

**SUSTAINABLE DEVELOPMENT OF THE REPUBLIC OF ARMENIA IN  
THE CONTEXT OF NEW GEOPOLITICAL REALITIES \***

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***In addition to the global development goals and trends, each country is guided by its own national medium- and long-term strategies, which are periodically revised depending on the priority objectives of sustainable development. In the context of rapid geopolitical changes and uncertainties, the economic, social, and ecological sustainable development targets of the Republic of Armenia are particularly sensitive to the resolution of security issues and the level of constitutional compliance. It is indisputable that the transition from state***

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***stabilization to long-term sustainable development must be carried out on the basis of predictive assessments. A retrospective approach, from the standpoint of evaluating the consequences of decision-making, requires a realistic analysis of the prerequisites for sustainable development.***

***The aim of the study is to improve the methodological approach underlying the development of the “Agenda 2030” SDG Index, taking into account the interactions between national security and sustainable development.***

***To achieve this aim, within the context of Armenia’s Sustainable Development Strategies and national security analyses, the study sets the task to examine the interrelations between security indicators and SDGs for six regional countries (Armenia, Russia, Georgia, Azerbaijan, Turkey, Iran).***

***The methodology is based on dynamic panel analysis, carried out for the six regional countries through modeling the trends of Sustainable Development Goals (SDG) and the Fragile States Index (FSI).***

***The findings provide assessments that will contribute to creating the prerequisites for the formation of a regional security concept in the context of sustainable development under the new geopolitical realities.***

***Key words:*** Sustainable development, UN SDG Index, transformation, security, constitutionalism, “Crossroads of Peace”, Fragile States Index.

### **Introduction**

In 2015, the UN summarized the Millennium Development Goals program proclaimed in 2000, and the General Assembly, which includes 193 member states, adopted a document on international strategies entitled “Transforming the World: The 2030 Agenda for Sustainable Development.” It includes 169 targets and 17 goals, has a time horizon until 2030, and intended participants: governments of countries, civil and scientific research communities, etc. Currently, there is some practice in terms of implementing the Sustainable Development Goals (SDGs) in countries. In this sense, the joint study “Sustainable Development Achievements Report 2022” by the University of Cambridge and the SDG Agency is instructive (Sachs et al., 40), as well as the almost annual SDG reports, which analyze and summarize the progress of countries towards sustainable development, and countries are classified according to the achievement of the selected targets.

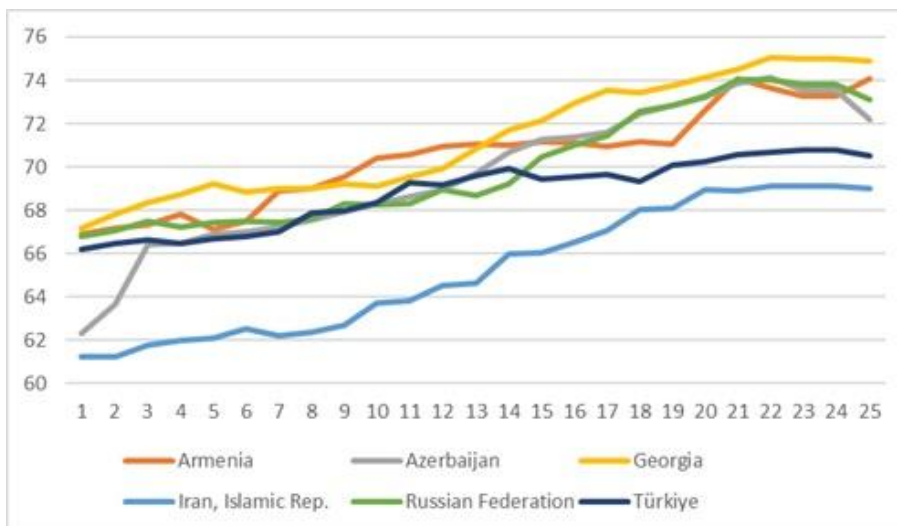
According to the 2024 SDG report (Sachs et al., 40), the top ten countries in the SDG index ranking are: Finland (86.35 points), Sweden (85.70 points), Denmark (85 points), Germany (83.45 points), France (82.76 points), Austria (82.55 points), Norway (82.25 points), Croatia (82.19 points), the United Kingdom (82.16 points) and Poland (81.69 points).

In addition to striving towards the achievement of the global Sustainable Development Goals (SDGs), each country also adopts its own national medium- and long-term strategies, which reflect its specific context and priorities. These national strategic frameworks play a crucial role in determining a country's ranking in terms of sustainable development. For instance, Finland, which consistently ranks at the top of the SDG index, revised its national priorities in 2022 in accordance with its updated strategic plans. The revised priorities emphasized decent work and economic growth, quality education, health and well-being, affordable and clean energy, along with six other priority areas. Similarly, Denmark, in its updated national strategy, placed particular emphasis on enhancing ecological dimensions, especially in terms of raising global climate ambitions, reducing greenhouse gas emissions, and redirecting financial flows towards green production.

Nevertheless, even countries with high development rankings face significant challenges in achieving the Sustainable Development Goals (SDGs), and their performance remains far from optimal. This concern is reflected in the statement of the UN Secretary-General, who emphasized that the SDGs require urgent acceleration and transformation; otherwise, by 2030 only 15% of them will be achieved.

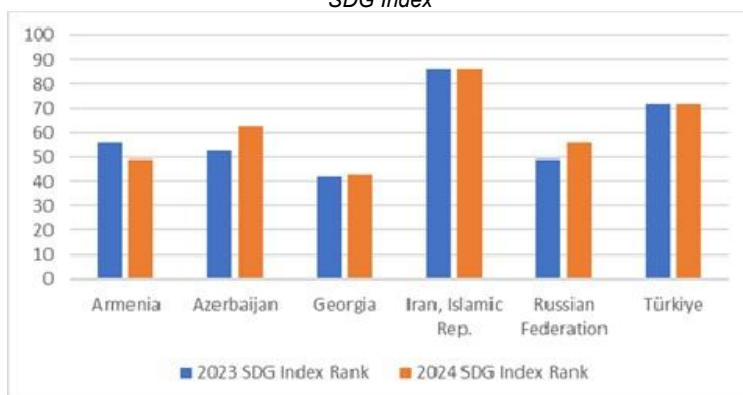
The trajectory of SDG indicators for the Republic of Armenia, as well as for certain other countries in the region, over the period 2000–2024, is presented in Figure 1.

Figure 1. Trends in SDG Indicators for the Republic of Armenia and Selected Regional Countries, 2001–2024



The Republic of Armenia holds the 49th position out of 166 countries in the aforementioned ranking table, with an SDG index score of 74.1. By comparison, the global average score is 66.3. The ranking positions of selected countries in the region, ranging from the highest to the lowest, are presented in Figure 2.

Figure 2. Sustainable Development Rankings of Selected Regional Countries According to the 2023 and 2024 SDG Index



The experience of achieving the Sustainable Development Goals (SDGs) varies in each country. Upon examining this experience, it can be concluded that at the beginning of the 21st century, every country adopted its own national strategy for sustainable development. Within the framework of the 2030 global agenda, governments

independently select priority targets from the 169 goals outlined in the Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development document. These priorities are adapted to align with national circumstances and objectives. Additionally, countries establish indicators to assess the effectiveness of implementation pathways.

Typically, these goals and indicators are enshrined in specific national strategic documents, which are periodically reviewed and adjusted to reflect evolving external and internal priorities.

In the current context of rapidly evolving changes and uncertainties—often described as a shift towards a world disorder—policies aimed at achieving long-term sustainable economic growth and development must be implemented with careful evaluation of the consequences of decision-making. This approach requires considering legal, security-related, and particularly logistical aspects, especially in relation to the targeted utilization of the "Crossroads of Peace" initiative proposed by the Government of the Republic of Armenia (Vardanyan 84). For decision-making regarding the possible implementation of the "Crossroads of Peace," it is necessary to carry out predictive assessments in order to clarify its security, social, economic, and environmental implications.

From a crossroads logic perspective, the immediate beneficiaries within the first circle of influence have been identified as Armenia, Georgia, Azerbaijan, Turkey, Russia, and Iran. Naturally, the list of stakeholders is not limited to these regional countries but extends to a wider scope. Based on the national objectives of the participating countries, it is essential to calculate and assess both the opportunities for progress and potential adverse effects by sector and country, and to provide scientific assurances for their prevention or mitigation.

Moreover, research aimed at integrating these opportunities can be proposed and outlined, which is equally important for improving the methodological framework, enhancing the sensitivity of the index, and refining the overall approach to the subject matter (Sargsyan et al. 4).

The modified index we propose aims to ensure a balanced approach to the SDG index by reinterpreting and supplementing the accepted analytical framework of indicators with a comprehensive set of 17 aggregated national program goals and indicators. Through a new, more realistic system of prioritized targets - taking into account the current geopolitical realities - this approach will enable the identification of potential challenges and the outlining of new opportunities arising from the implementation of the "Crossroads of Peace" initiative in the region, all within the context of sustainable development.

To achieve this objective, it is necessary to construct a modified SDG index that, in addition to the targets reflected in the UN SDG index, also incorporates indicators related to security and legal safeguards, particularly constitutional order. Special attention must be given to the selection of targets and the challenges whose solutions should constitute global priorities for the next generation (Sachs et al. 805).

To refine the existing SDG index and clarify the interrelationships between the presented indicators, it is essential to employ statistical research methods. Specifically, comparative analysis of results obtained through such methods, combined with theoretical knowledge, will enable the development of improved indices for different groups of countries, taking into account their distinctive characteristics of sustainable development.

### **Modeling Sustainable Development in the Republic of Armenia.**

The realities of the Republic of Armenia, characterized by heightened geopolitical and security vulnerabilities, necessitate the integration of key factor-arguments constituting the Sustainable Development Goals (SDGs). These factor-arguments encompass the following subsystems and structural components: economic and social systems, ethno-cultural systems, the ecological environment, institutional frameworks - particularly constitutional order—and defense structures, including national security, diplomacy, and others.

In other words, modeling and integrating the SDGs through the inclusion of these factors will facilitate the identification of issues aimed at revealing the underlying realities. Such an approach will be more comprehensive and effective, avoiding the pitfalls of fragmented or partial analyses, and ensuring that guarantees do not resemble mere declarations.

The integrated sustainable development function can be generally represented as  $Y_{SDG} = f(E, S, En, C, N, K)$ ,

Where

E (Economy) – economic system,

S (Society) – social system,

En (Environment) – ecological system,

C (Constitutionalism) – constitutional institutions,

N (National Security) – national security factors

K (Cultural Genesis of Behavior) – processes of cultural origin of behavior.

The scientific literature contains multilayered analyses and diverse approaches concerning the three pillars of sustainable development—economy, society, and environment—as defined by the United Nations' 2030 Agenda. In addition to the indicators comprising the UN's sustainable development agenda, scholarly studies also analyze constitutional indicators within the context of countries' sustainable development (Sargsyan et al. 4; Sargsyan and Gevorgyan 30; Harutyunyan et al. 1126).

Research by Auzan, Sargsyan, and Martirosyan addresses the cultural origins of behavior and offers a comprehensive examination of the Sustainable Development Goals (Auzan 2022; Sargsyan and Martirosyan 62; Sargsyan et al. "Cultural Ecosystem" in SDGs, 373; Martirosyan 199).

To integrate the national security factor (N) into the SDG model, measurable indicators or variables are required. These are addressed through two main components—defense and diplomacy—in the article by Sargsyan et al. (254), which discusses the foundational issues of their modeling.

Martirosyan's research (198) is dedicated to the analysis of the logistics system of the Republic of Armenia and the prospects for sustainable development and national security in the context of the potential unlocking of regional transport infrastructure.

Within the context of analyzing sustainable development strategies and national security, this study examines two governance effectiveness indicators: the Regulatory Quality Index, which is widely used in the assessment of economic security, and the Fragile States Index, which evaluates state vulnerability by considering political, social, and economic factors.

The Regulatory Quality (RQ) indicator was developed within the framework of the World Bank's Worldwide Governance Indicators (WGI) initiative. It assesses the extent to which a country is capable of formulating and implementing sound policies and regulations that promote economic security. The index ranges from -2.5 to +2.5, where higher values indicate a high-quality and effective regulatory environment, while lower values reflect a weak, non-transparent, or obstructive regulatory system.

The Fragile States Index (FSI) measures state vulnerability by considering social, economic, political, and military indicators (e.g., security threats, economic inequality, governance quality, refugee flows). A higher FSI value indicates greater instability, meaning a more “fragile” state. The data are sourced from the Fragile States Index 2024 report.

*Table 1. State Vulnerability and Regulatory Quality Indicators of Regional Countries According to 2023 Data*

Country	FSI	RQ
Armenia	67.5	0.05
Russia	80.7	-1.12
Georgia	71.9	0.95
Azerbaijan	72.7	-0.11
Turkey	81.2	-0.23
Iran	85.4	-1.69

### Methodology

The analysis is based on the Panel Least Squares method with cross-section fixed effects, which account for the individual differences between countries. The dataset includes 48 observations (6 countries over 8 years), using data from 2016–2023 obtained from the latest available reports (Fragile states Index, Worldbank).

The calculations were carried out using the EViews statistical software package (the output tables of the calculations are provided in the appendices).

**Model 1.** This model examines the relationship between the SDG indicator - the Sustainable Development Index - and the FSI, the Fragile States Index. As a result of the estimation (see Appendix 1 for the calculation outputs), we obtained the following model:

$$SDG = 30.1230596116 + 0.654476199516 \cdot SDG(-1) - 0.0681768557725 \cdot FSI + [CX=F] + \varepsilon$$

The Adjusted R-squared (0.971) indicates that the model explains 97.5% of the variation in the SDG. The F-statistic (226.8,  $p = 0.000$ ) confirms the overall statistical significance of the model. The Durbin–Watson statistic (2.289) is close to 2, which rules out significant autocorrelation of the residuals. Additional tests were also conducted to verify the quality of the model.

**Model 2.** In this model, the level of state fragility (FSI) is estimated as a function of the previous year's fragility level, the Regulatory Quality Index, and the Capital Expenditures indicator (CAPEX). As a result of the estimation (see Appendix 2 for the calculation outputs), we obtained the following model:

$$FSI = 56.27 + 0.4224 \cdot FSI(-1) - 3.54 \cdot RQ\_REGULATOR\_QUALITY - 3.71 \cdot LOG(CAPEX) + [CX=F, PER=F] + \varepsilon$$

The Adjusted R-squared (0.941049) shows that the model explains 94.1% of the variation in the FSI, indicating that it provides a good explanation of state fragility. The F-statistic (49.95377, Prob = 0.000000) confirms that the model is statistically significant ( $p < 0.05$ ), meaning that the selected variables have a substantial impact on the FSI. The Durbin–Watson statistic (2.222410) is close to 2, suggesting that there is no autocorrelation in the residuals.

## Results

Based on the analysis of Model 1, the following results were obtained: **Constant (C):** 30.123 ( $p = 0.000$ ), representing the baseline level when the other variables are zero.

**FSI:** Coefficient =  $-0.068$  ( $p = 0.021$ ), indicating that an increase in state fragility negatively affects the SDG. Specifically, a one-unit increase in the FSI reduces the SDG by an average of 0.068 points. This finding aligns with the reality that fragile states face greater challenges in achieving the SDGs, which may be explained by weak governance systems, economic instability, and social tensions.

**SDG(-1):** Coefficient = 0.654 ( $p = 0.000$ ). The high coefficient of SDG(-1) indicates that progress in sustainable development is strongly dependent on the results of previous periods. Specifically, a one-unit increase in the SDG of the previous year raises the current SDG by 0.654 units. This highlights the inertial nature of the development process, where past investments (for example, in education or healthcare) continue to generate positive effects.

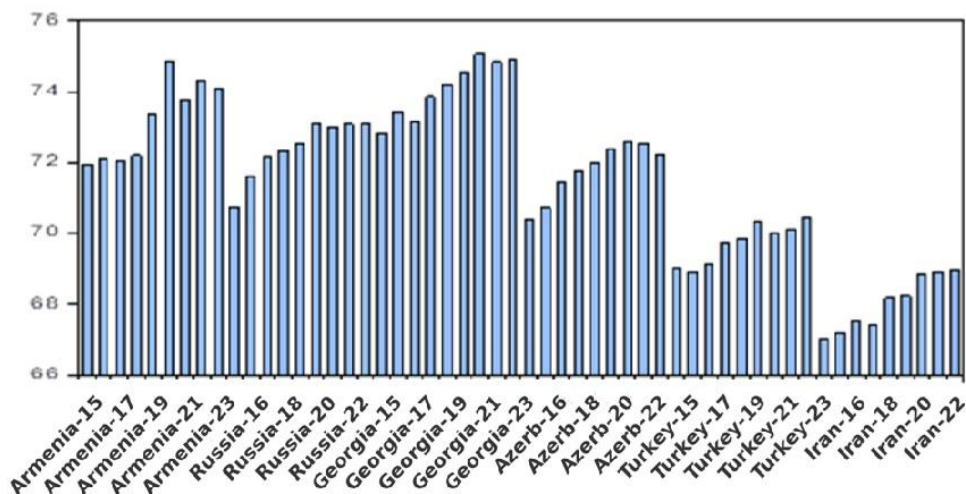
**Cross-section Fixed Effects:** The country fixed effects reflect cross-country differences in the baseline levels of the SDG.

Georgia: +0.720 (positive effect, highest baseline SDG level), Russia: +0.373, Armenia: +0.041, Azerbaijan:  $-0.058$ , Turkey:  $-0.435$ , Iran:  $-0.641$  (lowest baseline SDG level).

The Redundant Fixed Effects test ( $F = 2.903$ ,  $p = 0.025$ ; Chi-square = 14.86,  $p = 0.011$ ) confirms that the fixed effects are statistically significant, and their inclusion improves the model by accounting for structural differences between countries.

To test the robustness of the model results, alternative specifications were also constructed (for example, a model without the SDG lag, a non-linear model, etc.). Comparisons with these alternatives showed that the obtained results are robust: the coefficients of SDG(-1) and FSI retained their significance and direction across different alternative specifications.

Figure 3. SDG indicators by country and year



The analysis of Model 2 and the interpretation of the estimated coefficients are as follows: given that the FSI measures volatility, the signs of the coefficients should be

interpreted such that a positive coefficient indicates an increase in volatility, while a negative coefficient indicates a decrease in volatility (i.e., an improvement in stability).

**FSI(-1)** (Coefficient = 0.422411,  $p = 0.0013$ ): A one-unit increase in the previous year's FSI raises the current FSI by an average of 0.422 units. This demonstrates the inertial nature of instability: if a state has been fragile in the past, that fragility tends to persist. This is expected, since factors of fragility (such as political instability and economic problems) often change only slowly.

**RQ\_REGULATOR\_QUALITY** (Coefficient =  $-3.540393$ ,  $p = 0.0239$ ): A one-unit increase in the Regulatory Quality Index reduces the FSI by 3.54 units. Improvements in regulatory quality (e.g., better legislation, reduced corruption, more effective governance) decrease state instability. This result is expected, as stronger regulations create a more stable environment and reduce fragility. For example, in Armenia—where the regulatory quality score was lower than that of Georgia in 2023 (0.05 and 0.95, respectively) - regulatory reforms could substantially reduce instability.

**LOG(CAPEX)** (Coefficient =  $-3.711981$ ,  $p = 0.0399$ ): A one-unit relative increase in capital expenditures reduces the FSI by 3.71 units. Higher capital spending (e.g., infrastructure investments, industrial projects) lowers instability. For instance, such investments contribute to economic stability by creating jobs, improving infrastructure, and reducing social tensions.

**Cross-section Fixed Effects:** The country fixed effects reflect each country's specific influence on the FSI.

Turkey (10.42051) has the highest positive effect (+10.42), indicating greater fragility. This may be linked to Turkey's economic crises (e.g., the depreciation of the lira between 2018–2023), political instability, and social tensions.

Russia (7.605640) and Iran (5.701311) also show positive effects, meaning higher fragility. In Russia's case, this can be explained by the consequences of the 2022 war in Ukraine, sanctions, and economic instability. For Iran, sanctions, domestic political tensions, and economic crises are the key contributing factors.

Georgia ( $-4.937853$ ) and Azerbaijan ( $-6.168131$ ) both have negative effects, suggesting relatively greater stability. For Azerbaijan, this may be associated with oil revenues, which provide a degree of stability, while in Georgia's case, it may be due to a relatively more stable political environment.

Armenia ( $-12.62147$ ) shows the most negative effect ( $-12.62$ ), indicating lower fragility compared to the other regional countries included in the model. At first glance, this may seem unexpected, given Armenia's experience with the 2020 war and economic challenges. However, it may reflect that Armenia's baseline FSI level is lower (i.e., more stable) relative to others, possibly due to its comparatively smaller economy or lower levels of social tension.

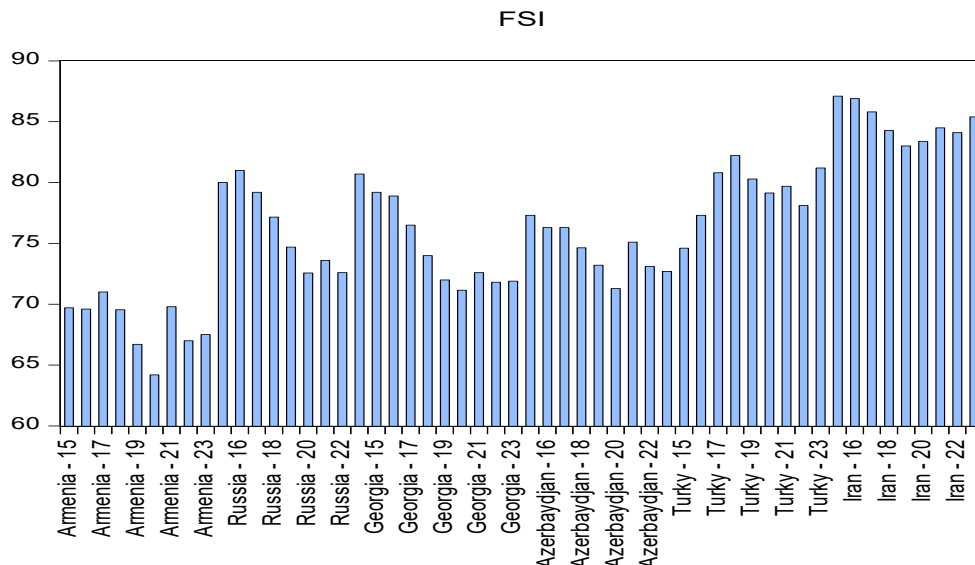
**The period fixed effects** capture the temporal dimension, indicating how year-specific shocks or conditions have affected state fragility (FSI)

- **2020 ( $-2.233144$ ):** On average, 2020 had a significantly negative effect on the FSI, meaning that instability decreased during that year. For Armenia, this result may seem unexpected given the 44-day war of 2020, but it can be explained by the fact that in other countries of the region the FSI was lower that year due to different factors.
- **2023 (2.311631):** The year 2023 had the largest positive effect, meaning that instability increased. This could be linked to regional tensions (e.g., the impact of the Russia–Ukraine war) or to economic crises.
- **2019 ( $-1.505385$ ), 2022 ( $-1.154366$ ):** Both years reduced instability. In the case of 2022, for example in Armenia, this could be explained by the post-war recovery process.



In this model as well, the Redundant Fixed Effects test confirms that the fixed effects are statistically significant, and their inclusion improves the model. To verify the robustness of the model's results, alternative specifications were also constructed, and their analysis confirmed the stability of the obtained results.

Figure 4. FSI indicators by country and year



Thus, the results of the model analysis highlight the importance of regulatory policy quality and capital investment in reducing state fragility. The inertial nature of fragility requires long-term and consistent reforms. The relatively low fragility levels of Armenia and Georgia point to effective governance, whereas the higher levels observed in Turkey and Russia indicate structural challenges.

## Conclusion

Progress toward achieving the Sustainable Development Goals (SDGs) is a major global challenge for both individual countries and groups of countries, regardless of the degree to which they are affected by fragility (FSI). State fragility—characterized by low levels of resource self-sufficiency, political stability, weak institutional governance systems, socio-economic instability, and conflicts—cannot contribute to the adequate realization of the SDGs.

The quantitative analysis demonstrated that state fragility has a negative impact on SDG progress in the six selected countries. This implies that policy priorities should focus on reducing fragility in order to maximize the achievement of the SDGs. Such priorities may include governance reforms, the promotion of economic stability, and the implementation of socially inclusive programs. Given the temporal dependence of SDG performance, long-term and consistent investments in sustainable development sectors are essential.

Scientific research and actions aimed at the continuous improvement and transformation of the SDG index, as framed by the “Agenda 2030,” should be directed toward capturing changes in socio-economic dynamics and environmental conditions,

while integrating the challenges and requirements into the proposed system of modified indicators.

Driven by the need to improve the methodology, the task has been set to refine SDG index targets and introduce a more effective system of evaluation and forecasting. Particularly under the new geopolitical realities formed in recent years, the application of a revised, more targeted set of objectives allows for a deeper analysis of the potential implications of implementing the “Crossroads of Peace” initiative and its extra-regional effects. Within this context, the forecasts can significantly reduce Armenia’s fragility index (FSI), thereby providing a more reliable and flexible foundation for governance processes.

In subsequent stages of the research, the evaluation results may serve as a basis for offering recommendations on the development of individual dimensions of security, social policy, and environmental sustainability across countries.

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## ՀՀ ԿԱՅՈՒՆ ՉԱՐԳԱՑՈՒՄԸ ԱՇԽԱՐՀԱԶԱՂԱԶԱԿԱՆ ՆՈՐ ԻՐՈՂՈՒԹՅՈՒՆՆԵՐՈՒՄ

### ՀԱՅԿ ՍԱՐԳՍՅԱՆ

Երևանի պետական համալսարանի տնտեսագիտության և կառավարման  
ֆակուլտետի կառավարման և գործարարության ամբիոնի պրոֆեսոր,  
տնտեսագիտության դոկտոր,  
ք. Երևան, Հայաստանի Հանրապետություն

### ՆԱՐԻՆԵ ԶՈԶԻՆՅԱՆ

Երևանի պետական համալսարանի տնտեսագիտության և կառավարման  
ֆակուլտետի տնտեսագիտության մեջ մաթեմատիկական մոդելավորման ամբիոնի  
դոցենտ, տնտեսագիտության թեկնածու,  
ք. Երևան, Հայաստանի Հանրապետություն

### ՍՈՆԱ ՍԱՐԳՍՅԱՆ

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դոցենտ, տնտեսագիտության թեկնածու,  
ք. Երևան, Հայաստանի Հանրապետություն

**ՄՅԵՐ ՕԹԱՐՅԱԼ**

*Երևանի պետական համալսարանի Իջևանի մասնաճյուղի տնօրեն,  
տնտեսագիտության թեկնածու,  
ք. Իջևան, Հայաստանի Հանրապետություն*

Համաշխարհային գլոբալ զարգացման նպատակներից և միտումներից բացի, յուրաքանչյուր երկիր առաջնորդվում է իրեն բնորոշ ազգային միջնաժամկետ և երկարաժամկետ ռազմավարություններով, որոնք պարբերաբար վերանայվում են՝ կախված պետությունների կայուն զարգացման առաջնահերթ նպատակադրումներից: Արդի աշխարհաքաղաքական սրընթաց փոփոխությունների և անորոշությունների պայմաններում Հայաստանի Հանրապետության տնտեսական, սոցիալական և էկոլոգիական կայուն զարգացման թիրախները առավել զգայուն են անվտանգային հիմնախնդիրների լուծման և սահմանադրականության ապահովման մակարդակի նկատմամբ: Աներկբա է այն, որ երկրի կայացումից դեպի երկարատև կայուն զարգացում անցումը պետք է կատարվի կանխատեսումային գնահատումների վրա: Հետահայացը որոշումների կայացման հետևանքների գնահատման դիրքերից պահանջում է կայուն զարգացման նախադրյալների իրատեսական վերլուծություն: Հետազոտության նպատակն է բարելավել «Օրակարգ 2030»-ի ԿՀՆ ինդեքսի մշակման հիմքում ընկած մոտեցման մեթոդաբանությունը՝ հաշվի առնելով ազգային անվտանգության և կայուն զարգացման փոխազդեցությունները:

Նպատակին հասնելու համար ՀՀ կայուն զարգացման ռազմավարությունների և ազգային անվտանգության վերլուծությունների համատեքստում խնդիր է դրվել ուսումնասիրելու անվտանգային ցուցանիշների և ԿՀՆ-ի փոխհարաբերությունները տարածաշրջանային վեց երկրների (Հայաստան, Ռուսաստան, Վրաստան, Ադրբեջան, Թուրքիա, Իրան) համար:

Իրականացվել է դիսամիկ պանելային վերլուծություն տարածաշրջանային վեց երկրների կտրվածքով՝ կայուն զարգացման նպատակների և պետության խոցելիության (SDG և FSI) ինդեքսների շարժընթացների մոդելավորմամբ:

Հետազոտության արդյունքում ստացվել են գնահատումներ, որոնք կնպաստեն աշխարհաքաղաքական նոր իրողություններում կայուն զարգացման համատեքստում տարածաշրջանային անվտանգության հայեցակարգի ձևավորման նախադրյալների ստեղծմանը:

*Հիմնաբառեր՝ կայուն զարգացում, ՄԱԿ ԿՀՆ ինդեքս, տրանսֆորմացիա, անվտանգություն, սահմանադրականություն, «խաղաղության խաչմերուկ», պետության խոցելիության ինդեքս:*

## **УСТОЙЧИВОЕ РАЗВИТИЕ РЕСПУБЛИКИ АРМЕНИЯ В УСЛОВИЯХ НОВЫХ ГЕОПОЛИТИЧЕСКИХ РЕАЛИЙ**

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Кроме глобальных целей и тенденций развития, каждая страна руководствуется собственными национальными средне- и долгосрочными стратегиями, которые периодически пересматриваются в зависимости от приоритетных задач устойчивого развития. В условиях стремительных геополитических изменений и неопределённости экономические, социальные и экологические цели устойчивого развития Республики Армения оказываются особенно чувствительными к решению вопросов безопасности и уровню обеспечения конституционности. Несомненно, что переход от этапа стабилизации государства к долгосрочному устойчивому развитию должен осуществляться на основе прогнозных оценок. Ретроспективный подход, с позиции оценки последствий принимаемых решений, требует реалистичного анализа предпосылок устойчивого развития.

Цель исследования заключается в совершенствовании методологического подхода, лежащего в основе разработки Индекса ЦУР «Повестка дня 2030», с учётом взаимодействия национальной безопасности и устойчивого развития.

Для достижения цели в контексте анализа стратегий устойчивого развития и национальной безопасности Армении была поставлена задача изучения взаимосвязей между показателями безопасности и Целями устойчивого развития (ЦУР) для шести региональных стран (Армения, Россия, Грузия, Азербайджан, Турция, Иран).

Проведён динамический панельный анализ по шести странам региона с моделированием тенденций изменения Индексов устойчивого развития (SDG) и Индексов уязвимости государства (FSI).

В результате исследования получены оценки, которые будут способствовать формированию предпосылок для разработки концепции региональной безопасности в контексте устойчивого развития в условиях новых геополитических реалий.

**Ключевые слова:** *устойчивое развитие, индекс ЦУР ООН, трансформация, безопасность, конституционализм, «Перекрёсток мира», индекс несостоятельности государств.*

## Appendix 1. Estimation results of Model 1

Dependent Variable: SDG

Method: Panel Least Squares

Date: 04/13/25 Time: 23:47

Sample (adjusted): 2016 2023

Periods included: 8

Cross-sections included: 6

Total panel (balanced) observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	30.12306	6.905740	4.362032	0.0001
SDG(-1)	0.654476	0.078700	8.316114	0.0000
FSI	-0.068177	0.028366	-2.403505	0.0210

### Effects Specification

#### Cross-section fixed (dummy variables)

R-squared	0.975424	Mean dependent var	71.69180
Adjusted R-squared	0.971123	S.D. dependent var	2.223637
S.E. of regression	0.377867	Akaike info criterion	1.042460
Sum squared resid	5.711325	Schwarz criterion	1.354327
Log likelihood	-17.01905	Hannan-Quinn criter.	1.160315
F-statistic	226.8006	Durbin-Watson stat	2.289083
Prob(F-statistic)	0.000000		

#### Cross- section Fixed Effects

COUNTRY	Effect
1 Armenia	0.040849
2 Russia	0.372934
3 Georgia	0.720305
4 Azerbaijan	-0.057898
5 Turkey	-0.435248
6 Iran	-0.640941

#### Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.902868	(5,40)	0.0250
Cross-section Chi-square	14.860047	5	0.0110

#### Cross-section fixed effects test equation:

Dependent Variable: SDG

Method: Panel Least Squares

Date: 04/19/25 Time: 13:43

Sample (adjusted): 2016 2023

Periods included: 8

Cross-sections included: 6

Total panel (balanced) observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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C	10.03762	4.663670	2.152300	0.0368
SDG(-1)	0.901008	0.047753	18.86797	0.0000
FSI	-0.035710	0.018827	-1.896777	0.0643
<hr/>				
R-squared	0.966506	Mean dependent var		71.69180
Adjusted R-squared	0.965018	S.D. dependent var		2.223637
S.E. of regression	0.415899	Akaike info criterion		1.143711
Sum squared resid	7.783728	Schwarz criterion		1.260661
Log likelihood	-24.44907	Hannan-Quinn criter.		1.187907
F-statistic	649.2698	Durbin-Watson stat		2.285101
Prob(F-statistic)	0.000000			

## Appendix 2. Estimation results of Model 2

COUNTRY	Effect
1 Armenia	-12.62147

Dependent Variable: FSI  
Method: Panel Least Squares  
Date: 04/13/25 Time: 14:35  
Sample (adjusted): 2016 2023  
Periods included: 8  
Cross-sections included: 6  
Total panel (unbalanced) observations: 47

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	56.27003	11.58490	4.857186	0.0000
FSI(-1)	0.422411	0.119165	3.544762	0.0013
RQ_REGULATOR_QUALITY	-3.540393	1.490572	-2.375191	0.0239
LOG(CAPEX)	-3.711981	1.730734	-2.144743	0.0399

### Effects Specification

Cross-section fixed (dummy variables)  
Period fixed (dummy variables)

R-squared	0.960272	Mean dependent var	75.93741
Adjusted R-squared	0.941049	S.D. dependent var	5.568665
S.E. of regression	1.352064	Akaike info criterion	3.705833
Sum squared resid	56.67043	Schwarz criterion	4.335671
Log likelihood	-71.08708	Hannan-Quinn criter.	3.942845
F-statistic	49.95377	Durbin-Watson stat	2.222410
Prob(F-statistic)	0.000000		

2 Russia	7.605640
3 Georgia	-4.937853
4 Azerbaydjan	-6.168131
5 Turkey	10.42051
6 Iran	5.701311

DATEID	Effect
1 2016-01-01	1.311390
2 2017-01-01	1.375287
3 2018-01-01	0.180272
4 2019-01-01	-1.505385
5 2020-01-01	-2.233144
6 2021-01-01	1.049804
7 2022-01-01	-1.154366
8 2023-01-01	2.311631