factors will increase due to the escalation of the crisis in Ukraine. The Chinese economy has suffered less from these factors, but investment activity has decreased. This has an impact on investment flows, may indicate some weakening of investment activity. For 2021 within the framework of the activities of the Intergovernmental Russian-Chinese Commission on Investment Cooperation, 65 projects were allocated, among which: the construction of the Moscow-Kazan high-speed highway, the construction of the Nizhneleninskoye cross-border Russian-Chinese railway bridge — Tongjiang (EAO), the development of a production and trade zone of the woodworking industry in the Tomsk region, the creation of a zone of cooperation in the field of forestry (Trans-Baikal Territory), the joint Russian-Chinese production of butadiene-nitrile rubbers in Shandong, the construction of a complex for the production of polyethylene, etc.

An important aspect is the cooperation of the customs offices of the countries as a guarantee of economic cooperation. The main partner of the Russian Customs service in the region is the General Customs Administration of the People's Republic of

China. Contacts with the Chinese side are carried out at the central, regional and territorial levels on a planned basis. The priority tasks in this direction are to promote an increase in the volume of Russian-Chinese trade to 200 billion rubles. Annual trade turnover by 2024, as well as simplification of customs procedures in the context of the initiative to create a Large Eurasian Partnership and interface the construction of the Eurasian Economic Union with the Silk Road Economic Belt.

Within the framework of the Russian-Chinese Commission for the preparation of regular meetings of Heads of Government, the work of the Subcommittee on Customs Cooperation has been organized, meetings of which are held annually. There are nine Russian-Chinese working groups on various customs issues within the framework of the Sub-Commission.

3.2. Progress of China's direct investment projects in Russia in the field of resources and energy

Over the past decade, China's direct investment in Russia, as a whole, has shown an upward trend in parallel with the expansion of the diversity of industries and areas of investment.

According to the official data from the Federal State Statistics Service and the data of the Central Bank of Russia, it is possible to consider the indicators of direct investment in the Russian Federation by country, in particular, highlighting the share of China in the structure of these investments. In 2017–2021, the flow of direct investments of China to Russia (billion US dollars) decreased by 12.1%. This is due to the coronavirus pandemic and the negative consequences of this phenomenon. Also, the share of China's foreign direct investment in the Russian economy in the total structure of foreign direct investment decreased from 0.74 to 0.49%.⁹

China is not among the top 20 investor countries. However, investment cooperation is actively developing within the framework of a number of investment projects. The main investment projects in Russia with the participation of Chinese investments include: Construction of the Moscow-Kazan high-speed highway, Construction of the Nizhneleninskoye-Tongjiang cross-border Russian-Chinese railway bridge (EAO), Construction of a polyethylene production complex with a capacity of 2,700 thou-

⁹ External sector statistics. Central Bank of Russia. URL: https://cbr.ru/statistics/macro_itm/svs/ (accessed on 29.04.2022).

sand tons per year Svobodny (Construction of a gas chemical plant in the Amur Region), Construction of a refrigerator factory in the Republic of Tatarstan, Development of the Berezovsky iron ore deposit (Zabaikalsky Krai), Development of the Udokan copper deposit (Zabaikalsky Krai), Construction of a mining and processing plant at the Elegetskoye field in the Republic of Tyva (Complex project "Construction of the ElegestKyzyl-Kuragino railway and Coal terminal in the Far East in connection with the development of the mineral resource base of the Republic of Tyva), Development of the Baim copper-porphyry deposit in the Chukotka Autonomous Okrug, Development of the Taiga iron ore deposit in the Republic of Sakha (Yakutia), Development of the Bystrinsky deposit in the Trans-Baikal Territory, etc.

In addition, investments in the framework of the Belt and Road program are growing. The countries participating in the initiative now account for 13.5% of the total volume of Chinese FDI (in 2016–8.5%). But over the past two years, stagnation has been observed due to a decrease in the growth rate of total investments abroad, stricter control over where the funds are directed, as well as the insignificant size of the markets of the host countries and their growing debt burden and geopolitical risks. The main areas of Russian investment in China are the manufacturing industry, construction, and transportation.

A political resource is an essential factor for developing Chinese investments in Russia. At the same time, as the analysis shows, the implementation of large investment projects takes place in the western part of Russia [6]. There are no major projects in the Far East, a region directly bordering China. Capital from China is present here in the form of small and medium-sized enterprises in certain regions of the south of the Far East and in certain industries: agriculture and forestry, construction, mining, services and seafood production.

The population of the Far East and Eastern Siberia resists to some extent the development of investment activities in the region, perceiving any development programs with Chinese participation as pre-sale preparation of the territory. Therefore, the population of the Far Eastern Federal District perceives the lack of investment from China as a positive result. Business is primarily interested in the safety of investments, so large Chinese investors will not be interested in this region of Russia, as long as there are such sentiments of the population.

Thus, the dynamics of Chinese investments in Russia have somewhat decreased. This is due to the economic situation, coronavirus infection and the level of development of the country's economy.

3.3. Russia's direct investment and cooperation development process in China's production and manufacturing industry

Investment flows from Russia to China are growing. The main directions of Russian investments in China include the manufacturing industry, construction, transportation, etc.

Foreign direct investment inflows to China hit a record high of \$ 173 billion in 2021. Direct investment in China's economy from Russia decreased in the period from 2017–2021. The decrease in the number of investment projects also demonstrates this. Russian direct investment flow to China decreased from 23.84 million dollars in 2017 to 12.43 million dollars in 2021. Mainly the decline occurred in 2020.¹⁰

However, China is actively reforming the investment segment. New standard investment law was passed in Q1 2019, unusually fast for China, and took effect in January 2022. Among many other provisions, the new law opened China Government procurement tenders to foreign companies. This is of particular relevance to the Belt & Road Initiative as many projects are quasi-sourced or originate from China's diplomatic channels. However, faced with challenges in certain constructions and other technological areas and in need of the technology themselves, China allowed overseas partners to bid for projects.¹¹

Our analysis of the most significant projects in China with the participation of Russian investments leads to the following highlights:

1. Joint Russian-Chinese production of nitrile butadiene rubbers in Shandong.
2. Creating an industrial complex to produce aluminum products in Henan Province (China).
3. Terminal for the reception and transshipment of liquefied petroleum gas and propylene in Manchuria (China).

¹⁰ New Statistical Yearbooks Published by China Statistics Press 2018–2021. URL: <http://www.stats.gov.cn/tjsj/ndsj/2021/indexeh.htm>

¹¹ A New China for 2021: Foreign Investor Friendly Access, Overseas Direct Investment in Hi-Tech Projects and M&A, and More Belt & Road Initiative Opportunities. URL: <https://www.china-briefing.com/news/a-new-china-for-2021-foreign-investor-friendly-access-overseas-direct-investment-in-hi-tech-projects-and-ma-and-more-belt-road-initiative-opportunities/> (accessed on 29.04.2022).

4. Establishment of an enterprise for the production and marketing of monoclonal antibodies developed by JSC “Biocad” in China.

In the context of the constant interference of the West in China’s internal affairs, China-Russian relations have occupied an important place in China’s foreign strategy and influence China’s diplomatic behavior and domestic public opinion at the global, regional and national levels. Relations with third parties often influence changes in bilateral relations between China and Russia.

As the analysis showed, direct investment from Russia into the Chinese economy declined. Russia occupies a small share of China’s foreign investment structure, only 0.007% in 2021. At the same time, the coronavirus pandemic has greatly affected the investment cooperation of the countries.

4. Cooperation between Russia and China in the financial, banking and electricity sectors

4.1. Financial cooperation between China and Russia

Cooperation in the banking sector is one of the important elements of Russian-Chinese economic cooperation. In December 2015, the Chairman of the Bank of Russia and the Chairman of the People’s Bank of China signed a memorandum of understanding between the two central banks in Beijing, actively implementing an important aspect achieved by the heads of the two countries to deepen bilateral financial cooperation.

Due to the rapid development of Russia and China in the field of economy, trade and investment, assistance was provided for the development of interbank cooperation between the two countries. Cooperation mainly includes opening branches and representative offices, the development of interbank correspondent relations, financing, cross-border money transfers and payment systems by bank card, and others. By the end of 2018, Chinese banks had established correspondent relations with more than 200 Russian banks and created a clearing network including US dollars, rubles and yuan. Currently, 9 Russian banks have opened branches and representative offices in China. Some Chinese banks have established branches and representative offices in Russia. In 2017, the Bank of Russia opened its first representative office abroad in Beijing.

Russian-Chinese cooperation in the banking sector may be reinforced as follows:

1. Improved communication can be established between state and non-state level mechanisms to facilitate the exchange of information at all levels and improve work efficiency.

2. Raising the level of bilateral internationalization of the ruble and yuan. The calculation in national currencies should be expanded from border areas to other areas. To promote the practical implementation of the integration of China’s International Payments System (CIPS) with the domestic Financial Messaging System so that bilateral trade clearing can be carried out directly in national currencies and reduce the cost of cross-border settlements.

3. Improving the level of banking services and introducing innovations in financial products. Banks on both sides can develop correspondent relations and create branches to expand geographical coverage. It is necessary to actively introduce innovations in financial products, enrich the settlement tools between Russia and China and improve the efficiency of settlements.

As the analysis shows, Russian-Chinese cooperation in the banking sector is not very active. The dynamics of settlements in national currencies is not growing as fast as the dynamics of settlements in foreign currencies. Also, bank representative offices are not actively opening in the two countries. Chinese banks are partly represented in the regions of Russia (Khabarovsk, Blagoveshchensk, Vladivostok), while Russian banks are represented only in large cities (Beijing, China).

The market of non-cash payment services shows a clear trend toward diversification. It has contributed to the integration of the payment industry with such industries as mobile operations, the Internet and e-commerce, creating new opportunities for innovation and development of payment services. With the development of modern communication technologies and computer technology, traditional non-cash payment tools such as invoices are getting a new impetus, new payment methods such as online payments and mobile payments are flourishing, and the system of non-cash payment tools is gradually being completed.

Bank cards, being the most frequently used payment instrument among the general public, have far surpassed the field of payments and settlements, combining many financial functions such as savings, consumption, investment and capital management, and have become a means

of integrating the internal resources of banking institutions and facilitating the development of intermediary business important carriers. Integration of non-cash payment tools and social management functions continues to deepen, and industry applications become more mature.

Payment systems play an important role in reducing cashless management of business innovations. They can contribute to the development of their own standard banking services (such as insurance, leasing, factoring and consulting). At the same time, the bank also promotes intersectoral innovative development and cooperation in tourism, logistics, telecommunications, medicine and education in order to successfully operate as a highly competitive modern bank. In general, in the current economic situation, in order to fully contribute to the development of commercial banks, it is necessary to carry out comprehensive, innovative work, promote innovative products through conceptual innovations, technological innovations, and accelerate the pace of systemic reform.¹² This is the only way to effectively introduce innovations and comprehensively contribute to the development of commercial banks.

The analysis shows the importance of reinforcing Russian-Chinese cooperation in the payment systems sector as follows:

1. Acceleration of the procedure by Chinese banks. Sberbank, Alfa Bank and Tinkoff are planning to start issuing the card on the Chinese payment system. This opportunity is also being worked out in VTB, Home Credit, Expobank, etc. The demand for Union Pay cards, including co-branded ones, will only grow in the conditions of the crisis in Ukraine. The timing of the launch also depends on the capabilities of UnionPay, since now they receive a lot of requests from Russian banks. Now it is possible for Union Pay cardholders to use ATMs of a credit institution, as well as pay for purchases at retail outlets equipped with bank terminals. But this already includes the fundamental political question of whether the PRC will continue to remain in a neutral position with regard to sanctions. The US government is trying to put pressure on the Chinese government in this way.

¹² The Chinese ambassador said that Moscow and Beijing will discuss the use of national payment systems. URL: https://tass.ru/ekonomika/14555781?utm_source=yandex.ru&utm_medium=organic&utm_campaign=yandex.ru&utm_referrer=yandex.ru (accessed on 29.04.2022).

2. Introduction of new services based on China's experience. Since April 1, 2022, SBPay has appeared in Russia, a system from the Central Bank of Russia with payment via QR codes. The new method is designed to replace Apple Pay and Google Pay, as it also does not require a bank card. However, the service still has a number of problems.¹³ The method is extremely common in Asia, where payment terminals are not very successful. To make a payment, person must point the device's camera at the QR code of the institution or seller, after which a special application will open. In China, two similar services compete with each other — Tencent and Alibaba Group. Their applications are WeChat and Alipay. In China, in order to pay for anything using a QR code, you need to create an account in a Chinese bank. There are several reasons why China has implemented a payment system using QR codes. In applications, you can analyze all user transactions and get a lot of information about them. That is, one application contains all the data about a citizen. Active implementation of the system in Russia would solve the problem of the termination of Apple Pay and Google Pay services.

4.2. Russia's investment in China's electricity sector

As the analysis showed, despite the constant increase in the pace of Russian-Chinese trade, a significant part of which is energy resources, the problem of reforming China's energy complex remains quite significant. The growing demands of developing sectors of the country's economy, urbanization and an increase in the standard of living of the population — all this requires large amounts of energy. In 1990, electricity consumption was observed at the level of 603.5 billion kWh. In 2019, the value of the indicator rose to 7,201.8 billion kWh. In 2021, electricity consumption in China, according to preliminary estimates, exceeded the 2020 figure by 5.2%; at the same time, the population consumed 7.5% more energy than in 2020, industry — by 10.2%.¹⁴

It is planned that in 2030, a quarter of China's national energy supply system will be organized on non-fossil energy sources. At the same time, there is

¹³ Chinese version. How the SBPay payment service will work. URL: <https://www.gazeta.ru/tech/2022/04/01/14685649.shtml> (accessed on 29.04.2022).

¹⁴ National Bureau of Statistics. China. URL: http://www.stats.gov.cn/tjsj/sjjd/202201/t20220118_1826513.html

a certain paradox. The presence of sufficiently rich deposits of coal in China caused its transformation into a dominant source of energy used, among other things, for the needs of industry. Such actions have led to a serious deterioration of the environmental situation. At the moment, the share of coal in electricity production remains very high; accordingly, CO₂ emissions are not reduced. China is still the world leader in carbon dioxide emissions, which does not strengthen China's position in the international arena. In the future, including in connection with the signing of the Paris climate agreements, the volume of coal production in China has significantly decreased. Experts noted that in China, the country's energy policy limits the growth of coal generation.¹⁵

China's close attention to renewable energy sources may become an additional factor of uncertainty in the development of the entire global electricity department. Undoubtedly, this will mean new challenges for Russia. However, so far, the recent energy crisis has only proved the undoubted lack of apparent alternatives to oil and natural gas, opening up the possibility of further strengthening the energy alliance between Russia and China.

The next step is the improvement of cooperation between Russia and China in the electric power industry which can play a serious role in this process.

It should be noted that Russian-Chinese cooperation in this area has a relatively recent history. The export of Russian electricity to the border areas of Northeast China began in the last decade of the previous century. It was caused by a shortage of energy in the north-eastern provinces of China with some excess capacity in the Far East of Russia. In 1992, the first interstate power transmission line was put into operation, and in 1997 — the second, thereby marking the connection of the power systems of Russia and China.

However, the volume of deliveries via the Blagoveshchensk — Heihe power transmission line and the Sivaki — Shipazhan electric transmission line were small, no more than 200 million kWh per year. At the same time, these lines were characterized by a voltage class of 110 kV and 220 kV. At the beginning of this century, the situation changed to a certain degree. In 2005, an agreement was signed between JSC RAO UES of Russia and the State Energy Complex of China, defining the procedure for

long-term cooperation and the volume of Russian electricity supplied. According to the agreements, it was planned to export up to 50 billion kWh. The importance of the development of bilateral cooperation in the field of the electric power industry was emphasized by the signing on March 21, 2006, agreements between RAO UES of Russia and the State Energy Committee of the People's Republic of China on the comprehensive development of a feasibility study of a project for the supply of electricity from the Russian Federation in the People's Republic of China.

In 2021, against the background of the energy deficit in China, the Chinese energy complex appealed to the Russian side with a request to increase exports. Given the capabilities of power plants in the Russian Far East and the capacity of interstate transmission lines, an increase in the level of excess capacity supplies was theoretically quite acceptable. Since October 1, 2021, the Russian exporter has almost doubled the supplied volumes of energy, and the results of 2021, according to experts, are likely to show a 30% increase compared to the previous period. Also, in December 2021, an agreement was reached to increase the export of electricity from Russia to China in 2022 to 4.4 billion kWh.¹⁶

Currently, it is widely believed that increasing the volume of supplies to China is not beneficial for the Far East of the Russian Federation since the estimated price of exports to China is lower than the average tariff for electricity in the subjects of the Far Eastern Federal District. Without touching on the issue of the correctness of comparing wholesale and retail prices, it should still be noted that the final retail price for consumers in China is higher than in the Far Eastern Federal District (in 2021 — an average of 0.542 yuan per kWh for households, 0.635 — for industrial consumers¹⁷). In 2021, according to the Decree of the Government of the Russian Federation No. 3657-r of December 30, 2020, the basic tariff level for the Far Eastern subjects of the Russian Federation was 5.49 rubles without value added tax (VAT).

Since joint Russian-Chinese projects in the field of electric power are focused primarily on the border

¹⁵ Paris Agreement. URL: <https://www.un.org/ru/climatechange/paris-agreement>

¹⁶ Russia will increase electricity exports to China in 2022 to a record 4.4 billion kWh. URL: <https://tass.ru/ekonomika/13315263/> (accessed on 29.04.2022).

¹⁷ Explainer: China signals likely rise in household electricity prices. Reuters. URL: <https://www.reuters.com/world/china/china-signals-likely-rise-household-electricity-prices-2021-07-01/> (accessed on 29.04.2022).

regions of the Russian Far East, the main attention should be paid to the Unified Energy System of the East. As part of the ECO of the East, 39 power plants (including 11 diesel ones) operate the total installed capacity of which is 11,116 MW, as well as 649 power lines with a length of 33,727 km.¹⁸ Moreover, most power plants belong to thermal ones. As for the consumption of electric energy in the regions of the Far East, its dynamics clearly reflect the socio-economic situation of the subjects of the Far Eastern Federal District. In 2021 (from January to November), energy consumption amounted to 38,102.8 million kWh. The low rates of increase in the level of consumption (except for the Republic of Sakha (Yakutia) in 2019) demonstrate the corresponding rates of socio-economic development.

At the same time, according to experts, the winter period of 2021–2022 is characterized by a maximum consumption compared to the previous period due to the harsh climatic features of the region and an increase in the load of industrial enterprises of the Far Eastern Federal District.

The leader in energy production among the Far Eastern regions that are part of the ECO of the East is the Amur Region, whose power plants account for 37% of the total output. At the same time, the purchase of electricity for export to China is mainly carried out at the power plants of the Rushydro Group located on the territory of this subject of the Far Eastern Federal District: Bureyskaya, Nizhne-Bureyskaya and Zeyskaya HPP. Nizhne-Bureyskaya HPP is one of the largest Russian hydroelectric power plants built in the post-Soviet period. According to the Federal Customs Service of the Russian Federation, the region exported electricity to China in the amount of 169,613.79 thousand US dollars, in 2018–163,963.8 thousand dollars, in 2020–136,841.2 thousand dollars. The electricity delivered to China during the nine months of 2021 amounted to 117,274.8 thousand dollars. Thus, we can state the presence of some excess capacity, as a result of which a certain increase in supplies to China will not lead to a shortage of electricity in the Far Eastern regions of Russia (ECO of the East) — excess capacity is characteristic of the Russian electric power industry as a whole [7].

However, an increase in the transfer of generated capacity is unlikely to be an incentive for the effec-

tive development of the industry in the Far Eastern Federal District. The potential of Russian-Chinese cooperation in the field of electric power is much wider. First of all, the opportunities associated with the renovation and construction of new infrastructure facilities should be noted. Currently, the power grid complex of the Russian Far East is characterized by serious problems. Often, taking into account the area of the Far Eastern Federal District regions, a very serious remote locations of the main generating capacities from energy consumption facilities make it necessary to build extended electric networks.

Other areas of cooperation may be the modernization of worn-out equipment, including in the power grid complex, and investment in the construction of new generating capacities. Of course, it would be wrong to say that there is no interaction between the two countries in all these areas. Thus, the construction of trans-border power transmission lines was carried out with the participation of the Chinese side.

Possible recommendations and proposals for improving the investment activity of China and Russia in the electricity department were highlighted. They are based on a number of initiatives to increase Russian energy supplies to China; reducing excess capacity to a certain extent contributes to next step improvement, overcoming project barriers, and so on. In addition, despite the crisis of 2021, a sharp departure of the PRC from the proclaimed principles of the energy transition is unlikely, which actualizes Russian-Chinese cooperation in the field of renewable energy sources. The climatic features of the Russian Far East are favorable for the construction of wind and solar power plants; the development of generation based on clean energy is extremely costly, but under the current conditions, the energy-wasting economy has a very uncertain future.

5. Conclusion

The investment segment of international economic cooperation is an important element of Russia's interaction with foreign countries, and foreign investment is a significant source for the development of the real sector of the national economy. Building a new type of international relations is also the main development direction of China and Russia. At the same time, with the in-depth development of world multi-polarization, cultural diversification, and social informatization, the

¹⁸ The United Energy System of the East (ECO of the East). URL: <https://www.so-ups.ru/%20functioning/ees/oes-east/> (accessed on 29.04.2022).

global governance system and the world order are rapidly evolving.

The research revealed the following:

1. The main segments of Russian-Chinese economic cooperation between state-owned enterprises are the energy sector, nuclear power engineering, agriculture, science, technology, and infrastructure.

2. In 2021, foreign trade turnover in Russia amounted to US\$ 785 billion and increased by 34.42% over the study period compared to 2016. In 2021, the share of China in Russian foreign trade was 17.92%. China has been one of the leaders in the trade turnover of the Russian Federation for five years.

3. There are good prospects for the investment segment of economic cooperation between Russia and China, including:

- banking sector: improved communication can be established between state and non-state level mechanisms to facilitate the exchange of information at all levels and improve work efficiency; raising the level of bilateral internationalization of the ruble and yuan; improving the level of

banking services and introducing innovations in financial products;

- payment systems sector: acceleration of the procedure by Chinese banks; introduction of new services based on China's experience;

- electricity sector: increasing the supply of Russian energy to China; reduction of excess capacity to a certain extent participating in the next step improvement of the Far Eastern electric power industry.

4. Lately, the dynamics of Chinese investments in Russia have decreased due to the economic situation and coronavirus infection.

Consequently, the prospects for the development of the investment segment of economic cooperation are extensive and China-Russian investment cooperation can be raised to a new strategic height. At the same time, it is important to understand the variability of the economic situation. China is under the influence of Western partners because of strong economic and trade ties. Chinese firms avoid public statements about the affairs in Russia. Therefore, it is difficult to predict the development of the situation in the current economic realities.

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Analytical Study of the International Economic Policies of Iran and Russia: A Move to Bilateral Cooperation under Sanctions

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ABSTRACT

The high inflation, unemployment rate, and production reduction are apparent characteristics of the current state of Iran's economy. Therefore, studying solutions for the relationship with other countries and broader exposure to international trade is crucial. However, in the situation of sanctions, few countries can establish a free economic relationship with Iran, and Russia is one of the most important countries in this context. The article **aims** to investigate the history and perspectives of the economic cooperation between Iran and Russia. The paper uses an **analytical – descriptive method** to depict the international economic policies of Iran and Russia and the opportunities and challenges in their bilateral economic cooperation to pass unfair international sanctions and pursue economic development. The author **concludes** that although the political dimension was dominant in Iran and Russia relations, the two countries have realized the importance of bilateral economic ties, trying to improve the existing connections, which have shown the positive future of cooperation between the two countries.

Keywords: international economics; Iran; Russia; sanctions; economic policies; macroeconomy

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ОРИГИНАЛЬНАЯ СТАТЬЯ

Аналитическое исследование международной экономической политики Ирана и России: переход к двустороннему сотрудничеству в условиях санкций

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АННОТАЦИЯ

Высокая инфляция, растущий уровень безработицы и сокращение производства являются очевидными характеристиками текущего состояния экономики Ирана. В связи с этим изучение подходов к улучшению отношений с другими странами и более широкому участию в международной торговле имеет решающее значение. Однако в условиях санкционной ситуации немногие страны могут установить свободные экономические отношения с Ираном, и Россия является одной из важнейших стран в этом контексте. В статье **исследованы** история и перспективы экономического сотрудничества Ирана и России. В данном исследовании использовался **аналитико-описательный метод** изучения международной экономической политики Ирана и России, а также возможностей и проблем их двустороннего экономического сотрудничества в условиях несправедливых санкций. На основе проведенного исследования **сделан вывод**,

* The views and interpretations presented in this publication do not necessarily reflect the views of the RoBES journal.

что исторически политическое измерение было доминирующим в отношениях между Ираном и Россией. Однако обе страны осознали важность двустороннего экономического сотрудничества и предпринимают попытки улучшить существующие связи.

Ключевые слова: международная экономика; Иран; Россия; санкции; экономическая политика; макроэкономика

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1. Introduction

Nowadays, the economy not only covers the management of a whole country but also increases globalization of the economy as an essential part of this process. The current global order is characterized by the simultaneous existence of unexpected levels of well-being, poverty, and hunger, which means that globalization in the economic dimension has more depth and effect [1]. The situation is rapidly becoming a “network globalization”. The foundation of countries is an interdependence of nations. Nowadays, any country must consider export revenues and the benefits of participation in international trade to understand its national economy [2]. The globalization of the economy stresses the nature of economic flows and makes the financial situation of a nation depend not only on its government and country [3].

In this context, due to Iran’s geopolitical, geo-economic, and geostrategic position, any disruption and failure in Iran’s economy strongly affect neighboring countries and even many other countries. Iran’s economy is transforming into a governmental economy that confronts difficult economic conditions [4]. Over the years, these conditions affected the country’s economy. Then, under these conditions, the government was forced to reform the relative prices and introduce economic liberalization. As a result, the rate of taking advantage of industrial capacities has improved, and the capital accumulation rate in the industry and other sectors is increasing [5]. There were conditions for the country where self-sufficiency and reliance on production and domestic capacity were impractical. As a result, the import substitution strategy was adopted. This period was characterized by exceptionally high inflation and growing debts due to foreign proliferation, which forced the government to stop its agenda of policy self-sufficiency. The conditions

that were created by limiting importation due to the problems caused by the balance of payment and the reduction of capital on circulation led to a decrease in the interest rates and reduced the volume of investments in this period [6].

The government reformed the country’s economic body as the “third program” began. This period is referred to as the period of economic reform in Iran [7]. The amendments included: the formation of the foreign exchange account to secure the national economy concerning the world oil market shocks, an attempt to reduce the level of tariffs to provide conditions for WTO membership, strengthening the stock market and non-banking financial system, the establishment of private banks in free regions, the approval and enforcement of the new tax code, the implementation of the decentralization of social security, the performance of the comprehensive social security system, the elimination of the deposit for exporting goods [8].

These reforms took place during the years when the price of oil increased, which meant a high oil income for Iran. This could be useful in continuing reforms and improving the country’s economic conditions. However, with excessive withdrawal from the foreign exchange reserves and government expenditures, the country’s progress was not achieved through high energy sales. In other words, by increasing liquidity, fixing the rate of foreign exchange, and increasing inflation, Iran has witnessed a decrease in the value of trading stock in the stock exchange and a worsening of the business climate [9].

On the other hand, this period coincided with the increase of American and international sanctions against Iran. These conditions have harmed the Iranian economy until now. Between 2012 to 2014, the country suffered a deep recession. Gross domestic product (GDP) decreased drastically, and inflation increased [10]. During this period, the

insecurity caused by economic sanctions forced foreign investors to leave the country. The slump continued until 2016. After that, the government improved economic growth in some ways by increasing oil production and sales [11].

However, despite the improvement in the performance of the non-oil sector in the first six months of 2016, due to the problems and the weakness of internal structures as well as the continuity of sanctions and the lack of easy access to foreign financial resources, the historical problems of the Iranian economy persisted [12]. Later, with a lack of proper economic management, the country witnessed strong exchange rate fluctuations during 2018 and 2019 [13]. These fluctuations have caused the production sector to be uncertain, and the country experienced one of its worst economic periods.

The high price of exchange, high inflation, production reduction, and unemployment rate are apparent characteristics of the current state of Iran's economy. Therefore, studying solutions for relationships with other countries and extending exposure to international trade is crucial. With the increase in international trade, new jobs will emerge, the competition will grow, and production will thrive. The market will help improve and balance the exchange conditions.

Iran must be actively involved in the international economy; the country has enormous oil and gas reserves and mineral resources. However, in the sanctions situation, only some countries can establish free economic relations with Iran. Russia is one of the most important countries in this aspect. With the new sanctions imposed on the Russian economy by Western countries, the economic cooperation of Iran and Russia leads to economic growth and further development of both countries.

2. Research method

The paper uses an analytical-descriptive method based on gathering research data from electronic resources and library studies, including books, magazine papers, and academic journals. This paper presents an analytical study of the international economic policies of Iran and Russia and the opportunities and challenges in their bilateral economic cooperation to pass unfair sanctions and pursue economic development.

3. Results and discussion

3.1. Iran's international economic policies

Iran is located in Southwest Asia and the Middle East. The country has a population of 85 million and a \$ 486 billion GDP. Before the COVID-19 situation, Iran was the 18th world economy and the most populous country in the region, one of the most prosperous countries in the Islamic world. Iran is the shortest road connecting central Asia to Europe. The Iranian railway is the shortest way to connect Asia to Europe and the Persian Gulf [14]. Iran is one of the few countries in the world with such a unique position that it can be one of the great highways in the world by borders with 15 countries and a maritime border with the Persian Gulf and the Caspian Sea.

Iran is one of the most critical countries affecting the world economy, with 27 percent of world oil and gas reserves. However, Iran faced some limitations in recent decades [15].

Every revolution has a cycle of economic crises [16]. Theda Skocpol referred to this phenomenon as a structural crisis after the revolution. The Iranian revolution disrupted the function of most market institutions and created a gap in the production field. Large financial institutions and national factories were closed. Many prominent capitalists have turned their assets into currency and deposited them in foreign banks.

These events led to a fundamental change in the Iranian economy after the revolution. In the aftermath of the capture of the USA diplomats in Tehran in 1979, the United States started to sanction Iran's economy, a problem that continues increasingly until today.

In addition to needing a comprehensive economic plan after the Islamic revolution, another issue that added economic distress was ambiguity in Islamic jurisprudence in the economic area. Varying interpretations of different economic cases, such as the role of government in the economy and private property rights, were cases that had not been established for a long time.

During these economic problems, Iran became involved in an unexpected war with Iraq. A long and intense war devastated Iran's economy. Iran – Iraq war coincided with the destruction of a large part of the Iranian infrastructure, especially the oil industry. It also had a negative impact on economic relations with other countries [17].

The losses incurred on the production capacity and oil export after the war have led to a decrease in oil revenues and an economic downturn. The loss of these capacities meant more than the damage caused by the war. Under these circumstances, the Iranian economy was becoming increasingly weak. After the departure of foreign investment during the war, the collapse of multinational companies and the increasing conflicts of Iran with other countries led the economy toward the strategy of self-sufficiency [18].

The post-revolutionary period from 1979 to 1989 is called the period of self-sufficiency. After the end of the war, what remained of the economy were: bankrupt firms and market structure, deteriorated industry, high inflation, and high risk in using international facilities due to political conflicts with the outside world [19].

Under these circumstances, the government was forced to reform the relative prices and introduce economic liberalization. As a result, the rate of taking advantage of industrial capacities improved, and the capital accumulation rate in the industry and other sectors increased. The import substitution strategy was adopted during this period, which took place from 1990 to 1995. The characteristics of this period, including exceptionally high inflation and the growing debts due to imports, forced the government to halt and establish a self-sufficiency policy. The conditions that were created by limiting importation led to a decrease in the interest rates and reduced the volume of investments. This was the case in 1996–1998 in the country's economy, which is referred to as a second self-sufficiency strategy.

These reforms led to recent years, which coincided with an oil price increase and a high oil income for Iran. *Fig. 1* shows Iran's GDP per capita growth before and after the revolution.

This period coincided with the increase of American and international sanctions against Iran. These conditions stopped the Iranian economic growth, so during 2012 and 2013, the country suffered a deep recession. Gross domestic product decreased drastically, and inflation increased. During this period, the insecurity caused by economic sanctions forced foreign investors to leave the country. The economic downturn continued until 2016.

However, despite the improvement in the performance of the non-oil sector in the first six months of 2016, due to the problems within and

the weakness of internal structures as well as the continuity of sanctions and the lack of easy access to foreign financial resources, Iranian economy could not overcome its historical problems. In the following period (2017–2022), the lack of proper economic management and sharp currency fluctuations caused the production sector to be confused and brought the country to a recession and one of its worst economic periods.

3.2. Russia's international economic policies

Russia is the largest country in the world, with a total population of 147 million, with an area of 17,098,246 square kilometers. The economy of Russia has gradually transformed from a planned economy into a market-oriented economy. It has enormous natural resources, particularly oil and natural gas [20]. As of 2022, it is the fourth-largest economy in Europe, the world's ninth-largest economy by nominal GDP, and the sixth-largest by purchasing power parity. Russia's military power has been significant. Russia has always been one of the countries affecting international relations [21]. Russia plays a vital role in energy production. It is also one of the few countries that can affect global economic decisions, including sanctions [22]. On the other hand, Russia is one of the most critical neighbors of Iran, so it is essential to have close economic relations between the countries.

1998 and 1999 were the worst economic years for Russia. In this critical situation, President V.V. Putin came to power [23]. Recognizing the country's economic weaknesses, President Putin aimed to modernize the government and determine the priority of Russian foreign policy in gaining more economic benefits. This approach led Russia to action and was driven by the firm idea. The new economic way emphasized three principles:

- Increase Russia's integration into the global economy.
- Involvement and activity in international economic institutions.
- Following Russian economic benefits abroad.

President Putin, knowing the necessity of a long-term plan for the country's economy and structural reforms, especially in the manufacturing sector, and reducing dependence on energy revenues and the need for developing advanced

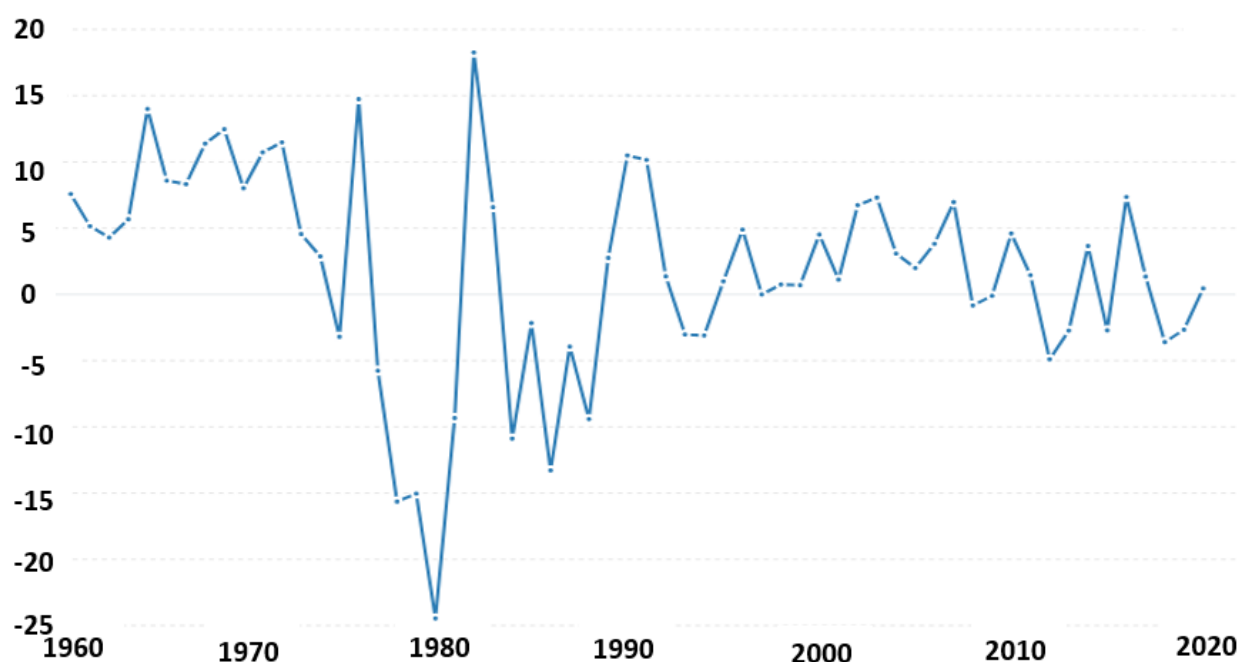


Fig. 1. Iran's GDP per capita growth (%) change from 1960 to 2020

Source: compiled by the author based on the World Bank data. URL: <https://data.worldbank.org/indicator/NY.GDP.PCAP.KD.ZG?end=2020&locations=IR&start=1960&view=chart> (accessed on 01.09.2022).

technologies, has doubled the gross domestic product in the economic sector [24]. Also, appropriate management practices were implemented.

The most important developments in the Russian economy were the following:

- Economic indices have a positive and increasing trend.
- Proper economic management of domestic and foreign investments in the Russian economy has been improving.
- The inflation rate declined, for example, to 9.8 percent in 2006.
- A stabilization fund to prevent price fluctuations was established.
- The government stopped the privatization process of the oil and gas industry and drove some private oil owners to sell their shares to the state-owned Gazprom.
- The government undertook a large investment in the defense industry.
- Enhanced public services and reduced rates of unemployment and poverty caused people to be satisfied.

President Medvedev D.A. continued Putin's approach to strengthening the economy [25].

In 2014, the Russian economy suffered two significant shocks: oil prices fell by 50 percent, and sanctions were imposed. The country's currency experienced a decline of 46% against the USA dol-

lar. This severely compromised economic security. Another event that led to the deterioration of the Russian economy was the dispute between the West and Russia on the Ukrainian issue. This led to decreased investment in Russia and increased borrowing costs for Russian banks and factories. After that growth rate in the Russian economy fell in 2015 and 2016. GDP went down by 4%, and the inflation rate rose by 15%. International trade declined from 35% to 40% [26].

Nevertheless, Russia managed to reverse the downtrend in the first quarter of 2017 and resume growth by mid – 2018 as it reached 6.1 percent growth. This growth was also achieved by improving the country's trade relations. From January through October 2018, the total volume of exports and imports went up by 20% compared to the corresponding period of the previous year, according to a report released by the federal customs service [27].

The leading indicators of the Russian economy are improving. Even in 2018, the government faced a surplus of 304 trillion rubles, which happened for the first time since 2012.

In recent years, Russia has witnessed advances in economic structure, resulting from replacing the import and implementing a digital economy [28]. The Russian economy is growing; for example, in 2017, the country reached a 1.5 percent growth



Fig. 2. Russia's GDP and economic growth (%) change from 1995 to 2021

Source: compiled by the author based on the World Bank data. URL: <https://www.macrotrends.net/countries/RUS/russia/economic-growth-rate> (accessed on 01.09.2022).

in agricultural production, and the income of agricultural companies approached the oil industry revenue [29]. Fig. 2 shows Russia's GDP and economic growth change from 1995 to 2021.

In addition to the increase in oil prices and improvements in international trade, the replacement of imports in industry and agriculture, investment in the expansion of production, and assistance to the development of the far east were also significant [30]. On the other hand, the reforms carried out in the financial sector, especially the adjustment of the banking sector and liberalization of the exchange rate and the financial market, which were stabilized by price adjustment, also contributed to this trend.

3.3. Economic relations between Iran and Russia

The achievement of cooperation between the two countries is always tricky, and the continuity of these relations is very sensitive. Factors causing such relationships are fear of deceit and considerations related to the country's national interests. Both of these factors are highlighted in Iran – Russia relations.

Some Iranian politicians do not have a positive view on relations with Russia due to historical events such as a series of conflicts between 1651

and 1828, concerning Persia (Iran) and the Russian Empire (Russo-Iranian Wars), Russian actions during the constitutional revolution in the early 20th century, the support of the USSR for the movement against Iran, especially the support of Iraq during Iraq-Iran war, and Russia's refusal to deliver the missile systems to Iran at the time of the president Medvedev. At the same time, some Russian politicians do not have a positive outlook on this issue too. They argue that Iran has tended to improve relations with Russia because of the restrictions from Europe and America. The Russians believe that Iran has preferred the West to Russia during any time when it has been able to communicate positively with the West. This is one of the reasons for Russia to pass resolutions of the UN Security Council against Iran on nuclear issues. The Russians have little interest in improving the relations between Iran and the West because improving Iran's relations with the West can undermine Russia's position in the region. The Russians are also afraid of repeating the history of Iran, preferring the West [31].

The factors mentioned and many other political and economic cases cause friction in the cooperation between Iran and Russia. Strategic cooperation means that one of the considerations in communications between the countries

should be national interests. This is constant in the relations between all countries. It is crucial to consider national interests in the relations between Iran and Russia to create solid relations.

These relations can be named a strategic partnership based on the improvement of relations between Iran and Russia in recent decades. Strategic partnerships emerge between the two countries when governments agree to promote their regular interactions from the bottom to the highest levels to deal with various issues and establish long-term obligations for joint interests and goals.

In the current context of the sanctions, the establishment of new economic relations for Iran and Russia is one of the best options for both. In this regard, Iran's vision is that interaction with the world and governments of the region, including Russia, is one of the long-term goals of Iran. It is essential because having a preferential trade zone is the priority for the new era of the economy.

Russia and Iran are interested in promoting economic relations; so far, the economic ties between Iran and Russia have been in the shadow of political considerations, but both countries need to pay more attention to the economic aspect of future relations.

Membership in any economic organization like the Shanghai Cooperation Organization or BRICS group can bring a big step toward economic progress. Nowadays, the two countries are working to improve and develop bilateral relations in political and economic matters. Existing neighborhood and economic realities require the improvement of bilateral relations for a long time.

Peter Schwartz, one of the most prominent futurist scholars of the present era, believes that the most important influential elements in the next decade are:

- Change of political alignments
- Technology explosion
- Universal pragmatism
- Populations
- Energy
- Environment.

What is also seen in the international relations trends indicates these elements' importance in the relations between the countries [32]. In the same vein, these factors affect the relations between Iran and Russia with different intensities and weaknesses. These elements generally reinforce bilateral cooperation between Iran and Russia. For

example, cooperation and commercial cooperation in some international organizations determine the political future, and the general form of bilateral relations is a kind of convergence.

Energy is one of the most critical links in the relations between the two countries. However, studying the relationship between the two countries' associations in the Eurasian economic union is vital too. Because within the union framework, many of the most important bilateral relations are not avoidable. For example, in the north and south corridor transportation sector, the "one road, one belt" project can be defined within the union framework. The energy field is expected to find oil and gas markets in the union framework by 2025.

It should be noted that the implementation of the project will depend on the national revenues of the countries by that date. The efforts to finalize the customs law and create energy, oil, and joint gas markets and a single financial regulator consist of the same components. Scientifically, this process is quite complex and controversial. It is logical to assume that the final solution for greater cooperation between the two countries will be based on mutual concessions between Russia and Iran.

4. Conclusions

The high price of exchange, high inflation, production reduction, and high unemployment rate are apparent characteristics of the current state of Iran's economy. Therefore, studying solutions for the relationship with other countries and more exposure to international trade is crucial. As the size of global trade increases, new jobs emerge, the competition grows, and production thrives. The market will help improve and balance the exchange conditions. Presence in the international economy for Iran is one of the most critical goals. Because a country with huge oil and gas reserves and mineral resources must be involved in the international economy; however, it should be considered that in the context of sanctions, only a few countries can establish a free economic relationship with Iran.

In recent decades we have seen a power transition to Asia. The Asian societies improved their position in the international system by using western knowledge in different areas, such as the market economy and science. Many researchers believe that the process of power

transfer to Asia, especially China and Russia, is irresistible. Although the future can be the sole source of surprising and unexpected events that each researcher has always considered the most probable, one of the most substantial scenarios is the east-west superiority in the international system.

Meanwhile, Russia is important for Iran for the reasons mentioned. Although in Iran and Russia relations, the political dimension is dominant and political considerations are always the dominant trends in economic trends. Nevertheless, over the past few years, the two countries have realized

the importance of bilateral economic relations, trying to improve the existing relations, which have shown the positive future of cooperation between the two countries.

Iran and Russia cooperate reasonably in various fields such as energy, power plant construction, and transport routes. Many bilateral economic agreements are in the initial stages of their implementation. Considering the new agreements between Iran and Russia, we can hope for the increase of the economic efficiency of the two countries to the mutual benefit and development of both countries.

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Association between Financial Knowledge, Financial Attitude and Financial Behaviour among Young Population in India

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ABSTRACT

The **research aims** to explore the associations between the determinants of financial literacy among the young population of Haryana, India. The research **methodology** included collecting data from 117 respondents through a well-structured questionnaire and investigating the associations using Chi-square criteria. The **results** of this research show a strong association between the determinants of financial literacy (financial knowledge, financial attitude, and financial behaviour). Among the research **limitations** are the relatively small sample size and inclusion of only the rural population of Haryana. This research will help researchers, policymakers and governments to focus on financial knowledge, financial attitude and financial behaviour as determinants for strengthening financial literacy.

Keywords: financial literacy; financial knowledge; financial attitude; and financial behaviour; determinants of financial literacy

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ОРИГИНАЛЬНАЯ СТАТЬЯ

Исследование взаимосвязи между финансовыми знаниями, финансовым отношением и финансовым поведением среди молодежи в Индии

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АННОТАЦИЯ

Цель исследования — изучить взаимосвязи между детерминантами финансовой грамотности среди молодежи штата Харьяна, Индия. **Методология** исследования включала опрос 117 респондентов с помощью хорошо структурированной анкеты и изучение ассоциаций с использованием критерия хи-квадрат. Результаты исследования показывают, что существует тесная связь между детерминантами финансовой грамотности (финансовыми знаниями, финансовым отношением и финансовым поведением). Среди **ограничений исследования** — относительно небольшой размер выборки и включение только сельского населения Харьяны. Это исследование поможет ученым, политикам и правительственным организациям сосредоточиться на финансовых знаниях, финансовом отношении и финансовом поведении как определяющих факторах повышения финансовой грамотности. **Ключевые слова:** финансовая грамотность; финансовые знания; финансовое отношение; финансовое поведение; детерминанты финансовой грамотности

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Introduction

Over the past few years, the world economy has been declining, and the recession has caused inflation and unemployment. The decline in financial well-being has harmful effects on mental and physical health. It creates the problem of stress, anxiety, depression, and suicide in our society [1]. Financial literacy has recently become a much-talked-about topic for the financial empowerment of people and their lives after the pandemic [2]. After COVID-19, the world economy gets affected, and everyone suffered a financial crisis [3]. After the COVID-19 maximum number of people get unemployed because of the global lockdown [2]. People who took loans from banks or other financial institutions fail to pay the equated monthly installment (EMI) on time because of a pay cut or unemployment. This situation creates the problem of family disputes, depression and anxiety [3]. After this pandemic, financial literacy catches the attention of common people who are willing to meet their daily financial needs. Financial literacy strengthens people's ability to access financial services, manage their budgets, and maximize resource utilization, which encourages economic development. Financial literacy increases people's confidence and self-control, encouraging their participation in the formal economic system. It will contribute to confidence and well-being. As the literature shows, almost all countries in the world are dealing with the issue of financial crises because of a lack of financial literacy. However, the concept of financial literacy still needs to be clarified. Different researchers use different definitions of financial literacy. Financial literacy is explained by Atkinson [4] as "a combination of understanding, expertise, ability, attitude and action required to make sound financial decisions and eventually achieve individual well-being". "Financial literacy is the capacity to make wise decisions and to make appropriate choices on the use and managing of capital" [5]. "Financially literate people make good choices about their finances and reduce their risk of being deceived on financial issues" [6]. In previous work on financial literacy, researchers focused on various aspects of financial literacy. Few scholars have used financial literacy and financial knowledge

as the same term, while others found financial knowledge associated with financial literacy. The Organisation for Economic Co-operation and Development (OECD) has given a detailed view of financial literacy. According to the OECD "financial literacy is a blend of financial behaviour, financial conduct and financial awareness".¹ Financial behaviour and financial literacy both may be affected by financial knowledge or financial education. Sharma and Roshan found in their study that financial literacy has a significant effect on financial well-being, and financial literacy is the combination of "financial knowledge, financial behaviour and financial attitude" [7]. It is, therefore, important to gain insight into the association between financial knowledge, financial attitude and financial behavior among the young generation.

2. Literature review

Financial literacy has been researched in several ways. Government bodies, private organisations and individuals have undertaken studies in various countries to check their countries' financial literacy levels. "People's willingness to process financial information and make a rational financial saving, capital accumulation, debt, and pension decisions" [8]. "A combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing" [4]. "Financial literacy has introduced an implementation layer enabling individuals to have the capacity and trust to use financial skills to make financial choices" [5]. The notion of financial literacy is still being debated. Financial literacy has numerous interpretations in the present literature since financial literacy authorities have given researchers the freedom to express and assess financial literacy [9]. "Financial literacy, financial behavior and financial awareness should be seen interchangeably" [10, 11]. Most of the research used an objective evaluation method to assess individual financial literacy.

¹ Organisation for Economic and Cooperation and Development. Measuring financial literacy: questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy. 2011. URL: <https://www.oecd.org/finance/financial-education/49319977.pdf>

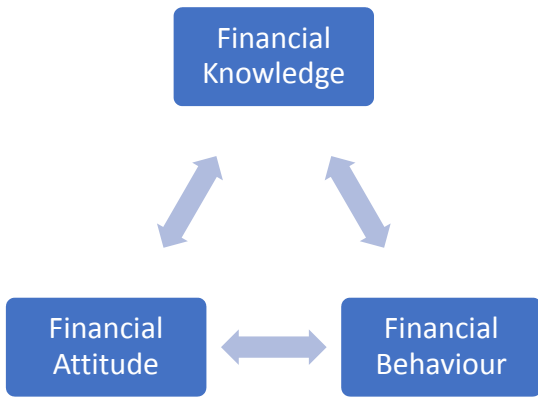


Fig. 1. Conceptual model

Source: developed by the authors.

Various researchers used objective tests differently to assess the individual's financial literacy. Bhushan and Medury [12] measure financial literacy by asking objective questions about "income, savings, investment, budget management and credit management". Fessler et al. [13] use "time value of money, risk and return, interest, diversification and inflation" to test financial literacy. The previous study result shows a low level of financial literacy among the low-income group, females, students, less educated, less income group and minorities² [10, 14, 15]. In reviewing the literature, it can be said that, in most research on assessing literacy among the population, researchers consider only one dimension of financial literacy, i.e., financial knowledge. Other aspects, such as financial attitudes and financial behavior, have been considered only in a few research pieces. The concept of financial literacy is different from person to person. In India, governments, the Reserve Bank of India, non-governmental organizations (NGOs) and financial institutions are taking numerous steps to increase awareness. Financial literacy centres (FLCs) play an essential role in creating awareness to improve financial literacy. FLCs organized regular camps in rural Haryana to spread awareness among women, children, farmers, low-income groups, etc. Research in India's Haryana state aims to examine the relationship between "financial knowledge", "financial attitude" and "financial behaviour" among the country's young population (Fig. 1).

In light of the prior research, we developed the following hypotheses.

2.1. Financial Knowledge and Financial Behaviour

A person with a basic understanding of financial concepts and financial products is considered financially literate. According to OECD, one of the most important factors in financial literacy is financial knowledge. Huston identified four critical elements of financial literacy after evaluating more than 71 studies [5]. All aspects of money, including saving, investing, and borrowing, are explored. One of the five financial concepts included by the OECD is the notion of the time value of money, which explains how inflation affects investments and prices. According to Gerrans and Heaney, financial literacy has an impact on both financial behaviour and financial well-being in the long run [16]. It has been hypothesized that knowledge of personal finance, saving, loans, investment, and insurance are all indicators of financial literacy and are associated with financial behaviour. In light of the previous objective and prior research, we developed the following hypotheses:

H_0 : Financial knowledge has no significant association with financial behavior.

H_1 : Financial knowledge has a significant association with financial behavior.

2.2. Financial attitude and financial knowledge

Generally speaking, a financial attitude is described as a personal tilt toward financial products, which can only be achieved when people have a favourable attitude toward the financial product and help to build a positive attitude toward the financial product. Financial literacy is critical in today's society. According to Chijwani's [17] findings, cultivating positive financial attitudes among the majority of the rural population should be emphasized to achieve high financial literacy. Only then will any financial education program be able to give meaningful benefits to its participants. Ajzen [18] has demonstrated that decision-actions have an impact on their financial attitudes and that their perceptions of the economy and non-economic factors will enhance their

² The National Institute of Securities Markets (NISM). 2014. Financial Literacy and Inclusion in India: Final Report — India.

opinions. Ibrahim and Alqaydi concluded that financial education can help people modify their personal financial views and minimise their reliance on credit cards even further [19]. Financial attitudes and financial behaviour variables have been shown to have a favourable impact on financial literacy and financial well-being [20]. Financial attitudes, in addition to financial behaviour, can have an impact on one's financial well-being. In the study by Ibrahim and Alqaydi [19], researchers discovered that those who had a good financial attitude borrowed less money from banks and credit cards. According to Sohn et al., the financial socialization agent, financial attitude, and financial literacy all have a favourable impact on financial literacy levels [21]. Ultimately, Haque and Hamdan concluded that a positive financial attitude and financial literacy are beneficial to women's financial well-being and empowerment [22, 23]. The following hypothesis has been formulated in light of the aforementioned literacy and for the aim of this study: recording income and expenditure according to the budget you created, setting aside money every month for the future, and paying off all of your debts every month are all indicators of a positive financial attitude.

H_0 : Financial attitude has no significant association with financial knowledge.

H_2 : There is a significant association between financial attitude and financial knowledge.

2.3. Financial behavior and financial attitude

People's actual financial decisions in the financial market are referred to as financial behaviour, and they are linked to their levels of savings, debt, and expenditure. Researchers discovered that realistic financial attitudes, such as effective budget preparation and financial stability, help people improve their financial literacy [4]. Conversely, people with negative financial attitudes, such as reliance on loans and credit, harm their finances. Financial literacy and financial attitude can lead to positive financial behaviour, according to Taft et al. [1], who concluded that it is necessary to consider the impact of financial literacy on financial behaviour. According to the findings of this study, financial literacy aids in the modi-

fication of behaviour and the improvement of decision-making abilities as well as the improvement of living standards. According to Morgan and Trinh [24], financial behaviour is extremely important and is a key component of financial literacy. According to Mokhtar and Rahim [25], the work environment, financial stress, locus of control, and financial behaviour are all strongly associated with financial well-being. Aside from that, financial stress was found to be the most significant factor influencing financial well-being, followed by the workplace environment. In light of previous research, the following hypotheses has been developed and is currently being tested.

H_0 : Financial behavior is not significantly associated with financial attitude.

H_3 : Financial behavior is significantly associated with financial attitude.

3. Research methodology

3.1. Sampling technique and sample size

The demographic area of interest in this study was the Ambala district of Haryana. Three professors from different disciplines at Sharda University in Greater Noida, India, approved a self-administered questionnaire. Data were collected both online and offline. Due to time constraints, only 117 people were chosen for this study. This research employed probability sampling.

3.2. Instrumentation

Computers were used to analyze nearly all data gathered via a self-administered survey. There were two sections in the survey. There were questions on demographics in the first segment, and there were questions on independent and dependent variables in the second. The questions were formulated with the help of previous research and OECD, and customized according to the demand of this research paper. In this study, 30 questions were asked to measure financial knowledge and understanding, ten questions connected to financial attitude and ten questions linked to financial behaviour. After factor analysis, a few questions from financial knowledge, financial attitude, and financial behaviour were deleted because their loading was less than 0.50. A 5-point Likert scale was used to collect data in this study.

Table 1
Demographic and socioeconomic details of the respondents

		Frequency	Percent
Gender of respondent	Male	51.00	43.59
	Female	66.00	56.41
Marital status of respondent	Married	61.00	52.14
	Unmarried	56.00	47.86
Qualification of respondent	School level	6.00	5.13
	Graduate	35.00	29.91
	Masters	36.00	30.77
	Professional	38.00	32.48
	Illiterate/uneducated	2.00	1.71
Occupation of the respondent	Business/Professionals	7.00	5.98
	Salaried Employee	72.00	61.54
	Students	14.00	11.97
	Farming	2.00	1.71
	Not Working	22.00	18.80
	Up to INR 20,000	21.00	17.95
Monthly family income	INR 20,001-INR 40,000	33.00	28.21
	INR 40,001- INR 60,000	21.00	17.95
	INR 60,001- INR 80,000	23.00	19.66
Type of respondent family	Above INR 80,000	19.00	16.24
	Joint family	63.00	53.85
	Nuclear family	54.00	46.15

Source: compiled by the author.

3.3. Demographic and socioeconomic characteristics

The sample was collected from the Haryana state in India. Haryana is a state in northern India with 22 districts, and it is the seventeenth most crowded state with a land area of 17,070 square miles (total of 44,212 square miles), with a population of 27.39 million in 2021. *Table 1* and *Fig. 2* show the characteristics of the sample used for the analysis. Of all respondents, 56% were female, and 44% were male. In the sample, there is no significant difference in the marital status of males and females, i.e., 52% are married, and 48% are unmarried. In the sample, most respondents were graduates, masters and professionals, with 30%, 31% and

32%, respectively; 5.13% those who studied at school level and 1.71% were illiterate. The sample consists of 28% of respondents who earn between 20,001–40,000 p.m., 18% earn 20,000 pm, 18% earn 40,001–60,000; 20% of the respondent earn 60,001–80,000, and 16% earns above 80,000. The sample consisted of 6% of respondents working as professionals, 62% of the respondents as salaried people, 12% still studying, 2% were farmers and 19% were unemployed. Finally, the sample consisted of 54% of the respondents from the joint families and the rest, 46% from the nuclear families.

The questionnaire was prepared with extreme seriousness, including all the relevant details, using detailed questions, attitude rating ques-

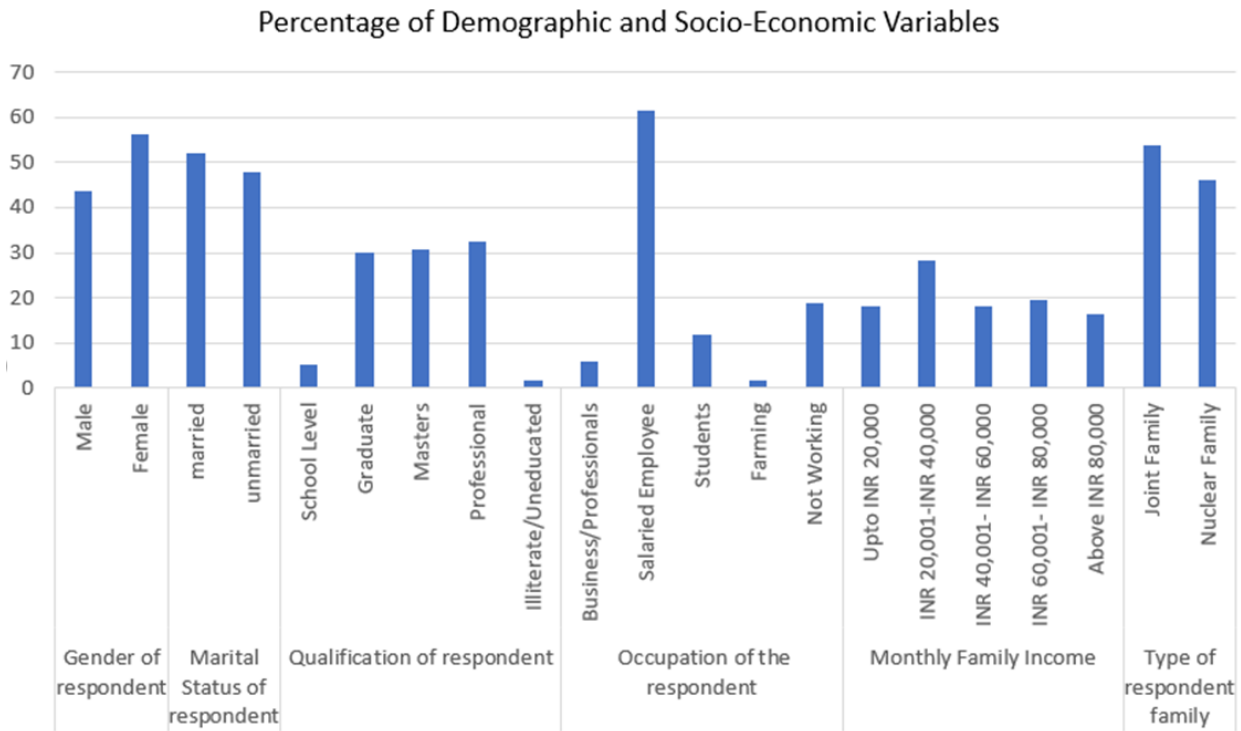


Fig. 2. Demographic profile of samples

Source: compiled by the author.

tions, as well as behaviour-related questions and responses, which were analyzed on the 5-point Likert scale. The questionnaire was sent to more than 400 people, but only 117 showed interest in filling it out; out of the total 56% were female and 44% were male. The reliability of the question was tested by Cronbach’s alpha through SPSS. Thirty questions were asked related to banking, saving, investment, insurance, taxes, risks, etc. to check financial knowledge and Cronbach Alpha is 0.952, Cronbach Alpha for 10 questions of financial attitude is 0.825 and for 10 questions of financial behavior is 0.708 (Table 2).

Chi-square was used to study the association between financial knowledge, financial attitudes and financial behaviour. Under this study, data fulfilled all the conditions of chi-square only. In this study, data was collected on 5 points Likert scale. Then after it was treated as the ordinal scale considered [26] and for calculating the average, the median was used instead of the mean because the mean does not make any sense [26].

Results and discussion

Association between financial knowledge and financial attitude. Financial literacy is described as an individual’s capacity to use his

or her knowledge and abilities to make appropriate financial decisions to effectively manage one’s financial resources. The chi-square test has been applied to test the null hypothesis. Table 3 indicates p value = 0.00 < 0.01 = alpha level of significance, the result fails to accept the null hypothesis H02. Hence at a 1% confidence level, there is a significant association between financial attitude and financial knowledge. It was concluded that financial educated has a financial attitude and financial attitude, financial education is very important. So, government and other financial institutions should focus more on educating people related to financial products.

Association between financial attitude (FA) and financial behaviour (FB). The researchers concluded that the emphasis should be on creating good financial attitudes among the residents of the country to promote financial literacy among successive generations [27]. Ajzen [18] noted that financial attitudes are the expression of behaviour in decision-making and that their economic and non-economic values can be reflected in their attitude. Chi-square was computed to test the developed hypotheses. Table 4 indicates p value = 0.00 < 0.01 = alpha level of significance, the result fails to accept the

Table 2
Reliability statistics

Variables	No of Questions	Cronbach Alpha
Financial Knowledge	30	0.952
Financial Attitude	10	0.825
Financial Behaviour	10	0.920

Source: compiled by the author.

Table 3
Association between financial attitude and financial knowledge

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.149E2*	48	0
Likelihood Ratio	104.497	48	0
Linear-by-Linear Association	0.248	1	0.618
No of Valid Cases	117		

Source: compiled by the author.

* 156 cells (88.9%) have an expected count of less than 5. The minimum expected count is 0.03.

Table 4
Association between financial attitude and financial behaviour

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	77.470*	36	0
Likelihood Ratio	71.316	36	0
Linear-by-Linear Association	0.001	1	0.978
No of Valid Cases	117		

Source: compiled by the author.

* 42 cells (85.7%) have an expected count less than 5. The minimum expected count is 0.05.

Table 5
Association between financial knowledge and financial behaviour

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.242E2*	48	0
Likelihood Ratio	108.274	48	0
Linear-by-Linear Association	10.648	1	0.001
No of Valid Cases	117		

Source: compiled by the author.

* 58 cells (92.1%) have an expected count of less than 5. The minimum expected count is 0.02.

null hypothesis H01. Hence at a 1% confidence level, there is a significant association between financial attitude and financial behaviour among the young population.

Human behaviour involved in financial decision-making and money management, such as the construction and supervision of an adequate spending programme, the rapid paying of bills

and the daily saving nature, is known as financial behaviour [27, 28]. According to Atkinson and Messy [4], the constructive financial behaviour of individuals, such as proper spending preparation and sound financial stability, improve the level of financial literacy. In contrast, negative financial behaviour, such as credit and lending, weakens their financial well-being. Thus, it becomes important to check the association between financial knowledge and financial behaviour. *Table 5* p value = $0.00 < 0.01 = \alpha$ level of significance, the result fails to accept the null hypothesis H_0 . Hence at a 1% confidence level, there is a significant association between financial knowledge and financial behaviour.

Findings and conclusion

The main objective of this research is to find the association between financial attitude and financial behaviour among the rural population of Haryana because the financial literacy level in Haryana, India, is very high. From the above result, it was concluded that:

1. At 1% confidence level, there is a significant association between financial knowledge and financial attitude.

2. At 1% confidence level, there is a significant association between financial knowledge and financial behaviour.

3. At 1% confidence level, there is a significant association between financial attitude and financial behaviour.

Hence, there is an association between financial knowledge, financial attitude and financial behaviour among the young population in rural Haryana, India. So, an increase in financial knowledge is not sufficient, positive change in attitude and behaviour is equally important to

improve the well-being of an individual. The main implication of this study is to develop a sound educational system and a financial literacy centre. And with an increase in financial knowledge, financial institutions, government, and NGOs should focus on change in the financial attitude and financial behaviour toward the financial product, services, budgeting, etc.

Limitations of the study. The current analysis is not without constraints. The first limitation, this study was conducted through online forms only. Secondly, the study includes only the rural young population of Haryana, India. The third — sample size was relatively small.

Practical implications. Most researchers took demographic and socio-economic factors as a determinant of financial literacy and took the financial attitude, financial behaviour and financial knowledge as a dimension of financial study. This research will help the researchers to focus more on these determinants for strengthening financial literacy and financial wellbeing. After covid-19, the concept of financial literacy should be more in focus because people need to understand that the future is uncertain and anything can happen. So, an individual must have full financial knowledge, a positive financial attitude, and financial behaviour. So, banks and financial institutions, financial literacy centres and government should focus not only on financial knowledge but should also try to organize the camps to positively change the attitude and behaviour of an individual.

Future scope. The researchers can take larger samples to remove the above limitations and consider other essential determinates, and check the association between family financial socialisation, financial socialisation agents, family income and financial wellbeing.

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Socially Responsible Investment in the Russian Stock Market

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ABSTRACT

One of the major elements of the sustainable development policies is the socially responsible investing (SRI), also called ESG investing (environmental, social, and corporate governance) or green investing. The key feature of SRI (ESG investments), which distinguishes it from the other forms of raising capital, is the focus on priority financing of environmental and social projects providing long-term positive effects and consequences for society (the wellbeing of an individual and the nation), the environment (including climate), regional and global economies. The research **aims** to study ESG-investments' influence on the Russian economy, specifically, the exchange-traded funds (ETF) industry. The research **methodology** includes structuring, comparison, generalization, economic analysis, induction, deduction and synthesis. The **results** of include analysis of the foundations of socially responsible investments, the concepts, and factors of ESG investments. Also, the global and Russian ESG markets are explored, including ESG-exchange traded funds industry, its features, structure and trends. Based on the research, the author **concludes** that the Russian market for ESG instruments is only developing. However, interest in this category of financial instruments is growing among investors, which is facilitated by the policy pursued by the national regulator (the Bank of Russia), which encourages the introduction of ESG practices by Russian issuers of securities.

Keywords: sustainable development; ESG principles; ESG factors; ESG concept; Principles for responsible investment

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ОРИГИНАЛЬНАЯ СТАТЬЯ

Социально ответственное инвестирование на российском фондовом рынке

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АННОТАЦИЯ

Одним из основных элементов политики устойчивого развития является социально ответственное инвестирование (SRI), также называемое ESG-инвестированием (экологическое, социальное и корпоративное управление) или зеленым инвестированием. Ключевой особенностью SRI (ESG-инвестиций), отличающей ее от других форм привлечения капитала, является направленность на приоритетное финансирование экологических и социальных проектов, обеспечивающих долгосрочные положительные эффекты и последствия для общества (благополучие личности и общества), окружающей среды (включая климат), региональной и глобальной экономики. **Цель** исследования – изучение влияния ESG-инвестиций на российскую экономику, в частности на индустрию биржевых фондов (ETF). **Методология** исследования включает структурирование, сравнение, обобщение, экономический анализ, индукцию, дедукцию и синтез. **Результаты** работы включают анализ основ социально ответственных инвестиций, концепций и факторов ESG-инвестиций. Также исследуется мировой и российский рынок ESG, в том числе индустрия биржевых ESG-фондов, ее особенности, структура и тенденции. На основании проведенного исследования автор делает **вывод**, что российский рынок ESG-инструментов только начинает развиваться. Однако интерес к данной категории финансовых инструментов среди инвесторов растет,

чему способствует проводимая национальным регулятором (Банк России) политика, поощряющая внедрение практик ESG российскими эмитентами ценных бумаг.

Ключевые слова: инвестиции; социально ответственное инвестирование; устойчивое развитие; ESG-факторы; фондовый рынок

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Introduction

Countries worldwide had implemented sustainable fiscal policies since 2015, when the Paris Climate Agreement was adopted,¹ and the United Nations formulated Sustainable Development Goals.² One of the key elements of the abovementioned policies is the so-called socially responsible investment (SRI), also called ESG investment (environmental, social, and corporate governance) or “green investments” — the phenomenon that goes back to the early-1960s, when the idea of the investment in “green” and “social” instruments appeared. The key feature of SRI (ESG investments), which distinguishes it from the other forms of raising capital, is the focus on priority financing of environmental, social and management projects, as their creation implies the emergence of long-term positive effects and consequences for society (the wellbeing of an individual and the nation), the environment (including climate), regional and global economies.

Despite the increasing attention to the environmental agenda and ESG investing in particular, the depth of ESG investing varies across different countries. At the same time, this agenda is undoubtedly relevant and plays an important role in the further development of both regional and global financial markets.

The Russian market of ESG investment vehicles is very young and at the stage of development. “Green investing” is a practice that came to Russia just a few years ago. Thus, the Moscow Exchange (MOEX) launched the first Russian ESG indices only in 2019 (e.g., the Moscow Exchange Index — RSPP Responsibility and Openness and the Moscow Exchange Index — RSPP Vector of Sustainable Development. Besides, later in 2020, the first exchange-traded in-

vestment funds for responsible investment appeared on the Russian market.³ The list of such instruments will expand in the coming years. Nevertheless, the Russian market has several significant features, and being an emerging market (concerning ESG agenda) may and already faces significant limitations.

Taking into account the significance of the idea behind socially responsible investments, as well as the events of the last two years (such as the COVID-19 pandemic), that spurred investors’ interest in the ESG agenda worldwide (including Russia), we believe that it’s necessary to study the issue of ESG practice integration into the Russian economy.

The purpose of this research is to conduct a study devoted to the issue of ESG-investments’ influence on the Russian economy, specifically, the exchange-traded funds (ETF) industry.

The objectives of the paper are:

1. The review of the foundations of socially responsible investments, the concepts, and factors of ESG-investments.
2. The analysis of the global ESG market (ESG-exchange traded funds (ETF) industry), its features, structure and trends.

The object of the research is the Russian BPIFs (Russian exchange-traded mutual funds) and ETFs investing in ESG instruments; the subject of research is the performance of these funds.

The theoretical basis of the research is the normative documents and official statistical materials of Central Banks and Supervisors Network for Greening the Financial System, the Bank of Russia, and publications of Russian and foreign authors.

A review of socially responsible investments in the securities market

In recent years, the world community has been undergoing an ideological transformation of business processes, largely due to the desire of participants in economic relations (in particular,

¹ Paris Agreement (The United Nations). URL: <https://www.un.org/en/climatechange/paris-agreement> (accessed on 15.04.2022).

² The Sustainable Development Goals of the United Nations. URL: www.un.org/sustainabledevelopment/sustainable-development-goals (accessed on 10.04.2022).

³ Moscow Stock Exchange starts trading BPIFs for Sustainability Index. URL: <https://www.moex.com/n30298> (accessed on 15.04.2022).

government agencies, institutional and private investors) to give preference to investment projects that meet the principles of the so-called socially responsible investment (SRI), which is also often referred to as ESG investing.

Even though SRI as an investment direction appeared in the 1960s⁴ (it was then that the idea of preferential financing of investment projects pursuing long-term benefits for society was first voiced), there is still no unambiguous interpretation of the term SRI in international practice. SRI, ESG tools, “green” investments are not clearly delineated.

A significant number of research papers have been written on the topic of environmental investment in recent years. It is obvious that the trigger for such studies was the adoption of environmental doctrines by developed countries in the 2000s and their course towards the decarbonization of the economy, enshrined in the Paris Climate Agreement.⁵ Most of these studies were carried out in the EU countries and the USA (both by national institutions and large international funds and organizations authorized to conduct such studies — for example, PRI, CBI, S&P, PwC, Bloomberg, MSCI). At the same time, researchers most often focus on the practical aspects of socially responsible investment and green finance. Most of these studies do not provide an interpretation of the term “socially responsible investment”, a distinction between the concepts of SRI and “green financing”, but only disclose a list of criteria that business projects must meet in order to be considered SRI or ESG.⁶

The UN first presented the basic principles of socially responsible investment in 2006; later, they were enshrined in the UN Sustainable Development Goals (Sustainable Development Goals, SDGs).⁷ The Principles for Responsible Investment (RPI) International Association, one of the key international organizations developing methodological materials

on ESG investment and green finance, identified six basic SRI principles in 2006⁸:

1. We will incorporate ESG issues into investment analysis and decision-making processes.
2. We will be active owners and incorporate ESG issues into our ownership policies and practices.
3. Principle 3: We will seek appropriate disclosure on ESG issues by the entities in which we invest.
4. We will promote acceptance and implementation of the Principles within the investment industry.
5. We will work together to enhance our effectiveness in implementing the Principles.
6. We will each report on our activities and progress towards implementing the Principles.

The above principles of SRI reflect the essence and key characteristics of ESG investments. Nevertheless, later, the above list of principles was significantly expanded. In particular, it included the PRI initiative to include ESG factors in the assessment of the credit risk of companies issuing securities and assigning ratings in the SRI area (The ESG in Credit Risk and Ratings Initiative, 2016).⁹ Later (in 2020), PRI took the initiative to require member organizations to disclose information about their actions in the field of climate change risk management.¹⁰ Thus, the regulation of the global market for ESG tools is becoming more complicated and synchronized.

While foreign authors focus more on describing and studying the practical side of the issues, Russian authors pay more attention to interpreting the theoretical foundations of social investment. This is largely due to the fact that socially responsible investment is still a new practice for Russia, and the SRI industry requires the development, among other things, of legislative and regulatory.

Russian researchers define the social responsibility of business (which underlies SRI) as “an institutional form of forced adaptation of corporations to the growing demands of civil society and regulators, marketing technologies to strengthen the brand image” [1].

⁴ Magdalena Ziolo Finance and Sustainable Development: Designing Sustainable Financial Systems (Routledge International Studies in Money and Banking). 2020. P. 290.

⁵ Paris Agreement (The United Nations). URL: <https://www.un.org/en/climatechange/paris-agreement> (accessed on 15.04.2022).

⁶ Responsible Investment Strategies (EUROSIF). URL: www.eurosif.org/responsible-investment-strategies (accessed on 27.04.2022).

⁷ The Sustainable Development Goals of the United Nations. URL: www.un.org/sustainabledevelopment/sustainable-development-goals/ (accessed on 10.04.2022).

⁸ PRI. What are the Principles for Responsible Investment? URL: <https://www.unpri.org/about-us/what-are-the-principles-for-responsible-investment> (accessed on 02.05.2022).

⁹ PRI. The ESG in Credit Risk and Ratings Initiative aims to enhance the transparent and systematic integration of ESG factors in credit risk analysis. URL: <https://www.unpri.org/investment-tools/credit-risk-and-ratings> (accessed on 02.05.2022).

¹⁰ Task Force on Climate-related Financial Disclosures (TCFD). Climate change presents financial risk to the global economy. URL: <https://www.fsb-tcf.org/> (accessed on 02.05.2022).

A. Andreev defines socially responsible investment as a set of targeted measures aimed at solving the socio-economic problems of both the organization and the region of its presence (i.e., the implementation of its economic activities) by investing in business processes that provide long-term benefit to both the organization and society [2]. At the same time, the author rightly notes that the return on invested capital is not a prerequisite for social investment, i.e., it is not the primary task of this kind of investment in the traditional sense of investment theory. In this case, it means that the level of fulfillment of SRI goals is determined to a greater extent not by quantitative indicators (in terms of investment: the risk and profitability of the financial portfolio) but by a list of qualitative characteristics of a business project — the so-called «social effects» (for example, improving the quality reproduction of labor resources, demographic indicators, employment indicators, provision of the population with social benefits, etc.).

K. B. Bakhtareva defines socially responsible investment as an investment process in which the investor's responsibility for the consequences of his investment is manifested in the voluntary and conscious choice of investment criteria. At the same time, the influence of the investor's investment choice extends to society, the environment and its development, and to the investor himself as a direct participant in the investment process [3].

In addition, there are several other functions of socially responsible investment (ESG investment) which determine the essence of the SRI concept:

1. The redistributive function of SRI manifests itself in the investment essence of SRI. ESG investment is the redistribution of capital in cash from economic entities that have this capital in excess at a given time to economic entities that at the same time need cash. At the same time, the potential impact of SRI on the development of social sectors of the economy in the long term plays an important role in the redistribution of capital in this case.

2. Regulatory function: the implementation of SRI investments has an indirect impact on the processes of capital reproduction, their growth rates, i.e., on the development of economic sectors, the speed of implementation of the achievements of scientific and technological progress, the social well-being of the population, the state of the environment and other social aspects.

3. Stimulating function. This function is manifested by stimulating investors (i.e., shareholders) to develop their business by introducing the most advanced business process practices, encouraging the company to use modern, safe technologies that have the least impact on the environment while satisfying the interests of both company owners, investors, as well as the interests of its employees and other stakeholders [4].

In a narrower sense, ESG investments can be attributed to selecting securities of companies that operate according to the ESG principles. In this case, the main criterion for selecting securities of companies that meet the ESG criteria will be not so much risk and return indicators but the actions of securities issuers in the field of ecology, company management and social infrastructure development [5]. Thus, it becomes obvious that from the point of view of the followers of the concept of responsible investment, the highest value is not the primary growth in the welfare of the company's owners (as enshrined in the traditional concept of corporate finance Value Based Management), but an orientation towards meeting the interests of society. In other words, an investor investing in ESG projects voluntarily agrees that the profitability of such projects may be lower than similar business projects that do not consider ESG factors.

The emergence of socially responsible investment and capital investment based on ESG principles is undoubtedly one of the key factors that can increase the level of competition in the financial market. Such an effect is achieved by increasing the investment attractiveness of companies operating based on ESG criteria, i.e., by increasing demand for the securities of these issuers, including by assigning ESG ratings to them. The world practice of using ratings, including ESG ratings, demonstrates that such instruments have a significant impact on the assessment of the company's market value and its market capitalization.

This is further supported by the fact that ESG investing has an important positive social impact. As M. Oehmke and M.M. Opp noted in their study, socially responsible investment enhances the interaction between economic agents and prevents the occurrence of coordination failures; moreover, it encourages firms to invest in new "green" technologies, apply modern business models to meet the social order [6].

From the point of view of regulating investment practices that meet the ESG criteria, responsible investment also implies responsible management of the company issuing securities. In this case, we mean precisely the need for the company's shareholders and its institutional investors to exercise their corporate rights, as well as the need for public disclosure of information (including reporting) on the company's adherence to ESG principles. At the same time, since following the ESG principles is in most jurisdictions, including Russia, a voluntary initiative of the company, international and national regulators do not give instructions on the disclosure of ESG reporting (reporting structure, frequency of its submission and other parameters mandatory for issuers of securities), but only recommendations for doing business in accordance with the ESG criteria and the practice of existing regulatory and legal regulation.

Thus, in Russia, the institutional infrastructure for doing business is just being created, considering the principles of socially responsible investment. There are currently no mandatory requirements for issuers to conduct business, disclose ESG reports, and any other obligations of companies related to activities in the field of socially responsible investment in Russia now. Nevertheless, while creating a regulatory infrastructure for companies operating by ESG principles, in 2020, the Bank of Russia (the national regulator of the financial market) provided explanations and recommendations to participants in the Russian financial market on implementing the principles of responsible investment. In its clarifications, the Bank of Russia refers to the international experience in SRI regulation and the G20/OECD Principles of Corporate Governance, fixed at the level of the G20 countries, adopted by the Council of the Organization for Economic Cooperation and Development in 2015.¹¹

It is worth noting that in recent years the Codes of Good Corporate Governance (in international practice, they are called the Stewardship Code) have been widely used in international practice. These codes are mainly used in countries with a high level of corporate governance development (mainly countries with a market-based financial system, for example, the USA and Great Britain) and countries with a highly developed investor protec-

tion system — the EU countries, primarily Germany and France.¹² As we know, corporate governance codes are mostly voluntary, contain a set of market best-practices, as well as recommendations regarding the participation of institutional investors in the management of the company and their role in ensuring that the company fulfills its obligations in the field of ESG investment, which it undertakes voluntarily.

An important role in this aspect is influenced not so much by the voice of the investor (in terms of corporate governance), but by his performance of “supervisory” functions, for example, monitoring the most significant aspects of the company's activities, active interaction with other investors to achieve their common goal, including in the area of ESG — i.e., sustainable development of the company (increasing its market capitalization and fulfilling the social order for “ESG-services”), selection of asset managers, consultants and other persons whose services can contribute to the development of the company, maximizing its market value, implementing activities in accordance with the principles of ESG investment. By the latter, we mean, among other things, the need to consider risks when choosing objects for investment, because they are inevitably associated with sustainable development factors — environmental, social, as well as corporate governance factors. Nevertheless, taking these factors into account does not mean narrowing down the list of investment objects but mainly applying the practices of financial modeling, fundamental analysis, and a risk-based approach in order not to avoid but to manage these risks and increase the company's return on investment in the long term.

Socially responsible investment practices are new for the Russian market, the regulator and investors. Nevertheless, considering the trends in the global financial market, including ESG investment, which has become an integral part of the financial markets of developed countries, the Bank of Russia emphasizes the importance and significance of promoting the principles of SRI in Russia and starting from 2019–2020 pursues a policy that encourages the development of socially responsible investment in our country.¹³

¹¹ G20/OECD Principles of Corporate Governance. URL: <https://www.oecd.org/corporate/principles-corporate-governance/> (accessed on 15.04.2022).

¹² FRC. The UK Stewardship Code 2020. URL: [//www.frc.org.uk/getattachment/5aae591d-d9d3-4cf4-814a-d14e156a1d87/Stewardship-Code_Final2.pdf](https://www.frc.org.uk/getattachment/5aae591d-d9d3-4cf4-814a-d14e156a1d87/Stewardship-Code_Final2.pdf) (accessed on 15.04.2022).

¹³ The concept of organizing a methodological system in Russia for the development of green financial instruments and

The impact of ESG investments on global and regional stock markets

Government and business leaders are under increasing pressure to improve their ESG abilities and incorporate sustainability into their policy and planning efforts. In the face of the rising economic effect of climate change, they will include adaptation and resilience measures in their investment plans.

New laws and reporting requirements will necessitate more dependable company data. While many big firms will adopt sustainability targets and disclose ESG-related data in 2021, investors, regulators, and the general public will be pay greater attention to corporate sustainability initiatives, which they will label as «greenwashing.» Much of this criticism stems from concerns that businesses may use sustainability-related disclosure and labeling of products and services as a marketing tool to look more engaged in these issues than they are.

Environmental variables have consolidated consensus on important indicators and reporting methods quicker than social factors. However, by 2023, there may be a stronger convergence of the data, metrics, and reporting standards most important to social concerns, as well as a growing desire for metrics that evaluate effect rather than inputs.

The difficulty for governments and businesses will be translating zero net income commitments into short-term actions. The number of countries and significant corporations that have established a target of attaining zero emissions by 2050 has quickly increased since 2021. However, these pledges frequently lacked intermediate emission reduction goals or plans to reduce indirect emissions from the supply chain. We predict that by the end of 2022, shareholders and other stakeholders will be putting more pressure on these companies to produce specific short-term strategies and take action to address emissions across the whole value chain.

According to a 2018 UN Intergovernmental Panel on Climate Change assessment, attaining net zero emissions globally by 2050 is vital to avoiding some of climate change's worst impacts. The IPCC released a high-profile climate assessment in 2021, dubbed «humanity's red code» by the UN Secretary-General. In 2022, the IPCC will release new findings that may reshape how rapidly the world needs to act to stay on

track to keep global warming to 1.5 degrees Celsius¹⁴ over pre-industrial levels this century.

Investors will expect more than long-term climate pledges at such high rates. Governments and businesses will be required to offer accurate, attainable short-term benchmarks for decarbonization. Beyond the current focus on lowering emissions, the attention will shift to how enterprises handle physical climate hazards, including the presence and/or effectiveness of adaptation and resilience planning. These expectations will help transform the market's image of greenwashing by holding companies accountable for their pledges.

Transition strategies for climate change will increasingly address social concerns. Despite hopes that governments and businesses will make great progress toward reaching their climate obligations by 2022, they will do so in an economic and geopolitical environment marked by inflationary tendencies, increased energy costs, and tighter monetary policy. These changes will strain on the climate agenda and highlight the need to manage the transition's social consequences.

In the financial services business, climate stress assessments will become increasingly significant. Investor pressure on non-financial firms, particularly in the energy industry, has historically been focused on climate change. However, large financial institutions and governments are starting to see the long-term threat this poses to financial stability. They also realize the importance of finance in aiding the transition to low-carbon technology and making the economy climate resilient.

Central banks are increasingly beginning to add climate risk as a stress testing component for banks and insurers, building on the work of the Greening Financial System (NGFS) Network.¹⁵ Banks must strengthen their evaluation of their exposure to both climate and physical risks in order to effectively manage them, according to the European Central Bank General Economic Climate Stress testing in 2021.

The Federal Reserve of the United States has considered the implications of climate-related risks for financial institutions and the financial system, describing scenario analysis as “a potentially essential analytical tool for this purpose.” China, too, has been looking for methods to include climate

responsible investment projects. URL: https://cbr.ru/Content/Document/File/84163/press_04102019.pdf (accessed on 15.04.2022).

¹⁴ The global response to warming. URL: <https://www.ipcc.ch/sr15/>

¹⁵ NGFS. URL: <https://www.ngfs.net/en>

change risk in financial stress testing. Much of the work on climate stress testing has been done collaboratively by central banks throughout the world, and this work is expected to continue beyond 2022.

Furthermore, firms will be required to recognize legitimate human rights monitoring initiatives at higher levels in the supply chain if continuous action in the US and other important markets to prohibit imports based on forced labor in supply chains. This will apply to raw materials and will be valid outside of tier 1 suppliers.

The discussion over whether or not to invest will heat up. More significant asset owners, asset managers, and banks have adopted negative review tactics in 2021, which entail excluding or selling enterprises with poor ESG standards or high ESG risk exposure. This strategy has been chiefly used by fossil fuel, other high-carbon-intensive enterprises, and organizations facing acute and chronic physical climate concerns. As financial services businesses aim to develop Paris-focused investment and loan portfolios, we predict negative scrutiny to become more widespread in 2022, particularly to decarbonize investment and lending portfolios, further enhancing the relevance of ESG for credit.

Exclusion restrictions can directly reduce the carbon footprint of loans or investment portfolios, but this strategy has downsides. According to engagement advocates, breaking links with firms through sale or exclusion is not conducive to reform and may result in the sale of these shares to investors who are less concerned about ESG concerns. As a result, proponents of engagement seek to utilize their assets to affect change by engaging with firms on important ESG issues like climate change and supply chain labor conditions.

Lenders and investors will be obliged to justify their judgments, whether they use a negative review or a participative method. They will also have to examine and share the precise results of their selected technique in a credible manner.

The reality is that ESG investments are on the rise. ESG investing trends have gained traction in recent years, with investments in sustainability increasing by 456 percent between 2005 and 2020.¹⁶ Old financial rules give way to more ethical, sustainable, and responsible investments.

Here are a few of the key ESG investment trends.

Fight against climate change.

Climate change and the elements that influence global temperature have become major problems for businesses and investors as a result of the Paris Agreement. ESG investment is expected in the industry as the Biden administration works to implement the Paris Agreement. In 2015, the Paris Agreement was signed. The pact was designed to be legally binding on various countries throughout the world in order to help limit global climate change to two degrees Celsius per year.

However, five years of policy compliance reveals that just 16 percent of IMI firms are following the standards intended to meet the global temperature target of 2 degrees Celsius, according to last year's surveys.

In addition, the Paris Agreement established a second, more difficult goal of 1.5 degrees Celsius every year.¹⁷ Only 5% of IMI firms in the world have accomplished this. While some may dismiss these figures, the number of investors willing to tackle climate change is increasing yearly. We may expect more corporations to follow the ESG trend and open up additional investment trends for sustainability, in addition to the increasing pressure from the government each year.

Biodiversity restoration.

People are finally starting to take biodiversity seriously when it comes to long-term investment trends. Similarly, the global biodiversity issue has piqued the interest of policymakers and investors due to its negative consequences for our ecology. Depending on their location and business, companies will be expected to prepare extensive portfolios of their effect on biodiversity. While a result, policymakers will be better able to establish a biodiversity recovery strategy as they work to address climate threats. Investors could anticipate more corporations exhibiting their whole portfolios to demonstrate their real engagement with areas of high variety value if this trend of investing in ESG continues. Take the agriculture business as an example. The food sector relies on biodiversity for good soil and seed protection. However, the industry is responsible for about 80% of global deforestation,¹⁸

¹⁶ World investment report. URL: https://unctad.org/system/files/official-document/wir2021_en.pdf

¹⁷ The Paris Agreement. URL: https://unctad.org/system/files/official-document/wir2021_en.pdf

¹⁸ Guardian sustainable business. URL: <https://www.theguardian.com/sustainable-business/2017/jul/10/100-fossil-fuel-companies-investors-responsible-71-global-emissions-cdp-study-climate-change>

which leads to the extinction of thousands of species and has a negative impact on biodiversity. Raising public knowledge of such facts and numbers will almost certainly result in favorable improvements in the major investment sectors in the near future, which investors should monitor.

Giving more attention to mental health.

The global epidemic has caused a year of messed-up schedules and perplexing reality. Long-term curfews and social segregation policies have altered our perceptions of city life like never before. Naturally, the number of reported instances of despair and anxiety increased dramatically. While 64 percent of Americans had typical indicators of despair, 57 percent experienced crippling anxiety. This has brought us to a depressing conclusion. As a result of the worldwide pandemic's impacts, mental health became yet another disease that the globe had to contend with.

Some companies are already tackling this problem by promoting flexible working hours and performance-based employment structures. This can free up time for employees to engage in social events, participate in recreational activities, and pursue their interests and passions. Businesses that effectively employ these principles will witness increased production in the future, resulting in better returns for investors. On the other hand, companies that remain silent on these concerns may suffer mass burnout and significant financial losses soon.

Elimination of social inequality.

Employees worldwide have had enough of racism, gender inequity, and a lack of standards in the workplace. This may have a direct impact on the investors who put their money into firms. Companies will have to concentrate on how they treat their employees and preserve connections with their supply chains in the coming years as the epidemic draws attention to operational difficulties in the workplace.

Other major difficulties, including inequality, uneven pay ratios, and the executive pay gap, have also surfaced in recent years. Investors must guarantee that their portfolio enterprises contribute positively to these societal concerns as people grow more aware of their rights. Companies that successfully bridge the social divide between their employees and give required advantages to their local supplier chains will see a significant boost in their stock values.

Conversely, companies that fail to do so may suffer dire consequences such as labor strikes, litigation, and societal boycotts. This will result in an immediate depreciation of inventory, as well as a reduction in creativity, productivity, and employee motivation in the long run.

Transition to a variety of food options.

It's no secret that millennials and Gen Z customers have forced food companies to reinvent themselves to stay relevant. Consumers have awakened to the rising need for vegan choices and plant-based protein alternatives, spurring exponential development in both categories. Impossible Foods, a well-known plant-based meat replacement firm, is a good example.

The firm distributes its products in more than 11,000 retail locations throughout the US,¹⁹ since the epidemic, along with lockdowns and physical inactivity, prompted consumers to seek healthier eating alternatives. This is a tremendous increase in demand, over 77 times that seen in retailers prior to the epidemic. Similarly, well-known businesses like Taco Bell and McDonald's are taking measures to offer a diverse menu to customers.

Revolution in the fashion industry.

The fashion industry's sustainability tendencies have likely been the most startling ESG investing developments in recent years. When it comes to ESG problems, a sector that prides itself on developing new trends and introducing innovation to seasonal clothes has traditionally trailed behind.

However, Vogue forecasts that after the 2019 pandemic, sustainable fashion may see the light of day. Secondhand clothes retailers have already seen a big boost in sales this year. The used clothes industry has risen 21 times faster than the new apparel market in the last two years. Specifically, because of ESG's ongoing fashion trend, firms like Patagonia, Thredup, and Poshmark are likely to boost their net value by billions in the future years.

Intersectoral growth trends.

The future trends in ESG investment demonstrate that fixing today's challenges is not a one-person show. Instead, if we are to achieve our global society goals, businesses must collaborate and assist one another.

Consider the United Kingdom's objective of having wind power in every home by the end of this

¹⁹ Walmart Business Model. URL: <https://businessmodelanalyst.com/walmart-business-model/>

decade. This does not imply that the government must unify energy corporations on a single front in order to achieve this aim. Instead, several industries, such as real estate, construction, and infrastructure, will need to collaborate to achieve this. This entire concept of businesses banding together for a good cause makes brands more relevant to today's consumers and helps them prosper in the face of ESG investing trends. Consider Dyson, which began producing ventilators when the demand emerged during the epidemic. In the next years, such cross-industry support systems will likely grow and create large financial gains.

The ESG investments in Russia: the investment practices

Russian investors, according to our observations, consider ESG concerns while analyzing investments. Simultaneously, they underlined market participants' need for more awareness of the nuances of the ESG integration process, which is sometimes linked with the approach of removing particular industries, firms, and projects from the portfolio. Investors believe that corporate governance issues are critical because they directly influence profitability and, eventually, dividend policy. However, few individuals are aware of the influence that environmental and social factors have on a company's financial performance. Some Russian investors started receiving inquiries from their overseas clients about incorporating ESG elements into their decision-making process a year ago. The greatest hurdle to the adoption of the ESG integration approach is a lack of consumer engagement. There is common understanding that its implementation in Russia should be coordinated centrally with regulatory assistance.

Banks represent market players that can influence the situation and increase the interest of investors.

ESG banking is a concept based on environmental, social, and governance responsibilities to current and future generations, as well as endeavors to accomplish the United Nations Sustainable Development Goals and other socially meaningful results.

ESG Banking²⁰: sustainability management is a difficult banking activity that necessitates the use of both financial and human resources. Fur-

thermore, there are better strategies than having a few people responsible for the organization's sustainability agenda while the rest of the employees and management perform their business as usual. Sustainable development goals must be entrenched in an organization's everyday actions in all departments, regardless of its resources (including through sustainable KPIs). The Chief Sustainability Officer's primary responsibility is to integrate and manage all departments' sustainability initiatives, as well as to create appropriate knowledge among the board of directors and executives. Sustainability management, in this sense, refers to examining ESG issues critical to a bank's strategic and operational decisions. A consistent and clear approach is essential to ensure sound risk management and a better-informed strategy. Individual banks' corporate governance and operational management must adapt to the further expansion of ESG banking by training and empowering current staff. It is also recommended to establish distinct management structures and divisions to address ESG concerns in various sectors. It is critical that banks consider establishing a Chief Sustainability Officer (CSO) post. Several banks have chosen to employ a CSO with a suitable authority. However, the majority of the banks intend to reconsider or increase the roles of other CEOs. Russian banks manage their sustainability efforts through the following:

- ESG Board Committees
- Committees for the execution of long-term plans for integrating the ESG strategy
- Policy Development Committees to build an ESG strategy
- Sustainable Development Departments
- Working groups to enhance internal procedures and execute the ESG strategy

ESG banking's key objective is good ESG risk management. Because of the significant resources necessary to build these skills, many banks that are new to the industry make only minor changes to existing risk management processes. Due to the strategic nature of ESG risks, it appears that incorporating them into the classic "three lines of defense" concept is the best option. However, due to a lack of knowledge, resources, and new ideas, this strategy is not widely used in the Russian banking industry.

Because ESG banking is still in its early stages in Russia, banks prefer to concentrate on producing sustainability reports that mostly address social and environmental efforts.

²⁰ ESG banking trends. URL: <https://flow.db.com/more/esg/eight-esg-trends-to-watch-in-2022>

ESG investment prospects in Russia

Our study of the data of Russian exchange-traded investment funds that fit the definition of ESG-oriented showed that the impact of ESG factors on the value of securities of such companies is insignificant.

Five significant variables that favor and limit the implementation of ESG integration methods were identified. The main barriers to ESG integration in Russia are a lack of comparable and historical data on the environmental and social aspects of companies' activities, market structure limitations, a lack of understanding of ESG aspects and the specifics of their integration into investment processes, and investors' perceptions that the potential for obtaining positive returns is insufficient.

Another barrier is a lack of company and investing culture, particularly in respect to short-term investments. Often, investors are primarily concerned with portfolio returns. They do not consider the social effect of their investments or aim to build value-added portfolio firms for future generations. Short-term investment in the Russian stock and bond markets is said to be supported in part by Western money. Foreign investors in Russian securities are aware of the dangers, but they pay little attention to the social consequences of their investments. They exclusively look at government risks.

The low level of customer interest may be essential obstacle to the development of ESG integration practices in Russia. At the same time, interest from clients is also the one of the main factors contributing to the promotion of this approach. The increase in demand from clients can encourage Russian investors to more actively implement the practice of ESG integration.

One of the most important motivations for the growth of the idea of ESG investing in Russia, as in most of the nations, is investors' desire for more effective risk management. Stakeholders also believe that to promote this concept in Russia, a centralized strategy with regulatory support is required. However, it's often impossible to tell which variable is more important: customer demand or government regulation. However, in most of these circumstances, the customer's best interests remain paramount.

Despite the surge of 2020, Russia will appear to be a laggard in 2021–2022 compared to international leaders. Both in terms of volume and intended use diversity. The absence of drivers for ESG investment growth in the Russian market is due to

the dominance of local investors and their lack of concern for ESG in the investment process.

In turn, PJSC Sberbank, which has set the goal of becoming a driver of the country's ESG transformation, a centre of expertise, and a change agent, suggests considering the possibility of providing state guarantees and subsidizing the rate on ESG loans, facilitating the issuance of loans to companies with a good ESG rating, and lowering the requirements for banks to create reserves while taking the borrower's rating into account. Gazprombank suggests that assistance measures be considered in terms of taxation, bank capital requirements, and institutional investor portfolios.

Without question, Russia's sustainable bond market will continue to expand and become more sophisticated in terms of intended use, but only as a result of prominent enterprises' actions and responsibilities. Until now, the bond issuer market has been dominated by a few firms. Nonetheless, significant firms with ESG ratings and validated bonds from foreign verifiers are showing a lot of interest. The key driving force behind the ESG transformation will be banks. Sberbank, Gazprombank, Sovcombank, and VTB are among the banks that have already jumped on board the ESG train. Management corporations will join them, helping to build a class of responsible investors interested in both profit and ethical investing.

It is crucial to highlight that if the ESG transformation of banks and institutional investors advances at a rapid pace, the rating will likely become a condition for employment and loan approval, similar to credit ratings, which are also employed in sectors where such regulations are not present. Participation in tenders is an example of this.

Currently, the objective is to adapt the best international methods to green and social investment legislation to Russian realities. In order to account for national specifics, a thoughtful adaptation of norms and regulations will be required.

As a result, the ESG focus may soon have a global impact on the notion of providing project finance for new facilities in Russia. Of course, a quick change is unlikely, but one has begun, and enterprises who fail to reorient themselves to ESG principles in a timely and comprehensive manner, as recognized by the global and all-Russian sustainable development agenda, may find their investment processes becoming more problematic. Currently, the market requires consistent methods in the ESG project

evaluation system. They will make it simpler for players in the rising market of sustainable brands and goods to use development tools, discover “green” supplier chains, and acquire “green” financing by making it feasible to “green” company.

The political and sanctions scenario will determine the future of IGI investment. Unfortunately, if sanctions are placed on the Russian financial industry, we should not expect much improvement in this area: our financial sector will be shut off from global markets, which means it would have to exist on its own, unable to borrow innovative international ESG investing practices. If no sanctions are imposed and Russian financial businesses are permitted to trade on international markets, they will begin to establish the practice of incorporating ESG into the investing process. The positive example of international rivals and the sharing of expertise will help with this. In reality, everything hinges on our continued participation in the global economy.

As a result, it's worth emphasizing that the ESG agenda has only lately been prominent in corporate circles, as well as among members of the public and government bodies. Although the contribution of ESG strategy to company efficiency is minor in the complicated concept of «quality of life,» it nevertheless has a beneficial impact. And you can see the good dynamics now, as well as the availability of all the criteria for its effective expansion. According to the report, the potential and prospects for Russian enterprises using an ESG strategy are currently unknown.

Nonetheless, when discussing the positive growth and future possibilities, the experts agreed that more ESG principles must be implemented in Russia in order to keep up with the development of technology, society, and the preservation of socially significant trends. If it was formerly thought that the organization's sole obligation was to pay taxes and leave everything else to the state, today's leaders are seeking to be called and, most significantly, to be socially conscious.

Conclusion

In the framework of this work, we have considered the key factors that determine the essence of ESG investments, studied the approaches of Russian and foreign authors to the definition of the concept of SRI, highlighted the basic principles according to which investments can be classified as “green”/SRI/ESG.

We came to a conclusion that, in international practice, the concepts of SRI and ESG investments are almost identical in essence: one way or another, investments related to SRI should be purposeful, aimed at financing socially significant sectors of the economy, contribute to solving environmental problems at the level of the state, regions, and a single company. At the same time, it is far from necessary for an instrument/company to meet all ESG criteria at once in order to be recognized as such. In particular, ESG practices may include, among other things, strategies that companies choose based on their declared commitment to one or more ESG criteria, whether it be minimizing the company's negative impact on the environment and climate, or, for example, focusing on the implementation of “transparent” principles of corporate governance. Also, ESG practice may include reviewing companies in certain sectors or companies that, in the opinion of portfolio managers, are performing poorly in relation to the management of ESG risks and opportunities.

Our analysis of the international market for ESG tools has clearly demonstrated that over the past 30 years, the popularity of SRI in the world has been growing significantly, both in the global and regional markets for ESG tools. As the market recognizes growing climate and social risks, capital is being redirected, and priority funding is being given to companies that offer solutions to these kinds of problems. Moreover, such global events as, for example, the COVID-19 pandemic, only intensified this trend, which was especially pronounced in the pharmaceutical field and significantly affected the rapid development of the bio-industry during the pandemic.

At the same time, it is worth paying special attention to the growing demand for ESG instruments both among retail investors and institutional investors. In particular, sales of European ESG funds during the COVID-19 pandemic outperformed sales of “traditional” mutual funds that do not qualify as socially responsible investment. It should be noted that these ETFs focused on the implementation of environmental, social and corporate principles (ESG Funds), take into account a wide range of factors that are consistent with their goals and strategies when choosing investments. So, they may include ESG companies, which directly have a positive impact on the recognition of such a fund as an ESG-oriented one, which means that it increases the demand

for its securities among investors. The latter is of particular importance in the mutual funds and ETF market, since these instruments of the collective investment industry are the basis of the redistribution mechanism of market-based financial systems.

The Russian market of “green” financial instruments is very young and today is at the initial stages of its development. Statistics on the volume of funds raised during the placement of “green” instruments is extremely insignificant. Moreover, our market has significant factors hindering its development: there is still low interest in SRI on the part of private investors, a very limited practice of using ESG ratings (national and global). Moreover, it is especially worth noting that information about the compliance of the company/fund with the principles of responsible investment is often simply not available to a private investor. These data are scattered or not disclosed, which significantly complicates even a superficial analysis of ESG factors and their impact on the company’s value.

We believe that ESG factors are most likely not taken into account when assessing the value of BPIF

units, and, consequently, the securities of companies from which the investment fund portfolio is assembled.

Nevertheless, the Russian market for ESG instruments is only developing. However, interest in this category of financial instruments is growing among investors, which is facilitated, among other things, by the policy pursued by the national regulator (the Bank of Russia), which encourages the introduction of ESG practices by Russian issuers of securities.

Taking into account the events of the 2022, which undoubtedly had an extraordinary impact on the Russian economy, including the financial market, we note that the penetration of foreign ESG assets and ESG practices into the Russian market is unlikely in the near future. Nevertheless, we believe that this agenda, especially in the light of the implementation of Russian National Projects, which in their essence partly reflect the principles and values of socially responsible investment, does not lose its significance and relevance in Russia, which, in fact, determines the importance of further research in this area.

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