Danish scientific journal
DSJ

Danish Scientific Journal

№110 2026

Danish scientific journal
DSJ
№110/2026
ISSN 3375-2389
Vol.1

The journal publishes materials on the most significant issues of our time.
Articles sent for publication can be written in any language, as independent experts in different scientific and linguistic areas are involved.
The international scientific journal "Danish Scientific Journal" is focused on the international audience. Authors living in different countries have an opportunity to exchange knowledge and experience.
The main objective of the journal is the connection between science and society.
Scientists in different areas of activity have an opportunity to publish their materials.
Publishing a scientific article in the journal is your chance to contribute invaluably to the development of science.

1000 copies
Danish Scientific Journal (DSJ)
Istedgade 104 1650 København V Denmark
email: publishing@danish-journal.com
site: http://www.danish-journal.com

CONTENT

CHEMICAL SCIENCES

CULTURAL SCIENCES

ECONOMIC SCIENCES

JURISPRUDENCE

MEDICAL SCIENCES

POLITICAL SCIENCES

SOCIAL SCIENCES

TECHNICAL SCIENCES

CHEMICAL SCIENCES

SYNTHESIS OF ADAMANTYL-CONTAINING SULFAMIDE AS A POTENTIAL ANTITRYPANOSOMA AGENT

Klimko Yu.,
PhD in Chemistry, Senior Lecturer
Department of Organic Chemistry and Technology of Organic Substances
National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"
Koshchii I.
PhD in Chemistry, Associate Professor
Department of Organic Chemistry and Technology of Organic Substances
National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"
https://doi.org/10.5281/zenodo.21706907

Abstract

4-Adamantyl-N-(3-methoxy-4-sulfamoylphenyl)benzamid was synthesized with a 94% yield, which may serve as a potential antitrypanosoma agent. A method for its preparation from readily available reagents was optimized.

Keywords: adamantyl-containing sulfamide, antitrypanosoma agent, benzamide, 2-methoxy-1-methylsulfonyl-4-nitrobenzene, 2-methoxy-1-methylsulfonyl-4-aniline.

Introduction

Human African trypanosomiasis (HATT) is a parasitic disease common in sub-Saharan Africa [1]. Trypanosoma brucei (T. brucei) cells primarily reside and replicate in the blood and tissue fluids of infected mammals, and transmission occurs via tsetse flies of the Glossina species. Given that both domestic and wild animals can serve as parasite reservoirs, complete eradication of the disease is a very complex task [2, 3]. A key aspect of the pathogenetic mechanism of T. brucei is its ability to exploit the antigenic variability of its major surface antigen. This allows the parasite to evade the host immune response, preventing effective immunization and leaving patients susceptible to recurrent infections. This also makes it extremely difficult to treat. Therefore, the development of effective vaccines against HATT is of great importance [4–6]. The most practical approach to control African trypanosomiasis is to ensure the availability of safe and effective drugs in endemic areas [1, 7–12].

Currently, there are several chemotherapeutic drugs available for the treatment of this disease [13]. Pentamidine (Fig. 1), an aromatic diamidine, is effective against the early stages of T. b. gambiense infections. Melarsoprol, a trivalent arsenical compound introduced in 1959 to treat the late stages of African trypanosomiasis (Fig. 1), can cross the blood–brain barrier (BBB), but its use is limited by high toxicity. Eflornithine (DL-α-difluoromethylornithine, DFMO) was first used in the 1980s to treat the late stages of T. b. gambiense infections (Fig. 1). However, daily administration is required to achieve a clinical effect, and resistance to eflornithine has emerged.

Nifurtimox (Fig.1) has been used since the mid-1980s [8,11]. Nifurtimox is the first oral chemotherapy drug to treat advanced trypanosomiasis, but its effectiveness as monotherapy is limited, with approximately half of patients experiencing relapses. Recently, fexinidazole, a newer oral drug against trypanosomiasis, received WHO recognition in 2018 as an essential medicine and was approved by the FDA in 2021 (Fig. 1) [14–15]. However, this drug has many side effects, including QT prolongation, psychosis, neurological symptoms, and low white blood cell count, which may be associated with its relatively high daily dose (1800 mg) [15–16]. In conclusion, these drugs have various limitations in treating the disease. There remains an urgent need to develop more effective and cost-effective chemotherapeutic agents to control African trypanosomiasis.

Tubulin is an important protein in trypanosome cells, playing a key role in cell division and motility. The high growth rate of trypanosome cells makes them highly dependent on the polymerization and depolymerization of tubulin [17–19]. Tubulin is a highly conserved protein across different species. However, different susceptibility to antimitotic agents suggests differences in tubulin structure in different organisms. Notably, differences in the colchicine binding pocket between mammalian and T. brucei tubulins have led to the development of selective trypanosome tubulin inhibitors [17–19].

These inhibitors demonstrated impressive in vitro potency and selectivity in inhibiting T. brucei cell growth: the best of them showed a very high selectivity index (IC_{50} human cell growth inhibition/IC50 T. brucei cell growth inhibition > 7000) and IC50 in the low nanomolar range for inhibiting trypanosome cell proliferation (e.g., [20–21, 22].

The physiological activity of framework hydrocarbon derivatives, primarily adamantane derivatives, has been extensively studied. The activity of these compounds is due to the pronounced lipophilic nature of the compact framework hydrocarbon fragment. Therefore, the aim of this study was to attempt to impart greater lipophilicity to known anti-priposomal drugs, which, in our opinion, could improve their pharmacological activity.

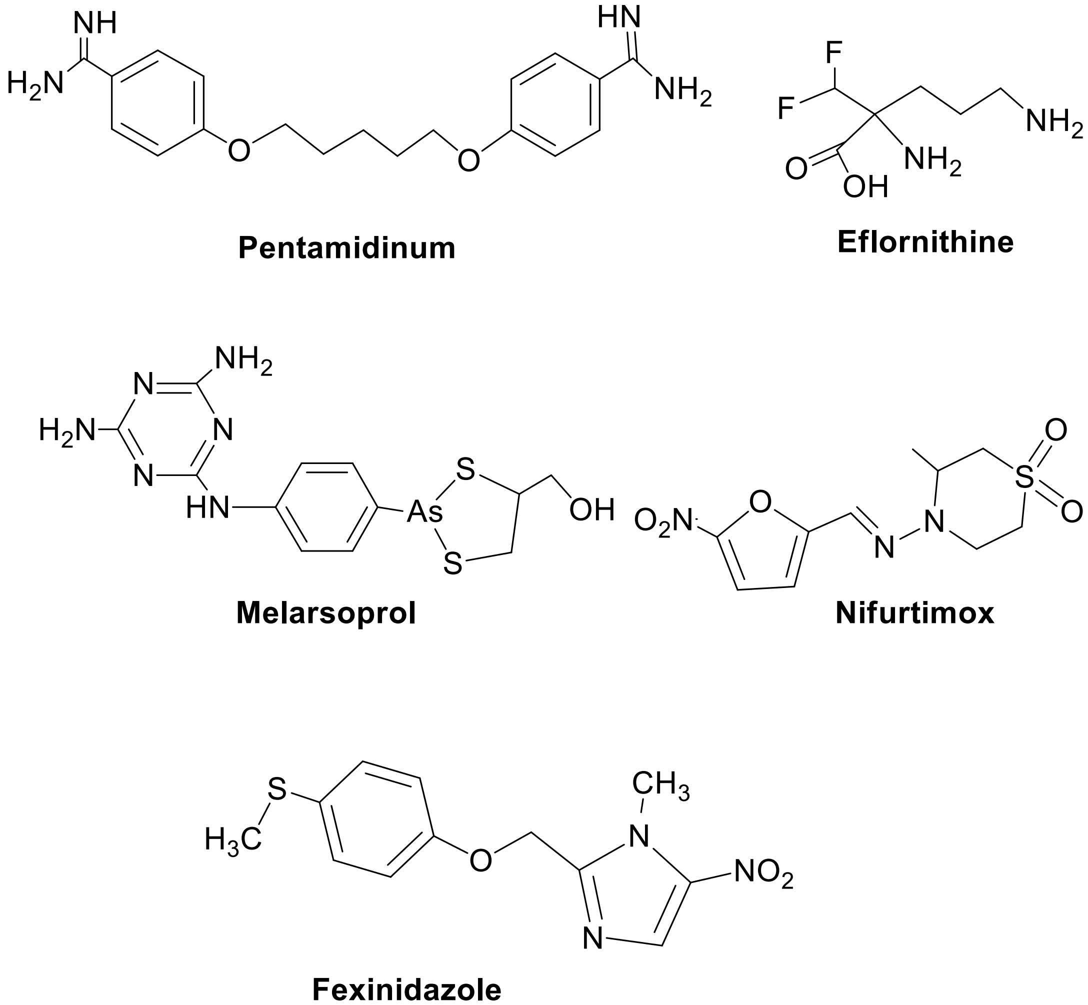
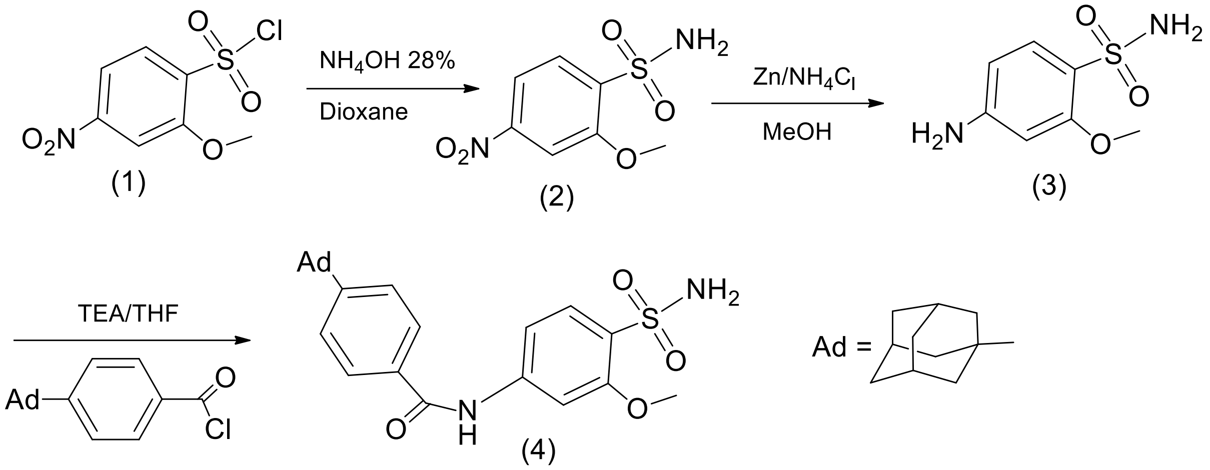


Figure 1. *anti-Trypanosoma agents*

Results and discussion

Two different approaches to compound development have been used in the literature. One approach focused on developing compounds with more bulky structures, yielding substrates that effectively inhibit trypanosome cell proliferation at the nanomolar level and exhibit selectivity indices exceeding a thousandfold [20–21]. Unfortunately, this category of compounds contained numerous aromatic moieties, significantly hindering their solubility and making in vivo testing impossible. In contrast, the other approach focused on creating compounds with fewer aromatic rings (reduced bulkiness) [22].

In our current research goal, we aim to combine the strengths of both approaches, finding a compromise to improve ligand efficacy, selectivity, and activity [23]. To achieve this, we chose to invert the sulfonamide group, promoting conjugation with the central aromatic ring. This will make the compounds more flat and rigid, reducing the number of rotatable bonds and decreasing overall bulkiness. For ease of synthesis, we will retain the methoxy group from the starting material and focus our efforts on modifying the benzamide moiety. This integrated approach promises to yield compounds superior in potency, selectivity, and solubility, thereby advancing our search for effective antitrypanosomal agents.



Scheme 1. *Synthesis of compound (4).*

The compounds were synthesized using the strategy shown in Scheme 1. Initially, sulfonyl chlorides were converted to sulfonamides by reaction with ammonium hydroxide. Subsequently, the nitro groups were reduced to anilines, and in the next step, the adamantyl-containing benzamide compound was incorporated.

Experimental section

Chemical reagents were commercially available and used as is, without further purification unless otherwise noted. Moisture-sensitive reactions were carried out under a dry argon atmosphere in pre-baked glassware. Thin-layer chromatography was performed on silica gel thin-layer chromatography plates with a fluorescent indicator at 254 nm (Fluka). Flash column chromatography was performed using silica gel 60 Å (BDH, 40–63 μm). Mass spectra were obtained on a Bruker ion-trap mass spectrometer. All NMR spectra were recorded on a Bruker 400 MHz spectrometer using $CDCl_3$ or DMSO-d6 as solvent.

Reverse-phase HPLC analysis of the compounds was performed on a Beckman HPLC system with an autosampler. Chromatographic separation was performed on a C18 column (2.0 mm × 150 mm, 5 μm). The mobile phase was used for isocratic elution at a flow rate of 0.2 mL/min. The injection volume was 20 μL and the UV detector was set at 260 nm.

2-Methoxy-1-methylsulfonyl-4-nitrobenzene (2). To a solution of 2-methoxy-4-nitrobenzene-1-sulfonyl chloride (1) (2.0 g, 7.95 mmol) in dioxane (20 ml), a 28% aqueous ammonia solution (9.2 ml) was added. The resulting reaction mixture was stirred at room temperature for 6 hours. Then, water and ethyl acetate were added to the reaction solution. The mixture was separated. The aqueous phase was further extracted with ethyl acetate. The combined organic phase was washed with water and brine, followed by drying over magnesium sulfate. The organic phase was filtered and concentrated under reduced pressure. The resulting residue was treated with ethanol.

Compound (2) (1.82 g, 7.84 mmol, 99%) was obtained as a yellow solid. Compound (2) was characterized as follows: 1H NMR (400 MHz, DMSO-d6) δ 4.03 (s, 3H), 7.46 (s, 2H), 7.89–7.99 (m, 3H).

2-Methoxy-1-methylsulfonyl-4-aniline (3). Zinc powder (645 mg) and ammonium chloride (264 mg) were added to a solution of compound (2) (200 mg, 0.865 mmol) in methanol (6 mL). The reaction mixture was stirred at room temperature for 5 h. The resulting solution was filtered through celite. The solvent was then concentrated under reduced pressure. The resulting residue was purified by silica gel chromatography using a hexane/ethyl acetate gradient (10–80%). This yielded the target compound (3) (164 mg, 0.815 mmol, 94%).

The compound was characterized as follows: NMR 1H (400 MHz, DMSO-d6, δ): 3.05 (s, 3H), 3.80 (s, 3H), 6.07 (s, 2H), 6.19 (d, J = 1.21 Hz, 1H), 6.27 (d, J = 1.32 Hz, 1H), 7.38 (d, J = 1.8 Hz, 1H).N-(3-methoxy-4-sulfamoylphenyl)-4-(1-адамантил)benzamide (4).

The starting compound (3) was dissolved in tetrahydrofuran (THF), then 4-(1-adamantyl)benzoyl chloride was added in the presence of triethylamine. The mixture was stirred at room temperature for 24 hours. The reaction was then quenched by adding water, and the solid product was filtered. The final product was recrystallized. The procedure is shown in Scheme 1.

Yield 94%, white crystalline solid. M.p. 256-258 ^{o}C. ^{1}H NMR (DMSO, 400 MHz, δ): 10.419 (s, 1H), 7.912–7.891 (d, J = 8.4 Hz, 2H), 7.743 (s, 1H), 7.704–7.682 (d, J = 8.8 Hz, 1H), 7.523–7.497 (d, J = 10.4 Hz, 1H), 7.376–7.356 (d, J = 8 Hz, 2H), 6.995 (s, 2H), 3.899 (s, 3H), 1.92, 1.68, 1.48 (m, 15H). ^{13}C NMR (DMSO, 100 MHz, δ): 166.186, 156.837, 144.631, 142.534, 132.049, 129.464, 128.695, 128.252, 126.555, 111.158, 104.245, 67.487, 56.343, 43.3, 37.5, 30.905, 29.0, 25.594, 21.499. Chemical formula: $C_{25}H_{31}N_2O_4S$, ESI-MS [M + H], *m/z* 456. HPLC mobile phase: 80% ACN with 0.1% formic acid, retention time 2.291 min, purity: >95%.

Conclusion

An original scheme for the synthesis of an adamantyl-containing sulfamide drug has been developed, which can be proposed for testing as an anti-Trypanosoma agent.

References:

1. WHO. Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030. Overview. World Health Organization; 2021.

2. Njiokou F., Nimpaye H., Simo G. et al. Domestic animals as potential reservoir hosts of Trypanosoma brucei gambiense in sleeping sickness foci in Cameroon. Parasite. 2010;17:61–66. DOI: 10.1051/parasite/2010171061.

3. Smith S. Trypanosome infection in cattle and African sleeping sickness. Int. J. Global Health Health Disparities. 2007;5:90.

4. Li B., Zhao Y. Regulation of antigenic variation by Trypanosoma brucei telomere proteins depends on their unique DNA-binding activities. Pathogens. 2021;10:967. DOI: 10.3390/pathogens10080967.

5. Garrison P., Khan U., Cipriano M. et al. Turnover of variant surface glycoprotein in Trypanosoma brucei is a bimodal process. Sibley L.D., ed. mBio. 2021;12(4). DOI: 10.1128/mBio.01725-21.

6. Pays E., Nolan D.P. Expression and function of surface proteins in Trypanosoma brucei. Mol. Biochem. Parasitol. 1998;91:3–36. DOI: 10.1016/S0166-6851(97)00183-7.

7. Krishna S., Kleine C., Stich A. African trypanosomiasis. In: Hunter’s Tropical Medicine and Emerging Infectious Diseases. 10th ed. Elsevier; 2020:755–761. DOI: 10.1016/B978-0-323-55512-8.00102-2.

8. Anene B.M., Onah D.N., Nawa Y. Drug resistance in pathogenic African trypanosomes: what hopes for the future? Vet. Parasitol. 2001;96:83–100. DOI: 10.1016/S0304-4017(00)00427-1.

9. Steverding D. The development of drugs for treatment of sleeping sickness: a historical review. Parasit. Vectors. 2010;3:15. DOI: 10.1186/1756-3305-3-15.

10. Brun R., Blum J., Chappuis F., Burri C. Human African trypanosomiasis. Lancet. 2010;375:148–159. DOI: 10.1016/S0140-6736(09)60829-1.

11. Wéry M. Drug used in the treatment of sleeping sickness (human African trypanosomiasis: HAT). Int. J. Antimicrob. Agents. 1994;4:227–238. DOI: 10.1016/0924-8579(94)90012-4.

12. Franco J.R., Cecchi G., Priotto G. et al. Monitoring the elimination of human African trypanosomiasis at continental and country level: update to 2018. Matovu E., ed. PLoS Negl. Trop. Dis. 2020;14(5):e0008261. DOI: 10.1371/journal.pntd.0008261.

13. De Rycker M., Wyllie S., Horn D., Read K.D., Gilbert I.H. Anti-trypanosomatid drug discovery: progress and challenges. Nat. Rev. Microbiol. 2023;21:35–50. DOI: 10.1038/s41579-022-00777-y.

14. Torreele E., Trunz B.B., Tweats D. et al. Fexinidazole—a new oral nitroimidazole drug candidate entering clinical development for the treatment of sleeping sickness. PLoS Negl. Trop. Dis. 2010;4:1–15. DOI: 10.1371/journal.pntd.0000923.

15. Deeks E.D., Lyseng-Williamson K.A. Fexinidazole in human African trypanosomiasis: a profile of its use. Drugs Ther. Perspect. 2019;35:529–535. DOI: 10.1007/s40267-019-00672-2.

16. Deeks E.D. Fexinidazole: first global approval. Drugs. 2019;79:215–220. DOI: 10.1007/s40265-019-1051-6.

17. Lama R., Sandhu R., Zhong B., Li B., Su B. Identification of selective tubulin inhibitors as potential anti-trypanosomal agents. Bioorg. Med. Chem. Lett. 2012;22.

18. Werbovetz K.A., Sackett D.L., Delfín D. et al. Selective antimicrotubule activity of N1-phenyl-3,5-dinitro-N4,N4-di-n-propylsulfanilamide (GB-II-5) against kinetoplastid parasites. Mol. Pharmacol. 2003;64:1325–1333.

19. Werbovetz K.A. Tubulin as an antiprotozoal drug target. Mini Rev. Med. Chem. 2002;2:519–529.

20. Bobba V., Li Y., Afrin M. et al. Synthesis and biological evaluation of imidamide analogs as selective anti-trypanosomal agents. Bioorg. Med. Chem. 2022;61:116740. DOI: 10.1016/j.bmc.2022.116740.

21. Bobba V., Nanavaty V., Idippily N.D., Zhao A., Li B., Su B. Synthesis and biological evaluation of selective tubulin inhibitors as anti-trypanosomal agents. Bioorg. Med. Chem. 2017;25. DOI: 10.1016/j.bmc.2017.04.009.

22. Zhao A., Li Y., Orahoske C.M. et al. Lead optimization of selective tubulin inhibitors as anti-trypanosomal agents. Bioorg. Med. Chem. 2019;27:1517–1528. DOI: 10.1016/j.bmc.2019.02.049.

23. Kenny P.W. The nature of ligand efficiency. J. Cheminform. 2019;11:8. DOI: 10.1186/s13321-019-0330-2.

CULTURAL SCIENCES

PROMOTING CULTURAL VALUES IN STRENGTHENING THE GREAT NATIONAL UNITY BLOC ACCORDING TO THE DOCUMENTS OF THE 14TH NATIONAL PARTY CONGRESS

M.A. Nguyen Thi Thu Hien
Nguyen Van Linh Political School, Hung Yen
https://doi.org/10.5281/zenodo.21706909

Abstract

The Documents of the 14th National Party Congress emphasize that culture and people are tremendous driving forces and endogenous strengths for strengthening the great national unity bloc in order to achieve rapid and sustainable national development. This article provides an overview of the role of cultural values in strengthening the great national unity bloc, identifies the current state of cultural values in Vietnam **today**, and proposes solutions to promote spiritual cultural values in strengthening the great national unity bloc in accordance with the Documents of the 14th National Party Congress.

Keywords: Culture; cultural values; great national unity; Documents of the 14th National Party Congress.

INTRODUCTION

The great national unity bloc is one of the core values and the foundation of the strength of the Vietnamese revolution. The Documents of the 14th National Party Congress affirm: “The great national unity bloc is the foundation for bringing together and maximizing the strength of the People, creating invincible power for our country to overcome all difficulties and challenges and advance toward prosperous and powerful development” [1, Vol. 1, p. 36]. During the wars of resistance against foreign aggression, the strength of national solidarity enabled Vietnam to achieve one victory after another. In the current new era, the great national unity bloc remains the key to sustainable development, helping the country both preserve its cultural identity and absorb the quintessence of humanity. Therefore, among the five major guiding viewpoints for achieving the country's development goals during the 2026–2030 period, our Party continues to affirm the need to: “Strongly arouse the tradition of patriotism, the aspiration for development, the spirit of solidarity, the will for autonomy, confidence, self-reliance, self-strengthening, and national pride; promote the strength of culture and people as endogenous resources and driving forces for development” [1, Vol. 1, p. 26]. When all social strata are united with a common purpose and shared goals, the country possesses the comprehensive strength to overcome all difficulties and challenges.

To strengthen the great national unity bloc, comprehensive solutions are required, among which promoting cultural values plays a particularly important role. Cultural values constitute the spiritual foundation that guides behavior and fosters consensus and shared trust among classes, ethnic groups, and social strata. The Documents of the 14th National Party Congress also affirm: “Effectively promote cultural values and the spirit of dedication of the Vietnamese people so that culture truly becomes an endogenous resource, a driving force, and a regulatory mechanism for national development” [1, Vol. 1, p. 64]. Culture serves as a bridge connecting communities: language, festivals, and customs are the ties that bind ethnic groups together. Culture creates a shared identity that enables people to see themselves as part of a community, thereby strengthening social cohesion. Therefore, promoting cultural values means enhancing the nation's soft power, consolidating domestic unity while elevating the country's international standing.

1. The role of cultural values in strengthening the great national unity bloc

In his speech commemorating the 80th anniversary of the Traditional Day of the Cultural Sector, General Secretary and State President To Lam affirmed: “Culture is the spiritual foundation of society, both the goal and the driving force of development; culture is soft power, the inexhaustible ‘source energy’ of the Vietnamese nation” [9]. In the current context, the world is undergoing rapid and complex changes; traditional and non-traditional security challenges are shaping new standards. Domestically, as Vietnam enters a new era with the goal of becoming a developed, high-income country with a socialist orientation, the General Secretary further directed: “Culture must take the lead, illuminate the path, provide guidance, cultivate resilience, strengthen confidence, and shape the nation's soft power capacity” [9]. This is because culture is both the “root” that preserves national identity and unity and the driving force for development and integration.

Cultural values are the system of concepts, beliefs, traditions, habits, and moral standards accepted by the community and transmitted through generations. They constitute a form of spiritual life, reflecting how people evaluate what is right, good, beautiful, and necessary [7]. In our view, cultural values are the spiritual, moral, and aesthetic standards created, preserved, and honored by the community throughout the process of production, helping to guide behavior, connect people, and provide the foundation for national unity and the sustainable development of society. Regarding the great national unity bloc, cultural values are the spiritual foundation that nurtures the spirit of solidarity, while the great national unity bloc provides the conditions for preserving, promoting, and disseminating cultural values. Promoting traditional cultural values such as patriotism, compassion, tolerance, and **filial piety and grat-**

itude constitutes the endogenous driving force for enhancing social consensus and national strength. This is specifically reflected in the following aspects:

First, cultural values constitute the spiritual foundation for creating social consensus and national unity. In the country's development process, alongside material resources, cultural values play an especially important role in establishing social stability and consensus. They comprise the value system, moral standards, and ways of life formed throughout history, while also serving as the “glue” that binds individuals, communities, and social strata into a unified whole. Resolution No. 80-NQ/TW dated January 7, 2026, of the Politburo on the development of Vietnamese culture affirms: “Cultural values permeate every aspect of social life, arouse the tradition of patriotism, and strengthen confidence and the great national unity bloc” [3]. Cultural values create social consensus because they constitute a shared spiritual foundation that guides behavior and unites communities. When people share common moral standards, traditions, and beliefs, society achieves unity in goals, actions, and ideals. This consensus strengthens solidarity, reduces conflicts, creates a stable environment for sustainable development, and simultaneously awakens the nation's endogenous strength in the process of integration and renewal.

Second, cultural values are endogenous resources for the great national unity bloc and for the country's rapid and sustainable development. Resolution No. 80-NQ/TW on the development of Vietnamese culture directs: “Building and developing culture must truly become the solid foundation, endogenous strength of the nation, and regulatory mechanism for the country's rapid and sustainable development, toward the goals of the 100th anniversary of the founding of the Party and the 100th anniversary of the founding of the State” [3]. This is because cultural values nurture patriotism, the will for self-reliance and self-strengthening, and national pride. When the community shares common values, society achieves consensus and solidarity, thereby generating comprehensive strength. This strength becomes the driving force for the country's rapid, stable, and sustainable development while preserving its identity throughout the process of international integration. The guiding viewpoint of Resolution No. 80-NQ/TW is that: “Cultural values must be closely and harmoniously integrated and deeply embedded throughout all aspects of social life, from politics, economy, society, and environment to national defense, security, and foreign affairs, truly becoming the nation's soft power in the new era” [3]. Therefore, promoting the value system of culture and people is a key factor in fostering national identity and strengthening the great national unity bloc.

Third, the great national unity bloc provides the conditions for preserving, promoting, and disseminating cultural values. Culture is not merely the creative product of an individual or a small group but the crystallization of the history, traditions, and spiritual life of the entire national community. When the whole people are united, all social strata work together to preserve heritage, customs, language, and the arts, thereby creating comprehensive strength in cultural preservation. National solidarity also helps overcome the risks of cultural erosion and distortion under the impact of globalization. At the same time, the spirit of great national unity creates favorable conditions for cultural values to be disseminated widely, not only nationwide but also internationally, thereby contributing to affirming the nation's identity on the global stage. In other words, culture can only remain truly vibrant and sustainable when supported by the unity of the entire people, as every citizen is both a creator and a transmitter of cultural values.

2. The Current State of Cultural Values in Strengthening the Great National Unity Bloc in Vietnam Today

First, several achievements

In recent years, cultural values have consistently served as the spiritual foundation, contributing to social consensus and strengthening the great national unity bloc. Traditional values such as patriotism, compassion, diligence, and creativity have been strongly promoted, becoming driving forces for socio-economic development. Resolution No. 80-NQ/TW affirms: “Cultural values permeate every aspect of social life, arouse the tradition of patriotism, and strengthen confidence and the great national unity bloc” [3]. Institutions, policies, and investment resources for cultural development have been strengthened. Decision No. 41/2025/QD-TTg (dated November 10, 2025) of the Prime Minister stipulates the principles, criteria, and norms for allocating central budget capital, together with the matching capital ratio from local budgets, to implement the National Target Program on Cultural Development for the 2025–2035 period. Decision No. 42/2025/QD-TTg (dated November 12, 2025) promulgates the National Criteria for Comprehensive Cultural Development at all levels for the 2025–2030 period, aiming to standardize and improve the quality of cultural activities nationwide. The Ministry of Culture, Sports and Tourism has approved the National Target Program on Cultural Development for the 2025–2035 period, with hundreds of specific tasks, including investment in cultural institutions, restoration of historical relics, and increasing the proportion of people regularly participating in cultural and sports activities. Under the program, both central and local budgets will contribute, ensuring stable resources for cultural projects.

Many tangible and intangible cultural heritage elements have been recognized by UNESCO. Vietnam has had 9 cultural and natural world heritage sites, 16 representative intangible cultural heritage elements of humanity, and 11 documentary heritage items under the Memory of the World Programme inscribed by UNESCO [5]. These figures not only reflect the country's rich historical legacy but also affirm Vietnam's cultural position within the regional and global cultural landscape.

The movement “All People Unite to Build a Cultural Life” has been implemented for more than 25 years, becoming a large-scale social movement associated with titles such as Cultural Family, Cultural Village, and Cultural Residential Area. The Ministry of Culture, Sports and Tourism launched the emulation movement “The Culture, Sports and Tourism Sector

Joins Hands in Building Grassroots Cultural Life," encouraging localities to establish cultural institutions, folk art clubs, community sports activities, and the model of "green–clean–beautiful cultural villages." The movement has: "Promoted the strength of the great national unity bloc in national construction and development, in line with the development trend of society" [2, Vol. 2, p. 120]. In addition, these movements have spread strongly to remote, isolated, and ethnic minority areas, helping preserve languages, scripts, and traditional costumes while reducing social evils, thereby enriching spiritual life, strengthening community cohesion, and reinforcing social trust.

Culture has also become a driving force for economic development through the exploitation of heritage values for tourism development and the promotion of Vietnam's image and people to the world. Vietnam has repeatedly been honored as the "World's Leading Heritage Destination" and "Asia's Leading Cultural Destination." In 2025, the country is estimated to welcome 22 million international visitors, an increase of more than 25% compared with 2024. Vietnam ranks among the countries with the world's highest tourism growth rates (21% in 2025), exceeding the global recovery average [4]. During the 2021–2025 period, the tourism sector achieved impressive growth, contributing steadily between 6% and 8% of GDP annually. Over the past five years, Vietnam welcomed nearly 55 million international visitors and nearly 500 million domestic visitors, with total revenue estimated at VND 3,200,000 billion [6]. This demonstrates that the nation's traditional cultural values have become important endogenous resources contributing to strengthening the great national unity bloc and promoting the country's rapid and sustainable development.

Second, several limitations

Some traditional cultural values are gradually fading under the impact of globalization and a pragmatic lifestyle. According to statistics, the country currently has more than 10,000 ranked historical and cultural relics, including over 3,600 national relics and approximately 130 special national relics distributed across all regions. At the same time, the system of intangible cultural heritage has been systematically established; to date, more than 7,000 intangible cultural heritage elements have been inventoried, and over 500 have been included in the National List of Intangible Cultural Heritage [5]. This indicates that many forms of traditional culture have not yet been adequately protected and are vulnerable to deterioration.

The commercialization of festivals, the decline in cultural behavior, and disparities in cultural enjoyment among regions remain matters of concern. The proportion of young people participating in traditional festivals has declined, while they increasingly prioritize modern entertainment activities such as social media and online games. Many traditional crafts, such as Dong Ho folk painting, Phu Lang pottery, and brocade weaving, are at risk of disappearing due to the lack of successors and declining market demand. Therefore, the Documents of the 14th National Party Congress observe: "Investment in culture remains low and scattered. Cultural industries, cultural services, and tourism have not developed commensurately with their potential. The cultural market has developed slowly. The cultural environment has not yet become truly healthy; social morality has shown signs of deterioration" [1, Vol. 1, p. 66]. Furthermore, the dissemination of cultural values has not been sufficiently balanced, and creative solutions to attract young people remain limited. These shortcomings affect social consensus and weaken the strength of national solidarity.

Cultural industries such as cinema, music, fashion, fine arts, and video games have not yet formed a sufficiently strong ecosystem to compete internationally. Many cultural products remain repetitive, lacking distinctive characteristics and failing to fully exploit the potential of the nation's traditions, people, and natural resources. Some heritage exploitation activities are excessively profit-oriented, diminishing their spiritual value. Human resources in the cultural sector remain limited and fail to meet practical demands, with a shortage of creative professionals capable of international integration. When small enterprises lack the resources for systematic investment, heritage exploitation tends to become commercialized, reducing its spiritual value and thereby affecting social trust and consensus. Most cultural enterprises remain small and medium-sized, with limited competitiveness and weak capacity to expand internationally. Due to the absence of strong brands and international competitiveness, the cultural industry has not yet become a sufficiently strong economic and spiritual "pillar" to reinforce national pride. This reduces the effectiveness of culture as an endogenous resource for the great national unity bloc.

In the new period, disparities between the rich and the poor, urban and rural areas, and lowland and mountainous regions have created gaps in cultural enjoyment, placing the culture of solidarity before new challenges to the great national unity bloc. Cultural participation remains uneven, with remote and isolated areas facing considerable limitations, affecting comprehensive social cohesion: "Disparities in **the enjoyment of** culture, arts, physical exercise, and sports among different regions and areas, especially mountainous, remote, and isolated areas, remain substantial" [2, Vol. 2, p. 125]. People in mountainous areas have fewer opportunities to access new forms of culture, such as cinemas, digital libraries, and standard sports facilities. Due to inadequate conditions for preservation, many traditional cultural values of ethnic minority communities have not been properly promoted. At the same time: "The deterioration of political ideology, morality, and lifestyle has shown no sign of declining. No effective solutions have yet been found to prevent and reverse the serious deterioration in certain aspects of culture, morality, and lifestyle, which has caused public concern" [2, Vol. 2, p. 125]. Coordination mechanisms among ministries, sectors, and local authorities at all levels in organizing and implementing cultural movements and cultural activities remain insufficiently synchronized and coordinated: "The policy of socializing cultural heritage preservation activities has not achieved high effectiveness and has not been commensurate with its potential" [2, Vol. 2, p. 125].the en

Recently, certain value conflicts in literature and the arts have sparked intense debates on social media, potentially leading to disagreements and affecting social consensus. One group excessively favors foreign values, while another completely rejects them, regarding them as cultural “garbage.” Both of these extreme tendencies create disturbances in the cultural environment and affect the Party's ideological foundation. The rapid expansion of cross-border online platforms has also introduced **offensive and anti-cultural** inappropriate and uncivilized foreign elements, generating value conflicts and negatively affecting the preservation of national identity and social consensus.

3. Solutions for Promoting Cultural Values in Strengthening the Great National Unity Bloc According to the Documents of the 14th National Party Congress

First, Party committees, Party organizations, cadres, Party members, and the People should thoroughly grasp and develop a comprehensive, profound understanding of the foundational role and important endogenous strength of culture in national development. It is necessary to enhance the role and responsibility of heads of Party committees and leaders at all levels in implementing cultural development tasks. In particular: “Thoroughly grasp the viewpoint that cultural development must be placed on an equal footing with political, economic, and social development, in association with building the cultural security posture, human security, and digital cultural sovereignty” [3], based on the principle that: “It is necessary to build and synchronously implement the national value system, the cultural value system, the family value system, and the standards of Vietnamese people to meet development requirements in the new period; arouse patriotism, the will for self-reliance, and the aspiration to rise; nurture compassion, **gratitude and affection**, loyalty, honesty, responsibility, and discipline; and create a healthy, progressive, and civilized cultural environment in families, schools, communities, and cyberspace” [1, Vol. 1, p. 32].

To effectively implement this solution, it is necessary to strengthen communication and education on cultural values through mass media, journalism, and publishing. Communication methods should be diversified, with emphasis on modern forms of communication, especially digital communication through social media. A healthy cultural, informational, and aesthetic environment should be established and guided; education on cultural values, family values, and standards of Vietnamese people should be strengthened; and exemplary individuals and good deeds should be identified and widely promoted. It is also necessary to proactively promote national culture to the world while selectively absorbing the cultural achievements of humanity. The roles and missions of leaders, managers, artists, intellectuals, cultural workers, entrepreneurs, folk artisans, reputable individuals, influential figures, and religious dignitaries should be promoted as the core force, together with the entire People, in creating and disseminating the nation's positive cultural values in order to strengthen the great national unity bloc. Every citizen and every organization should regard preserving and promoting national cultural identity as a shared responsibility, thereby fostering social consensus.

Strengthening positive communication, disseminating the nation's positive values, and proactively combating false, harmful, and anti-cultural information in cyberspace are urgent requirements today. Public awareness and skills in the safe use of social media should be enhanced, especially among younger generations. The roles of the press, media agencies, and socio-political organizations should be promoted in guiding public opinion, safeguarding the Party's ideological foundation, and building a healthy cultural environment in cyberspace. Communities should be encouraged to actively participate in preserving and promoting traditional customs, festivals, languages, scripts, and folk arts. At the same time, people's sense of responsibility for preserving traditional cultural values should be strengthened, thereby contributing to safeguarding the nation's cultural identity for future generations.

Second, institutional mechanisms and policies should be improved to create strategic breakthroughs and mobilize resources for cultural development. In the immediate future, legal normative documents that remain inadequate or overlapping should be revised, supplemented, or replaced; institutional bottlenecks should be removed; and the legal framework should be supplemented to address new issues arising from practice. The feasibility, consistency, and interconnection between cultural legislation and related laws, as well as between cultural policies and policies on education and training, science and technology, innovation, and private economic development, should be ensured. Institutions and policies for international cultural integration should be improved in accordance with international practices and commitments: “Build and perfect institutions for developing an advanced Vietnamese culture imbued with national identity” [2, Vol. 2, p. 89]. According to Plan No. 4537/KH-BVHTTDL in 2024, the Ministry of Culture, Sports and Tourism proposed solutions to establish a digital cultural environment while narrowing disparities in infrastructure and cultural enjoyment among regions and social groups by 2030, with a vision toward 2045. This is an important orientation for ensuring cultural equity and contributing to the strengthening of national unity.

Third, promoting cultural values should be closely linked with socio-economic development in order to create endogenous resources and strengthen the great national unity bloc. It is necessary to thoroughly grasp and concretize the viewpoint that culture must be placed on an equal footing with the economy, politics, and society: “Develop culture in conjunction with socio-economic development so that culture truly becomes a solid foundation, a driving force, and an important endogenous resource for the country's sustainable development and the firm protection of the Fatherland” [2, Vol. 2, p. 271]. First of all, it is necessary to: “Formulate breakthrough policies to support the development of cultural industries, the entertainment industry, the preservation and promotion of heritage, and strongly encourage creativity in the arts, design, and digital content production” [2, Vol. 2, p. 125]. Secondly, cultural industries associated with national identity should be developed, while creative enterprises should be supported in expanding their scale and enhancing their international competitiveness. The development of distinctive cultural products not only creates economic value but also reinforces national pride and strengthens community cohesion. Cultural heritage should be effectively utilized to develop tourism, services, and creative industries in association with social consensus. At the same time, attention must be paid to narrowing regional disparities in access to cultural life and investing in cultural infrastructure in mountainous, remote, and isolated areas so that all citizens have opportunities to access and participate in cultural activities. This is the foundation for building cultural equity, creating social consensus, and strengthening the great national unity bloc.

Fourth, organizing patriotic emulation movements and community cultural activities plays an important role in strengthening solidarity and cohesion among all social strata while fostering responsibility and awareness in building the homeland and the country. Through emulation movements, cultural and artistic activities, sports, and community events, people have opportunities to exchange, share, and promote the nation's fine cultural values. The Documents of the 14th National Party Congress emphasize: “Promote the building of a healthy cultural environment and cultural life in association with the movement ‘All People Unite to Build a Cultural Life’” [2, Vol. 2, p. 271]. This is an important orientation for building a united and civilized community, contributing to strengthening the great national unity bloc and promoting the country's sustainable development.

The movements “All People Unite to Build a Cultural Life,” “Day for the Community,” and “Voluntary Blood Donation,” among others, should continue to be expanded in order to affirm the values of compassion and mutual assistance, which are the foundation of the great national unity bloc. Greater efforts should be devoted to utilizing cultural heritage and traditional arts to create distinctive cultural and tourism products that both enrich spiritual life and promote the country's image. At the same time, cultural enterprises should be supported in expanding their scale and improving their international competitiveness.

Through cultural exchanges, international cooperation, tourism, the arts, and communication activities, the positive values of Vietnamese culture, together with the image of Vietnamese people as friendly, compassionate, creative, and deeply rooted in national identity, should be introduced to international friends. The Documents of the 14th National Party Congress affirm: “Proactively integrate internationally in the field of culture, selectively absorb the cultural achievements of humanity, and promote Vietnamese culture to the world. Expand cultural exchanges and cooperation with other countries, bringing international cultural relations into greater depth. Create favorable conditions for overseas Vietnamese and international organizations to contribute intellectual resources and other resources to cultural development and the promotion of the image of Vietnam and its people” [2, Vol. 2, p. 272]. At the same time, the process of international integration must be accompanied by the selective absorption of the cultural achievements of humanity while preserving national cultural identity and avoiding the risk of **cultural hybridity** and the loss of the Vietnamese nation's fine traditional values.

Conclusion

Promoting cultural values in strengthening the great national unity bloc in accordance with the spirit of the Documents of the 14th National Party Congress is a strategic task that is both urgent and long-term. Culture is not only the spiritual foundation of society but also an important endogenous resource that generates soft power to connect communities, inspire national pride, and promote the country's rapid and sustainable development. Practice has shown that when cultural values are preserved and disseminated, they become a driving force for socio-economic development while strengthening public trust, social consensus, and the spirit of compassion among the people. Nevertheless, a number of limitations remain, including disparities in cultural enjoyment among regions, the commercialization of cultural heritage, and the underdevelopment of cultural industries relative to their potential. Therefore, in order for culture to truly become a solid foundation for national unity, it is necessary to continue improving institutional mechanisms and policies, investing in cultural infrastructure, developing creative industries associated with national identity, and, in particular, narrowing regional disparities in access to cultural life. Only when every citizen is able to participate in and benefit from cultural life can the great national unity bloc be firmly strengthened, creating the comprehensive strength needed for Vietnam's rapid and sustainable development in the new era.

References:

1. Communist Party of Vietnam (2026). Documents of the 14th National Congress of Delegates, Volume I. National Political Publishing House Su That, Hanoi.

2. Communist Party of Vietnam (2026). Documents of the 14th National Congress of Delegates, Volume II. National Political Publishing House Su That, Hanoi.

3. Politburo (2026). Resolution No. 80-NQ/TW dated January 7, 2026, on the Development of Vietnamese Culture.

4. Government News. Diep Anh (2026). A Year of Acceleration and Breakthrough for Vietnam's Tourism. Published on January 1, 2026. Accessed on July 1, 2026, at: https://baochinhphu.vn/nam-tang-toc-but-pha-cua-du-lich-viet-nam-102251230185735473.htm

5. Lao Cai Newspaper (2025). Vietnamese Cultural Heritage: A Foundation for the Country's Sustainable Development. Accessed on July 1, 2026, at: https://www.vietnamplus.vn/mo-muong-giu-hon-van-hoa-mo-duong-huong-toi-tro-thanh-di-san-the-gioi-post1116392.vnp

6. Vietnam News Agency (VNA). Ngoc Bich (2025). Vietnam Tourism 2025: A Bright Spot in the Socio-economic Growth Picture. Accessed on July 1, 2026, at: https://nvsk.vnanet.vn/du-lich-viet-nam-2025-diem-sang-trong-buc-tranh-tang-truong-kinh-te-xa-hoi-1-179938.vna

7. **Communist Review**. Bui Hoai Son (2022). Vietnamese Cultural Values from the Perspectives of National, Regional, and Ethnic Values. Published on August 10, 2022. Accessed on July 1, 2026, at: https://tapchicongsan.org.vn/media-story/-

/asset_publisher/V8hhp4dK31Gf/content/gia-tri-van-hoa-viet-nam-nhin-tu-cac-chieu-canh-gia-tri-quoc-gia-vung-mien-toc-nguoi

8. **Thu Vien Phap Luat** (2026). Resolution No. 80-NQ/TW on the Development of Vietnamese Culture. Accessed on July 1, 2026, at: https://thuvienphapluat.vn/van-ban/Van-hoa-Xa-hoi/Nghi-quyet-80-NQ-TW-2026-phat-trien-van-hoa-Viet-Nam-689327.aspx

9. **VnExpress**. To Lam (2025). Full Text of General Secretary To Lam's Speech at the Ceremony Commemorating the 80th Anniversary of the Traditional Day of the Cultural Sector. Published on August 23, 2025. Accessed on July 1, 2026, at: https://vnexpress.net/tong-bi-thu-viet-nam-can-xay-dung-cac-thung-lung-van-hoa-4930637-p2.html

ECONOMIC SCIENCES

UDK 338.45:69:658.012

ECONOMIC RESILIENCE OF ENTERPRISES WITHIN INTEGRATED CONSTRUCTION DEVELOPMENT STRUCTURES: A MULTICRITERIA APPROACH TO ASSESSMENT AND INTERACTION SUPPORT

Fesun A.,
PhD in Economics,
Doctoral Student, Department of Management in Construction,
ORCID ID: https://orcid.org/0009-0002-1433-3087
Ratnikov D.,
PhD in Economics,
Doctoral Student, Department of Management in Construction,
ORCID ID: https://orcid.org/0009-0006-0024-5384
Shyliuk P.,
PhD student, Department of Management in Construction,
ORCID ID: https://orcid.org/0009-0002-5471-3308
Petrenko O.
PhD student, Department of Management in Construction,
ORCID ID: https://orcid.org/0009-0002-1849-1103
Kyiv National University of Construction and Architecture,
Kyiv, Ukraine
https://doi.org/10.5281/zenodo.21706911

Abstract

The article substantiates the conceptual and methodological foundations for assessing the economic resilience of construction development enterprises within integrated structures. Economic resilience is interpreted as the dynamic capacity of an enterprise to maintain a balanced relationship among resources, obligations, financial flows, project workload, and risks. A three-level analytical framework is developed, encompassing intra-corporate, project-portfolio, and inter-organizational levels. Financial, investment, resource, operational, market, adaptive, and inter-organizational components of resilience are identified. An integrated assessment approach is proposed, incorporating threshold constraints, inter-organizational dependence, and a resilience reserve to identify critical imbalances and support preventive managerial decision-making.

Keywords: enterprise, business model, competitiveness, project, economic efficiency, innovation, risk management, digitalization, strategy, operational activities, development, sustainable development

Introduction. The economic resilience of construction development enterprises should be considered not as a static characteristic of their financial condition or as the ability to maintain individual financial and economic indicators within normative limits, but as a complex dynamic property reflecting an enterprise's capacity to ensure the continuity of reproductive, investment, operational, and project processes; preserve economic controllability; maintain acceptable levels of solvency, profitability, resource availability, and risk; and adapt the structure of its activities to changes in the internal and external environment without losing its strategic capacity for value creation.

For construction development enterprises, such a conceptualization is of particular importance because economic outcomes are generated not within an isolated business entity, but within a complex system of inter-organizational relations involving developers, investors, customers, design organizations, general contractors and subcontractors, suppliers of material and technical resources, financial institutions, property management companies, owners of land and real estate assets, and other participants involved in the implementation of development projects. Accordingly, the resilience of an individual enterprise largely depends on the operating parameters of the integrated structure in which it functions, as well as on the mechanisms through which resources, risks, financial flows, liabilities, and economic outcomes are distributed among its participants.

In the scientific literature, enterprise economic resilience is predominantly examined through the lenses of adaptability, resource balance, inter-organizational interaction, and the system's capacity to withstand external and internal disturbances. D. Teece [1] links enterprise resilience to dynamic capabilities and the ability to reconfigure resources in response to environmental changes. T. Pettit, J. Fiksel, and K. Croxton [2] emphasize the alignment between vulnerabilities and adaptive capabilities within supply networks. T.-K. Wang et al. [3] substantiate the appropriateness of multicriteria assessment of counterparties in the construction sector using multi-criteria decision-making tools. Z. Chen, A. Hammad, and M. Alyami [4] investigate the resilience of construction supply chains through robust optimization and the use of backup supply sources, whereas M. Lin et al. [5] explore causal relationships among resilience factors using structural equation modeling and system dynamics. A synthesis of these approaches indicates that comprehensive assessment of the economic resilience of construction development enterprises remains insufficiently developed, particularly with regard to the simultaneous consideration of financial and investment conditions, project portfolio balance, inter-organizational dependencies, and the reserves required to restore the resilience of an integrated structure. In this context, the category of "economic resilience of a construction development enterprise" is proposed to be interpreted as the enterprise's capacity, within a system of inter-organizational interaction, to maintain an economically acceptable balance among its resource potential, assumed obligations, project workload, financial flows, risks, and expected outcomes, while ensuring the restoration of equilibrium after internal or external disturbances and preserving the ability to implement both the current and prospective portfolio of development projects.

This interpretation makes it possible to distinguish economic resilience from related categories. Financial resilience primarily characterizes the capital structure, liquidity, debt burden, and ability to meet financial obligations. Economic security focuses on protection against threats and the prevention of critical losses. Adaptability reflects the speed and quality of response to environmental changes. Resilience in the narrower recovery-oriented sense characterizes the capacity to restore functioning after shocks. Economic resilience integrates these properties but is not reducible to any of them, since its fundamental meaning lies in preserving the long-term economic viability of an enterprise and maintaining balanced relationships with the participants of an integrated structure.

Presentation of the main research findings. Methodologically, the assessment of economic resilience should be based on a transition from local diagnostics of an individual enterprise toward the analysis of the system of interdependencies within which its economic outcomes are generated. Under this approach, the enterprise is simultaneously an independent economic entity and a structural element of a value-creation network (table 1). Therefore, a deterioration in the resilience of one participant may be transmitted to others through chains of accounts receivable and payable, financing delays, disruptions to project schedules, resource shortages, failures to meet contractual obligations, increases in the cost of capital, or the redistribution of risks. At the same time, integration may strengthen resilience through the shared use of resources, portfolio diversification, coordination of financial flows, centralization of selected functions, and the creation of mutual support reserves. Accordingly, the object of assessment should include not only the economic condition of the enterprise itself, but also its position within the structure of economic interactions. The analytical framework should cover three interrelated levels: the intra-corporate level, the project-portfolio level, and the inter-organizational level. The intra-corporate level characterizes the financial, resource, operational, and investment condition of the enterprise. The project-portfolio level reflects the economic balance of the development project portfolio, synchronization of financing, resource provision, implementation schedules, and expected returns. The inter-organizational level determines the reliability and stability of economic relationships among participants of the integrated structure, the degree of dependence on key counterparties, the allocation of risks and outcomes, and the system's capacity to localize or compensate for negative impulses.

Table 1.

Structure of the analytical framework for assessing the economic resilience of construction development enterprises

Analytical level	Object of assessment	Key analytical parameters	Diagnostic outcome
Intra-corporate	The enterprise's internal economic condition: financial, resource, operational, and investment dimensions.	Liquidity and solvency; capital structure and debt burden; cash-flow stability; resource availability; productivity and cost intensity; investment efficiency and risk exposure.	Assessment of internal balance, reserve economic capacity, critical constraints, and areas where imbalances accumulate.
Project-portfolio	The portfolio of development projects and the nature of their interdependencies within the enterprise.	Synchronization of financing, resources, and schedules; project structure by implementation stage; capital requirements; expected returns; risk concentration and diversification; correspondence between project workload and economic capacity.	Assessment of portfolio balance and feasibility; identification of resource and financing shortages, timing gaps, and excessive risk concentration.
Inter-organizational	Economic relationships among participants of the integrated construction development structure.	Counterparty reliability; concentration of dependence on key investors, contractors, and suppliers; timeliness of obligations; allocation of risks and outcomes; counterparty substitutability; intensity of financial, resource, and information flows.	Identification of critical nodes and channels through which imbalances propagate; assessment of the integrated structure's capacity to localize, absorb, or redistribute adverse impacts.

Source: compiled by the authors.

The conceptual assessment model should proceed from the multicriteria nature of economic resilience. The use of a single financial ratio, or even a set of traditional liquidity, profitability, and autonomy indicators, does not adequately reflect the economic behavior of a construction development enterprise. High profitability may coexist with a critical liquidity deficit; positive asset growth may be accompanied by excessive capital concentration in unfinished projects; revenue growth may occur alongside increasing debt exposure; and a formally balanced capital structure may conceal a high dependence on a single investor, contractor, or resource supplier. Therefore, economic resilience should be assessed through a set of interrelated criteria, each of which reflects a particular mechanism through which resilience is generated or lost.

The basic components of such a system should include financial, investment, resource, operational, project-portfolio, market, adaptive, and inter-organizational resilience.

The financial component reflects the enterprise's ability to maintain sufficient liquid assets, service debt obligations, preserve a rational capital structure, and ensure the continuity of cash flows. Its assessment should consider not only absolute and relative indicators of liquidity, financial autonomy, and leverage, but also the temporal synchronization of cash inflows and outflows, volatility of operating cash flow, the structure of accounts receivable, and dependence on external financing.

The investment component characterizes the enterprise's capacity to maintain the economic efficiency of invested capital at an acceptable level of risk. In construction development, particular importance is attached to the duration of the investment cycle, the share of capital immobilized in unfinished projects, investment payback periods, the relationship between capital expenditures and generated cash flows, and the sensitivity of project value to changes in discount rates, resource prices, and implementation timeframes.

Resource resilience is determined by the enterprise's ability to ensure consistency between the resource requirements of the project portfolio and the volume of labor, material, technical, financial, and managerial resources that are actually available. The key objective is not maximum resource provision, but the creation of a sufficient reserve of capacity that enables deviations to be absorbed without maintaining an economically inefficient level of unused resources.

Operational resilience characterizes the enterprise's capacity to perform planned volumes of work while maintaining acceptable levels of cost, productivity, and quality. Its deterioration is manifested in rising costs, budget overruns, delays against implementation schedules, declining productivity, an increasing share of rework, and disruption of the technological sequence of project implementation.

The project-portfolio component is one of the most important for development activities. Economic resilience depends not only on the performance of an individual project, but also on the structure of the entire portfolio in terms of implementation stages, financing requirements, profitability, duration of the investment cycle, territorial and product diversification, risk exposure, and resource needs. Excessive concentration of similar projects or projects simultaneously entering their most capital-intensive stages may create a critical gap between the enterprise's economic capacity and its assumed project workload.

Market resilience characterizes the enterprise's ability to maintain sufficient demand, competitive positioning, and economic performance under changing market conditions. In development activities, it is associated with sales dynamics, the structure of demand, real estate prices, purchasing power, the accessibility of mortgage and investment financing, competition, and territorial characteristics of the market. The adaptive component reflects the capacity to modify business model parameters, project portfolio structure, resource proportions, and financing schemes in response to environmental changes. Its assessment should take into account the speed of response to deviations, the duration of the managerial decision-making cycle, the availability of alternative suppliers and financing sources, the possibility of reallocating resources among projects, and the level of digital support for managerial decision-making. A special role is assigned to the inter-organizational component, which characterizes the economic quality of the enterprise's interaction with other participants of the integrated structure. It includes counterparty reliability, the degree of mutual dependence, concentration of financial and resource flows, timeliness of obligations, allocation of economic risks, intensity of information exchange, and consistency of managerial decisions. High internal resilience may prove unstable if the enterprise is critically dependent on a single source of financing, a key contractor, or a dominant supplier.

From a systems perspective, inter-organizational interaction should be assessed using two complementary characteristics: the intensity of economic relationships and their criticality. A high degree of interaction intensity is not inherently negative, since it may generate synergy, reduce transaction costs, and accelerate project implementation. Risk arises when high intensity is combined with low counterparty substitutability, excessive concentration of resources or financing, and the absence of alternative channels for performing critical functions. Accordingly, an important element of the assessment should be the measurement of the concentration of inter-organizational dependencies. It is appropriate to assess the share of a key investor in project portfolio financing, the share of major suppliers in material provision, the concentration of contracted works, the share of major customers or buyers in revenue generation, and the proportion of intra-group transactions in the enterprise's total turnover. The critical issue is not integration itself, but such a configuration of integration in which the failure of one node can generate disproportionately large economic losses for the entire structure. Conceptually, economic resilience within an integrated construction development system should be assessed according to the principle of "condition – interaction – recovery capacity." The first block characterizes the current level of economic balance of the enterprise. The second reflects the quality of inter-organizational relationships and dependencies. The third determines the reserves that enable the system to absorb negative deviations and return to an acceptable development trajectory.

The methodological sequence of such an assessment should include the formation of a system of indicators; the determination of normative, target, or critical thresholds; normalization of indicators; assignment of weights; calculation of partial indices across functional components; assessment of inter-organizational dependencies; integration of results into a composite economic resilience index; identification of critical zones and reserves; and the formulation of managerial decisions aimed at restoring balance.

A fundamentally important requirement is to use not only the actual values of indicators but also their dynamics, volatility, and deviation from permissible limits. Two enterprises may demonstrate the same current liquidity ratio while having different levels of resilience if one maintains a stable trajectory and the other exhibits rapid deterioration. Consequently, the assessment system should incorporate static, dynamic, and risk-based projections.

The static projection reflects the current economic condition; the dynamic projection captures the direction and speed of change in key parameters; and the risk projection reflects the probability that indicators may exceed permissible ranges under the influence of internal and external factors. Combining these projections enables a transition from retrospective reporting of financial outcomes toward anticipatory diagnostics of emerging economic disequilibrium. It is also appropriate to apply a zonal approach under which each component is assigned normative or analytically substantiated ranges corresponding to resilient, acceptable, unstable, and critical states. Such an approach avoids an oversimplified classification of enterprises as merely “resilient” or “non-resilient” and makes it possible to reflect the depth of economic imbalance. At the same time, the criticality of a particular component should be determined not only by the absolute magnitude of deviation, but also by its systemic impact on other parameters of enterprise activity. For example, a liquidity deficit may delay settlements with contractors, which in turn slows construction works, extends implementation periods, increases financial costs, and reduces expected project profitability. Thus, one primary imbalance is transformed through inter-organizational channels into a set of secondary adverse effects. The assessment of economic resilience should therefore identify not only the presence of an imbalance, but also the mechanisms through which it propagates. For this purpose, the methodological toolkit should include a matrix of inter-organizational economic dependencies reflecting the key participants of the integrated structure and the main types of mutual flows: financial, resource-related, informational, contractual, and project-related. Each relationship may be assessed in terms of intensity, criticality, substitutability, stability, and disruption risk. This makes it possible to identify system-forming relationships whose breakdown poses the greatest threat to economic resilience.

Integrated assessment should be structured according to a hierarchical principle. At the first level, primary indicators are aggregated within individual functional components. At the second level, partial indices of financial, investment, resource, operational, project-portfolio, market, adaptive, and inter-organizational resilience are formed. At the third level, a composite indicator of the enterprise’s economic resilience is calculated. Weighting coefficients should reflect not only the expert significance of each component, but also its actual contribution to the overall risk of resilience loss.

In general form, the integral level of economic resilience of an enterprise may be expressed as:

$$I_{ES} = \sum_{k=1}^{n} w_k I_k$$

where I_{ES} is the integral economic resilience index of the enterprise; I_k is the normalized value of the partial index for the k-th component; w_k is the weighting coefficient of the respective component; and $\sum_{k=1}^{n} w_k = 1$.

However, a simple additive model has limitations because it allows a critically low value of one component to be fully compensated for by high values of others. In construction development, such compensation is not always economically acceptable. High profitability cannot offset critical insolvency, while sufficient resource potential cannot compensate for the absence of financing required to complete a project. Therefore, the integral index should be supplemented with a system of threshold constraints:

$$I_k \geq I_k^{crit}$$

where I_k^{crit} is the minimum acceptable value of the respective resilience component.

If the critical threshold is breached for at least one system-forming component, the overall condition of the enterprise should not be classified as resilient regardless of the average integral value. Such an approach combines the compensatory mechanism of multicriteria assessment with the logic of economic constraints.

For integrated structures, it is advisable to introduce into the general model an inter-organizational dependence coefficient reflecting the scale of potential transmission of a negative economic impulse among participants:

$$I_{ES}^{*} = I_{ES} \times (1 - D_{int})$$

where D_{int} is the aggregated level of critical inter-organizational dependence normalized within the range from 0 to 1.

The greater the concentration of dependence on economically critical counterparties and the lower the possibility of their substitution, the stronger the corrective effect of D_{int} on the actual level of resilience. Such a modification makes it possible to distinguish between the internal economic resilience of an enterprise and its actual resilience within the structure of inter-organizational relationships. A separate methodological block should involve the assessment of the resilience reserve. Its economic meaning lies in determining the distance between the enterprise’s actual condition and the critical threshold beyond which the continuity of project portfolio implementation becomes endangered. Such a reserve may be formed in terms of liquidity, debt exposure, resource capacity, implementation schedules, investment capital, profitability margins, and the availability of alternative resource or financing arrangements.

The resilience reserve should be used as a leading indicator. Even if the current condition of the enterprise formally remains within normative limits, a systematic reduction in the distance to the critical threshold indicates the accumulation of latent instability. Managerial intervention should therefore occur before formal thresholds are actually breached.

The assessment methodology should also account for the different time horizons of individual components of economic resilience. Liquidity and solvency are predominantly short-term characteristics; capital structure, portfolio efficiency, and resource provision are medium-term; investment returns, market position, adaptability, and the capacity to reproduce economic potential are medium- and long-term. Consequently, the final assessment should be generated across several time horizons rather than reduced to a single point-in-time indicator. Another important principle is the correspondence of assessment criteria to the stage of the development project life cycle. Financial and economic proportions differ considerably across the stages of acquiring land-use rights, design, preparatory works, active construction, commissioning, and sale of the completed property. Elevated debt exposure or negative operating cash flow during the investment stage may be economically justified, whereas the same characteristics at the project completion stage may signal declining resilience. Therefore, threshold values should be differentiated according to project implementation stages and the structure of the project portfolio.

The managerial significance of assessment lies not in generating a rating indicator as an end in itself, but in identifying the mechanisms through which economic equilibrium is disrupted and the parameters through which it can be restored. Diagnostic results should support the choice among alternative managerial decisions, including revising the portfolio structure, postponing the launch of new projects, optimizing debt exposure, changing financing sources, reallocating resources, diversifying suppliers and contractors, adjusting investment budgets, or redesigning the model of inter-organizational coordination.

Conclusions. The conceptual and methodological foundations for assessing the economic resilience of construction development enterprises should be formed through a combination of systems, process, multicriteria, risk-oriented, portfolio, and network approaches. The systems approach provides for viewing the enterprise as an element of an integrated economic structure; the process approach accounts for the interrelationship among operational, financial, and investment processes; the multicriteria approach reflects the multidimensional nature of assessment; the risk-oriented approach incorporates the probability and magnitude of deviations; the portfolio approach captures the interdependence of development projects; and the network approach assesses the channels through which economic impulses propagate among participants.

The proposed approach changes the logic of assessment from recording consequences toward diagnosing causes and potential development trajectories. Economic resilience in this interpretation is determined not by the absence of fluctuations and imbalances—which is virtually impossible in development activities—but by the capacity of both the enterprise and the integrated structure to keep deviations within economically controllable limits, localize their propagation, preserve functional integrity, and restore a balanced trajectory of project portfolio implementation. Accordingly, the outcome of the assessment should consist not only of an integral level of economic resilience, but also of a multidimensional diagnostic profile reflecting the current condition of functional components, the size of the resilience reserve, the configuration of inter-organizational dependencies, critical nodes of the integrated structure, the speed of deterioration or recovery of key parameters, and the potential scale of imbalance propagation. Such an architecture of analytical support provides the basis for moving from reactive management of individual financial and economic deviations toward preventive management of enterprise economic resilience within the multi-project environment of construction development.

References:

1. Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal, 28(13), 1319–1350. https://doi.org/10.1002/smj.640

2. Pettit, T. J., Fiksel, J., & Croxton, K. L. (2010). Ensuring supply chain resilience: Development of a conceptual framework. Journal of Business Logistics, 31(1), 1–21. https://doi.org/10.1002/j.2158-1592.2010.tb00125.x

3. Wang, T.-K., Zhang, Q., Chong, H.-Y., & Wang, X. (2017). Integrated supplier selection framework in a resilient construction supply chain: An approach via analytic hierarchy process (AHP) and grey relational analysis (GRA). Sustainability, 9(2), 289. https://doi.org/10.3390/su9020289

4. Chen, Z., Hammad, A. W. A., & Alyami, M. (2024). Building construction supply chain resilience under supply and demand uncertainties. Automation in Construction, 158, 105190. https://doi.org/10.1016/j.autcon.2023.105190

5. Lin, M., Ren, Y., Feng, C., & Li, X. (2024). Analyzing resilience influencing factors in the prefabricated building supply chain based on SEM-SD methodology. Scientific Reports, 14, 17393. https://doi.org/10.1038/s41598-024-65271-2

EVALUATION OF RENEWABLE ENERGY AND ENERGY EFFICIENCY POLICIES, MEASURES, AND TARGETS WITHIN GEORGIA'S NATIONAL ENERGY AND CLIMATE PLAN (NECP)

Arabidze G.,
Full Professor
Georgian Technical University; Faculty of Energy; Department of Thermal Energy, Energy Efficient Technologies, and Energy Audit;
77 Merab Kostava Street, Tbilisi, Georgia
Arabidze M.,
Professor
Ministry of Economy and Sustainable Development of Georgia, Head of the Department of Energy Efficiency and Renewable Energy Policy and Sustainable Development Department
Sanapiro Street # 2, Tbilisi-Georgia
Tsereteli O.
Georgian Technical University, Faculty of Power Engineering, PhD student
77 Merab Kostava Street, Tbilisi, Georgia
https://doi.org/10.5281/zenodo.21706913

Abstract

This study evaluates the renewable energy and energy efficiency policies set out in Georgia's National Energy and Climate Plan (NECP), along with the policy instruments and implementation mechanisms required to achieve them. The research is based on a comparative analysis of Georgia's energy legislation, national policy documents, energy balance, international statistical data, and energy sector development scenarios.The study examines the integration of renewable energy sources, the implementation of energy efficiency measures, and their contribution to energy security and decarbonization. It also assesses the (With existing measures) WEM and alternative development scenarios, analyzing their impact on energy independence, import dependency, and greenhouse gas emissions. The findings indicate that achieving the 2030 targets requires effective policy implementation, adequate public and private investment, and coordinated institutional action. Expanding renewable energy, improving energy efficiency, deploying energy storage systems, and modernizing energy infrastructure are identified as key priorities for strengthening Georgia's energy security, reducing dependence on imported energy resources, and supporting the transition to a low-carbon economy.

Keywords: Renewable energy; Energy efficiency; Energy security; National Energy and Climate Plan (NECP); Decarbonization; Energy policy; Energy planning.

1. Introduction:

Georgia's energy sector has undergone significant transformation over the past decade, driven by both the country's economic development and its commitment to fulfilling international energy and climate obligations. The continuous growth in energy demand, high dependence on imported fossil fuels, challenges arising from climate change, and the necessity of ensuring energy security have created the need for developing new approaches to energy policy.

Following the signing of the Association Agreement with the European Union and Georgia's accession to the Energy Community, the country's energy policy has gradually aligned with the European Union's legal and institutional framework. This process encompasses the liberalization of the energy market, the promotion of renewable energy development, improvements in energy efficiency, the reduction of greenhouse gas emissions, and the strengthening of energy security.

Modern energy policy is based on achieving a balanced implementation of the energy trilemma, which consists of energy security, economic efficiency, and environmental sustainability. In this context, the integration of renewable energy sources and the large-scale implementation of energy efficiency measures have become particularly important, as they not only reduce dependence on imported energy resources but also enhance the competitiveness of the national economy and contribute to achieving decarbonization objectives.

Georgia's energy consumption structure remains highly dependent on imported natural gas and petroleum products. At the same time, the upward trend in final energy consumption poses additional challenges for both energy security and the achievement of national climate targets. These circumstances further emphasize the importance of implementing energy efficiency measures and ensuring the effective utilization of domestic renewable energy resources.

In response to these challenges, in 2024 the Parliament of Georgia approved the "State Energy Policy of Georgia" together with its annex, the "National Energy and Climate Plan of Georgia (NECP)." For the first time, this strategic document integrates the key dimensions of energy security, energy efficiency, renewable energy, decarbonization, the energy market, and research and innovation into a single policy framework.

The NECP establishes quantitative targets for 2030; however, achieving these objectives largely depends on the effective implementation of planned measures, improvements in the investment environment, modernization of energy infrastructure, and the consistent implementation of energy policy. Therefore, assessing the mechanisms that ensure the achievement of these targets is of particular importance.

This article aims to provide a comprehensive assessment of the measures defined in Georgia's National Energy and Climate Plan, alternative development scenarios, and the effectiveness of the country's energy policy. Furthermore, it evaluates their impact on energy security, energy independence, decarbonization, and the prospects for renewable energy development.

2. Legislative and Policy Framework

On 27 June 2024, the Parliament of Georgia, upon the submission of the Government, adopted the country's updated Energy Policy Document and its annex — the National Integrated Energy and Climate Action Plan (NECP), alongside amendments to the Law of Georgia on Energy Efficiency and the Law of Georgia on Energy Efficiency of Buildings. This legislative framework provides the institutional foundation for the efficient use and saving energy, the development of resourceefficient technologies, the strengthening of energy security, and the implementation of climate change policies.

National Energy and Climate Plan of Georgia (NECP) has been developed in accordance with the requirements of Regulation (EU) 2018/1999 and represents the country's key strategic document for energy sector development until 2030.

The NECP is based on a multi-scenario modeling approach, which enables the assessment of alternative pathways for Georgia's energy sector development up to 2030. The scenarios consider different assumptions regarding economic growth, energy demand trends, renewable energy deployment, energy efficiency improvements, infrastructure development, and changes in energy supply patterns. In particular, the analysis includes a baseline scenario reflecting the continuation of existing policies and measures, as well as alternative scenarios incorporating additional policy interventions aimed at accelerating renewable energy integration, improving energy efficiency, reducing greenhouse gas emissions, and strengthening energy security.

By comparing scenario outcomes, the NECP identifies the most effective measures required to achieve Georgia's 2030 energy and climate targets while maintaining economic efficiency and system reliability.

In addition, the Law of Georgia on Energy Efficiency establishes the legal framework for improving energy efficiency across all sectors of the economy. Its primary function is to promote the rational and efficient use of energy resources, reduce energy consumption, decrease dependence on imported energy resources, and contribute to the achievement of national climate and decarbonization objectives. The law introduces obligations and mechanisms related to energy efficiency measures, including energy audits, energy management systems, energy efficiency obligations, and the implementation of policies aimed at reducing final energy consumption.

The Law of Georgia on Energy Efficiency of Buildings specifically regulates energy performance requirements for the building sector, which represents one of the largest energy-consuming sectors in Georgia. The law establishes minimum energy performance standards for new and existing buildings, introduces requirements for energy performance certification, and promotes the improvement of building thermal characteristics through renovation and modernization measures. Its main objective is to reduce energy demand for heating, cooling, and lighting while improving indoor comfort, reducing greenhouse gas emissions, and supporting the transition toward a more sustainable and energy-efficient building stock.

Together, these laws form a key component of Georgia's energy efficiency policy framework and serve as important instruments for implementing the objectives defined under the National Energy and Climate Plan (NECP) and aligning the country's legislation with the European Union's energy efficiency acquis.

Therefore, the contemporary legislative and policy framework creates the necessary conditions for the development of renewable energy and energy efficiency in Georgia. However, achieving the established objectives will largely depend on the effective enforcement of adopted legal provisions, strengthening institutional capacities, and attracting investment.

3. Scenario Assessment and Its Implications for Energy Security

Scenario modeling is considered one of the most effective instruments in modern energy planning, as it enables policymakers and researchers to evaluate not only potential changes in the energy balance but also the broader economic, environmental, and social implications of different development pathways. Unlike traditional forecasting approaches, scenario analysis does not aim to predict a single future outcome; rather, it explores multiple possible trajectories based on alternative assumptions regarding economic growth, energy demand, technological development, investment trends, policy implementation, and external factors. This approach reduces uncertainty in strategic decision-making and improves the ability of energy policy to respond to future challenges.

Within the framework of Georgia's National Energy and Climate Plan (NECP), scenario-based analysis plays a central role in assessing the feasibility of achieving the country's energy and climate objectives by 2030. The implementation of the measures defined in the NECP is expected to significantly contribute to increasing the share of renewable energy, improving energy efficiency, reducing greenhouse gas emissions, and strengthening energy security.

According to the NECP targets, Georgia aims to achieve a 27.4% share of renewable energy in gross final energy consumption by 2030. This target reflects the country's commitment to increasing the utilization of domestic renewable energy resources, reducing dependence on imported energy carriers, and improving the resilience of the national energy system. Expanding renewable energy capacity, particularly through hydropower, wind, solar, and other renewable sources, is considered a key mechanism for diversifying the energy mix and enhancing long-term energy independence.

In terms of climate objectives, Georgia has established a target of achieving a 47% reduction in greenhouse gas emissions by 2030 compared with the 1990 baseline, in accordance with its nationally determined contribution (NDC). Achieving this target requires coordinated measures across multiple sectors, including energy production, buildings, transport, industry, and infrastructure development. The energy sector remains a particularly important area, given its significant contribution to national emissions and its potential for emission reductions through renewable energy deployment and efficiency improvements.

The NECP also defines a comprehensive set of energy efficiency measures to be implemented in the buildings, transport, industrial, gas, and electricity sectors. These measures include improving the energy performance of buildings, modernizing infrastructure, introducing efficient technologies, and optimizing energy consumption patterns. As a result, the plan establishes quantitative targets for reducing energy consumption by 2030:

❖ Primary Energy Consumption (PEC): 5.45 million tonnes of oil equivalent (Mtoe);

❖ Final Energy Consumption (FEC): 5.00 million tonnes of oil equivalent (Mtoe).

These targets are particularly important from the perspective of energy security, as reducing energy demand decreases pressure on energy imports, lowers exposure to external market fluctuations, and improves the overall efficiency of the energy system.

The NECP evaluates four major development scenarios, which differ according to assumptions regarding energy generation structure, the level of renewable energy integration, energy efficiency improvements, investment requirements, and the achievement of decarbonization objectives. The scenarios provide a framework for comparing alternative energy transition pathways and assessing their implications for energy security, economic efficiency, and environmental sustainability.

From an energy security perspective, scenario analysis allows for the identification of pathways that minimize supply risks, reduce import dependency, and increase the flexibility and resilience of the energy system. Scenarios with higher levels of renewable energy deployment and improved energy efficiency demonstrate greater potential for strengthening domestic energy supply, reducing vulnerability to external energy price fluctuations, and supporting Georgia's transition toward a more sustainable and secure energy system.

3.1 With Existing Measures Scenario (WEM)

The With Existing Measures Scenario (WEM) represents a development pathway in which the energy sector evolves solely within the framework of currently implemented policies and measures, without introducing additional strategic initiatives or new policy interventions. This scenario serves as a baseline case for assessing the potential outcomes of maintaining the existing energy policy framework and provides a reference point for comparing alternative development pathways.

Under the WEM scenario, by 2030, the installed capacity of hydropower plants remains unchanged at approximately 3,407 MW, while wind power generation is represented only by the existing wind power plant with an installed capacity of 20 MW. Similarly, no significant expansion of thermal power generation capacity is assumed under this scenario. As a result, the structure of electricity generation remains largely unchanged, with limited diversification of domestic energy sources.

According to this scenario, electricity demand continues to increase due to economic growth, population dynamics, and rising energy consumption trends; however, the development of new generation capacities remains constrained. Consequently, the gap between electricity demand and domestic generation increases, leading to greater reliance on imported electricity and natural gas. This trend negatively affects Georgia's energy independence, increases exposure to external energy markets, and reduces the resilience of the national energy system.

From an energy security perspective, the WEM scenario represents the least effective development pathway, as energy supply reliability becomes increasingly dependent on external factors, including regional electricity markets, international energy prices, and geopolitical developments. Limited growth in domestic renewable energy capacity reduces opportunities for diversification of the energy mix and restricts the potential for reducing dependence on imported energy resources.

Furthermore, under the WEM scenario, Georgia faces significant challenges in achieving its renewable energy and decarbonization targets. The limited deployment of renewable energy sources and the absence of additional energy efficiency measures prevent the country from fully realizing the objectives defined within the National Energy and Climate Plan (NECP). Therefore, the WEM scenario highlights the need for additional policy measures, investment incentives, and accelerated development of renewable energy and energy efficiency solutions to ensure a more secure, sustainable, and resilient energy future.

3.2 National Integrated Energy and Climate Plan (NECP) Scenario

The baseline scenario of the National Energy and Climate Plan (NECP) is based on the large-scale deployment of renewable energy sources, the systematic implementation of energy efficiency measures, and the modernization of energy infrastructure. Unlike the With Existing Measures (WEM) scenario, the NECP scenario assumes the implementation of additional strategic measures aimed at transforming the energy system, increasing domestic generation capacity, reducing import dependency, and improving the overall resilience of the energy sector.

The scenario envisages the gradual development of various renewable energy technologies, including regulating hydropower plants, run-of-river hydropower plants, wind power plants, and solar photovoltaic installations. The expansion of these generation capacities significantly increases the contribution of domestic energy resources to the national energy mix and strengthens the diversification of electricity supply.

According to the NECP scenario, in addition to the existing generation capacities, by 2030 Georgia is expected to develop approximately:

❖ 430 MW of regulating hydropower capacity;
❖ 237 MW of run-of-river hydropower capacity;
❖ 730 MW of wind power capacity;
❖ 547 MW of solar power capacity.

These additional capacities represent the minimum level of renewable energy development required to meet the projected growth in electricity demand while maintaining system reliability and achieving the country's renewable energy and climate objectives.

From the perspective of energy security, the NECP scenario provides several important advantages:

- Reduction of dependence on imported energy resources through increased utilization of domestic renewable energy potential;
- Expansion of domestic electricity generation capacity, improving the balance between electricity supply and demand;
- Improvement of power system flexibility and resilience through diversification of generation sources;
- Reduction of seasonal electricity deficits, particularly during periods of increased demand and limited hydropower availability;
- Reduction of greenhouse gas emissions through the substitution of fossil fuel-based energy generation with renewable energy sources.

In addition to increasing renewable generation capacity, the implementation of energy efficiency measures plays a crucial role in achieving the objectives of the NECP scenario. Improvements in the energy performance of buildings, industrial efficiency, and optimized energy consumption patterns contribute to reducing final energy demand and lowering pressure on the energy system. As a result, the combined implementation of renewable energy development and energy efficiency measures enhances Georgia's energy independence, supports decarbonization objectives, and contributes to the creation of a more secure and sustainable energy system.

3.3 Alternative Scenario 1

The first alternative scenario considers the partial replacement of regulating hydropower plants with wind power generation combined with the deployment of energy storage systems. In terms of all other parameters, this scenario is consistent with the NECP baseline scenario and differs only in the structure of additional generation capacity. Specifically, the planned 430 MW of regulating hydropower capacity, with an estimated annual generation of approximately 1,500 GWh, is replaced by wind power capacity with equivalent technical characteristics.

Under this scenario, the integration of variable renewable energy sources requires the deployment of additional energy storage capacity. Therefore, the scenario assumes the installation of approximately 150 MW of battery energy storage systems to support system balancing, enhance flexibility, and ensure the reliable integration of wind generation into the electricity system.

This approach reflects one of the major global trends in modern energy system development — the integration of variable renewable energy sources with advanced energy storage technologies. The combination of wind generation and storage solutions enables greater utilization of renewable energy potential while addressing the variability challenges associated with weather-dependent generation sources.

The main advantages of this scenario include:

- Shorter construction and deployment periods compared with large-scale hydropower projects;
- Lower environmental impact, particularly in terms of land use and ecosystem disturbance;
- Greater diversification of the electricity generation mix and improved resilience of the energy system;
- More effective utilization of Georgia's wind energy potential.

However, this scenario also involves several important technical and economic challenges. The variability and intermittency of wind generation increase the need for advanced system balancing mechanisms and operational flexibility. Furthermore, the large-scale deployment of battery energy storage systems remains associated with significant investment costs, technological uncertainties, and the need for appropriate regulatory frameworks to support their integration into the power system.

Overall, Alternative Scenario 1 represents a transition pathway that prioritizes renewable energy diversification and technological innovation, while requiring additional investments in flexibility solutions to maintain electricity system reliability and security of supply.

3.4 Alternative Scenario 2

The second alternative scenario assumes the replacement of regulating hydropower generation with thermal power generation. Specifically, the 430 MW of regulating hydropower capacity, corresponding to approximately 1,500 GWh of annual electricity generation, is substituted with electricity generated by thermal power plants.

Although this approach reduces generation variability and provides a higher level of short-term system reliability due to the controllable nature of thermal generation, it significantly increases dependence on natural gas consumption, imported energy resources, and greenhouse gas emissions. The increased reliance on fossil fuel-based generation creates additional exposure to fluctuations in international energy prices and external supply risks.

From an energy security perspective, this scenario may improve the short-term stability and predictability of electricity supply by providing dispatchable generation capacity and enhanced system balancing capabilities. However, in the long term, it negatively affects Georgia's energy independence by increasing dependence on imported natural gas and limiting the potential for domestic renewable energy utilization.

Furthermore, the scenario is inconsistent with the country's long-term decarbonization objectives, as the increased role of thermal generation leads to higher greenhouse gas emissions and creates additional challenges in meeting national climate commitments.

3.5 Comparative Assessment of Scenarios

The analysis of the considered scenarios demonstrates that the success of energy policy depends not only on the development of new generation capacities but also on achieving an optimal combination of different technologies, energy sources, and system flexibility solutions.

The results of the study indicate that:

- The WEM scenario is insufficient to achieve the country's energy security and decarbonization objectives, as it maintains a high level of dependence on imported energy resources and limits the expansion of renewable energy capacity;
- The NECP scenario represents the most balanced pathway from economic, technical, and environmental perspectives, providing a comprehensive approach to renewable energy development, energy efficiency improvement, and energy system modernization;
- Alternative Scenario 1 demonstrates significant potential, particularly in the context of further development of energy storage technologies, as it enables greater integration of variable renewable energy sources while improving system flexibility;
- Alternative Scenario 2 increases short-term energy supply reliability due to the contribution of dispatchable thermal generation; however, it substantially increases climate-related and energy dependency risks by raising fossil fuel consumption and greenhouse gas emissions.

The comparative analysis confirms that the most optimal pathway for achieving Georgia's energy security objectives, decarbonization targets, and renewable energy goals is the comprehensive implementation of the measures defined under the NECP. This approach is based on the accelerated development of renewable energy sources, systematic improvement of energy efficiency, modernization of electricity infrastructure, and enhancement of overall power system flexibility and resilience.

Such a pathway enables Georgia to reduce dependence on imported energy resources, strengthen the reliability of energy supply, support the transition toward a low-carbon energy system, and ensure the long-term sustainability of the national energy sector.

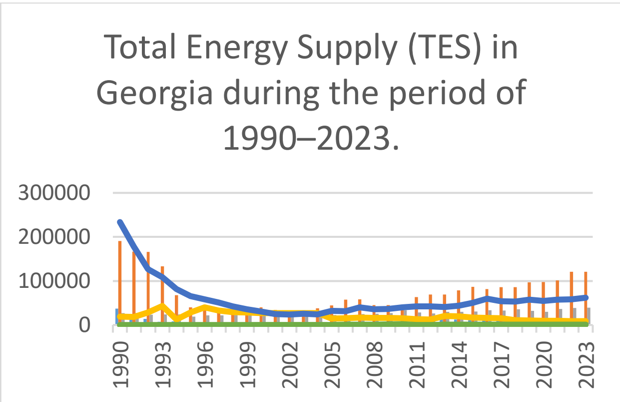
4. Analysis of Energy Sector Development Trends in Georgia and Assessment of Renewable Energy and Energy Efficiency Targets

4.1 Assessment of the Current Status and Performance of Georgia's Energy Sector

In recent years, Georgia's energy sector has been characterized by a sustained increase in energy demand, driven by the expansion of economic activity, urbanization processes, improvements in living standards, and the widespread adoption of energy-consuming technologies. While the growth in energy consumption reflects the country's socio-economic development, it also creates additional challenges related to energy security, sustainable resource management, and the fulfillment of environmental and climate commitments.

An analysis of Georgia's energy balance indicates that imported natural gas and petroleum products continue to dominate final energy consumption. Due to the limited availability of domestic fossil fuel resources, a significant share of primary energy supply remains dependent on imports. This dependence increases the exposure of the national economy and energy supply system to developments in international energy markets, including price volatility and external supply risks.

According to data from the International Energy Agency (IEA), Georgia's energy supply side remains highly dependent on imported resources, accounting for approximately 80% of total energy supply, while the remaining 20% is represented by domestically generated electricity. **Figure 1** presents the dynamics of Total Energy Supply (TES) in Georgia during the period of 1990–2023.



In this context, the effective utilization of local renewable energy resources and the enhancement of energy efficiency constitute not only key environmental priorities but also one of the most important instruments for ensuring energy security.

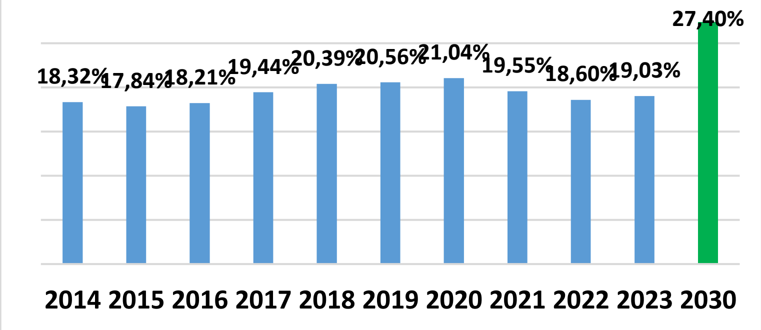
4.2 Assessment of Renewable Energy Target Indicators

The Integrated National Energy and Climate Plan of Georgia defines a target whereby the share of renewable energy in gross final energy consumption should reach 27.4% by 2030.

Achieving this target depends not only on the development of new power generation capacities but also on changes in the structure of final energy consumption. In particular, the consistent increase of renewable energy shares in the electricity, transport, and heating and cooling sectors is of critical importance.

The results of the study indicate that Georgia's initial position in the electricity sector is relatively favorable, as a significant share of electricity generation already comes from renewable energy sources. However, the deployment of renewable energy in the transport and heating and cooling sectors remains limited, representing one of the key challenges for achieving the established targets.

Figure 2 presents the trend in the share of renewable energy in the energy balance during 2014–2023, as well as Georgia's renewable energy target for 2030.



4.3 Assessment of Energy Efficiency Target Indicators

The main objective of energy efficiency policy is to reduce the growth rate of energy consumption while supporting economic development. In this regard, energy efficiency represents the most cost-effective energy resource, as saved energy provides an effect equivalent to the development of new generation capacity.

The primary and final energy consumption targets defined by Georgia's Integrated National Energy and Climate Plan require the systematic implementation of energy efficiency measures across all major sectors.

Particular attention should be given to:

- Energy efficiency improvements in buildings;
- Technological modernization of the industrial sector;
- Electrification of transport;
- Reduction of electricity and natural gas infrastructure losses;
- Implementation of energy management systems.

The combined implementation of these measures will contribute not only to reducing energy consumption but also to improving the overall efficiency and sustainability of the energy system.

5. Conclusions

And finally, we can conclude, that the sustainable development of Georgia's energy sector, strengthening of energy security, and achievement of decarbonization objectives significantly depend on the consistent and coordinated implementation of renewable energy and energy efficiency policies. The Integrated National Energy and Climate Plan (NECP) provides a strategic framework that integrates the objectives of energy development, climate change mitigation, energy security, and economic growth.

The comparative assessment of different scenarios revealed that the With Existing Measures (WEM) scenario is not sufficient to achieve the energy efficiency, renewable energy, and decarbonization targets set for 2030. Under this scenario, dependence on imported energy resources increases, which negatively affects both energy security and the country's economic resilience.

The study further confirms that the development scenario defined under the Integrated National Energy and Climate Plan represents the most balanced alternative in terms of energy security, economic efficiency, and environmental sustainability. Implementation of this scenario will enable the broader integration of renewable energy sources, improvement of energy consumption efficiency, reduction of greenhouse gas emissions, and gradual replacement of imported energy resources with domestic energy sources.

The findings of the study confirm that energy efficiency measures should not be considered as a separate component of energy policy, but rather as an additional "energy resource" that reduces the need for new generation capacity, enhances economic competitiveness, and lowers the overall costs of the energy system.

Based on the assessment conducted, it can be concluded that the long-term energy security of Georgia can only be ensured through the simultaneous implementation of the following measures:

- Accelerated development of renewable energy sources;
- Comprehensive implementation of energy efficiency measures;
- Modernization of electricity infrastructure;
- Development of energy storage technologies;
- Effective institutional implementation of energy policy and continuous monitoring.

To sum up, we can highlight that Georgia's long-term energy security, sustainable development, and decarbonization goals depend on the coordinated implementation of renewable energy and energy efficiency policies. The NECP provides a strategic framework, while achieving 2030 targets requires accelerated renewable energy deployment, improved energy efficiency, infrastructure modernization, energy storage development, and effective policy implementation.

References:

1. Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Georgia, of the other part. Annex XXV – Energy. Available at: https://www.asocireba.ge/show_article.php?id=30&id=30#ganmarteba
2. Protocol concerning the Accession of Georgia to the Treaty Establishing the Energy Community. Available at: https://www.asocireba.ge/show_article.php?id=226&id=226#vadebi
3. Law of Georgia on the Promotion of the Production and Use of Energy from Renewable Sources. Available at: https://www.matsne.gov.ge/ka/document/view/4737753?publication=1

4. Resolution of the Parliament of Georgia on the Approval of the Energy Policy of the State of Georgia. Available at: https://matsne.gov.ge/ka/document/view/6212458?publication=0

5. Law of Georgia on Energy Efficiency. Available at: https://matsne.gov.ge/ka/document/view/4873938?publication=6

6. International Energy Agency (IEA). Energy Statistics Data Browser – Georgia Energy Statistics. Available at: https://www.iea.org/data-and-statistics/data-tools/energy-statistics-data-browser?country=GEORGIA&fuel=Energy%20supply&indicator=TESbySource

7. National Statistics Office of Georgia (Geostat). Energy Balance of Georgia, 2023. Available at: https://www.geostat.ge/ka/modules/categories/864/sakartvelos-energetikuli-balansi-2023

8. Integrated National Energy and Climate Plan (NECP) of Georgia. Government of Georgia, Ministry responsible for Energy and Climate Policy.

9. Energy Community Secretariat. Georgia – Energy and Climate Governance Framework and Progress Reports. Available at: https://www.energy-community.org

10. European Commission. Clean Energy for All Europeans Package and Renewable Energy Directive framework. Available at: https://energy.ec.europa.eu/topics/renewable-energy_en

A QUANTITATIVE MODEL FOR THE TRANSITION FROM PRINT-ON-DEMAND OUTSOURCING TO IN-HOUSE MANUFACTURING IN SMALL PERSONALIZED-PRODUCT ENTERPRISES: THE PRINT-TO-IN-HOUSE TRANSITION (PTI) INDEX

Sholomii Y.
entrepreneur, independent researcher,
personalized-product manufacturing and cross-border e-commerce (Trender project),
USA
https://doi.org/10.5281/zenodo.21706915

Abstract

The rapid growth of print-on-demand (POD) has enabled small enterprises to sell personalized physical products with negligible upfront investment by outsourcing production to third-party fulfilment providers. As order volume grows, however, the per-unit premium embedded in POD pricing increasingly erodes profitability, and owners face a recurrent but under-formalized question: at what point should production be brought in-house? The make-or-buy and backshoring literatures address this decision qualitatively and at the level of large firms, while the mass-customization literature focuses on flexibility rather than the outsourced-to-insourced transition of a micro-enterprise. This study proposes the Print-to-In-house Transition (PTI) Index, a standardized and reproducible model that expresses the transition decision as a single dimensionless value derived from per-unit cost savings, monthly volume, and the capital expenditure required for in-house capability, benchmarked against a maximum acceptable payback horizon. The model is specified analytically and applied to cost data from a UV-printing personalized-electronics-accessories operation covering four product categories, and it is validated across five volume scenarios from 50 to 1,000 orders per month. Under the base case, the transition becomes financially justified at approximately 350 orders per month, but the threshold is strongly product-dependent, ranging, in the case data, from 189 units per month for high-savings items to 947 for low-savings items. The PTI Index offers small and medium producers of customized goods a transferable decision rule and can, in principle, be applied to other customized-production technologies — including laser engraving, DTF printing, and sublimation — by substituting the relevant cost and investment parameters.

Keywords: print-on-demand; in-house manufacturing; make-or-buy decision; mass customization; break-even analysis; personalized products; small and medium enterprises; transition index

Introduction

Personalized physical products — phone cases, apparel, drinkware, and accessories bearing custom names, images, or designs — have become one of the most dynamic segments of consumer e-commerce. Their commercial viability rests on a production paradigm known as print-on-demand (POD), in which an item is manufactured only after it is ordered, and in which the manufacturing step is typically outsourced to a specialized fulfilment provider. POD removes the two classical barriers to entry for a small producer: it eliminates inventory risk, because nothing is made until it is sold, and it eliminates upfront capital investment, because the seller does not own the production equipment. These properties have made POD the default entry route for micro-enterprises selling customized goods, and the global POD market has grown accordingly, valued at approximately USD 6.2 billion in 2022 and projected to expand at a compound annual growth rate of roughly 26% [11].

The same properties that make POD attractive at entry, however, impose a structural cost as a business scales. A POD provider prices each unit to cover its own materials, labour, equipment, overhead, and margin; the seller therefore pays a per-unit premium on every order in exchange for not owning production. While this premium is immaterial at low volume, it becomes the single largest controllable cost as order flow grows, because it scales linearly with every unit sold and is not diluted by volume. At sufficient scale, the cumulative premium paid to the outsourcing provider exceeds the cost of acquiring and operating the equipment in-house — at which point continued outsourcing represents a persistent and avoidable loss of margin.

The owner of a growing personalized-product business thus faces a recurring strategic decision: whether, and when, to transition from outsourced POD to in-house manufacturing. In practice this decision is frequently made by intuition, by imitation of competitors, or too late, after substantial margin has already been surrendered. It is a specific instance of the classical make-or-buy problem, but with characteristics that distinguish it from the settings in which that problem is usually studied: the decision-maker is a micro-enterprise rather than a corporation; the product is customized rather than standardized; the "buy" option is a modern digital-fulfilment service rather than a component supplier; and the "make" option requires a relatively modest but non-trivial investment in accessible digital-printing equipment such as UV printers, direct-to-film (DTF) systems, or sublimation lines.

Despite the practical importance and frequency of this decision, no standardized, quantitative, and reproducible model exists to determine the point at which the transition becomes optimal for such enterprises. The academic literature offers qualitative frameworks and factor lists for make-or-buy and reshoring decisions, and a rich body of work on the economics of mass customization, but none of these yields a single, computable decision rule tailored to the outsourced-to-insourced transition of a small personalized-product producer.

This study addresses that gap by proposing the Print-to-In-house Transition (PTI) Index. The objectives of the study are threefold: (1) to formulate a transparent analytical model that reduces the transition decision to a single dimensionless index derived from observable cost and volume parameters; (2) to apply the model to real cost data from an operating personalized-product manufacturer across four product categories; and (3) to validate the model across a range of business-growth scenarios and to characterize the sensitivity of the transition threshold to the key parameters. The remainder of the paper is organized in the conventional IMRAD form: a review of the relevant literature, the methodology and model specification, the results of the scenario analysis, a discussion of their implications and limitations, and conclusions with directions for future research.

Literature Review

The make-or-buy decision

The question of whether a firm should produce internally or procure externally is one of the foundational problems of the theory of the firm. Transaction cost economics frames it as a comparison of the governance costs of internal organization against those of market exchange, with asset specificity, uncertainty, and transaction frequency as the principal determinants of the efficient boundary of the firm [1]. Subsequent operations-management research operationalized this insight into managerial frameworks. Fine and Whitney characterized the make-buy decision as itself a potential core competence, emphasizing dependency on knowledge and on capacity [2]. Cánez, Platts, and Probert developed a structured, multi-stage framework linking make-or-buy choices to technology, cost, and strategic considerations [12]. McIvor synthesized transaction-cost and resource-based perspectives into an integrated outsourcing-evaluation process [13]. A recurring theme across this literature is that cost, although necessary, is treated as one factor among many strategic, technological, and relational considerations, and that the analysis is generally qualitative and firm-level rather than reduced to a computable operating threshold.

Complementary to the cost comparison itself, the total-cost-of-ownership perspective argues that purchasing decisions must account for the full set of costs associated with a sourcing choice rather than price alone [3]. This perspective is directly relevant to POD, where the visible per-unit price paid to the provider is the entire "buy" cost, whereas the in-house alternative distributes cost across materials, labour, energy, and capital.

Reshoring, backshoring, and the relocation of production

The decision to move production back into the firm or the home region has been studied intensively under the labels reshoring and backshoring. Gray and colleagues drew scholarly attention to reshoring as a distinct phenomenon and set out a research agenda for it [4]. Stentoft, Olhager, Heikkilä, and Thoms provided a systematic review of the backshoring literature, extracting and clustering the factors that drive relocation into categories including cost, quality, time and flexibility, and access to skills [5]. Wiesmann and colleagues reviewed the drivers of and barriers to reshoring as "offshoring in reverse," again organizing the evidence into qualitative factor clusters [6]. This body of work establishes that relocation decisions are multi-dimensional and that efficiency-seeking motives — chiefly cost — are consistently among the most frequently cited drivers. However, it addresses relocation at the level of established manufacturing firms and geographic supply chains, and it does not provide a quantitative rule applicable to a micro-enterprise deciding whether to internalize an outsourced digital-manufacturing service.

The economics of mass customization

Personalized products are the commercial expression of mass customization — the production of goods tailored to individual customer requirements at costs approaching those of mass production. Pine's foundational treatment established mass customization as a competitive paradigm [9]. Da Silveira, Borenstein, and Fogliatto reviewed the literature and identified the success factors and enablers of mass customization [7], and Fogliatto, Da Silveira, and Borenstein later provided an updated decade review addressing its economics, enablers, and customer–manufacturer interaction [8]. This literature explains why personalized products command a price premium and how flexible production supports them, but it is concerned primarily with the design and operation of customized production systems rather than with the sourcing question of whether that production should be outsourced or internalized at a given scale.

Print-on-demand and digital manufacturing

The POD model itself has been examined largely as a market and technology phenomenon: the expansion of digital print engines, textile inkjet, and related additive and customized-production technologies has lowered the minimum efficient scale of customized manufacturing and enabled the small-batch, made-to-order economics on which POD depends [11]. This trend is precisely what makes in-house production accessible to small enterprises today, and thus what makes the transition question both live and tractable: the equipment required to internalize POD is now affordable to a micro-enterprise.

Research gap

Taken together, the literature provides (i) qualitative, firm-level frameworks for make-or-buy and reshoring decisions; (ii) a total-cost lens on sourcing; and (iii) an account of the economics and enablers of mass customization. What is missing is a standardized, quantitative, and reproducible decision model for the specific and increasingly common case of a small personalized-product enterprise transitioning from outsourced POD to in-house digital manufacturing — a model that yields an explicit, computable threshold as a function of the operation's own cost structure and order volume. The PTI Index proposed below is intended to fill this gap.

Methodology

Model overview and assumptions

The model compares two production regimes for an identical set of personalized products: the outsourced regime, in which each unit is produced by a POD provider at a known per-unit price, and the in-house regime, in which the enterprise acquires digital-printing equipment and produces each unit itself. The decision variable is the transition from the first regime to the second. The model is deterministic and operates on average monthly figures. It rests on the following assumptions, each of which is revisited in the Discussion: (a) product selling prices and the outsourced per-unit prices are known and stable; (b) in-house per-unit operating cost can be estimated from materials, packaging, labour, and energy; (c) in-house capability requires a one-time incremental capital expenditure; and (d) the firm applies a maximum acceptable payback horizon as its investment threshold. Depreciation of the equipment is treated as part of the capital decision (through the payback analysis) rather than double-counted in the operating cost, so that the per-unit savings used below are, if anything, a conservative estimate of the true cash savings.

Definitions and formulation

For each product i, let p_i denote the outsourced (POD) per-unit cost and c_i the in-house per-unit operating cost. The per-unit saving realized by producing in-house is

S_i = p_i − c_i

Let Q_i denote the monthly volume of product i. The total monthly cost saving obtained by internalizing production across the product portfolio is

M = Σ (S_i × Q_i)

Let I denote the incremental capital expenditure required to establish in-house capability (equipment, tooling, and setup), and let P_max denote the firm's maximum acceptable payback horizon, expressed in months. The **Print-to-In-house Transition (PTI) Index** is defined as

PTI = (M × P_max) / I

The index expresses the ratio of the cost savings accumulated over the acceptable payback horizon to the investment required to obtain them. It is dimensionless and admits a direct interpretation: because the simple payback period is P = I / M [10], the index equals P_max / P. Therefore PTI ≥ 1 if and only if the investment is recovered within the acceptable horizon, and the index scales linearly with volume. The **transition break-even volume** Q* is the monthly order volume at which PTI = 1; for a fixed product mix with blended per-order saving S̄, it is

*Q\ = I / (S̄ × P_max)**

Decision rule

The index is mapped to a recommended production strategy through the following thresholds, chosen so that the transition is advised once payback comfortably meets the firm's horizon and prioritized once it does so with a wide margin:

- PTI < 0.75: retain outsourced POD;
- 0.75 ≤ PTI < 1.25: hybrid operation and preparation for transition;
- 1.25 ≤ PTI < 2.0: transition to in-house production;
- PTI ≥ 2.0: full in-house production as a priority.

Data

The model is applied to cost data from an operating personalized-product manufacturer using UV printing to decorate accessories for consumer electronics and related customized goods. Four representative product categories are used: a phone case, a laptop (MacBook) case, a printed T-shirt, and a ceramic mug. For each, the outsourced per-unit price and the in-house cost structure (materials, packaging, labour, and combined energy and depreciation) were recorded from operating practice. These figures are reported in the Results section. A representative product mix of 40% phone cases, 25% T-shirts, 20% mugs, and 15% laptop cases is used to compute blended, portfolio-level results, reflecting the higher order frequency of lower-priced items.

Parameters and validation design

The base case sets the incremental capital expenditure at I = USD 25,000, representing a combined digital-production setup (a UV printer together with complementary equipment for textile and sublimation output, tooling, and installation), and the maximum acceptable payback horizon at P_max = 12 months, adopted here as a representative capital-decision horizon for a small enterprise. Because I is the least directly observable parameter, a one-way sensitivity analysis is performed over the range USD 15,000–40,000. The model is validated across five business-growth scenarios — 50, 100, 300, 500, and 1,000 orders per month — and for each scenario the monthly saving, PTI Index, payback period, and recommended strategy are computed. In addition, a per-product break-even volume is computed to expose the heterogeneity of the transition point across the portfolio.

Results

Cost structure and per-unit savings

Table 1 reports the outsourced (POD) per-unit cost, the in-house per-unit operating cost, and the resulting per-unit saving for each product category, together with the saving expressed as a share of the outsourced cost.

Table 1.

Per-unit cost comparison and savings by product category (USD).

Product	POD cost	In-house cost	Saving	Saving (% of POD)
Phone case	12.50	6.50	6.00	48.0
MacBook case	24.00	13.00	11.00	45.8
T-shirt	15.00	9.20	5.80	38.7
Ceramic mug	8.50	6.30	2.20	25.9

The in-house operating cost is itself composed of materials, packaging, labour, and combined energy and depreciation, as shown in Table 2. Across the four categories, in-house production reduces per-unit cost by between 25.9% and 48.0% relative to outsourcing, with the absolute saving ranging from USD 2.20 for the mug to USD 11.00 for the laptop case.

Table 2.

In-house per-unit operating cost structure (USD).

Product	Materials	Packaging	Labour	Energy & depreciation	Total
Phone case	3.20	0.60	2.00	0.70	6.50
MacBook case	7.50	0.80	3.50	1.20	13.00
T-shirt	5.00	0.70	2.50	1.00	9.20
Ceramic mug	2.80	0.70	2.00	0.80	6.30

For the representative product mix, the blended per-order saving is $\bar{S}$ = USD 5.94.

Per-product transition break-even

Applying the break-even expression to each product individually, using the base-case investment and payback horizon, yields the monthly single-product volume at which internal production would recover the investment within twelve months (Table 3). The threshold varies almost fivefold across the portfolio, driven entirely by the magnitude of the per-unit saving: the high-saving laptop case justifies in-house production at only 189 units per month, whereas the low-saving mug requires 947 units per month.

Table 3.

Per-product transition break-even volume (units/month; I = USD 25,000, P_max = 12).

Product	Per-unit saving (USD)	Break-even volume (units/month)
MacBook case	11.00	189
Phone case	6.00	347
T-shirt	5.80	359
Ceramic mug	2.20	947

Scenario validation

Table 4 reports the PTI Index, monthly saving, payback period, and recommended strategy for the five volume scenarios under the base case, using the blended product mix. The index rises linearly with volume: the transition is not justified at 50 or 100 orders per month, becomes a hybrid-preparation case at 300, crosses the transition threshold at 500, and becomes a clear priority at 1,000. The blended transition break-even occurs at Q* = 351 orders per month.

Table 4.

Validation scenarios (blended mix; I = USD 25,000; P_max = 12 months).

Orders/month	Monthly saving (USD)	PTI	Payback (months)	Recommended strategy
50	297	0.14	84.2	Retain POD
100	594	0.29	42.1	Retain POD
300	1,782	0.86	14.0	Hybrid / prepare
500	2,970	1.43	8.4	Transition to in-house
1,000	5,940	2.85	4.2	Full in-house (priority)

Sensitivity to capital expenditure

Because the required investment is the least directly observable parameter, Table 5 reports the blended transition break-even volume for three levels of I. The threshold moves approximately proportionally with the investment, from 210 orders per month at USD 15,000 to 561 orders per month at USD 40,000. Even at the upper bound, the transition is justified well below the operating ceiling of a single production line.

Table 5.

Sensitivity of the transition break-even volume to capital expenditure.

Capital expenditure I (USD)	Break-even volume Q* (orders/month)
15,000	210
25,000	351
40,000	561

Discussion

Interpretation of the findings

The results yield a clear and previously unformalized decision structure. First, there exists a well-defined volume threshold below which outsourcing is economically correct and above which internal production is: continued reliance on POD is rational for a nascent business but becomes a persistent margin loss once volume passes the break-even point, which under the base case lies near 350 orders per month. Second, and less obviously, the transition threshold is not a single number but a property of the individual product, governed by the magnitude of its per-unit saving. A product with a large absolute saving, such as the laptop case, justifies internalization at less than half the volume required by a low-saving product such as the mug. This has an immediate operational consequence that the aggregate figure conceals: a rational transition is selective and sequenced, beginning with the highest-saving items and extending to lower-saving items only as total volume grows. The PTI Index captures both effects within a single expression, because the monthly saving M aggregates the volume and the per-unit saving of every product simultaneously.

Relation to prior work

The model extends the make-or-buy and backshoring literatures in a specific and useful way. Those literatures establish that cost is a dominant, efficiency-seeking driver of internalization decisions [4, 5, 6] but treat the decision qualitatively and at firm level [1, 2, 12, 13]. The PTI Index operationalizes precisely that efficiency-seeking dimension for the micro-enterprise case, converting a multi-factor qualitative judgement into a computable threshold without denying the relevance of the non-cost factors, which are discussed below as boundary conditions. In doing so it complements, rather than contradicts, the total-cost-of-ownership perspective [3]: the outsourced price is the full "buy" cost, and the model makes explicit the volume at which the distributed in-house cost plus amortized capital becomes the cheaper alternative. Relative to the mass-customization literature [7, 8, 9], which explains why personalized products are viable and how flexible production supports them, the present model addresses the orthogonal and downstream question of who should own that production at a given scale.

Managerial implications

For the owner of a personalized-product business, the model offers an objective and transferable decision rule to replace intuition or imitation. Three implications follow directly. First, the transition should be planned in advance and triggered by a measured volume threshold rather than reacted to after margin has been lost. Second, the transition should be sequenced by product, internalizing high-saving items first; the per-product break-even volumes provide an explicit ordering. Third, a hybrid regime — internalizing the highest-saving, highest-volume items while continuing to outsource the remainder — is not merely a compromise but, under the model's assumptions, the economically optimal configuration over a broad middle range of volumes, corresponding to the PTI band between 0.75 and 1.25.

Limitations

Several limitations qualify these findings. The model is deterministic and static: it uses average monthly volumes and stable prices, and it does not represent demand volatility, seasonality, or the risk that internalized capacity is left underutilized. It is calibrated on cost data from a single operation and four product categories; while the cost structure is representative of UV-based customized production, the specific parameter values are not claimed to be universal. The capital expenditure is the least observable parameter and was therefore treated through sensitivity analysis rather than as a fixed input. Most importantly, the model deliberately isolates the cost dimension of a decision that the broader literature shows to be multi-dimensional [5, 6]: it does not quantify quality control, lead-time reduction, design confidentiality, learning effects [14], or the strategic value of owning production capability, all of which tend to favour internalization and which therefore make the cost-based threshold a conservative one. The PTI Index should accordingly be read as a necessary financial condition and a lower bound on the case for transition, to be combined with the qualitative considerations established in prior work.

Conclusion

This study proposed the Print-to-In-house Transition (PTI) Index, a standardized and reproducible model that reduces the decision of whether a small personalized-product enterprise should move from outsourced print-on-demand to in-house manufacturing to a single, interpretable, dimensionless value derived from the operation's own cost structure, order volume, required investment, and payback threshold. Applied to cost data from a UV-printing personalized-products operation and validated across five growth scenarios, the model locates the base-case transition near 350 orders per month while revealing that the true threshold is product-specific, ranging from 189 to 947 units per month according to per-unit savings, and that a sequenced, hybrid transition is economically optimal over a broad middle range of volumes.

The principal contribution is methodological: the PTI Index gives small and medium producers of customized goods, and the researchers who study them, an explicit and transferable decision rule where previously only qualitative, firm-level guidance existed. The model is not specific to any one technology and can be applied, without structural change to its formulation, to UV printing, laser engraving, direct-to-film printing, sublimation, and other accessible customized-production environments, in each case by substituting the relevant cost and investment parameters and subject to empirical validation in those settings.

Future research should extend the model in three directions: empirical validation across multiple firms and product categories to test the generality of the observed thresholds; incorporation of stochastic demand and capacity utilization to move from a deterministic to a risk-adjusted transition criterion; and integration of the non-cost factors identified in the make-or-buy and backshoring literatures, so that the financial threshold provided by the PTI Index can be combined with quality, lead-time, and strategic considerations within a single decision-support tool.

References:

1. Williamson, O. E. (1985). The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting. New York: Free Press.
2. Fine, C. H., & Whitney, D. E. (1996). Is the Make-Buy Decision Process a Core Competence? Cambridge, MA: MIT Center for Technology, Policy and Industrial Development.
3. Ellram, L. M. (1995). Total cost of ownership: an analysis approach for purchasing. International Journal of Physical Distribution & Logistics Management, 25(8), 4–23.

4. Gray, J. V., Skowronski, K., Esenduran, G., & Rungtusanatham, M. J. (2013). The reshoring phenomenon: what supply chain academics ought to know and should do. Journal of Supply Chain Management, 49(2), 27–33.

5. Stentoft, J., Olhager, J., Heikkilä, J., & Thoms, L. (2016). Manufacturing backshoring: a systematic literature review. Operations Management Research, 9(3–4), 53–61.

6. Wiesmann, B., Snoei, J. R., Hilletofth, P., & Eriksson, D. (2017). Drivers and barriers to reshoring: a literature review on offshoring in reverse. European Business Review, 29(1), 15–42.

7. Da Silveira, G., Borenstein, D., & Fogliatto, F. S. (2001). Mass customization: literature review and research directions. International Journal of Production Economics, 72(1), 1–13.

8. Fogliatto, F. S., Da Silveira, G. J. C., & Borenstein, D. (2012). The mass customization decade: an updated review of the literature. International Journal of Production Economics, 138(1), 14–25.

9. Pine, B. J. (1993). Mass Customization: The New Frontier in Business Competition. Boston: Harvard Business School Press.

10. Horngren, C. T., Datar, S. M., & Rajan, M. V. (2015). Cost Accounting: A Managerial Emphasis (15th ed.). Harlow: Pearson.

11. Grand View Research. (2024). Print-on-Demand Market Size, Share & Trends Analysis Report. San Francisco: Grand View Research.

12. Cánez, L. E., Platts, K. W., & Probert, D. R. (2000). Developing a framework for make-or-buy decisions. International Journal of Operations & Production Management, 20(11), 1313–1330.

13. McIvor, R. (2009). How the transaction cost and resource-based theories of the firm inform outsourcing evaluation. Journal of Operations Management, 27(1), 45–63.

14. Anderson, E. G., & Parker, G. G. (2002). The effect of learning on the make/buy decision. Production and Operations Management, 11(3), 313–339.

JURISPRUDENCE

THE 1925 CORRECTIONAL LABOR CODE OF AZERBAIJAN SSR AND ITS FEATURES

Humbatov M.
Baku City, the Republic of Azerbaijan

AZƏRBAYCAN SSR-NİN 1925-Cİ İL İSLAH-ƏMƏK MƏCƏLLƏSİ VƏ ONUN XÜSUSİYYƏTLƏRİ

Hümbətov M.H.
Azərbaycan Respublikası, Bakı şəhəri
https://doi.org/10.5281/zenodo.21706917

Abstract

The first Correctional Labor Code of the Azerbaijan SSR is analyzed, its features that differ from subsequent codes are considered, and its importance in the development of punishment enforcement legislation is touched upon.

Xülasə

Azərbaycan SSR-nin ilk İslah-Əmək Məcəlləsi təhlil edilir, onun sonrakı məcəllələrdən fərqli xüsusiyyətləri nəzərdən keçirilir, cəzaların icrası qanunvericiliyinin inkişafındakı əhəmiyyətinə toxunulur.

Keywords: Azerbaijan SSR, Criminal Code, Correctional Labor Code, Code of Execution of Sentences, rules for the execution of sentences in the form of deprivation of liberty and correctional labor.

Açar sözlər: Azərbaycan SSR, Cinayət Məcəlləsi, İslah-Əmək Məcəlləsi, Cəzaların İcrası Məcəlləsi, azadlıqdan məhrum etmə və islah işləri növündə cəzaların icrası qaydaları.

Azərbaycan dövlətinin cəzaların icrasını tənzimləyən qanunvericiliyi XX əsrin iyirminci illərindən başlayaraq formalaşmağa başlamışdır. Yüz ildən artıq tarixə malik olan həmin qanunvericiliyin keçdiyi inkişaf yolu tərəfimizdən əvvəllər üç əsas mərhələyə bölünərək qısa şəkildə təhlil edilmişdir [1, Səh. 13–19, 2, Səh. 31]. Həmin qanunvericiliyin inkişafinda əhəmiyyət kəsb edən normativ hüquqi aktlar arasında Azərbaycan SSR (bundan sonra ASSR) Mərkəzi İcraiyyə Komitəsi tərəfindən qəbul edilmiş və 25 may 1925-ci il tarixdən qüvvəyə minmiş ilk İslah-Əmək Məcəlləsi (bundan sonra Məcəllə) özünəməxsus xüsusi yer tutur. Belə ki, Məcəllə Azərbaycanda cəzaların icrasını tənzimləyən ilk məcəlləşdirilmiş qanunverici akt olmuşdur. İlkin qeyd olunmalıdır ki, Məcəllə məzmun və struktur etibarı ilə o zaman sabiq SSRİ-nin tərkibindəki respublikalarda, o cümlədən Rusiya Sovet Federativ Sosialist Respublikasında 1924-cü ildə qəbul edilmiş İslah-Əmək Məcəlləsinə demək olar ki, tam oxşar olmuşdur. Məcəllə, digər respublikalarda olduğu kimi, müvafiq dövrdə Cinayət Məcəlləsinə daxil edilmiş cəzaların yalnız ikisinin, yəni azadlıqdan məhrum etmə və azadlıqdan məhrum etmə yerlərinə yerləşdirilmədən məcburi işlərin (bundan sonra islah işləri) icra qayda və şərtlərini müəyyən etsə də, ölkənin Rusiya imperiyasının tərkibində olduğu dövrdəki müvafiq qanunvericiliklə müqayisədə özünün humanistliyi ilə diqqəti cəlb edir. Eyni zamanda, Məcəllə, dünya penitensiar təcrübəsinin mütərəqqi ideyalarından bəhrələnsə də, sabiq SSRİ-də formalaşmış inzibati-amirlik sistemi şəraitində qəbul edildiyinə görə həmin dönəmin tələblərinə uyğun olaraq özündə sinfi yanaşmanı əks etdirirdi. Onu da vurğulamaq lazımdır ki, 1930-cu ilin aprel ayında SSRİ-də cəzaların icrası QULAQ kimi tanınan sistemə, yəni İslah-əmək düşərgələri Baş İdarəsinə tabe etdirildikdən sonrakı, xüsusilə ölkədəki repressiya illərində, cəzaların icrası bir qayda olaraq Daxili İşlər Xalq Komissarlığının (bundan sonra DİXK) normativ hüquqi aktlarına əsasən həyata keçirilməyə başladı. Nəticədə, 1961-ci ilin birinci yarısına kimi SSRİ-nin digər respublikalarında olduğu kimi, Azərbaycanda da təcrübədə Məcəllənin bir sıra normalarına demək olar ki, riayət olunmadığı müşahidə edilirdi [3, c. 9].

Məcəllənin hüquqi baxımdan xarakterizə olunması, cəzaların icrasını tənzimləyən digər qanunlarla, yəni sonrakı müvafiq məcəllələrlə müqayisə edilməsindən əvvəl, onun strukturunun, maraq kəsb edən institutlarının, normalarının ayrı-ayrılıqda və qısa şəkildə nəzərdən keçirilməsini məqsədəuyğun hesab edirik. Struktur baxımından Məcəllə ümumi müddəalardan, on hissədən, on beş fəsildən və 225 maddədən ibarət olmuşdur. Bir qrup maddələrə aydınlıq gətirilməsi məqsədilə onlar ayrıca qeydlərlə müşayiət olunurdu. Məcəllənin böyük hissəsi azadlıqdan məhrum etmə cəzasının icrasının təşkili ilə bağlı olmuş, islah işləri növündə cəzanın icrasına isə, ayrıca bir fəsil və iyirmi bir maddə həsr edilmişdi. Təhlil göstərdi ki, ASSR Ali Soveti Rəyasət Heyətinin 29 iyul 1961-ci il tarixli Fərmanı ilə təsdiq edilmiş "Azərbaycan SSR Daxili İşlər Nazirliyinin islah-əmək koloniyaları və həbsxanaları haqqında Əsasnamə"nin (bundan sonra Əsasnamə) qəbuluna kimi qüvvədə olduğu müddət ərzində Məcəlləyə edilmiş əlavə və dəyişikliklər, habelə DXİK-in qəbul etdiyi normativ hüquqi aktları, bir qayda olaraq, sözügedən qanunla tənzimlənən cəza növlərinin icrası qayda və şərtlərinin sərtləşdirilməsi, yəni müəyyən edilmiş qadağanların siyahısının genişləndirilməsi, məhkumların hüquq və azadlıqlarının dairəsinin isə məhdudlaşdırılması ilə bağlı olmuşdur. Qeyd etmək istərdik ki, sözügedən Əsasnamə sinfi yanaşmadan və QULAQ sistemindən imtina edərək, azadlıqdan məhrum etmə yerləri, azadlıqdan məhrum etmə cəzasının icrası qayda və şərtləri ilə əlaqədar vacib müddəaları nəzərəçarpacaq şəkildə dəyişdirmişdi. Lakin cəmi 61 maddədən ibarət olan və yalnız azadlıqdan məhrum etmə cəzasının icrasını tənzimləyən Əsasnamə, sözügedən cəzanın icrası ilə bağlı bir sıra institutlara, yəni məhkumların hüquq və azadlıqlarının həyata keçirilməsi mexanizmlərinə, azadlıqdan məhrum etmə yerlərinə başçəkmələrə, habelə islah-əmək müəssisələrinin fəaliyyəti ilə bağlı tənzimlənməsi vacib olan digər məsələlərə ümumi şəkildə və ya ümumiyyətlə toxunmadığı səbəbindən, o, Məcəlləni əvəz etməmiş və ayrı qanunvericilik aktı kimi fəaliyyət göstərmişdi. Əsasnamənin əksəriyyət müddəaları sonradan 23 dekabr 1970-ci ildə qəbul edilmiş ASSR-nin İslah-Əmək Məcəlləsinə (bundan sonra İƏM) daxil edilmişdi.

Ümumi müddəalar. Məcəllənin giriş hissəsində onun məqsədi, vəzifələri, habelə, islah-əmək müəssisələrinin yaradılmasının, məhkumlara göstərilən islah-əmək təsirinin hədəfləri, sosial müdafiə tədbirlərinin tətbiqi baxımından məhkumların müxtəlif növlü müəssisələrə bölüşdürulməsi, cəza çəkən şəxslərə xərclənən vəsaitin, islah etmənin məqsədləri nəzərə alınmaqla, məhkumların əməyindən alınan gəlir hesabına ödənilməsi, cinayətkarlıqla mübarizənin və residivin xəbərdarlığı baxımından azadlıqdan məhrum etmə yerlərindən azad edilmiş şəxslərə müxtəlif yönümlü köməklik göstərilməsi məsələləri ümumi və çox qısa şəkildə öz əksini tapmışdı.

İslah-əmək fəaliyyətinin mərkəzi və yerli orqanları. Məcəllə ilə Azərbaycanda azadlıqdan məhrum etmə yerlərinin (həbs edilmiş şəxslərin, məhkumların saxlandığı müəssisələrin) idarə olunması ASSR DİXK-in Həbs yerləri şöbəsinə (bundan sonra Şöbə) və Naxçıvan Muxtar Sovet Sosialist Respublikasının (bundan sonra Naxçıvan MSSR) Həbs yerləri müfəttişliyinə (bundan sonra Müfəttişlik) həvalə edilmişdi. Dağlıq Qarabağ Muxtar Vilayətinin (bundan sonra DQMV) Həbs yerləri Müfəttişliyi yerli idarəetmə orqanı olmaqla, ASSR DİXK-in ümumi nəzarəti altında, onun sərəncam və göstərişləri əsasında fəaliyyət göstərirdi. Şöbənin nəzdində islah işləri cəzasının icrasının təşkili və bu sahədə fəaliyyətə nəzarət məqsədilə ayrı bir qurum, yəni Məcburi işlər bürosu (bundan sonra Büro) təşkil edilmişdi.

Həbs yerlərinə bütün işçi heyətinin tabe olduğu rəis rəhbərlik edirdi. Həmin yerlərin müdiriyyətinin, işçi heyətinin hüquqları və vəzifələri, habelə daxili intizam qaydaları xüsusi əsasnamə ilə tənzimlənirdi.

Bölüşdürmə komissiyaları. Xüsusi işlər üzrə məhkəmələrin nəzdində təşkil edilən sözügedən komissiyalar, müvafiq xalq hakimi, rayon icraiyyə komitəsinin, həmkarlar ittifaqı təşkilatının, qadınlarla iş şöbəsinin nümayəndələrindən ibarət tərkibdə fəaliyyət göstərirdi. Komissiyaların iclaslarında prokuror və ya onun köməkçisi, habelə baxılan məsələnin mahiyyətindən asılı olaraq xalq təhsili, səhiyyə şöbələrinin işçiləri də iştirak edirdilər. Bölüşdürmə komissiyalarına aşağıdakı hüquq və vəzifələr həvalə edilmişdi:

- məhkumların müəyyən olunmuş müddətdən əvvəl bir dərəcədən digərinə keçirilməsi;
- 16-18 yaşında olan məhkumların fərdi xüsusiyyətlərindən asılı olaraq əmək evlərinə və yaxud digər islah-əmək müəssisələrinə göndərilməsi ilə bağlı məsələnin həlli;
- cəza müddətinin sonunda tam islah edilməsi müəyyən olunmamış yetkinlik yaşına çatmayan məhkumların cəza müddətinin artırılması, yaxud islahına nail olunmuş sözügedən məhkumların cəzanın qalan hissəsinin çəkilməsi üçün iyirmi yaşınadək əmək evlərində saxlanılması barədə məhkəməyə vəsatətin verilməsi;
- islah işləri və azadlıqdan məhrum etmə növündə cəza çəkən məhkumların amnistiya aktına əsasən, yaxud qanunla müəyyən edilmiş müddətdən sonra cəzadan şərti və ya tam azad edilməsi;
- islah işləri və azadlıqdan məhrum etmə növündə cəzaları çəkən məhkumların ictimai faydalı əməklə məşğul olduqları iki iş gününün təyin edilmiş cəza müddətinin üç günü kimi hesablanması;
- müvafiq orqanlar qarşısında həbs qətimkan tədbirinin ləğvi və ya onun digər qətimkan tədbiri, yaxud islah-əmək təsiri tədbirləri ilə əvəz edilməsi ilə əlaqədar vəsatət qaldırılması;
- qanunvericiliklə müəyyən olunmuş qaydada aidiyyəti dövlət orqanları ilə razılaşdırılmaqla, yeni islah-əmək müəssisələrinin yaradılması, yaxud fəaliyyət göstərən həmin müəssisələrin yenidən təşkili və ya təkmilləşdirilməsi ilə əlaqədar təkliflərin verilməsi.

Məcəlləyə əsasən Bölüşdürmə komissiyasının sədri xalq hakimi, sədr müavini isə, rayon icraiyyə komitəsinin nümayəndəsi müəyyən edilmişdi.

Müşahidə komissiyaları. Hər bir azadlıqdan məhrum etmə müəssisəsində Müşahidə komissiyası təşkil edilirdi. Onların tərkibinə azadlıqdan məhrum etmə yerinin rəisi, müvafiq ərazi üzrə xalq hakimi və həmin müəssisənin tədris-tərbiyə hissəsinin rəisi daxil idi. Komissiyaların işində prokuror və ya onun köməkçisi, habelə müzakirəyə çıxarılmış məsələdən asılı olaraq, müəssisənin xidmət sahələrinin rəisləri, yerli səhiyyə şöbəsinin nümayəndəsi-həkim iştirak edirdilər. Müşahidə komissiyaları aşağıdakı səlahiyyətlərə malik idilər:

- məhkumların müəssisələrə bölüşdürülməsi işini müşahidə etmək, bu sahədə pozuntuya yol verilməsi zamanı onları müvafiq təsnifatla müəyyən edilən müəssisəyə qaytarmaq;
- məhkumları dərəcələrə bölmək, bu sahədə pozuntu aşkar edidiyi təqdirdə müvafiq qərarı ləğv etmək;
- cəzadan vaxtından əvvəl azad edilmə ilə əlaqədar məhkumun şəxsiyyəti, cəzanın çəkilməsi müddətində davranışı barədə toplanmış məlumatı ilkin müzakirə etmək və Bölüşdürmə komissiyasına təqdim etmək;
- Şöbə ilə razılaşdırılmaqla, məhkumlara müəssisə hüdudlarından kənara çıxmaqla məzuniyyət vermək, habelə məzuniyyətdən vaxtında qayıtmayanlar barədə tənbeh tədbirləri tətbiq etmək;
- orta dərəcədə olan məhkumların uzun müddətli görüşlərinə icazə vermək;

- qətimkan tədbiri-həbsin ləğvinin məqsədəuyğunluğu barədə Bölüşdürmə komissiyasına vəsatət təqdim etmək;

- həbsdə saxlanılma müddətinin keçməsi ilə əlaqədar prokuroru məlumatlandırmaq.

Müsahidə komissiyasının işinə sədrliyi müəssisənin rəisi həyata keçirirdi, hakim isə, onun müavini vəzifəsinin icra edirdi. Sözügedən qurumun vəzifələri, təşkili və iş qaydası ASSR Ali Soveti Rəyasət Heyətinin 16 fevral 1966-cı il tarixli Fərmanı ilə əsaslı şəkildə dəyişdirilmişdi. Həmin komissiyalar adlarını saxlamaqla rayon, şəhər xalq deputatları Sovetlərinin İcraiyyə komitələrinin, DQMV-nin Xalq Deputatları Soveti İcraiyyə Komitəsinin, habelə Haxçıvan MSSR-nin Nazirlər Soveti yanında təşkil edilirdi.

Büro (islah işləri üzrə). Büro:

- məhkumların qeydiyyatını aparır, Xalq Əmək Komissarlığı ilə razılaşdırılmaqla, onları müvafiq işlərə bölüşdürürdü;

- məhkumlar tərəfindən cəzanın çəkilməsi qaydalarına riayət edilməsinə ümumi nəzarəti həyata keçirirdi;

- məhkumların yaşayış yerlərinə yaxın Bürolara, onların bölmələrinə keçirilməsini təmin edirdi;

- Bölüşdürmə komissiyasına məhkumun vaxtından əvvəl əvvəl azad edilməsi ilə bağlı təqdimat verirdi.

İslah işlərinə məhkum edilmiş şəxslərin əmək haqqından 25 % miqdarında tutulmalar aparılır və onlar Şöbənin Xüsusu fonduna keçirilirdi. Həmin fondda toplanmış vəsait cəza çəkən və azad edilmiş şəxslərlə aparılan işlərin təşkili, onların təkmilləşdirilməsi ilə əlaqədar istifadə olunurdu. İslah işlərinə məhkum edilmiş və ən azı beş ay yarım fasiləsiz işləmiş şəxslərə ildə bir dəfə, müddəti iki həftə olmaqla, növbəti məzuniyyət təqdim edilirdi.

İslah işlərindən yayınan, habelə müəyyən edilmiş işləri layiqincə yerinə yetirməyən məhkumlara digər işlərə keçirilmə, səhlənkarlıqla icra edilmiş işlərin və ya özbaşına buraxılmış iş gününün cəza müddətinə hesablanmaması, cəzanın dəyişdirilməsi ilə əlaqədar məhkəməyə vəsatət verməklə və yaxud verməməklə, on dörd günədək inzibati qaydada həbs növündə tənbeh tədbirləri tətbiq edilə bilərdi.

Azadlıqdan məhrum etmə yerləri. Məcəlləyə uyğun olaraq ilkin həbs də daxil olmaqla, azadlıqdan məhrum etmə cəzası müxtəlif növlü müəssisələrdə icra edilirdi.

1. Aşağıdakı müəssisələr ilkin həbs və islah xarakterli sosial müdafiə tədbirlərinin icrası üçün müəyyən edilmişdi:

- barələrində həbs qətimkan tədbiri seçilmiş, məhkəmə hökmləri qanuni qüvvəyə minməmiş şəxslər və altı ayadək azadlıqdan məhrum edilmiş məhkumlar üçün - **ilkin həbs evləri;**

- altı aydan artıq müddətə azadlıqdan məhrum edilmiş məhkumlar üçün - **islah-əmək evləri;**

- zəhmətkeşlər sinifinə aid olmaqla, ilk dəfə ehtiyatsızlıqdan törədilmiş cinayətlərə görə və ciddi qaydada təcrid edilmədən beş ilədək müddətə azadlıqdan məhrum edilmişlər üçün - **kənd təsərrüfatı, fabrika, peşə təyinatlı əmək koloniyaları;**

- ciddi qaydada təcrid edilməklə azadlıqdan məhrum edilmiş və digər müəssisələrdən tənbeh tədbiri qismində keçirilmiş məhkumlar üçün - **xüsusi təyinatlı təcridxanalar;**

- azadlıqdan məhrum etmə cəzasının bir hissəsini çəkmiş, əmək həyatına uyğunlaşma nümayiş etdirən, Bölüşdürmə komissiyaları tərəfindən cəzanın icrası şərtləri daha humanist olan, yarımsərbəst rejim şəraitinə keçirilməsi məqsədəuyğun hesab edilmiş məhkumlar üçün - **keçid islah-əmək evləri.**

2. Tibbi-pedaqoji xarakterli sosial müdafiə tədbirlərini icra edən müəssisələr qismində, yetkinlik yaşına çatmayan, yəni 14 yaşından 16 yaşınadək azadlıqdan məhrum edilmiş məhkumlar üçün **əmək evləri** fəaliyyət göstərirdi.

3. Tibbi xarakterli sosial müdafiə tədbirləri, yəni həbs edilmiş şəxslərin və məhkumların tibbi səhadətləndirilməsi, diaqnostikası və müalicəsi üçün təşkil olunmuş müəssisələrə daxil idi:

- psixi pozuntuları olan, vərəm və digər xəstəliklərə düçar olmuş şəxslər üçün müalicə müəssisələri;

- psixiatrik ekspertiza insitutları, xüsusi xəstəxanalar.

Azadlıqdan məhrum edilmiş məhkumların təsnifatı. Məcəllə, törətdikləri cinayətin növündən, habelə məhkumların sinfi mənsubiyyətindən asılı olaraq azadlıqdan məhrum edilmişləri **üç qrupa** ayırırdı. Birinci qrupa ciddi təcrid edilməklə məhkum edilmişlər, ikinciyə, peşəkar cinayətlərə görə məhkum olunmuşlar, habelə zəhmətkeşlər sinifinə aid olmayan, lakin sinfi baxış, vərdiş və maraqlar nəticəsində cinayət törətmiş şəxslər, üçüncü qrupa isə, birinci və ikinci qrupa aid olmayan bütün digər məhkumlar daxil edilirdilər. Eyni zamanda, müvafiq qruplara daxil edilmiş məhkumlar, cəzanın çəkilməsi rejiminin düzgun və planlı şəkildə dəyişdirilməsi məqsədilə, onlara göstərilən islah-əmək təsirinin nəticələrindən, yəni məhkumun islah edilmə səviyyəsindən asılı olaraq üç dərəcəyə bölünürdülər: **ilkin, orta və ali.** Bir dərəcədən digərinə keçirilmə zamanı məhkumların hansı qrupa mənsub olduqları əsas götürülürdü. İslah-əmək müəssisəsinə daxil olmuş birinci və ikinci qrupa aid məhkumlara ilkin dərəcə təyin edilirdi. Bu zaman, birinci qrupa aid məhkumlar, digər dərəcəyə keçirilmə üçün təyin olunmuş cəza müddətinin ən azı yarısını, ikinci qrupa aid məhkumlar isə, ən azı dördə birini çəkməli idilər. Üçüncü qrupa daxil olan məhkumlara isə, Müşahidə komissiyasının əsaslandırılmış qərarına əsasən dərhal istənilən dərəcə təyin oluna bilərdi. Müəyyən edilmiş dərəcədə qalma, yaxud sonrakı dərəcəyə keçirilmə zamanı, məhkumun cəzanın cəkilməsi dövründəki davranışı, yəni onun əmək fəaliyyətində, təhsildə əldə etdiyi nəticələr, rejim qaydalarına riayət edib-etməməsi, yol verilmiş pozuntular, habelə islah edilmə səviyyəsi nəzərə alınırdı. Əmək evlərində cəza çəkən yetkinlik yaşına çatmayan məhkumlar dərəcələrə bölünmürdülər. Onlar bir-birindən təcrid edilən iki qrupa ayrılırdılar: residivist-hüquq pozucuları və digər məhkumlar.

Cəzanın çəkilməsi rejimi. Azadlıqdan məhrum etmə yerlərinə yeni qəbul edilmiş məhkumlar dərhal tibbi müayinədən, sanitariya-gigiyena tədbirlərindən keçirilir, bundan sonra xüsusi ayrılmış kameralara, yəni karantin bölməsinə yerləşdirilir və bir müddət digər məhkumlardan ayrı saxlanılırdılar. Həmin müddətdə məhkumlar müəssisənin rəisi, yaxud onun köməkçisi, habelə xidmət sahələrinin rəhbər işçiləri tərəfindən qəbul edilir, onlara cəzanın icrası, azadlıqdan məhrum etmə yerlərindəki qaydalar barədə məlumat verilirdi. Karantində saxlanılma müddəti başa catdıqdan sonra məhkumlar daxil edildikləri qrupa və dərəcəyə uyğun olaraq ümumi kameralarda yerləşdirilirdilər. Məhkum qadınlar, yetkinlik yaşına çatmayanlar, habelə fəhlə-kəndli sinifinə mənsub 16-20 yaşında olan gənclər cəzalarını onlar üçün nəzərdə tutulmuş müvafiq müəssisələrdə çəkirdilər. Barələrində həbs qətimkan tədbiri seçilmiş şəxslər məhkumlardan təcrid edilməklə, ayrı yerləşdirilirdilər.

İlkin həbs evləri, islah-əmək evləri, xüsusi təyinatlı təcridxanalarda ali dərəcədə olan məhkumlar istisna olmaqla, digər məhkumlar, əməyə cəlb edilmə vaxtı nəzərə alınmamaqla, gün ərzində qapıları bağlı olan kameralarda saxlanılırdılar. Ali dərəcəyə aid məhkumların kameraları isə, yuxudan durma vaxtından yatma vaxtınadək açıq olurdu. Həmin məhkumlar gün ərzində saxlandıqları binanın müvafiq hissəsinin hüdüdlarında sərbəst hərəkət etmək hüququna malik idilər. Əmək koloniyalarında, keçid islah-əmək evlərində cəza çəkən məhkumlar da gün ərzində müəssisənin ərazisində və hüdudlarında sərbəst hərəkət edə bilərdilər.

Məhkumlar öz paltarlarından istifadə edə bilərdilər, eyni zamanda, onlara mövsümə uyğun geyim, alt paltarı, ayaqqabı və yataq ləvazimatı da verilirdi. Onlara hər gün, bir saatdan az olmamaqla açıq havada gəzinti təqdim olunurdu. Məhkumların özlərində saxlanmasına icazə verilən əşya və malların siyahısı Şöbə və ya Müfəttişlik tərəfindən təsdiq edilirdi. Məhkumların görüş, sovqat almaq, yazışma hüquqları, habelə şəxsi hesablarında olan və xərclənməyə icazə verilən pulun məbləği, onlara təyin edilmiş dərəcədən asılı idi. Belə ki, ilkin dərəcədə olan məhkumların iki həftə ərzində bir görüş, bir məktub göndərmək, hər həftə iki sovqat almaq, ay ərzində müvafiq pul məbləğinin üçdə bir hissəsindən istifadə etmək hüquqları var idi. Orta dərəcədə olan məhkumlar həftədə bir görüş, iki sovqat ala, bir məktub göndərə, pul məbləğinin üçdə ikisindən istifadə edə bilərdilər. Ali dərəcədə olan məhkumlar isə həftə ərzində iki görüş və iki sovqat almaq, iki məktub göndərmək, habelə hesablarındakı pulun dördə üç hissəsindən istifadə etmək hüququna malik idilər. Barəsində istintaq aparılan, cinayət işi məhkəmənin icraatında olan şəxslər müvafiq istintaq-məhkəmə orqanlarının razılığı ilə həftədə bir görüş, bir sovqat ala, şəxsi hesablarında olan puldan tamlıqla istifadə edə, habelə iki həftədə bir məktub göndərə bilərdilər. Görüşlər əsasən qısa müddətli olmaqla, müəssisə əməkdaşının iştirakı ilə təqdim edilirdi. İlkin və orta dərəcədə olan məhkumlara, görüşlər xüsusi təchiz edilmiş və birbaşa təmasları istisna edən arakəsmələr quraşdırılmış otaqlarda təqdim edilirdi. Ali dərəcədəki məhkumlar uzun müddətli görüş hüququna da mailk idilər. Orta dərəcədə olan məhkumlara uzun müddətli görüşlər Müşahidə komissiyasının qərarına əsasən təqdim edilə bilərdi. Hər üç dərəcəyə daxil edilmiş məhkumlara Müşahidə komissiyasının qəbul etdiyi qərarla, müvafiq Şöbə və ya Müfəttişlik tərəfindən təsdiq olunduqdan sonra, il ərzində bir məzuniyyət verilə bilərdi. İlkin və orta dərəcədə olan məhkumlar üçün müvafiq dərəcələrdə ən azı iki ay olduqdan sonra məzuniyyət müddəti yeddi gün, ali dərəcədə olan məhkumlar üçün isə, həmin dərəcədə bir ay olduqdan sonra, on dörd gün təşkil edirdi.

Yetkinlik yaşına çatmayan, hamilə ya yanında azyaşlı uşaqları olan məhkum qadınlar üçün digər kateqoriyalı məhkumlarla müqayisədə müəyyən güzəştlər də nəzərdə tutulmuşdu. Eyni zamanda, qeyd olunmalıdır ki, yetkinlik yaşına çatmayan məhkumlar üçün nəzərdə tutulmuş əmək evlərində Müşahidə komissiyası əvəzinə müəssisə rəisinin sədrliyi ilə, onun köməkçisinin, tərbiyəçilərin, habelə müəsisədəki həkimin daxil olduğu Pedaqoji şura fəaliyyət göstərirdi. Sözügedən şura, məhkumların vaxtından əvvəl azad edilməsi və onların əmək evlərində iyirmi yaşınadək saxlanılması ilə əlaqədar məsələlər istisna olmaqla, Bölüşdürmə və Müşahidə komissiyalarının səlahiyyətlərinə aid edilmiş digər məsələlər üzrə qərarlar qəbul etmək hüququna malik idi. Habelə, müvafiq məhkumlara görüşlərin, sovqatların verilməsi, onların yazışmaları Pedaqoji şuranın qərarı ilə hər bir məhkum üçün ilə fərdi qaydada müəyyən olunurdu.

Məhkumların əməyi. Azadlıqdan məhrum edilmiş, əmək qabiliyyətli məhkumlar üçün ictimai faydalı əməklə məşğul olmaq məcburi xarakter daşıyırdı və onlar müdiriyyətin müəyyən etdiyi yerlərdə işləməli idilər. Əməyə cəlb edilmə zamanı məhkumların sağlamlıq vəziyyəti, təhsili, əvvəlki məşğuliyyəti, onların hər hansı bir işə meyilli olması, müvafiq fəaliyyət növündən cəzadan azad edildikdən sonra istifadə etmək imkanları, habelə məhkəmə hökmündəki göstərişlər nəzərə alınırdı. Məhkumların əməyinin təşkili ümumən Məcəllə ilə nəzərdə tutulsa da, əməyin mühafizəsi, iş və istirahət vaxtı ilə əlaqədar məsələlər Əmək qanunları Məcəlləsi ilə tənzimlənirdi. İşləyən məhkumların əməkhaqları, onların məbləği respublikanın Xalq Əmək Komissarlığı ilə razılaşdlrılmaqla, ASSR DİXK-i tərəfindən müəyyən edilirdi. İşləyən məhkumlara haqq-hesab kitabçası verilir, orada görülmuş işlər, hesablanmış və verilmiş maaş, habelə əməkhaqqından aparılmış tutulmalar qeyd edilirdi. Məhkumun aldığı əməkhaqqı müəssisədə onun adına açılmış şəxsi hesaba köçürülürdü. İşləyən hamilə, yanında südəmər uşağı olan qadın məhkumlar üçün müəyyən güzəştlər də nəzərdə tutulmuşdu. Məhkumların əməyi nəticəsində əldə edilmiş gəlirlər dövlət, habelə yerli vergi və ödənişlərdən azad edilmişdi. İstehsalat fəaliyyətindən daxil olan vəsaitlər islah-əmək müəssisəsinin cari hesabında saxlanılmaqla, yalnız avadanlıqların, materialların (xammalın) əldə olunmasına, texniki işçi heyətinin əməkhaqlarına, məhkumların əməyinin ödənilməsinə yönəldilə bilərdi. Məhkumların əməyindən əldə olunmuş təmiz gəlir isə, öz növbəsində aşağıda göstərilən qaydada bölüşdürülürdü:

- azadlıqdan məhrum etmə yerlərinin istehsalat sahələrinin genişləndirilməsinə – 50 %;
- cəzadan azad edilmiş məhkumlara yardım göstərilməsi komitəsinə – 20 %;
- DİXK-ə, Şöbəyə və Müfəttişliyə – 15 %;

- məhkumların qidalanmasının yaxşılaşdırılmasına – 10 %;

- müəssisədəki istehsalatın təşkil edilməsinə cəlb olunmuş və həmin sahələrdə məhkumlarla işləyən əməkdaşların mükafatlandırılmasına – 5 %.

Mədəni-maarif işi. Hər bir islah-əmək müəssisəsində məhkumlarla bilavasitə məktəbdə və məktəbdən kənar mədəni-maarif işi aparılır, bu məqsədlə xüsusi təchiz edilmiş otaq ayrılırdı. Sözügedən iş məhkumlara ümumi və peşə təhsili ilə bağlı məlumat verilməsi, onları sovet sisteminin əsasları, SSRİ vətəndaşlarının hüquq və azadlıqları, habelə vəzifələri ilə tanış etmək məqsədilə həyata keçirilirdi. Mədəni-maarif işini tərbiyə-tədris hissəsinin tərbiyəçi-müəllimləri, məktəb müəllimləri aparırdılar. Hər bir tərbiyəçi-müəllimə bir qrup məhkum həvalə olunurdu, onlara cəza çəkənlər üzərində müşahidə aparmaq, şəxsiyyətlərini öyrənmək, nəticələrini xüsusi jurnallarda və xasiyyətnamələrdə qeyd etmək tapşırılmışdı. Mədəni-maarif isinə dəstək göstərilməsi üçün zəhmətkeşlər sinifinə aid beş məhkumdan ibarət xüsusi komissiya yaradılması da nəzərdə tutulmuşdu. Mədəni-maarif işi məhkumları özfəaliyyət işinə daha geniş cəlb etmək, onların siyasi və sinfi düşüncələrini inkişaf etdirmək məqsədi daşımaqla, cəza çəkənlərin bilavasitə iştirakı ilə konsertlər, tamaşalar, ədəbiyyət gecələri, idman yarışları, canlı qəzetlər, müxtəlif səpgili məşğələ və tədbirlər formasında təşkil edilirdi. Sözügedən tədbirlər, eyni zamanda, məhkumların kommunizm ideyalarına cavab verməli, yenidən tərbiyələndirmə ilə əlaqədar vəzifələrə də uyğun olmalı idi.

Məcəllədə islah-əmək müəssisələrində Xalq Maarif Kommisarlığının rəhbərliyi ilə orta təhsil və peşə-ixtisas məktəblərinin fəaliyyət göstərməsi də təsbit olunmuşdu. Orta təhsil məktəblərinin vəzifəsi, ilk növbədə ümumi və siyasi savadsızlığın ləğv edilməsi idi. Həmin məktəblərə əlli yaşınadək, savadı olmayan və azsavadlı məhkumlar məcburi cəlb edilirdilər. Peşə-ixtisas məktəbləri, bir qayda olaraq, islah-əmək müəssisəsindəki mövcud istehsalat sahələrinin ehtiyacları nəzərə alınmaqla yaradılırdı. Hər iki növ məktəbə, ilk növbədə proletar mənşəli və zəhmətkeşlər sinifinə mənsub məhkumlar qəbul edilirdilər.

Azadlıqdan məhrum etmə yerlərində tibbi-sanitariya təminatı. Həbs edilmiş şəxslərə və məhkumlara tibbi yardım göstərilməsi, onların saxlandıqları müəssisələrdə sanitariya-gigiyena tədbirlərinin həyata keçirilməsi və həmin sahəyə nəzarət edilməsi, ASSR DİXK-i ilə razılaşdırılmaqla, ASSR Səhiyyə Xalq Komissarlığı tərəfindən xüsusi qəbul edilmiş əsasnaməyə uyğun təşkil olunurdu.

Tənbeh tədbirləri. Məcəlləyə əsasən azadlıqdan məhrum etmə yerlərində müəyyən edilmiş rejim qaydalarını pozan məhkumlara, yol verilmiş pozuntunun xarakteri və xüsusiyyətləri nəzərə alınmaqla, aşağıdakı tənbeh tədbirləri tətbiq edilə bilərdi:

- töhmət elan edilməsi;

- bir ay ərzində görüş, yazışma və ya sovqat almaq hüququnun məhdudlaşdırılması, yaxud ləğv olunması;

- xərclənməyə icazə verilən pulun məbləğinin azaldılması;

- hər üç gündən bir gəzintiyə çıxarılmaqla, on dörd günədək təkadamlıq kameraya təcrid edilmə;

- təyin edilmiş dərəcənin aşağı salınması;

- digər azadlıqdan məhrum etmə yerlərinə keçirilmə.

Yeddi gündən yuxarı təkadamlıq kameraya təcrid edilmə tədbiri, Müşahidə komissiyasının razılığı, dərəcənin aşağı salınması və digər müəssisələrə keçirilmə isə, Müşahidə komissiyasının vəsatəti əsasında Bölüşdürmə komissiyasının qərarları ilə tətbiq oluna bilərdi. Tənbeh tədbirləri, yalnız qeydə alınmış pozuntunun ətraflı araşdırılmasından, habelə müvafiq məhkumun izahatının alınmasından sonra tətbiq edilirdi. Qeyd olunmalıdır ki, Məcəllədə istər həbs edilmiş şəxslər, istərsə də məhkumlar barədə tətbiq edilə bilən həvəsləndirmə tədbirlərinin konkret siyahısı yox idi. Eyni zamanda, sözügedən şəxslərə həvəsləndirmə tədbirlərinə oxşar bir sıra imtiyazlar (məzuniyyət və ya uzunmüddətli görüş verilməsi, daha yüksək dərəcəyə keçirilmə və s.) Bölüşdürmə və Müşahidə komissiyalarının, habelə Pedaqoji şuranın qərarlarına əsasən təqdim edilirdi.

Azadlıqdan məhrum etmə cəzasından yayınma. Məcəllə, azadlıqdan məhrum etmə cəzasından boyun qacırma hallarına ikili yanaşma sərgiləyirdi. Birincisi, islah-əmək müəssisəsini qısa müddətə özbaşına tərk etmə, yəni təqdim edilmiş məzuniyyətdən vaxtında qayıtmama və yaxud müəssisədən kənarda həyata keçirilən işlərdən üzürlü səbəblər olmadan geriyə dönməmə hallarında, məhkumlara yalnız Məcəllədə təsbit edilmiş tənbeh tədbirləri tətbiq oluna bilərdi. İkincisi, yəni azadlıqdan məhrum etmə yerlərindən qaçış və ya qaçışa cəhd hallarında isə, cinayət isi başlanırdı, onun nəticəsindən asılı olmayaraq, məhkum Bölüşdürmə komissiyasının qərarı ilə ilkin aşağı dərəcəyə keçirilirdi. Azadlıqdan məhrum etmə cəzasından yayınmanın hər iki halında, islah-əmək müəssisəsindən kənarda olma vaxtı, təyin edilmiş cəza müddətinə hesablanmırdı.

Azadlıqdan məhrum etmə yerlərində təhlükəsizlik tədbirləri və odlu silahın tətbiqi. Məcəllədə azadlıqdan məhrum etmə yerlərində təhlükəsizliyin təmin edilməsinə yönəlmiş iki əsas tədbir nəzərdə tutulmuşdu. Belə ki, azadlıqdan məhrum etmə yerlərinin işçilərinə müqavimət göstərən, coşğunluq və ya digər zorakılıq hərəkətləri edən məhkumlara fiziki qüvvə, xüsusi hallarda isə, sakitləşdirici köynək tətbiq oluna bilərdi. Əl qandalından istifadəyə yol verilmirdi. Eyni zamanda, əgər Məcəllə ilə nəzərdə tutulmuş mümkün tədbirlər nəticəsiz qaldıqda, müəssisənin nəzarət və mühafizə xidmətlərinin əməkdaşları tərəfindən aşağıdakı hallarda odlu silah tətbiq edilə bilərdi:

- işçi heyətinə və məhkumlara edilmiş hücumlardan müdafiə məqsədilə;

- məhkumların zorakılıq hərəkətlərinin qarşısının alınması üçün;

- azadlıqdan məhrum etmə yerlərindən qaçış zamanı.

Silahın tətbiqindən əvvəl üç dəfə xəbərdarlıq edilməli idi. Hər bir silah tətbiqi ilə bağlı, işin halları ətraflı təsvir edilməklə protokol tərtib olunmalı, onun surəti dərhal Şöbəyə, yaxud Müfəttişliyə və prokurora göndərilməli idi. Qadın, yetkinlik yaşına çatmayan məhkumlara qarşı odlu silah ümumi qaydada tətbiq edlə bilərdi.

Azadlıqdan məhrum etmə yerlərinə başçəkmələr. Cəzaların icrası qanunvericiliyinə riayət olunması, həbsdə saxlanılan şəxslərin və məhkumların saxlanılma şəraitinin öyrənilməsi məqsədilə dövlət, partiya, prokurorluq, hüquqmühafizə orqanlarının işçiləri, xalq hakimləri, habelə ASSR DİXK-in, Şöbənin və ya Müfəttişliyin səlahiyyətli nümayəndələri xüsusi razılıq alınmadan müəssisələrə başçəkmə hüququna malik idilər. Başçəkmələri həyata keçirənlər qanunvericiliklə onlara verilmiş hüquqlar çərçivəsində hərəkət edə və ya göstərişlər verə bilərdilər. Müvafiq ərazinin səhiyyə və təhsil şöbələrinin nümayəndələri onlara Şöbə və ya Müfəttişlik tərəfindən verilmiş xüsusi vəsiqələr əsasında müəssisələrə baş çəkə bilərdilər. Başçəkmələr prosesində aşkar edilmiş nöqsan və pozuntular müəssisədəki xüsusi kitabda qeyd edilirdi və yaxud onlarla əlaqədar Şöbə ya Müfəttişliyə məlumat verilirdi.

Cəzadan azad edilən məhkumlara yardım göstərilməsi. Azadlıqdan məhrum etmə yerlərindən azad edilən məhkumlara yardım edilməsi işi, həmin fəaliyyətə sovet, partiya orqanlarının və həmkarlar ittifaqının işçiləri geniş şəkildə cəlb edilməklə, ASSR DİXK-i, Şöbə və ya Müfəttişlik tərəfindən həyata keçirilirdi. Yardım göstərilməsinin planlı şəkildə təşkili məqsədilə qəbul edilmiş müvafiq əsasnaməyə uyğun fəaliyyət göstərən xüsusi komitələr təşkil edilirdi. Xüsusi komitələr azadlıqdan məhrum etmə yerlərindən azad edilmiş məhkumlarla əlaqədar aşağıdakı səlahiyyətlərə malik idilər:

- azad edilənlərə maddi yardım göstərilməsi;
- onların öz vətəninə və ya daimi yaşayış yerinə qayıtmalarına köməklik edilməsi;
- ilk vaxtlarda imtiyazlı şərtlərlə yaşayış yeri və qidalanma ilə təmin olunma;
- əmək fəaliyyəti üçün alətlərin, habelə zəruri məişət əşyalarının əldə edilməsi üçün kreditin verilməsi;
- əməyə cəlb edilmə məqsədilə emalatxanaların və ya müəssisələrin təşkili;
- əməklə təmin edilmə üçün məşğuliyyət axtarılması;
- hüquqi və tibbi yardımların göstərilməsi;
- ümumi orta və peşə təhsili səviyyəsinin artırılması.

Zəruri hallarda, azadlıqdan məhrum etmə yerlərindən azad edilmiş məhkumlar Xüsusi komitənin vəsatətinə əsasən keçid islah-əmək evlərinə yerləşdirilə bilərdilər. Belə hallarda, azad edilmiş şəxslər adi vətəndaşların hüquq və azadlıqlarına malik olmaqla, müvafiq müəssisədə müəyyən edilmiş əmək intizamı qaydalarına riayət etməli idilər. Sözügedən komitələr məhkumların əməyindən əldə olunmuş gəlirlər, onlar tərəfindən təşkil edilmiş müəssisələrin istehsalat fəaliyyətindən və keçirilən müxtəlif tədbirlərdən alınan mənfəət, dövlət, yerli büdcələrdən xüsusi ayırmalar, habelə müəssisə və vətəndaşlardan daxil olmuş məqsədli ianələr hesabına fəaliyyət göstərirdilər.

Cəzaların icrasını nizamlayan Azərbaycanın ilk Məcəlləsinin məzmunu, onun müvafiq institutları ilə ümumi və qısa tanışlıqdan sonra qeyd etmək lazımdır ki, həmin qanunda, ilkin olaraq yuxarıda qeyd olunan iki cəzadan əlavə, barəsində istintaq aparılan, yaxud cinayət işi məhkəmə icraatında olan şəxslərin ilkin həbs evlərində saxlanılması qayda və şərtləri ilə əlaqədar bəzi müddəalar da öz əksini tapmışdı. Eyni zamanda, Məcəllədə sözügedən şəxslərlə bağlı xüsusi normaların nəzərdə tutulmadığı hallarda, həmin məsələlər məhkumlarla əlaqədar müvafiq normalara uyğun olaraq həll edilirdi. Məcəllə, cəzaların, xüsusilə azadlıqdan məhrum etmə növündə cəzanın icrası prosesində məhkumlara islah-əmək təsirinin göstərilməsinin ön plana çəkilməsilə də diqqəti cəlb edirdi. Əlavə olaraq, Məcəllə, azadlıqdan məhrum etmə cəzasının icrasının yalnız təcridetmə vasitəsi ilə deyil, habelə məhkumların ictimai faydalı əməyə, təhsilə cəlb edilməsi, onlarla tərbiyə işinin aparılması ilə də həyata keçirilməsini nəzərdə tuturdu. Azadlıqdan məhrum etmə cəzasının icrasının, yəni məhkumları sinfi mənsubiyyət nəzərə alınmaqla, müəyyən olunmuş təsnifata uyğun olaraq qruplara bölərək, müxtəlif növlü islah-əmək müəssisələri vasitəsi ilə realizə edilməsi təcrübəsinin tətbiqi də, sözügedən qanunu xarakterizə edən yeniliklərdən biri olmuşdur. Eyni zamanda, Məcəllə, cəzanın icrasının təşkili fəaliyyətinin özünümaliyyələşdirmə üsuluna keçidi, yəni məhkumların əməyindən əldə olunan gəlirlər hesabına təmin edilməsini də təsbit etmişdi. Məcəllə bir sıra humanist yanaşmalara görə də əvvəlki qanunvericilik aktlarından fərqlənirdı. Belə ki, azadlıqdan məhrum etmə cəzasını çəkən şəxslərə xarici aləmlə, xüsusilə yaxınları ilə geniş əlaqə hüququ, yəni daha çox sayda görüş, sovqat almaq, yazışma, habelə şəxsi hesabda olan pul məbləğinin daha güzəştli şərtlərlə xərclənməsi imkanlarını təqdim etmişdi. Məcəllədə, zəhmətkeş hesab olunan şəxslərin, yəni fəhlə və kəndli mənşəli məhkumların islah işləri cəzasının çəkildiyi müddətdə işlədikləri vaxtın onların əmək stajina daxil edilməsi, bütün məhkumlara, o cümlədən islah işləri növündə cəzanı çəkən şəxslər daxil olmaqla, hər il məzuniyyət verilməsi də təsbit edilmişdi. Habelə, islah işləri və azadlıqdan məhrum etmə cəzasını çəkən şəxslərin iş günlərinin cəza müddətinə imtiyazlı qaydada hesablanması, ciddi tənbeh tədbirlərinin, onların müddətinin yuxarı orqan və bir sıra qurumların razılığı ilə tətbiq edilməsi, təhlükəsizlik tədbirlərinin dairəsinin məhdud olması, yetkinlik yaşına çatmayan məhkumların, onlar üçün təyin edilmiş müəssisədə iyirmi yaşınadək saxlanılmasının mümkünlüyü, partiya və dövlət orqanları nümayəndələrinin başçəkmələr həyata keçirməklə cəzanın icrası prosesinə, müvafiq qanunvericiliyə riayət edilməsinə nəzarət olunması işinə cəlb edilməsi ilk dəfə sözügedən Məcəllədə öz əksini tapmışdı. Məcəllə, habelə həbs qətimkan tədbirinin ləğvi, yaxud onun digər tədbirlə əvəz edilməsi, islah işləri, azadlıqdan məhrum etmə cəzalarının icrası qayda və şərtlərinin dəyişdirilməsi, eləcə də digər bir sıra əhəmiyyətli məsələlər üzrə kollegial və mühüm qərarlar qəbul etmək səlahiyyətlərinə malik xüsusi qurumların, yəni Bölüşdürmə, Müşahidə komissiyalarının və Pedaqoji şuraların fəaliyyəti ilə də səciyyələnirdi. Əlavə olaraq qeyd edilməlidir ki, müvafiq cəzaların icrasının təşkili məsələlərinin, habelə qanunun müddəalarının həyata keçirilmə mexanizmlərinin bir hissəsi bilavasitə Məcəllənin özündə nəzərdə tutulmuşdu.

Məcəllənin sonrakı sələfləri ilə, yuxarıda istinad edilən 1961-ci il tarixli Əsasnamənin müddəaları nəzərə alınmadan, müqayisəli təhlilinə, oxşar və fərqli cəhətlərinə aydınlıq gətirilməsinə gəldikdə, hesab edirik ki, müvafiq məqsəd üçün 1970-ci il İƏM-i daha çox uyğunluq təşkil edir. Məcəllənin 2000-ci ildə qəbul edilmiş Azərbaycan Respublikasının Cəzaların İcrası Məcəlləsi (bundan sonra AR CİM) ilə müqayisəsi, fikrimizcə, o qədər də düzgün olmazdı. Belə ki, AR CİM-i, öz müstəqilliyini bərpa etmiş suveren dövlətin yeni Konstitusiyasının müddəalarına uyğun, 1999-cu ildə qəbul edilmiş müasir Cinayət Məcəlləsində təsbit edilmiş, yəni totalitar rejim şəraitində, sovet hüquq sisteminin prinsiplərinə əsaslanan sabiq 1922, 1927, 1960-cı illərin cinayət qanunlarından kifayət qədər fərqli olan cəza sistemi əsasında, habelə Azərbaycan Respublikasının qoşulduğu insan hüquq və azadlıqlarına dair beynəlxalq aktların tələbləri, məhkumlarla davranış üzrə BMT, Avropa Şurasının tövsiyə etdiyi standartlar nəzərə alınmaqla qəbul edilmişdir. Konseptual baxımdan sözügedən iki məcəllə arasında kifayət qədər digər fərqlər də vardır. Təkcə onu qeyd etmək lazımdır ki, AR CİM-i, vahid qanunverici akt olaraq, cəza sisteminə daxil olan bütün cəza növlərinin icrasını, habelə cinayət-hüquqi xarakterli digər tədbirlərin tətbiqi qaydalarını və şərtlərini tənzimləyir, Azərbaycan Respublikasının tərəfdar çıxdığı beynəlxalq müqavilələri qanunvericiliyin tərkib hissəsi hesab edərək, milli qanunvericiliklə münasibətdə onlara üstünlük verir. AR CİM-in əvvəlki İƏM-lərdən digər fərqli xüsusiyyətləri tərəfimizdən əvvəllər açıqlanmışdır [4, pp. 28, 30, 5, pp. 23–24].

Azərbaycan SSR-nin 1925-ci və 1970-ci illərin İƏM-lərinin müqayisəsini həyata keçirməkdən əvvəl qeyd edilməlidir ki, onların hər ikisi sovetlər birliyi ölkəsinin məhsulu olmaqla, müvafiq dövrlərin ideoloji baxışlarını özündə əks etdirən və eyni məfkurəyə əsaslanmaqla qəbul edilmiş qanunvericilik aktları olmuşdur. Əlavə olaraq, hər iki məcəllədə bir sıra digər oxşar xüsusiyyətlər də var idi. Belə ki, sözügedən məcəllələrdə:

- müvafiq dövrlərdə məhkəmə təcrübəsində daha çox tətbiq edilən, əsas iki cəza növünün, yəni azadlıqdan məhrum etmə və islah işlərinin icrası qayda və şərtləri qanun səviyyəsində tənzimlənirdi;

- cəzaların icrasının məqsədlərinə məhkumlara islah etmə vasitələrinin, yəni rejimin, ictimai faydalı əməyin, tərbiyə işinin, ümumi orta və peşə təhsilinin tətbiqi ilə nail olunması elan edilmişdi;

- azadlıqdan məhrum etmə cəzasının icrasının cins, yaş, törədilmiş cinayətin ağırlığı, təyin edilmiş cəzanın müddəti, sağlamlıq vəziyyəti, habelə məhkumun cəzanın çəkilməsi zamanı davranışı baxımından müxtəlif növlü müəssisələrdə təşkili təsbit olunmuşdu;

- məhkumların islah-əmək müəssisələrinə qəbulu proseduru eyni idi;

- məhkumların ictimai faydalı əməyə cəlb edilməsinin məqsədi, xarakteri, təşkili və əməyin ödənilməsi ilə əlaqədar normalar müəyyənləşdirilmişdi;

- cəzanın çəkilməsi prosesi mütərəqqi sistemin tətbiqi ilə müşayiət edilirdi, yəni məhkumların cəza müddətindəki davranışından asılı olaraq, onlar barədə müəyyən imtiyazların, yumşaltmaların və yaxud cəzanın icrası qaydalarının sərtləşdirilməsi, habelə tənbeh tədbirlərinin tətbiqi mümkün idi;

- yetkinlik yaşına çatmayanların, hamilə, yanında azyaşlı uşaqlarını saxlayan məhkum qadınlar üçün bir sıra imtiyazlar nəzərdə tutulmuşdu;

- cəzanın çəkildiyi müddətdə azadlıqdan məhrum edilmiş şəxslərin dövlətə vurduqları maddi ziyanla əlaqədar məsuliyyəti təsbit edilmişdi;

- məhkumlara tətbiq edilmiş tənbeh tədbiri ilə bağlı yuxarı idarə və ya təşkilata, habelə məhkəməyə şikayət verilməsi proseduru müəyyən edilməmişdi;

- həbs qətimkan tədbirinin və azadlıqdan məhrum etmə cəzasının icrasına digər dövlət orqanları tərəfindən nəzarətin həyata keçirilməsi nəzərdə tutulmamışdı;

- cəzadan azad edilən məhkumlara yardım göstərilməsi qaydası və onun növləri sadalanmışdı.

Müqayisə olunan məcəllələri bir-birindən kifayət qədər fərqləndirən cəhətlər də olmuşdur və onların əsaslarına toxunmaq istərdik. Belə ki, 1970-ci il tarixli İƏM-i ilk Məcəllədən fərqli olaraq:

- 11 iyul 1969-cu il tarixli SSRİ-nin İslah-əmək qanunvericiliyinin Əsaslarına uyğun olaraq qəbul edilmişdi və yalnız cəzaların icrasını tənzimləyirdi. Həbs qətimkan tədbirinin icrası, həbs edilmiş şəxslərin saxlanılması qayda və şərtləri isə, yeni və müstəqil qanunvericilik aktı, yəni müvafiq Əsasnamə ilə nizama salınmışdı;

- islah-əmək qanunvericiliyinin vəzifələrini genişləndirmiş, onlara məhkumların islah edilməsi, cəza çəkənləri əməyə vicdanlı münasibət, qanunlara dürüst əməl etmək və ictimai qaydalara hörmət etmək ruhunda yenidən təbiyələndirilməsi, habelə cinayətkarlığın kökünün kəsilməsinə kömək göstərilməsi kimi yeni vəzifələr əlavə etmişdi;

-islah-əmək qanunvericiliyinin tərkib hissələrini, onun tənzimləmə predmetini müəyyənləşdirmişdi;

- daha çox sayda cəza növlərinin, yəni azadlıqdan məhrum etmə və islah işlərindən əlavə, sürgün və köçürmə cəzalarının, 1977-ci ilin mart ayından isə, məhkumu əməyə mütləq cəlb etməklə azadlıqdan şərti məhrum etmənin və məhkumu əməyə mütləq cəlb etməklə azadlıqdan məhrum etmə yerlərindən şərti azad etmənin icrası qayda və şərtlərini də tənzimləyirdi;

- məhkumların, o cümlədən əcnəbi və vətəndaşlığı olmayan şəxslərin hüquqi vəziyyətinə ümumi şəkildə aydınlıq gətirmiş və onu ayrıca maddədə təsbit etmişdi;

- cəzaların icrası prosesində qanunvericiliyə riayət edilməsinə nəzarətin həyata keçirilməsi ilə bağlı prokurorluq orqanlarının səlahiyyətlərini xeyli artırmışdı;

- məhkumların sinfi mənsubiyyətinin nəzərə alınmasından, onları qruplara və dərəcələrə bölünməsindən imtina etmişdi;

- ictimai təşkilatların məhkumların islah edilməsi işində iştirakının, həmin fəaliyyətin qayda və formalarını tənzimləmişdi;

- islah işləri cəzasının icrası qayda və şərtlərini daha əhatəli şəkildə açıqlamış, cəzanın çəkildiyi iş yerləri üzrə müəssisə, idarə, təşkilatların müdiriyyətinin və əmək kollektivlərinin vəzifələrini dəqiqləşdirmişdi. Eyni zamanda, sözügedən məhkumlara cəzanın çəkildiyi müddətdə təqdim olunan növbəti məzuniyyəti ləğv etmişdi;

- cəzaların, xüsusilə azadlıqdan məhrum etmə cəzasının çəkilməsi yerlərini, habelə məhkumların həmin yerlərə göndərilməsi qaydasını müəyyənləşdirmişdi;
- azadlıqdan məhrum etmə cəzasını icra edən müəssisələrin növlərini dəyişdirmiş və onların müxtəlif rejimlərini nəzərdə tutmuşdu;
- Azərbaycanın 1960-cı ilin Cinayət Məcəlləsinə uyğun olaraq, məhkumların cəza çəkəcəkləri islah-əmək müəssisəsinin növünün və rejiminin, habelə onların dəyişdirilməsinin məhkəmələrin səlahiyyətinə verilməsi ilə əlaqədar Bölüşdürmə komissiyasını və Pedaqoji şuranı, habelə islah işləri üzrə Büronu ləğv etmişdi;
- azadlıqdan məhrum edilmiş məhkumların cəzalarının, qapalı kameralarda (otaqlarda) saxlanılmaqla icrasından imtina edərək, bir qayda olaraq, onların açıq və yataqxana tipli binalardan istifadə olunmaqla həyata keçirilməsini nəzərdə tuturdu;
- yetkinlik yaşına çatmayan məhkumların cəzalarının icrası qayda və şərtlərini, onlara təyin olunmuş tərbiyə müəssisəsinin rejimindən asılı olaraq ətraflı təsbit etmişdi;
- yetkinlik yaşına çatmayanlar da daxil olmaqla, məhkumların müxtəlif növlü və rejimli islah-əmək müəssisələrində yaşayış binalarında və ya qapalı kameralarda saxlanılmasını nəzərdə tutmaqla, onların il ərzində görüş, sovqat almaq, yazışma hüquqlarını, yeyinti və ən zəruri mallar əldə etmək üçün ay ərzində xərclənməyə yol verilən pul məbləğini bir qədər məhdudlaşdırmış, eyni zamanda onları, habelə ərizə və şikayətlər göndərmək, hüququ yardım almaq kimi yeni hüquqları ayrıca və konkret göstərməklə, ayrı-ayrı maddələrdə ətraflı əks etdirmişdi;
- azadlıqdan məhrum etmə yerlərində rejimin əsas tələblərini açıqlamışdı;
- məhkumların cəza müddətinin bir qayda olaraq bir müəssisədə çəkməsini, onların islah-əmək müəssisəsindən istintaq təcridxanasına keçirilməsi əsaslarını müəyyənləşdirmişdi;
- məhkumların əməyinin təşkilini, onun şərtlərini, odənilməsi ilə əlaqədar müddəaları daha müfəssəl və dəqiq qaydada nizamlamışdı:
- məhkumların qazancından tutulmaları və onların məbləğini dəqiqləşdirmişdi;
- islah-əmək müəssisəsinin hüdudlarından kənara çıxmaqla təqdim edilən məzuniyyətləri əvvəlcə ləğv etmiş, 28 mart 1977-ci il tarixli Fərmanla edilmiş dəyişiklikdən sonra bir qrup məhkuma müstəsna hallarla bağlı qısa müddətli səfərlərə icazə verilməsini təsbit etmişdi;
- məhkumların iş günlərinin güzəştli qaydada cəza müddətinə hesablanması ilə bağlı mövcud müddəanı ləğv etmişdi;
- məhkumlarla aparılan mədəni-maarif işini, siyası-tərbiyə işi ilə əvəz etmiş, onun əsas formalarının dairəsini genişləndirmiş və fərdi qaydada həyata keçirilməsinə üstünlük vermişdi;
- məhkumların özfəaliyyət təşkilatlarının fəaliyyətini, onların növlərini və iş qaydasını təkmilləşdirmişdi;
- məhkumlara tətbiq edilən həvəsləndirmə tədbirlərinin siyahısını müəyyənləşdirmiş, tənbeh tədbirlərinin dairəsini və bəzilərinin müddətlərini bir qədər artırmış, onların tətbiq qaydasını, habelə həmin tədbirləri tətbiq edən vəzifəli şəxslərin, yəni rəhbərliyin və əməkdaşların konkret siyahısını və səlahiyyətlərini təsdiqləmişdi;
- tənbeh tədbiri qismində cərimə, intizam təcridxanalarına, kamera tipli otaqlara, habelə birnəfərlik kameralara keçirilmiş məhkumların həmin yerlərdə saxlanılma şəraitini müəyyənləşdirmişdi;
- məhkumların cəzanın çəkilməsi dövründə ümumi orta və texniki-peşə təhsilinin təşkili qaydalarını təkmilləşdirmişdi;
- yetkinlik yaşına çatmayan, hamilə, yanında azyaşlı uşaqlarını saxlayan məhkum qadınların saxlanılma şəraitini daha da humanistləşdirmiş, onlar üçün nəzərdə tutulmuş hüquq və imtiyazların dairəsini xeyli artırmışdı [6, pp. 26–30, 7, pp. 51–55].
- hamilə və yanında azyaşlı uşaqları olan məhkum qadınların islah-əmək müəssisəsindən kənarda yaşamaları imkanını nəzərdə tutmuşdu;
- məhkumların maddi-məişət, tibbi-sanitariya təminatlarını ətraflı açıqlamış, məhkəmə tərəfindən tətbiq edilmiş alkoqolizmdən və narkomaniyadan məcburi müalicənin cəzanın çəkilməsi dövründə həyata keçirilməsini müəyyənləşdirmişdi;
- təhlükəsizlik tədbirlərinin siyahısını genişləndirmiş, onlardan və odlu silahdan istifadənin əsaslarını bir qədər dəyişdirmişdi. Habelə, qadın və yetkinlik yaşına çatmayan məhkumlara sakitləşdirici köynəyin, habelə sözügedən şəxslərə azadlıqdan məhrum etmə yerlərindən qaçış zamanı odlu silahın tətbiqini qadağan etmişdi;
- cəzanı çəkməkdən azad etmənin əsaslarını və qaydalarını ətraflı təsbit etmiş, yetkinlik yaşına çatmayan məhkumların azad edilməsinin xüsusiyyətlərini dəqiqləşdirmişdi;
- cəza çəkməkdən azad edilmiş şəxslər üçün məşğulluq və yaşayış şəraiti yaradılması qaydasını, bununla əlaqədar müvafiq dövlət orqanlarının vəzifələrini konkretləşdirmişdi;
- müxtəlif əsaslarla azadlıqdan məhrum etmə yerlərindən azad edilmiş bir qrup şəxslər üzərində ictimai təşkilatlar, əmək kollektivləri tərəfindən müşahidənin həyata keçirilməsini, habelə inzibati nəzarətin tətbiqini, həmin tədbirlərin məqsədlərini əks etdirmişdi;
- məhkumların cəzanı çəkməkdən yayınmaları hallarına yanaşmanı dəyişmiş və onların növündən asılı olmayaraq, həmin əməllərə yol vermiş şəxslərin cinayət məsuliyyətinə cəlb edilməsini nəzərdə tutmuşdu.

Vurğulamaq istərdik ki, Məcəllənin təhlili, təqdim etdiyimiz yanaşmadan fərqli olmaqla, əvvəllər A.E. Qasımov tərəfindən də həyata keçirilmişdir [8]. Eyni zamanda, qeyd olunmalıdır ki, 1970-ci il tarixli İƏM-i, Azərbaycan Respublikasında yeni Konstitusiyanın qəbulundan sonra nəzərəçarpacaq dərəcədə yeniləşməyə və təkmilləşdirilməyə məruz qalmışdı. Belə ki, Azərbaycan Respublikasının 7 fevral 1997-ci il tarixli qanunu ilə İƏM-ə edilmiş dəyişikliklərlə, ilk növbədə məhkumların hüquq və azadlıqlarının, onlara şamil oluna biləcək imtiyazların dairəsi xeyli genişləndirilmiş, azadlıqdan məhrum etmə cəzasının icra qayda və şərtləri əhəmiyyətli dərəcədə humanistləşdirilmiş, islah işinə xidmət etməyən bir qrup qadağalar ləğv edilmişdi [9, Səh. 22–24]. Sözügedən dəyişikliklərin bir hissəsi sonradan AR CİM-də də öz əksini tapmışdır.

Yuxarıda göstərilənləri yekunlaşdırmaqla, qeyd edilməlidir ki, 1925-ci il tarixlı ASSR İslah-Əmək Məcəlləsi sinfi xarakter daşımaqla, özünün tənzimlənmə predmetinə aid olan bütün məsələlərə tamlıqla aydınlıq gətirməsə də, bir sıra əhəmiyyət kəsb edən islah-əmək hüquq münasibətlərini ümumi qaydada və yaxud ümumiyyətlə nizamlamasa da, habelə müəyyən qüsurlara malik olsa da, həmin qanun Azərbaycan dövlətinin cəzaların icrasının qayda və şərtlərini özündə əks etdirən ilk xüsusi normativ hüquq aktı kimi müvafiq sahədə qanunvericiliyin əsasını qoymuşdur. Eyni zamanda, Məcəllə ASSR-də islah-əmək siyasətinin inkişafında müsbət rol oynamış, cəzaların icrası prosesində ciddi məhdudiyyətlərlə yanaşı, özündə bir sıra humanist yanaşmaları, yeni mütərəqqi hüquq norma və institutları da ehtiva etmiş, gələcəkdə daha mükəmməl qanunvericilik aktlarının qəbulu üçün əlverişli zəmin yaratmış, cəza-icra sisteminin fəaliyyətinin müstəqil qanunverici aktla nizamlanmasının başlanğıc mərhələsi kimi tarixə daxil olmuşdur. Təsədüfi deyildir ki, onun bir sıra müddəaları və bəzi normaları uzun müddət ötsə də, aktuallığını itirmədiyindən sonrakı məcəllələrdə də öz yerini qoruyub saxlamışdır.

Ədəbiyyat siyahısı:

1. Musa Hümbətov. Cəza və onun icrası. Bakı, “Hüquq ədəbiyyatı” nəşriyyatı, 1999, 206 s.
2. C. Quliyev, M. Hümbətov, N. Mustafayev. Azərbaycan Respublikasının cəza-icra hüququ. Dərs vəsaiti. Bakı, “Hüquq Yayın Evi” nəşriyyatı. 2022, 576s.
3.Упоров И.В. Исправительно-трудовой кодекс РСФСР 1933 г.: общеправовая характеристика // Гуманитарный научный вестник. 2017. № 10, С. 6–11.
4. Humbatov M. Heydar Alıyev and the penal system of the Republıc of Azerbaıjan // Journal Sciences of Europe. 2023. № 120, pp. 27–31.
5. Hümbətov M. H. Cəzaların İcrası Məcəlləsinin yeni layihəsi haqqında // “Cəmiyyət və cəza” jurnalı, Bakı, 2000. № 1, Səh. 22–25.
6. Hümbətov M. H. Azərbaycan Respublikasında yetkinlik yaşına çatmayanlara cinayət cəzalarının təyin edilməsinin və onların cəzalarının icrasının xüsusiyyətləri // Journal Annali d’Italia. 2025. № 71, pp. 21–32.
7. Hümbətov M. H. Azərbaycan Respublikasında qadınlara cinayət cəzalarının təyin edilməsinin və məhkum qadınların cəzalarının icrasının xüsusiyyətləri // Norwegian Journal of development of the International Science. 2025. № 156. pp. 49–58.
8. Qasımov Aydın Eylas oğlu. Azərbaycanda cəza-icra hüququnun inkişaf tarixi, müasir vəziyyəti və problemləri: hüquq üzrə elmlər dok. ... dis. avtoreferatı: 5611.01 / A. E. Qasımov. Bakı Dövlət Universiteti. Bakı, 2014. 70 s.
9. Hümbətov M. H. Humanizmin yeni nümunəsi // “Qanunçuluq” jurnalı, Bakı, 1997. № 3, Səh. 20–25.

MEDICAL SCIENCES

UDK 615.212:615.322:582.929.4

ANALGESIC ACTIVITY OF THE FRACTION FROM *PHLOMIS THAPSOIDES* L. IN AN ACETYLCHOLINE-INDUCED PAIN MODEL

Azamatov A.,
PhD, senior researcher at the Department of pharmacology and toxicology of the Institute of chemistry of plant substances of the Academy of sciences of the Republic of Uzbekistan
Rakhimov J.,
Master's student in the field of Experimental and Sports Pharmacology at the Tashkent Pharmaceutical Institute.
Abdullayev A.,
Master's student in the field of Experimental and Sports Pharmacology at the Tashkent Pharmaceutical Institute.
Ergashova M.,
Doctor of Biological Sciences, Professor, Head of the Laboratory of Pharmacological and Toxicological Research. State Institution "Center for Pharmaceutical Product Safety"
Okhundedayev B.,
PhD, Senior Researcher Laboratory of Terpenoids and Phenolic Compounds of the Institute of Chemistry of Plant Substances of the Academy of sciences of the Republic of Uzbekistan
Botirov R.
Doctor of Technical Sciences, Chief Specialist of the Academy of Sciences of the Republic of Uzbekistan, Tashkent

АНАЛЬГЕТИЧЕСКАЯ АКТИВНОСТЬ ФРАКЦИИ *PHLOMIS THAPSOIDES* L. В АЦЕТИЛХОЛИНОВОЙ МОДЕЛИ БОЛИ

Азаматов А.А.
PhD, с.н.с. отдела Фармакологии и токсикологии Институт химии растительных веществ Академии наук Республики Узбекистан
Рахимов Ж.Д.
магистрант Ташкентского фармацевтического института по направлению Экспериментальная и спортивная фармакология
Абдуллаев А.А.
магистрант Ташкентского фармацевтического института по направлению Экспериментальная и спортивная фармакология.
Эргашова М.Ж.
доктор биологических наук, профессор, заведующая лабораторией фармако-токсикологических исследований Государственное учреждение "Центр безопасности фармацевтической продукции"
Охундедаев Б.С.
PhD, с.н.с. лаборатории Тепрпеноидов и фенольных соединений Института химии растительных веществ Академии наук Республики Узбекистан
Ботиров Р.А.
Доктор технический наук, главный специалист Академии наук Республики Узбекистан, Ташкент
https://doi.org/10.5281/zenodo.21706919

Abstract

In this study, the analgesic activity of a fraction isolated from the *Phlomis thapsoides* L. was experimentally evaluated under conditions of a chemical pain model induced by acetylcholine. The studies were conducted on outbred white male mice, and the test fraction was administered orally at doses of 1.0, 5.0, 10.0, 25.0, 50.0, 100.0, 150.0, and 200.0 mg/kg. Analgesic activity was assessed based on pain reaction indicators and the degree of their reduction relative to the control group. The obtained results showed that the fraction exhibits a dose-dependent analgesic effect. The highest pharmacological efficacy was observed at a dose of 25.0 mg/kg, with a 65.5% reduction in the pain reaction. The analgesic activity of the fraction was comparable to the effect of the reference drug ketoprofen, allowing it to be evaluated as a promising natural analgesic agent.

Аннотация

В данном исследовании экспериментально оценена анальгетическая активность фракции, выделенной из *Phlomis thapsoides* L., в условиях модели химической боли, индуцированной ацетилхолином. Исследования проведены на беспородных белых мышах-самцах, исследуемую фракцию вводили перорально в дозах 1,0-5,0-10,0-25,0-50,0-100,0-150,0-200,0 мг/кг. Анальгетическую активность оценивали на основе показателей болевой реакции и степени их снижения по сравнению с контрольной группой. Полученные результаты показали, что фракция проявляет дозозависимое обезболивающее действие. Наивысшая фармакологическая эффективность наблюдалась при дозе 25,0 мг/кг, при этом болевая реакция снизилась на 65,5%. Анальгетическая активность фракции была сопоставима с действием референтного препарата кетопрофена, что позволяет оценить её как перспективное природное анальгетическое средство.

Keywords: *Phlomis thapsoides* L., acetylcholine-induced pain model, chemical pain test, ketoprofen.
Ключевые слова: *Phlomis thapsoides* L., ацетилхолиновая модель боли, тест химической боли, кетопрофен.

Введение. Болевой синдром является одним из основных клинических признаков различных патологических состояний и представляет собой актуальную проблему современной медицины и экспериментальной фармакологии. Хотя широко применяемые для устранения боли опиоидные и нестероидные противовоспалительные препараты обладают высокой терапевтической эффективностью, их длительное использование часто ограничивается развитием побочных эффектов, включая гастроэнтеропатию, нефротоксичность и другие осложнения [1-3]. Поэтому поиск новых эффективных, малотоксичных и получаемых из природных источников анальгетических средств остаётся одним из приоритетных научных направлений фармакологии.

В последние годы биологически активные соединения, выделяемые из лекарственных растений, рассматриваются как перспективный источник для управления болевыми и воспалительными процессами. В частности, способность флавоноидов, иридоидов и фенольных метаболитов воздействовать на медиаторные системы и подавлять ноцицептивные импульсы подтверждает их анальгетический потенциал [4-6]. В связи с этим оценка обезболивающих свойств растительных фракций на основе экспериментальных моделей имеет большое научное и практическое значение.

Phlomis thapsoides L., принадлежащий к семейству *Lamiaceae*, вызывает особый интерес благодаря богатству биоактивными компонентами. В литературе отмечены антиоксидантные, противовоспалительные и обезболивающие свойства некоторых видов рода *Phlomis* [4,5], однако фармакологическая активность фракций, выделенных из *Phlomis thapsoides* L., на ноцицептивных моделях боли изучена недостаточно. Данное обстоятельство определяет необходимость экспериментального исследования анальгетического потенциала фракций, выделенных из этого растения.

Модель химической боли, индуцированной ацетилхолином, является одним из широко используемых чувствительных тестов для изучения ноцицептивных механизмов с участием периферических медиаторов боли [7]. Оценка эффективности новых растительных фракций на этой модели служит важной научной основой для определения механизмов их действия и создания новых фитофармакологических средств.

Изучение анальгетической активности фракции, выделенной из *Phlomis thapsoides* L., на модели боли, индуцированной ацетилхолином, оценка её дозозависимой эффективности и определение возможностей как перспективного природного анальгетического средства имеют актуальное научно-практическое значение.

Цель исследования: экспериментальная оценка анальгетической активности фракции, выделенной из *Phlomis thapsoides* L., на модели химической боли, индуцированной ацетилхолином.

Материалы и методы. Экспериментальные исследования проведены на беспородных белых мышах-самцах массой тела 20-22 г. Перед началом эксперимента животные были адаптированы в течение 7 дней в условиях вивария, обеспечены стандартные лабораторные условия: температура в помещении 23±2°C, 12-часовой световой / 12-часовой тёмный цикл. Животные получали стандартный гранулированный корм и имели неограниченный доступ к воде.

Дозы исследуемого вещества и порядок введения были выбраны в соответствии с действующими методическими рекомендациями по экспериментальной (доклинической) оценке новых фармакологических веществ [8]. Исследования выполнены при полном соблюдении принципов биоэтики, в частности в соответствии с требованиями Европейской конвенции по защите позвоночных животных, используемых в научных целях (Страсбург, 1986), и Директивы ЕС 2010/63/EU [9,10].

Экспериментальные животные были распределены на группы по 6 особей в каждой на основе принципа случайного отбора. Исследуемое соединение вводили перорально (интрагастрально) с помощью атравматического зонда в дозах 1,0-5,0-10,0-25,0-50,0-100,0-150,0-200,0 мг/кг. Через 60 минут после введения вещества в брюшную полость вводили ацетилхолин в дозе 3,2 мг/кг [11], создавая модель химической ноцицептивной боли. После этого анальгетическую активность исследуемого соединения оценивали на основе интенсивности болевых реакций, их динамики и изменений по сравнению с контрольной группой.

Полученные экспериментальные результаты представлены в виде M±m. Статистическую достоверность различий между группами оценивали с помощью t-критерия Стьюдента, для множественных межгрупповых сравнений использовали однофакторный дисперсионный анализ (One-way ANOVA). Статистически значимыми считали различия при уровнях $p<0,05$ и $p<0,01$.

Анальгетическую эффективность определяли в процентах на основании степени изменения показателей болевой реакции по сравнению с контрольной группой, а обезболивающее действие исследуемого вещества оценивали на основе сравнительного фармакологического анализа.

Результаты. На модели химической боли, индуцированной ацетилхолином, у животных контрольной группы количество корчей составило 6,1±0,3, что подтвердило стабильное формирование ноцицептивной болевой реакции в данной модели.

Препарат сравнения кетопрофен проявил выраженную анальгетическую активность во всех изученных дозах. При введении препарата в дозе 1,0 мг/кг количество корчей уменьшилось до 2,9±0,2, болевая реакция подавлена на 52,4%. Под действием дозы препарата 5,0 мг/кг этот показатель составил 2,4±0,2, анальгетическая эффективность достигла 60,6%, а при дозе 10,0 мг/кг количество корчей уменьшилось до 2,2±0,2, подавление болевой реакции составило 63,9% ($p<0,01$). Эти результаты показывают, что кетопрофен обладает сильным и дозозависимым обезболивающим действием в данной модели.

Фракция, выделенная из *Phlomis thapsoides* L., также проявила значительную анальгетическую активность в данной модели. Под действием дозы фракции 1,0 мг/кг количество корчей уменьшилось до 4,0±0,3, болевая реакция подавлена на 34,4%. При дозе 5,0 мг/кг этот показатель составил 3,6±0,3, анальгетическая эффективность достигла 40,9% ($p<0,05$). Эти данные свидетельствуют о том, что фракция даже в малых дозах обладает способностью подавлять болевые импульсы.

При увеличении дозы исследуемой фракции до 10,0 мг/кг анальгетический эффект усилился: количество корчей уменьшилось до 2,9±0,2, болевая реакция подавлена на 52,4% ($p<0,01$). Максимальная эффективность фракции зарегистрирована при дозе 25,0 мг/кг: количество корчей снизилось до 2,1±0,2, анальгетическая активность составила 65,5%. Данный результат показывает, что эффективность фракции близка к действию референтного препарата кетопрофена.

При последующих введённых дозах фракции (50,0-100,0-150,0-200,0 мг/кг) анальгетическая активность сохранялась, однако наблюдалось постепенное снижение интенсивности эффекта. При введении фракции в дозе 50,0 мг/кг болевая реакция снизилась на 57,3%, при дозе 100,0 мг/кг - на 44,2%, при дозе 150,0 мг/кг - на 31,1%, а при дозе 200,0 мг/кг - на 22,9%. Данные показатели, свидетельствующие о том, что оптимальная анальгетическая эффективность фракции находится в диапазоне около 25,0 мг/кг и наблюдается относительное снижение фармакологического действия при более высоких дозах, подробно представлены в таблице 1

Таблица 1

Анальгетическая активность фракции, полученной из *Phlomis thapsoides* L., в тесте химической боли, M±m, n=6

№	Название групп	Доза мг/кг	Количество корчей (за 20 минут)	Снижение количества корчей по сравнению с контролем (%)
1	Контроль (Ацетилхолин 3.2 мг/кг)	3.2	6.1±0.3	-
2	Кетопрофен	1.0	2.9±0.2**	52.4
		5.0	2.4±0.2**	60.6
		10.0	2.2±0.2**	63.9
3	Фракция, полученная из *Phlomis thapsoides* L.	1.0	4.0±0.3*	34.4
		5.0	3.6±0.3*	40.9
		10.0	2.9±0.2**	52.4
		25.0	2.1±0.2**	65.5
		50.0	2.6±0.2**	57.3
		100.0	3.4±0.3*	44.2
		150.0	4.2±0.3*	31.1
		200.0	4.7±0.4*	22.9

*Примечание: результаты представлены в виде M±m (n=6). * —- $p<0,05$; ** - $p<0,01$ по сравнению с контрольной группой.*

Результаты исследования показали, что фракция *Phlomis thapsoides* L. проявляет выраженную и дозозависимую анальгетическую активность на модели химической боли, индуцированной ацетилхолином. Доза фракции 25,0 мг/кг выделилась как наиболее эффективная, что позволяет оценить данную фракцию как важного кандидата для дальнейших фармакологических исследований в качестве перспективного анальгетического средства на основе природного источника.

Вывод. Проведённые экспериментальные исследования показали, что фракция, выделенная из *Phlomis thapsoides* L., проявляет выраженную и дозозависимую анальгетическую активность на модели химической боли, индуцированной ацетилхолином. Наивысшая фармакологическая эффективность наблюдалась при дозе 25,0 мг/кг, анальгетическая активность составила 65,5%, и были отмечены результаты, близкие к действию референтного препарата кетопрофена.

Относительное снижение эффективности при более высоких дозах указывает на наличие оптимального терапевтического диапазона фракции. Полученные результаты подтверждают, что данная фракция является перспективным природным анальгетическим средством, и служат научной основой для более глубокого изучения механизмов её действия и создания новых фитопрепаратов.

Данные научные исследования выполнены в рамках бюджетного проекта Института.

Список литературы:

1. World Health Organization. WHO guidelines for the pharmacological treatment of persisting pain in adults. - Geneva: WHO, 2023.
2. Brunton L.L., Hilal-Dandan R., Knollmann B.C. Goodman & Gilman's The Pharmacological Basis of Therapeutics. -14th ed. - New York: McGraw-Hill, 2022.
3. International Association for the Study of Pain. Pain mechanisms and management recommendations [Электронный ресурс]. URL: https://www.iasp-pain.org.
4. Salatino A. et al. Biological activities of species of the genus *Phlomis*//Fitoterapia. 2022. Vol.158. P.105156.
5. Kirmizibekmez H. et al. Iridoids and flavonoids from *Phlomis* species and their pharmacological activity//Phytomedicine. 2023. Vol.117. P.154902.
6. Natural modulators of inflammatory pain pathways//Biomedicine & Pharmacotherapy. 2024. Vol.171. P.115762.
7. Хабриева Р.У. Руководство по экспериментальному (доклиническому) изучению новых фармакологических веществ. М. Медицина, 2005.832 с.
8. Стефанова А.В. Доклинические исследования лекарственных средств. – Киев: Авиценна, 2002. - Ч.1. 579 с.
9. European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes. - Strasbourg: Council of Europe, 1986.- 53 p.
10. Directive 2010/63/EU of the European Parliament and of the Council of 22 September 2010 on the protection of animals used for scientific purposes//Official Journal of the European Union. - 2010. - L276. - P.33-79.
11. Миронов А.Н. Руководство по проведению доклинических исследований лекарственных средств. Часть 1. М: Гриф и К, 2012, с. 673.

POLITICAL SCIENCES

FORMATION AND DEVELOPMENT OF REGIONAL INTEGRATION OF THE REPUBLIC OF AZERBAIJAN IN THE CIS SPACE

Salaeva T.
Master
Baku State University
https://doi.org/10.5281/zenodo.21706921

Abstract

This article provides a scientific and theoretical analysis of the participation of the Republic of Azerbaijan in the processes of regional integration within the Commonwealth of Independent States (CIS), as well as the stages of formation and the distinctive features of this integration. The study examines Azerbaijan's foreign policy based on national interests, mechanisms of economic cooperation, transport and logistics projects, issues of energy security, and the directions of the development of multilateral diplomatic relations within the CIS. At the same time, it evaluates both the advantages of Azerbaijan's cooperation with the CIS and the existing challenges arising from the country's pursuit of an independent foreign policy.

Keywords: Azerbaijan, Commonwealth of Independent States (CIS), regional integration, economic cooperation, foreign policy, transport corridors, energy security.

Introduction

The dissolution of the Soviet Union at the end of the twentieth century led to the emergence of a new system of geopolitical and geo-economic relations across the post-Soviet space. In order to preserve economic, political, and humanitarian ties among the newly independent states, the Commonwealth of Independent States (CIS) was established in December 1991. Following the restoration of its state independence, the Republic of Azerbaijan began integrating into the international system by prioritizing participation in both regional and global frameworks of cooperation in accordance with its national interests.

By joining the CIS in 1993, Azerbaijan demonstrated its interest in developing cooperation within the organization in the fields of economy, trade, transport, humanitarian affairs, and security. At the same time, throughout all stages of its foreign policy, the country consistently adhered to the principle of independence and refrained from assuming obligations within any integration framework that could restrict its sovereign rights. This approach constitutes one of the defining characteristics of Azerbaijan's model of regional integration.

Theoretical Foundations of Regional Integration within the Commonwealth of Independent States (CIS)

Regional integration is a complex process involving the systematic deepening of economic, political, legal, and institutional ties among states within the contemporary system of international relations. The primary objectives of this process are to accelerate economic development, reduce trade barriers, increase investment flows, strengthen regional security, and enhance the international competitiveness of participating states. Since the second half of the twentieth century, regional integration has become one of the key dimensions of the globalization of the world economy. Today, integration organizations operating in different regions of the world contribute to more effective interstate cooperation, the rational allocation of economic resources, and the achievement of sustainable development.

The theoretical foundations of regional integration have been extensively examined in various economic and political theories. One of the most influential approaches is the theory of integration developed by the Hungarian economist Béla Balassa. Balassa defined regional integration as "a process designed to abolish discrimination between national economies" [6, p. 304]. According to his theory, integration develops gradually through a sequence of stages: a free trade area, a customs union, a common market, an economic union, and complete economic integration. As Balassa stated, "Economic integration can be regarded as a process and as a state of affairs. As a process, it encompasses measures designed to abolish discrimination between economic units belonging to different national states" [6, p. 304]. This approach demonstrates that integration is not a one-time event but rather a long-term process of institutional development.

The political dimensions of regional integration are most comprehensively explained by the theory of neofunctionalism. One of its leading proponents, Ernst B. Haas, argued that cooperation among states in specific economic sectors gradually extends to other areas of interaction. He described this phenomenon as the **spillover effect**. According to Haas, "Political integration is the process whereby political actors in several distinct national settings are persuaded to shift their loyalties, expectations, and political activities toward a new center" [11, p. 552]. According to this concept, economic cooperation eventually promotes political and institutional integration. However, not all regional organizations fully follow this model.

Another important theoretical approach is the theory of economic integration developed by Béla Balassa and Jacob Viner. In his analysis of customs unions, Viner introduced the concepts of **trade creation** and

trade diversion. He argued that regional integration should not only promote the expansion of trade among member states but also improve overall economic efficiency [17, p. 221].

Richard Baldwin, a prominent scholar in the field of international economics, regards regional integration as an integral component of globalization. He argues that under contemporary conditions, regional cooperation plays a crucial role in strengthening the competitive advantages of states. According to Baldwin, regional economic organizations represent one of the key instruments for enhancing countries' positions within the global economic system [7, p. 344].

Regional integration is significant not only from an economic perspective but also in terms of politics and security. Joseph Nye viewed integration as a natural consequence of increasing interdependence among states, emphasizing that the development of economic ties contributes to greater political stability and reduces the likelihood of conflicts [14, p. 207]. Consequently, modern regional organizations encompass not only economic cooperation but also such areas as security, humanitarian cooperation, transport, energy, and digital development.

The Commonwealth of Independent States (CIS), operating in the post-Soviet region, differs from classical models of regional integration in several important respects. The CIS was established in 1991 following the dissolution of the Soviet Union with the objective of preserving economic, political, humanitarian, and legal ties among the former Soviet republics. The Agreement on the Establishment of the CIS defines the organization as "an international association promoting cooperation among independent states and protecting their common interests." Thus, unlike the European Union, the primary objective of the CIS is not to establish a unified economic and political space but rather to provide an effective platform for interstate cooperation.

Russian scholar Alexey Gromyko characterizes the CIS as a "flexible model of integration" within the post-Soviet space. In his view, the organization's principal advantage lies in its respect for the state sovereignty of its members. Decisions within the CIS are generally adopted by consensus, while member states independently determine the areas of cooperation in accordance with their national interests [10, p. 304].

The participation of the Republic of Azerbaijan in the CIS has likewise been shaped by these principles. Azerbaijan joined the organization in 1993 while maintaining its commitment to a balanced and multi-vector foreign policy. The Republic views the CIS as an important regional platform for promoting economic and humanitarian cooperation, while consistently giving priority to its sovereign right to make independent decisions.

Azerbaijani statesman and scholar Ramiz Mehdiyev emphasizes that Azerbaijan's foreign policy doctrine is based on the protection of national interests, the strengthening of state independence, and the pursuit of a balanced international policy. According to him, the country's participation in international organizations has never been placed above its national interests, and Azerbaijan approaches all integration processes from a pragmatic perspective [13, p. 576].

This approach has also been repeatedly reflected in the speeches of the President of the Republic of Azerbaijan, Ilham Aliyev. The President has emphasized: "Azerbaijan conducts its activities in all international organizations solely on the basis of its national interests and pursues an independent policy." This principle defines the distinctive features of Azerbaijan's model of integration within the CIS. The country supports the expansion of economic cooperation while fully preserving its political independence and sovereign decision-making authority.

Economic Integration and Trade Cooperation

Economic cooperation constitutes one of the principal dimensions of Azerbaijan's integration within the framework of the Commonwealth of Independent States (CIS). During the early years of independence, a significant share of Azerbaijan's foreign trade turnover was accounted for by the CIS member states. Although Azerbaijan subsequently expanded its economic relations with the countries of Europe and Asia, the CIS member states continue to occupy an important place among the country's principal trading partners. The main areas of economic cooperation are presented in Fig.1.

Fig. 1. Directions of Economic Cooperation

Azerbaijan has made extensive use of the CIS market to develop its agricultural production, food industry, chemical sector, and non-oil economy. At the same time, the country has diversified its foreign trade, thereby strengthening its economic security.

Development of Transport and Logistics Cooperation. One of the key directions of the Republic of Azerbaijan's regional integration within the Commonwealth of Independent States (CIS) is the development of transport and logistics cooperation. Azerbaijan's geographical location at the crossroads of Europe and Asia, its access to the Caspian Sea, and its position along the international North–South and East–West transport corridors have transformed the country into one of the region's most important transit hubs. Following the restoration of its independence, the modernization of transport infrastructure became one of the priorities of the state's economic development strategy.

One of the most significant projects in this area was the Baku–Tbilisi–Kars (BTK) Railway, which was officially inaugurated on 30 October 2017. The implementation of this project created a new international transport corridor linking Azerbaijan, Georgia, and Türkiye, substantially expanding the opportunities for CIS countries to access European markets. Through the Middle Corridor, the transportation time for cargo between China and Europe has been reduced from 35–45 days by sea to approximately 12–18 days [1].

Another important regional integration project is the International North–South Transport Corridor (INSTC). This route facilitates cargo transportation between India, Iran, Azerbaijan, Russia, and European countries. According to projections, the corridor will reduce delivery times by approximately 40% and transportation costs by up to 30%. To support the implementation of the project, the Astara railway line, logistics terminal, and other transport infrastructure facilities were modernized [3].

The Baku International Sea Trade Port (Port of Alat) also plays a significant role in expanding Azerbaijan's transit potential. During the first phase of the project, the port achieved a cargo-handling capacity of 15 million tonnes and 100,000 TEU annually. Future development plans envisage increasing this capacity to 25 million tonnes and 500,000 TEU, with a long-term objective of reaching 50 million tonnes of cargo and 1 million TEU per year. Through its connections with the ports of Aktau, Kuryk, and Turkmenbashi, the Port of Alat has become one of the key components of the Middle Corridor [2].

In 2024, approximately 4.5 million tonnes of cargo were transported via the Middle Corridor, representing an increase of about 60% compared to the previous year. Container traffic exceeded 56,000 TEU, while the total freight volume transported through the Azerbaijan Railways network surpassed 18 million tonnes. During the same year, transit transportation to CIS countries—particularly Russia, Kazakhstan, and Turkmenistan—also recorded significant growth.

According to the World Bank's Logistics Performance Index (LPI) 2023, Azerbaijan's performance in logistics and transport infrastructure improved considerably. The introduction of digital customs systems, the "single window" mechanism, and electronic document management accelerated cargo transportation and reduced transit costs [3].

Thus, such projects as the Baku–Tbilisi–Kars Railway, the International North–South Transport Corridor, the Middle Corridor, and the Baku International Sea Trade Port (Alat) have significantly strengthened Azerbaijan's regional integration within the CIS and transformed the country into one of the strategically important transport and logistics hubs connecting Europe and Asia.

Energy Cooperation. One of the most important directions of the Republic of Azerbaijan's regional integration within the Commonwealth of Independent States (CIS) is cooperation in the energy sector. Possessing substantial hydrocarbon resources, Azerbaijan transformed its energy sector into the principal driver of national economic development following the restoration of its independence. Through the effective management of its oil and natural gas resources, the country has become one of the key contributors to regional energy security. The development of oil and gas fields in the Azerbaijani sector of the Caspian Sea, the implementation of major international energy projects, and the diversification of export routes have significantly strengthened Azerbaijan's strategic position both within the CIS and in the global energy market.

The foundations of Azerbaijan's energy policy are based on the protection of national interests, diversification of energy export routes, mutually beneficial cooperation with international partners, and the enhancement of energy security. The cornerstone of this policy was laid on 20 September 1994 with the signing of the agreement that became internationally known as the "Contract of the Century." This landmark agreement initiated cooperation with leading international energy companies in the development of the Azeri–Chirag–Gunashli (ACG) oil fields. The project involved 11 international oil companies from eight countries, attracting billions of US dollars in foreign investment into Azerbaijan's economy [5].

According to the State Oil Fund of the Republic of Azerbaijan (SOFAZ), the implementation of the "Contract of the Century" has generated more than US$200 billion in revenues for the country. These financial resources have been allocated to economic diversification, the development of social infrastructure, and the financing of strategically important national projects. Consequently, the energy sector has played a decisive role in strengthening Azerbaijan's economic independence.

Oil transportation infrastructure occupies an important place in the development of Azerbaijan's energy cooperation within the CIS. One of the earliest major projects was the Baku–Novorossiysk oil pipeline. With a total length of approximately 1,330 kilometres, the pipeline transports Azerbaijani crude oil to the Russian Black Sea port of Novorossiysk. For many years, this route has remained an important component of energy cooperation with CIS countries and one of the alternative export routes for Azerbaijani oil to international markets.

Another milestone in Azerbaijan's energy policy was the commissioning of the Baku–Tbilisi–Ceyhan

(BTC) Main Export Oil Pipeline, which became operational in 2006. The pipeline has a total length of 1,768 kilometres and an annual transportation capacity of approximately 50 million tonnes of crude oil, equivalent to nearly 1 million barrels per day. The implementation of this project ensured reliable and uninterrupted transportation of Azerbaijani oil to global markets via the Mediterranean Sea, substantially expanding the country's export opportunities [12].

A key project that significantly enhanced Azerbaijan's regional and international importance in the natural gas sector was the development of the Shah Deniz gas-condensate field. Located in the Caspian Sea, the field's reserves are estimated at approximately 1.2 trillion cubic metres of natural gas and 240 million tonnes of gas condensate. The implementation of the Shah Deniz Stage 2 project considerably increased Azerbaijan's natural gas exports and transformed the country into one of the leading gas exporters in the region.

One of the greatest achievements of Azerbaijan's energy strategy has been the implementation of the Southern Gas Corridor project. The total cost of the project is estimated at approximately US$33 billion. The Southern Gas Corridor consists of four main components (Figure 2).

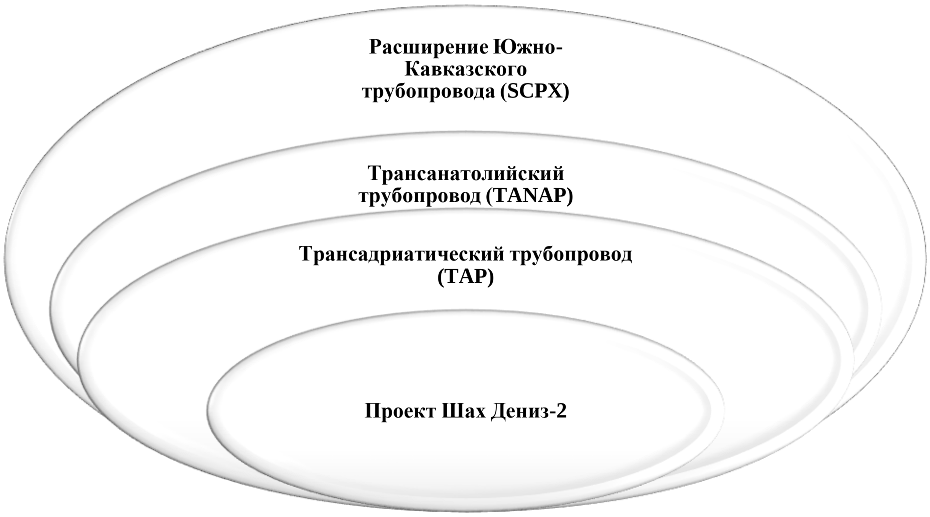


Fig. 2. Main Components of the Southern Gas Corridor Project

The Southern Gas Corridor, which entered commercial operation at the end of 2020, supplies Azerbaijani natural gas to the markets of Türkiye and Europe, contributing to the diversification of the country's export routes and strengthening its role in ensuring international energy security.

In 2024, Azerbaijan produced 50.3 billion cubic metres of natural gas and approximately 29 million tonnes of crude oil. Natural gas exports exceeded 25 billion cubic metres. Energy cooperation with CIS member states continued through natural gas exchange, the parallel operation of electricity systems, and the implementation of joint technical projects. At the same time, the oil and gas sector maintained its leading position in the country's export structure [15].

Azerbaijan is also actively expanding cooperation in the field of renewable energy. The liberated territories of Karabakh and East Zangezur have been declared a "Green Energy Zone," while the country's considerable renewable energy potential and the implementation of related projects create favourable conditions for expanding energy cooperation with both CIS countries and other international partners.

Humanitarian and Social Integration. One of the important directions of the Republic of Azerbaijan's regional integration within the Commonwealth of Independent States (CIS) is the development of humanitarian and social cooperation. Alongside economic and political relations, cooperation in education, science, culture, youth policy, sports, healthcare, and other humanitarian fields plays an important role in strengthening mutual trust among states and creating a long-term environment for cooperation. In this regard, the CIS has established a number of institutional mechanisms aimed at expanding humanitarian and social integration among its member states.

The legal foundation for humanitarian cooperation within the CIS is the Agreement on Humanitarian Cooperation of the CIS Member States, adopted in 2005. Pursuant to this agreement, the Council for Humanitarian Cooperation of the CIS Member States was established in 2006, followed by the Interstate Fund for Humanitarian Cooperation of the CIS Member States (IFHC) in 2007. With the support of the Fund, dozens of regional projects in science, education, culture, library and museum development, youth policy, and sports are implemented annually [16].

Azerbaijan is one of the active participants in these programmes. Azerbaijani delegations regularly participate in CIS humanitarian cooperation forums as well as international events involving university lecturers, researchers, librarians, museum specialists, and youth organizations. Such cooperation facilitates the exchange of scientific knowledge, the preparation of joint projects, and the further expansion of humanitarian ties among member states.

Cooperation in the field of education represents one of the most dynamic areas of Azerbaijan's integration within the CIS. Azerbaijani universities have concluded hundreds of bilateral cooperation agreements with higher education institutions in Russia, Kazakhstan, Belarus, Kyrgyzstan, Uzbekistan, and other CIS countries. These agreements provide for student and faculty exchanges, joint scientific research, dual-degree programmes, and the organization of international conferences [18].

According to the Ministry of Science and Education of the Republic of Azerbaijan, more than 8,000 international students were enrolled in Azerbaijani higher education institutions in 2024, a significant proportion of whom were citizens of CIS member states. At the same time, thousands of Azerbaijani citizens pursued higher education in universities in Russia, Belarus, Kazakhstan, and other CIS countries. These indicators demonstrate the consistent development of mutual integration in the educational sphere.

Leading Azerbaijani higher education institutions—including Baku State University, Azerbaijan State University of Economics (UNEC), Azerbaijan State Oil and Industry University, ADA University, and others—successfully implement joint research projects, Erasmus+ programmes, dual-degree programmes, and academic mobility initiatives in cooperation with universities across the CIS. Particular importance is attached to the Baku Branch of Lomonosov Moscow State University and the Baku Branch of I.M. Sechenov First Moscow State Medical University, which serve as successful examples of educational cooperation between Azerbaijan and Russia.

Scientific cooperation has also expanded considerably in recent years. The Azerbaijan National Academy of Sciences (ANAS) implements joint projects with the academies of sciences of CIS countries in biotechnology, geology, energy, artificial intelligence, history, and the humanities. Azerbaijani researchers actively participate in scientific programmes and international conferences organized by the Association of Academies of Sciences of the CIS Countries [12].

Cooperation in the field of culture constitutes an important social component of regional integration. Azerbaijan regularly hosts CIS Culture Days, international book fairs, theatre festivals, and musical events. In 2024, Baku hosted the 17th Forum of the Creative and Scientific Intellectuals of the CIS Member States, which became an important event in the development of humanitarian cooperation. During the forum, decisions were adopted to expand cooperation in science, culture, education, and digital development.

Another important aspect of humanitarian integration is the international promotion of Azerbaijan's rich cultural heritage. International recognition of such cultural heritage sites as Icherisheher, the Gobustan State Historical and Artistic Reserve with its rock carvings, and the Historic Centre of Sheki, as well as the inscription of Azerbaijani Mugham, the art of Ashiqs, traditional carpet weaving, and the art of making and wearing the Kelaghayi on international lists of intangible cultural heritage, has contributed to the further development of cultural cooperation with CIS countries [9].

In the field of sports, Azerbaijan also actively cooperates with CIS member states. Azerbaijani athletes regularly participate in the CIS Games, international tournaments, and joint training programmes. In 2025, the 3rd CIS Games were held in the city of Ganja, bringing together thousands of athletes from more than twenty countries. Azerbaijan ranked among the leading countries in terms of the number of medals won. Hosting these competitions made a significant contribution to strengthening friendly relations among the countries of the region and promoting humanitarian integration.

Cooperation in the healthcare sector became particularly important during the COVID-19 pandemic. Azerbaijan cooperated with CIS member states in the exchange of epidemiological information, the provision of medical equipment, the training of healthcare professionals, and the prevention and control of infectious diseases. Such cooperation contributed to strengthening the regional sanitary and epidemiological security system and establishing joint mechanisms for responding to public health emergencies.

The model of regional integration pursued by the Republic of Azerbaijan within the CIS is characterized by a pragmatic and balanced approach that differs from the classical models of regional integration. Following the restoration of its independence, Azerbaijan built its foreign policy on the principles of national interests, state sovereignty, economic security, and multilateral cooperation [8]. Consequently, Azerbaijan regards the CIS primarily as an effective platform for promoting economic and humanitarian cooperation while maintaining the priority of national interests in matters of political and military-political integration.

Table 1.

Features of Azerbaijan's Model of Regional Integration

No.	Features
First	National interests were established as the primary priority of the country's foreign policy.
Second	A multi-vector and balanced diplomatic approach enabled Azerbaijan to develop cooperation simultaneously within the Commonwealth of Independent States (CIS), the Organization of Turkic States (OTS), the Organization of Islamic Cooperation (OIC), as well as with European and other international organizations.
Third	Economic integration was given priority over political integration. Azerbaijan placed greater emphasis on expanding economic cooperation while preserving its political independence.
Fourth	Energy and transport diplomacy became one of the principal driving forces of regional integration.
Fifth	Throughout the integration process, Azerbaijan consistently adhered to a position based on the principles of international law and the principle of the territorial integrity of states.

Thus, Azerbaijan's model of regional integration within the Commonwealth of Independent States (CIS) is based on the principles of safeguarding national interests, economic pragmatism, multilateral diplomacy, an effective energy and transport policy, respect for international law, and economic diversification. These characteristics have enabled Azerbaijan to strengthen its position as a reliable partner and an important regional actor not only within the CIS but also across the broader Eurasian region.

Despite the progress achieved in the CIS integration process, a number of challenges remain. Differences in the levels of economic development among member states, divergent geopolitical interests, the impact of international sanctions, regional conflicts, and increasing competition among transport and logistics routes continue to influence the further expansion of regional cooperation.

At the same time, the development of the digital economy, e-commerce, green energy, the innovation economy, artificial intelligence technologies, and the digitalization of transport infrastructure creates new opportunities for deepening regional integration.

Azerbaijan's growing role in the development of the Middle Corridor, the establishment of modern infrastructure in the liberated territories, the prospects for implementing the Zangezur Corridor, and the expansion of regional economic ties have the potential to open new avenues of cooperation and further strengthen integration processes within the CIS.

Conclusion

The regional integration of the Republic of Azerbaijan within the Commonwealth of Independent States (CIS) has been one of the key directions of the country's balanced foreign policy since the restoration of its state independence. While actively contributing to the development of economic, transport, energy, and humanitarian cooperation within the CIS framework, Azerbaijan has consistently adhered to the principles of state sovereignty and independent foreign policy decision-making.

At the present stage, Azerbaijan's strengthening position as a regional transport and logistics hub, its achievements in energy diplomacy, the diversification of the national economy, and the implementation of a strategy of multilateral international cooperation have created favourable conditions for elevating regional integration within the CIS to a qualitatively new level.

Looking ahead, digital transformation, the development of the green economy, and the implementation of regional transport and logistics projects are expected to further deepen Azerbaijan's cooperation within the CIS, strengthen its role as a reliable and strategic partner, and enhance the country's significance within the broader Eurasian region.

References:

1. Azerbaijan Railways CJSC. (2025). Annual report 2024. https://ady.az
2. State Customs Committee of the Republic of Azerbaijan. (2025). Foreign trade statistics of the Republic of Azerbaijan 2024. https://customs.gov.az
3. State Oil Fund of the Republic of Azerbaijan. (2025). Annual report 2024. https://oilfund.az
4. State Statistical Committee of the Republic of Azerbaijan. (2025). Statistical indicators of Azerbaijan 2025. https://stat.gov.az
5. Ministry of Energy of the Republic of Azerbaijan. (2025). Energy statistics 2024. https://minenergy.gov.az
6. Balassa, B. (1961). The Theory of Economic Integration. Richard D. Irwin. 304 p.
7. Baldwin, R. E. (2016). The Great Convergence: Information Technology and the New Globalization. Harvard University Press. 344 p.
8. Commonwealth of Independent States. (1991). Agreement establishing the Commonwealth of Independent States. https://cis.minsk.by
9. Energy Institute. (2024). Statistical review of world energy 2024. https://www.energyinst.org
10. Gromyko, A. A. (2018). Post-Soviet space: integration processes and perspectives. Institut Evropy RAN. 304 pp.
11. Haas, E. B. (1958). The Uniting of Europe: Political, Social and Economic Forces, 1950–1957. Stanford University Press. 552 p.
12. International Energy Agency. (2024). Azerbaijan – Energy profile. https://www.iea.org
13. Mehdiyev, R. (2011). Azerbaijan: Requirements of the era of globalization. East-West. 576 p.
14. Nye, J. S. (1971). Peace in Parts: Integration and Conflict in Regional Organizations. Little, Brown and Company. 207 p.
15. United Nations Economic and Social Commission for Asia and the Pacific. (2024). Transport connectivity in Asia and the Pacific. https://www.unescap.org
16. United Nations Economic Commission for Europe. (2024). Sustainable transport and transit corridors. https://unece.org
17. Wiener, J. (1950). The Customs Union Issue. Carnegie Endowment for International Peace. 221 p.
18. World Bank. (2023). Connecting to compete 2023: Trade logistics in the global economy (Logistics Performance Index). World Bank. https://www.worldbank.org

SOCIAL SCIENCES

TOWARD A CONCEPTUAL FRAMEWORK FOR POST-DIASPORIC FORMATION: THE CASE OF KOREANS IN KAZAKHSTAN

Kim G.
Dr. habil., Prof.
Director of the Institute for Asian Studies
al-Farabi Kazakh National University
https://doi.org/10.5281/zenodo.21706923

Abstract

Post-diaspora should not be understood as the end of diaspora but as a historically conditioned transformation of diasporic life. This article develops a conceptual framework for analyzing that transformation in the post-Soviet space through the heuristic case of Koreans in Kazakhstan (Koryo Saram). It argues that diasporic belonging is increasingly reorganized through multiple identity, pragmatic mobility, institutional brokerage, digital mediation, and the public reworking of traumatic memory. The post-Soviet context is especially productive because communities shaped by imperial borderlands, Stalinist deportations, Soviet nationality policy, Russophone modernization, and post-1991 state-building were recast as transnational communities after the dissolution of the USSR. The Koryo Saram illustrate this transition with particular clarity: their history combines forced displacement, Soviet integration, language shift, Central Asian rootedness, renewed contacts with the Republic of Korea, and digitally mediated networks. The article proposes indicators for identifying post-diasporic formation and outlines a comparative research agenda for post-Soviet diaspora studies.

Keywords: post-diaspora; Koryo Saram; Koreans in Kazakhstan; transnationalism; post-Soviet space; digital diaspora; multiple identity

Introduction

Since the eve of millennium, the concept of diaspora has moved from the margins of historical and migration studies to the focus of studies and discussions in the context of multiple identity, social mobility, globalization, transnationalism, digitalization and AI. The notion is no longer understood merely as a dispersed by forced circumstances ethnic minority separated from and ancestral homeland, diaspora is increasingly examined as a dynamic social formation shaped by multiple attachments, changing political contexts, intergenerational memory and new forms of communication. This shift has expanded the analytical field from classical models of exile, trauma, and return to more flexible approaches that consider hybridity, cultural transition, networked multiple and cyber identities, and the everyday practices through which diaspora is reproduced or transformed. In this point, diaspora has become not only a descriptive object, but also a theoretical lens for understanding how the ethnic communities beyond the kinstate negotiate continuity and change across borders.

The expansion of the classical notion of diaspora has caused two related problems. On the one hand, diaspora remains indispensable for analyzing ethnic communities shaped by forced displaced or voluntarily transborder migration, long-distance attachments, and collective memory. On the other hand, it is increasingly used for highly diverse groups whose identities are no longer organized primarily around exile, loss, and return (Safran, 1991; Cohen, 1997; Brubaker, 2005).

This paper conceptualizes post-diaspora not as a predetermined evolutionary stage, but as an analytical hypothesis requiring empirical verification and theoretical validation. It does not treat post-diaspora as a completed theory or as a universal and inevitable phase for all diasporas. Rather, drawing on classical and critical approaches to diaspora studies (Safran, 1991; Clifford, 1994; Cohen, 1997; Brah, 1996; Brubaker, 2005) the paper raises the questions under what historical, sociological and institutional conditions diaspora may be reconfigured into post-diasporic formation.

From this perspective, post-diaspora does not signify the end of diaspora, it signifies a transformation in the internal balance of its constitutive elements. Collective memory persists, but it no longer functions as the exclusive foundation of identity (Vertovec, 1997, pp. 447, 452). The homeland remains symbolically and politically relevant, yet it ceases to be the sole axis of orientation (Levitt & Glick Schiller, 2004, pp. 1004-1011). Ethnic culture continues to be reproduced, but increasingly in elective, symbolic, pragmatic and digitally mediated forms (Brinkerhoff, 2009, pp. 29-54). Diasporic institutions also remain active; however, their role shifts from preserving insular ethnic community to serving as a platform of representation, networking, transnational communication, diplomacy and accumulation of social capital (Vertovec, 1997, pp. 454-455).

The post-Soviet space offers a distinctive field for this inquiry. In contrast to many migrant communities formed through voluntary migration to the West for labor or study, a dozen of post-Soviet diasporas were shaped by Stalinist ethnic deportations, Soviet nationality policy, Russophone modernization, directive changes by decisions by the leaders of the Communist Party and Soviet government of the administrative boundaries between regions and Republics of the

USSR and the sudden emergence of fifteen independent states after 1991. They were simultaneously old and new: old because of the long histories of the residence and collective memory; new since the geopolitical framework that had contained them ceased to exist.

Accordingly, the principal study's question may be articulated in the following terms: through which historical, institutional, socio-cultural, digital and transnational mechanisms are formed diasporas in the post-Soviet space being transformed into post-diasporic communities? Three propositions are advanced in the paper. First, post-diaspora should be understood as a transformation of diaspora, not as its end. Second, the post-Soviet diasporic experience requires attention to the interaction of Soviet legacies and global processes rather than a simple importation of Western migration theory. Third, the case of Koryo Saram, used here as both an ethnonym and an endonym referring to the Korean diaspora of the post-Soviet space, provides a particularly productive case for this pilot study because their history combines forced deportation, Soviet integration, sociocultural metamorphoses, post-Soviet mobility, boom of ethnic and diaspora identity, and intensive digital and transnational recomposition.

This goal is achieved by solving six tasks, organized chronologically and logically within the article's structure. The first part examines diasporas. The second part attempts to formulate a working definition of the key term "post-diaspora" and define its main criteria. The third part explains why the post-Soviet space is viewed as a unique laboratory for post-diaspora research. The fourth part identifies the main trends in the formation of post-diaspora. In the fifth part of the proposed structure, the phenomenon of Koryo Saram is used as a heuristic example. The conclusion summarizes the argumentation, outlines the rationale, and defines a program for further comparative research.

From Classical Diaspora to Post-Diasporic Thinking: Literature Review

Safran's classic theory of diaspora is built around a set of clear criteria: dispersed settlement beyond the original homeland, collective memory of the historical homeland, boundary maintenance in the host society, and solidarity with compatriots abroad (Safran, 1991, pp. 83-84). His influential formulation of the diaspora remains one of the most cited definitions of the key notion, while Cohen expanded the typology of diasporas to include labor, commercial, imperial, cultural and religious models. (Cohen, 1997, pp. 22-26, 177-180)These approaches remain important because they preserve the historical depth of diaspora and prevent the concept from being absorbed into the associated general theory of transborder migration (Safran, 1991, pp. 83-84; Cohen, 1997, pp. 177-180).

Nevertheless, the same classic model of diaspora has been criticized for being overly normative and standardized. This can turn diaspora into a checklist and privilege just classical or world diasporas as Jewish or Armenian historical experience as paradigmatic examples. Clifford challenged this tendency by emphasizing routes rather than roots, mobility rather than immutability, and the relational nature of diaspora (Clifford, 1994, pp. 302-310). Hall's understanding of cultural identity as a process of becoming rather than a stable entity opened a parallel path: diaspora identity could be treated as a positional and historical formation rather than as an inherited substance (Hall, 1990, pp. 225-226). Bhabha's notion of hybridity and the "third space" further destabilized the binary distinctions between homeland and hostland, origin and assimilation, authenticity and loss (Bhabha, 1994, pp. 53-56).

A decisive step in the development of the constructivist approach to diaspora studies was Brubaker's rethinking of the very concept of diaspora which he proposed to consider not as a fixed social group, but as a set of practices, discourses, and forms of mobilization that arise in specific historical and political contexts. This approach opens up possibilities for analyzing diaspora as a flexible and situational resource of collective identification that can be actualized, transformed or weakened depending on surrounding circumstances. In this perspective, individuals and groups are capable of simultaneously participating in various models of belonging - diasporic, ethnic, national, transnational, professional - without perceiving them as mutually exclusive forms of identity (Brubaker, 2005, pp. 14-16).

Transnationalism added a new dimension to the discussion of the transformation of diaspora communities. Basch, Glick Schiller and Szanton Blanc demonstrated that migrants are capable of simultaneously participating in the social, economic, and political processes of several states, shaping transnational social fields (Basch et al., 1994, pp. 6-7, 22-34). In the contemporary era, these processes are increasingly mediated by digital technologies, internet communication, transnational education, and social network platforms, facilitating new forms of mobility and connections across national borders. (Diminescu, 2008, pp. 565-568)

It is evident that post-diaspora is best viewed not as a single canonical paradigm, but as a new analytical approach to studying the transformation of diaspora communities. In this context, the book of M. Laguerre's "The Postdiaspora Condition" is particularly significant, interpreting post-diaspora as an emancipatory metamorphosis of the diaspora state, linked to the development of cross-border social protection, the expansion of citizenship practices, and the intensification of state policies toward compatriots abroad. In studies of culture, digital mobility, and transnational communications, this term is used less systematically, but retains a similar semantic focus: diaspora is no longer viewed solely as a consequence of exile or spatial rupture with the homeland and is increasingly understood as a networked, hybrid, and multi-layered form of social organization, functioning simultaneously in several social and cultural spaces (Laguerre, 2017, pp. 1-12, 95-118, 145-158).

Working Definition and Analytical Indicators

For the purposes of this paper, post-diaspora is defined as a historically conditioned transformation of diaspora in which the classical markers of diasporic existence are not erased but reconfigured into flexible, networked, situational, and future-oriented forms of belonging. The concept is useful only if it avoids two extremes. It should not romanticize hybridity as a universal liberation from history, because many minor ethnic communities continue to experience discrimination, inequality, language loss, and renewed politization of ethnicity. It should also avoid reducing all change to assimilation, because cultural memory, ethnic institutions, and transnational links may remain powerful even when they no longer function in classical forms.

A post-diaspora is marked by several indicators. The first is the weakening of the myth of return to the ancestral land. In classical diaspora, this return may operate as a sacred, political or emotional horizon. In post-diaspora, the homeland often becomes a symbolic, cultural, economic, educational or emotional resource rather than a destination for collective repatriation. Mobility may be circular, temporary and pragmatic rather than teleological. The second indicator is multiple identity. Individuals combine ethnic, civic, religious, linguistic, professional, regional and digital affiliations without necessarily placing one at the top of a fixed hierarchy. The third indicator is the instrumentalization of ethnicity. Ethnic origin becomes a form of social and cultural capital that can be mobilized in business, public and cultural diplomacy, tourism, education, and transnational careers. The fourth indicator is digital mediation. Territorial concentration of ethnic minority and local community institutions remain important, but recently they are supplemented by online groups, YouTube channels, family genealogy projects, diasporic publics, virtual commemorations, and digital archives which are not limited by residence. The fifth indicator is the transformation of memory. The diasporic trauma of exodus or forced list of homeland is not forgotten; however, it often moves from closed family narration to public history, museum exhibition, academic research, documentary film, civic ritual and educational projects.

Finally, post-diaspora entails a shift in temporality: while classical diaspora is often oriented toward the lost homeland and remembered past, post-diaspora increasingly treats history as a resource for imagining future forms of citizenship, education, creativity, entrepreneurship, and global connectivity.

Table 1.

Classical diaspora and post-diasporic transformation: analytical contrast

Dimension	Classical diaspora	Post-diasporic transformation	Possible indicators
Homeland	Sacred or political center; myth of return	Symbolic, cultural, educational, or economic resource	Circular mobility, tourism, scholarships, selective repatriation
Identity	Ethnicity as primary collective marker	Multiple, hybrid, and situational self-identification	Civic, professional, linguistic, and digital identities coexist
Community form	Territorial settlement, associations, kinship networks	Networked platforms and flexible publics	Online communities, digital archives, transnational projects
Memory	Trauma and exile as mobilizing core	Public history, museumization, and academic reflection	Commemorations, oral history, documentary film, research projects
Language	Heritage language as boundary marker	Instrumental and symbolic multilingualism	Shift to state language, Russian, English, or standard homeland language
Ethnicity	Obligation and boundary maintenance	Resource, capital, and elective affiliation	Ethnic branding, cultural diplomacy, creative industries

Source: compiled by the author.

Why the Post-Soviet Space Requires a Specific Approach

The post-Soviet space is a historically rich field, intersecting the Russian Empire, the Bolshevik Revolution, Sovietization, ethnic cleansing (deportations), post-Stalinist nationalities policy, the collapse of the Soviet Union, and the nation-building of the emerging sovereign countries, in the context of which diasporas formed. The collapse of the USSR once again transformed these ethnic groups, previously living within the framework of a common Soviet political and civil system and suddenly finding themselves divided by state borders, included in separate national citizenship regimes, and forced to rethink their identity, institutional affiliation, relations with their historical homeland, and forms of belonging in the context of post-Soviet statehood and globalization (Martin, 2001, pp. 9-20).

This historical trajectory fundamentally distinguishes post-Soviet diasporas from many other foreign diasporas. Firstly, they were more characterized by pan-Soviet socio-cultural characteristics than by purely ethnic cultural content. The Russian language, which displaced their native language in many spheres, the pan-Soviet system of education and upbringing, a secular culture "socialist in content" and symbolically "national in form," and a memory, sometimes nostalgic, of the Soviet past became part of their collective identity. Secondly, the "host society" was not always perceived as foreign in the classical sense. Ethnic minorities had been deeply integrated into the context of "proletarian internationalism", " equality, fraternity and friendship" of the soviet people. Thirdly, after the fall of USSR, previously single ethnic groups fragmented into several emerging sovereign states, each with its own constitution, national laws regulating citizenship, property rights, freedoms, language policy, and the status of titular, state-forming nation.

Post-Soviet national state-building, which included the promotion of the state language - the language of the titular nation - the revision of historical narratives, and the restructuring of state institutions, contributed to the onset of divergent processes among parts of a previously unified ethnic group. Many Russian-speaking ethnic minorities, including Koreans, Germans, Greeks, Jews, and others, faced a difficult choice: either integrate into the new reality or repatriate to their historical homeland or another foreign country, including Russia and the so-called "near abroad" countries, that is, those formerly part of the USSR.

Some ethnic diasporas began to transform into post-diasporic entities because the deep integration in post-Soviet states prevented ethnic division from being perceived as necessary. Others acquired post-diasporic status because migration and digital communications precluded the formation of a stable ethnic community within a single territory. In both cases, diasporas are no longer defined solely by compactness of settlement or institutionalized ethnic affiliation. They become bearers of fluid memory, actors in networks and new digital opportunities. Most often, this involves the reorganization of linear identity into its diversity and multilayeredness around pragmatic adaptation.

Another distinctive feature of the post-diaspora trend is the increased role and influence of the historical homeland. Post-unification German policy toward ethnic Germans, Israel's Law of Return, Armenia's engagement with Armenians abroad, South Korean policy innovations, including the introduction of a unified visa for compatriots abroad, and Turkey's cultural diplomacy toward Turkic communities - all have influenced the development trajectories of the post-Soviet diaspora. These external policies create new opportunities, but also new asymmetries. The ancestral homeland can be attractive as a labor market or a place for education, while remaining little-known and unfamiliar in ethnocultural, linguistic, and civilizational terms. This gives rise to one of the central paradoxes of the post-diaspora: the homeland can simultaneously become closer in territorial terms and, in practical terms, further away in terms of identity.

Finally, the digital turn has acquired particular significance in the post-Soviet space, as it partially compensates for the geographical dispersion of diasporas, strengthens horizontal networks, and allows for the maintenance of transnational ties regardless of the country of residence. In this context, internet platforms, social media, mobile applications, and automatic translation serve not only as means of communication but also as a new infrastructure for the reproduction of identity: they expand the exchange of information, create the effect of "presence at a distance," and make it possible to remain "in the diaspora without being in the diaspora" The younger generation is increasingly becoming involved in diaspora life through online networks and platforms, without necessarily being members of formal ethnic associations; However, this does not mean a loss of ethnicity, but rather indicates a transfer of its reproduction to a different, digital infrastructure (Pivovar et al., 2021, pp. 437-439, 445).

Major Trends in the Formation of Post-Diaspora in the Post-Soviet Space

The first trend is the weakening of repatriation as a collective action plan for ethnic diasporas. In many post-Soviet ethnic communities, the idea of returning to the land of their ancestors was strong in the early 1990s, when economic crisis, uncertainty, and nationalization policies spurred migration. However, the experience of repatriation often showed that for those who returned, their ancestral land did not become their true home. Representatives of the Soviet and post-Soviet diasporas arrived with different languages, social habits, educational levels, and expectations. As a result, the homeland increasingly became one element of a broader field of mobility: a place for work, study, tourism, temporary residence, marriage, and business, but not necessarily a final destination.

The second trend is the rise of multiple identities. Post-Soviet diasporas often combine ethnic origin, memories of the Soviet past, the Russian language, citizenship of the new state, and transnational aspirations. For example, a person might identify as Korean by ethnic origin, Kazakh by citizenship, Russian-speaking by language, Soviet by education and culture, Central Asian by regional experience, and someone capable of global mobility by profession. Such identity combinations are not transnational anomalies; they are increasingly becoming normal forms of belonging. The post-diasporic subject is not necessarily torn between loyalties, but can view plurality as a practical competency.

The third trend concerns the transformation of language, as classical diaspora studies often viewed the ancestral language as the central marker of collective identity, whereas in the post-Soviet space, linguistic trajectories have developed in a more complex and multilayered manner. Many ethnic minorities experienced the weakening or partial loss of their heritage languages during Soviet modernization and became predominantly Russian-speaking; however, after 1991, they entered new linguistic regimes shaped by titular state languages and, in many cases, a renewed interest in the languages of the historical motherland. As a result, post-Soviet diaspora communities are increasingly characterized by a multilayered multilingualism, in which Russian can function as a family, cultural, or interethnic language, the state language as a civic and professional necessity, English as a global resource, and the ancestral language as a symbolic and cultural asset. Therefore, post-diaspora should be understood not simply as a loss of native language, but as a restructuring of the social, cultural and pragmatic functions associated with different languages.

The fourth trend is the institutional restructuring of diaspora organizations. In the 1990s, numerous ethnic associations were created in the post-Soviet space to preserve traditional culture and revive language, rituals, and customs. By the 2000s and 2010s, the activities of these organizations began to expand into cultural diplomacy, public events, educational exchanges, business forums, cultural tourism, media projects, and collaboration with embassies and institutions of their historical homelands. The association is becoming not only an ethnocultural autonomy but also a platform for mediation. This is an important characteristic of the post-diaspora era: institutions remain, but their logic is shifting: from the preservation of traditional culture to advocacy, mediation, and future-oriented systemic project work.

The fifth trend is the transformation of memory from trauma to public history. Many diasporas retained memories of deportation, repression, or forced migration in the early post-Soviet years, as the public expression of such memory was often linked to legal rehabilitation, recognition of innocence, and moral and psychological recovery. Over time, this memory began to migrate to museum exhibits, archival exhibitions, academic conferences, educational textbooks, documentaries, memorial days, and digital content. This did not erase memory, but rather transformed the way it was transmitted. Post-diasporic memory is less likely to become a closed family secret and more likely to become a carefully curated public resource.

The sixth trend is associated with the pragmatization of ethnicity, that is, its gradual transformation from a primarily symbolic marker of origin into a social, cultural and, institutional resource. In the post-diaspora context, ethnicity progressively functions not only as a form of collective memory or a means of preserving traditions, but also as capital that can be used in education, professional mobility, entrepreneurship, public and cultural diplomacy. Knowledge of origin, access to diaspora networks, participation in ethnic organizations, and a symbolic connection to the historical motherland acquire practical significance. This transformation does not signify a loss of identity; on the contrary, it signals a change in its functions. Ethnicity becomes a flexible resource, allowing diaspora associations to develop new strategies for social integration, transnational interaction, and future development.

The seventh trend is the emergence of a digital post-diaspora. Digital media do not simply transmit an existing diaspora; they restructure it. Online space creates new hierarchies of visibility and new forms of participation. A community can be loosely organized offline yet highly active in digital space. Conversely, digital activity can create an illusion of unity that masks generational, class, linguistic, and political differences. For this reason, the digital post-diaspora should be studied not only as connection but also as selection: algorithms, linguistic competence, digital literacy, and platform culture determine who participates and who remains invisible.

Overall, trends in the formation of post-diaspora in the post-Soviet space indicate not the disappearance of diasporic identity, but its structural transformation. Memory, language, culture, institutions, and ties to the historical homeland remain, but they are taking on more flexible, pragmatic, digital, and future-oriented forms, corresponding to the new conditions of mobility, citizenship, and global communication.

Table 2.

Trends, mechanisms, and research questions

Trend	Mechanism	Research question
Weakening of return	The homeland becomes a resource rather than a final destination; external homeland policies open selective mobility but do not necessarily ensure cultural closeness.	When does return become circular mobility?
Multiple identity	Ethnic, civic, linguistic, professional, regional, and digital affiliations overlap.	How do generations rank or combine identity layers?
Language shift	Heritage language loses boundary functions; new multilingualism emerges.	Which languages carry memory, citizenship, and mobility?
Institutional reframing	Associations become platforms of mediation, representation, and diplomacy.	How do institutions move from preservation to brokerage?
Pragmatization of ethnicity	Ethnic origin becomes cultural, social, and professional capital.	When does ethnicity function as resource rather than boundary?
Digital community	Platforms replace or supplement territorial concentration; digital networks create flexible participation.	Who is included or excluded by digital diaspora?
Memory transformation	Trauma becomes public history and educational resource.	How can memory remain meaningful without ritualization?

Source: compiled by the author.

The Koryo Saram as a Heuristic Case of Post-Diaspora

Koryo Saram represents one of the most productive heuristic examples for analyzing post-diaspora in the post-Soviet space, as its historical path encompasses all the processes inherent to many diasporas: resettlement from the Korean Peninsula to the Russian Far East in the late 19th and early 20th centuries; Sovietization and the creation of Korean-language institutions; deportation to Kazakhstan and Uzbekistan in 1937; integration into collective farm agriculture, education, science, and urban professions; linguistic shift from an oral dialect-Koryo Mar-to Russian as a native language; the formed experience of Soviet citizenship; post-Soviet migrations and resettlement in states that had regained national sovereignty; and the resumption of contacts and interactions with the historical homeland (Chang, 2016; Pak & Bugai, 2004; Son, 2025). From a classical diaspora perspective, Koreans can be understood as an ethnic minority formed as a result of forced deportation, traumatic collective memory, and the preservation of ethnocultural identity. However, this understanding is insufficient and does not correspond to historical reality, as the subsequent development of the Korean diaspora testifies not only to survival after deportation but also to deep integration into

Soviet and post-Soviet societies. In Kazakhstan, in particular, Koreans became highly urbanized, educated, professionally diversified, and institutionally significant, while the Korean theater, diaspora media, amateur art groups, and the scientific and creative intelligentsia formed a developed Korean model of Soviet reality.

Within post-diasporic configuration of the Koryo Saram, the most visible shift concerns the weakening of the collective myth of return. For the predominant majority of Kazakhstani Koreans, the Republic of Korea is not a straightforward historical motherland in the classical diasporic sense. But it remains meaningful and emotionally resonant, yet the Koryo Saram experience differs substantial from South Korean cultural, linguistic and social norms. Standard Seoul Korean may be studied as a language of employment, education and cultural access, whereas Koryo Mar - an older dialect speech survives only in fragile forms, primarily in family memory, everyday expressions and symbolic repertoires. Recent labor migration to South Korea may therefore strengthen practical ties with the ancestral homeland, but it also reveals cultural and social distance. The historical motherland is consequently transformed from a final collective return destination into a field of opportunity, negotiation and selective attachment.

When the historical homeland ceases to function as a central axis of orientation, the ethnic identity of Koryo Saram is transformed into a pluralistic identity, maintained not only at the level of individual self-identification but also through diaspora institutions. Korean associations, cultural centers, theaters, newspapers, and educational programs no longer function solely as mechanisms for preserving ethnicity. They increasingly participate in interethnic dialogue, public commemoration, cultural diplomacy, Korean language education, youth projects, and cooperation with South Korean organizations. In this sense, Koryo Saram institutions act as intermediaries between Kazakhstan and other post-Soviet states, the Republic of Korea, the broader Korean world, and global cultural circles. Thus, their function has shifted from mediation to representation of interests and the creation of social capital.

The institutional transformation of Koryo Saram is accelerated by global digitalization and new forms of online communication. Modern ethnic diasporas and Koryo Saram groups live dispersed across a vast transnational space, including Kazakhstan, Uzbekistan, Russia, Kyrgyzstan, the Republic of Korea, countries in Europe, North America, Southeast Asia, Australia, and New Zealand. Under these conditions, no single Korean public organization or association can fully encompass the entire geography of settlement and the diversity of social ties among Koreans abroad. Therefore, digital platforms have become an important infrastructure for the preservation and reproduction of collective ethnic memory, the circulation of family histories, reminiscences, oral and written documents, and folklore between different generations and countries of residence.

The digital environment is particularly important for the younger generation and those members of the diaspora community who are not involved in the activities of diaspora organizations. Online communication allows them to engage in more flexible and selective expressions of ethnic identity that do not require permanent institutional affiliation. Thus, digital channels do not abolish diaspora consolidation and solidarity, but rather transform it into new forms - more horizontal, mobile, and situational. This process coincides with a broader shift from inherited ethnic cohesion to a wide range of online communications. The question is not whether ethnic solidarity is being lost, but rather how, and how, it is being reassembled in digital and transnational spaces.

Comparative Implications for Post-Soviet Diaspora Studies

Although the Koryo Saram constitute a central case, the proposed framework has broader comparative significance. Post-Soviet Jews, Germans, Greeks, Poles, Crimean Tatars, Meskhetian Turks, Russians living outside the Russian Federation, and numerous smaller ethnic communities reveal different configurations of diasporic and post-diasporic experience. Some are linked to strong external homeland and repatriation policies; others relate to contested, fragmented or absent homelands; still others are connected less to a single nation-state than to religious, linguistic or civilizational imaginaries. The concept of post-diaspora is analytically useful only insofar as it enables comparison without reducing these historical and sociological differences to a uniform model. Comparative research should therefore approach diaspora not merely as a fixed collective identity or legacy of displacement, but as historically formed and dynamically changing field of practicies, institutions, networks, and meanings. (Faist, 2010, pp. 33-34)

A comparative study of post-diaspora in the post-Soviet space should proceed not from a simple comparison of "big " and "small" diasporas, but from an analysis of the historical, institutional, and cultural configurations in which ethnicity continues to be reproduced but changes its functions. One of the key factors in this transformation is the relationship between the historical homeland, the country of residence, and the community itself. In some cases, the homeland actively invites compatriots to return, offering them citizenship, special legal status, educational programs, or social benefits; in others, it limits itself to cultural diplomacy, symbolic support, and soft power, without envisioning mass repatriation. There are also situations where the homeland itself is politically contested, is at war, is experiencing an economic crisis, or lacks the institutional resources to accommodate returnees. Therefore, post-diaspora development is not limited to a choice between assimilation and return: it can take the form of integration into the host state, cyclical labor and educational mobility, selective repatriation, transnational entrepreneurship, or digital belonging. In this sense, the idea that inclusion in a new society and the maintenance of transnational ties are not mutually exclusive processes is particularly important; they can coexist within the same social field and be activated differently depending on generation, class, citizenship, and life strategy. (Levitt & Glick Schiller, 2004, pp. 1006-1011)

Language is an equally significant dimension, as it is in the linguistic sphere that post-Soviet diasporas encounter the most complex legacy of Soviet modernization. Many communities became predominantly Russian-speaking in the 20th century, having lost or weakened their everyday proficiency in their ancestral language, but after 1991 they also found themselves integrated into the new national language regimes of independent states. The result is not a linear linguistic assimilation, but a multilayered structure: Russian can be preserved as the language of family, education, memory, and interethnic communication; the titular language of the country of residence becomes a resource for civic and professional integration; the language of the historical homeland acquires the significance of symbolic capital, an educational resource, or a tool for migration. This situation can lead to marginalization, especially among those who lack a sufficient command of either their ancestral language or the state language, but it also creates a space of multilingual flexibility, where identity is expressed not only through language proficiency but also through its study, symbolic use, media consumption, and cultural translation. The institutional structure of communities also requires a more nuanced analysis. Some diasporas have associations, cultural centers, newspapers, Sunday schools, religious organizations, and stable channels of communication with their homeland; others rely primarily on kinship networks, professional contacts, informal initiatives, or digital communities. Institutional density influences how collective memory is transmitted, how communities access programs from their historical homeland, how they present themselves to the state of residence, and how they shape their public image. However, post-diaspora can arise not only in the context of strong organizations, but also where traditional institutions weaken, their functions gradually shifting to horizontal networks, educational projects, professional platforms, and digital media. This is why memory in the post-diaspora context should not be viewed solely as an archive of trauma. Deportation, genocide, exile, war, and repression have different historical contents, moral demands, and political vocabularies, yet many post-Soviet communities have followed a common path from the suppressed or familial memory of the Soviet period to public commemoration after 1991. The main question is not whether memory is preserved, but how it becomes meaningful for new generations without turning into a ritualized reproduction of suffering. Young people may appear less institutionally engaged and more assimilated, yet they often act as agents of new re-ethnicization through language learning, genealogical research, K-pop, documentary projects, digital archives, activism, and storytelling. In this regard, the digital environment does not abolish the diaspora, but rather reshapes its infrastructure: the "rooted" community is increasingly supplemented by the figure of the connected migrant, maintaining everyday relationships at a distance through information and communication technologies (Diminescu, 2008, pp. 565-579)

Therefore, a more productive approach is not to rank post-Soviet diasporas by the degree of ethnic preservation, but rather to use a matrix approach that takes into account historical trauma, language, citizenship, urbanization, institutionalization, homeland politics, digital connectivity, class mobility, and intergenerational differences. Such a matrix reveals not the disappearance of the diaspora, but the multiplicity of its transformations in the context of post-Soviet statehood, global mobility, and digital communication.

Risks, Critiques and Conceptual Limits

The concept of post-diaspora possesses considerable analytical potential, but its use requires methodological caution. The main danger is that the prefix "post" can be interpreted as signifying the end of the diaspora state, whereas in many cases, what is at stake is not the disappearance of the diaspora, but the transformation of its internal mechanisms. Diaspora communities continue to face the consequences of forced displacement, discrimination, securitization, legal vulnerability, and political instrumentalization. Therefore, post-diaspora should not be viewed as a stage automatically following "classical" diaspora, much less as evidence of overcoming a traumatic past. Rather, it signifies a new configuration of memory, mobility, institutional connections, and modes of belonging, in which previous diasporic elements persist but begin to perform different functions. It is especially important to avoid presenting post-diaspora as a universal space of hybridity, freedom of choice, and transnational possibilities. This interpretation can obscure social inequality, as access to mobility, multilingualism, digital networks, educational trajectories, and symbolic capital is distributed extremely unevenly. A highly educated urban professional may use their ethnic origin as a resource for professional advancement, international contacts, and cultural representation; meanwhile, a migrant worker with the same background may experience this through dependence on intermediaries, linguistic uncertainty, limited legal status, and vulnerability in the labor market. Consequently, an analysis of post-diaspora cannot be limited to questions of identity and self-description: it must consider citizenship, class, gender, the labor market, language policy, border regimes, and state institutions. This is precisely what allows us to avoid methodological individualism, which mistakenly separates individual choices from the structural conditions in which they are shaped (Levitt & Glick Schiller, 2004, pp. 1009-1015). Equally important is the issue of depoliticization. Classical concepts of diaspora retained a central place in the memory of violence, exile, loss, and demands for recognition. If post-diaspora is described as a smooth transition from trauma to opportunity, there is a risk of weakening the ethical dimension of memory. However, transformation in post-diaspora does not erase historical wounds, but rather changes the ways they are publicly represented. A community can translate traumatic memory into the language of public history, museums, archives, digital platforms, educational projects, and cultural diplomacy, while continuing to demand recognition, justice, and the right to their own interpretation of the past. In this sense, post-diaspora is not a rejection of memory, but a form of its reorganization. Another limitation is the danger of overgeneralization. The post-Soviet space includes communities with diverse histories: some formed as a result of deportation, others as a result of imperial migration, and still others as a result of state collapse and the transformation of internal borders into international ones. Therefore, a concept developed based on a single case cannot be automatically generalized to all groups. Some communities remain predominantly diasporic, others oscillate between diasporic and post-diasporic practices, and still others require analysis through the categories of minorities, migration, indigeneity, or transnational citizenship. The productivity of the concept of post-diaspora lies not in its universality, but in its ability to comparatively explore under what conditions memory, homeland, culture, language, and institutions cease to form a closed ethnic system and are transformed into a more flexible set of resources (Brubaker, 2005, p. 12). Finally, the post-diasporic configuration is not irreversible. War, nationalism, xenophobia, geopolitical confrontation, the politics of historical memory, and the actions of the "homeland" can reinforce ethnic boundaries and return a community to more rigid forms of diasporic mobilization. Digital media, on the one hand, expand communication and support transnational connections, but, on the other, can intensify polarization, competition for representation, and symbolic conflicts within a community. Thus, the future of post-diaspora is not predetermined: it depends on public policy, educational institutions, cultural leadership, intergenerational knowledge transfer, and the capacity of communities to transform historical memory not only into an argument about the past but also into inclusive, future-oriented cultural capital (Diminescu, 2008, pp. 565-579).

Conclusion

Post-diaspora as an analytical concept of the paper gives orientation in the studies of the transition from predominantly territorial, commemorative, and homeland-centered models of belonging to ethnic minorities in the countries of residence to more flexible, multiple, networked and digital forms of post-diasporic consolidation and identity. This transition is particularly specific for many diasporas in the post-Soviet space, as they were shaped by Soviet modernization, forced displacement, a Russian-language cultural environment, the collapse of the USSR, citizenship and various changes in the new nation-building states, and freedom of transborder mobility. This analysis identifies several interrelated trends that characterize the formation of post-diaspora configurations. This primarily concerns the weakening of repatriation as a universal collective horizon, the appearance of multiple identities, the functional differentiation of languages, the rethinking of the role of diaspora institutions, the transformation of traumatic memory into a social, academic, and cultural resource, the pragmatization of ethnicity, the development of digital forms of diasporic solidarity, and the simultaneous coexistence of post-diasporization with process of re-ethnicization. These trends are not linear and do not manifest themselves equally in all diasporic communities. Their intensity depends on generational experience, social status, country of residence, the density of institutional infrastructures, the nature of homeland policy, and opportunities for participation in transnational networks.

The examination of the Koryo Saram experience is notably significant, as this case demonstrates the heuristic capacity to generate new insights of the post-diasporic approach. The history of Koryo Saram cannot be reduced solely to the classical categories of exodus, exile, trauma, assimilation, or ethnic revival. It encompasses deportation and memory of the Stalinist repressions, but also the Soviet integration, Central Asian rootedness, Russian as lingua franca, success in educational and professional careers, post-Soviet mobility, interaction with historical homeland, and participation in digital networks.

The theoretical contribution of the proposed approach lies in its emphasis on the question of the persistence or loss of diaspora, moving from an analysis of the mechanisms of its transformation to a more in-depth study. This approach avoids both the dominant focus on ethnicity and the premature conclusion that diaspora communities are disintegrating in host societies. At the same time, the concept of post-diaspora requires careful application. It should not obscure persistent forms of inequality, discrimination, language loss, the political instrumentalization of memory, or social stratification within diasporas themselves. Therefore, post-diaspora should be understood not as a universal stage of development, but as a research concept applicable to specific historical conditions.

Prospects for future studies of post-diaspora lie primarily in comparative and interdisciplinary analysis. Matrices are needed that take into account the dynamic paradigm of contemporary diasporas, whose ethnopolitical and sociocultural developments lie on the borderline of transition to post-diaspora status. Such matrix tools will allow for comparisons not of the "strength" or "weakness" of diasporas in a linear dimension, but of the various configurations through which post-diaspora identities will be reproduced in the future. Thus, the answer to the key question about the future of ethnic diasporas, using the example of Koryo Saram, lies in the assertion that the Korean diaspora will not disappear in the post-Soviet space, but will transform into a post-diaspora state. Post-diaspora denotes trends toward the transformation of its characteristics in response to challenges, opportunities, and changes in the offline and online, digital environment.

References:

1. Basch, L., Glick Schiller, N., & Szanton Blanc, C. (1994). Nations unbound: Transnational projects, postcolonial predicaments, and deterritorialized nation-states. Gordon and Breach.
2. Bhabha, H. K. (1994). The location of culture. Routledge.
3. Brah, A. (1996). Cartographies of diaspora: Contesting identities. Routledge.
4. Brinkerhoff, J. M. (2009). Digital diasporas: Identity and transnational engagement. Cambridge University Press.
5. Brubaker, R. (2005). The diaspora diaspora. Ethnic and Racial Studies, 28(1), 1-19. https://doi.org/10.1080/0141987042000289997
6. Chang, J. K. (2016). Burnt by the sun: The Koreans of the Russian Far East. University of Hawaii Press.

7. Clifford, J. (1994). Diasporas. Cultural Anthropology, 9(3), 302-338. https://doi.org/10.1525/can.1994.9.3.02a00040

8. Cohen, R. (1997). Global diasporas: An introduction. University of Washington Press.

9. Diminescu, D. (2008). The connected migrant: An epistemological manifesto. Social Science Information, 47(4), 565-579. https://doi.org/10.1177/0539018408096447

10. Faist, T. (2010). Diaspora and transnationalism: What kind of dance partners? In R. Bauböck & T. Faist (Eds.), Diaspora and transnationalism: Concepts, theories and methods (pp. 9-34). Amsterdam University Press.

11. Hall, S. (1990). Cultural identity and diaspora. In J. Rutherford (Ed.), Identity: Community, culture, difference (pp. 222-237). Lawrence & Wishart.

12. Laguerre, M. S. (2017). The postdiaspora condition: Crossborder social protection, transnational schooling, and extraterritorial human security. Palgrave Macmillan. https://doi.org/10.1007/978-3-319-52261-6

13. Levitt, P., & Glick Schiller, N. (2004). Conceptualizing simultaneity: A transnational social field perspective on society. International Migration Review, 38(3), 1002-1039.

14. Martin, T. (2001). The affirmative action empire: Nations and nationalism in the Soviet Union, 1923-1939. Cornell University Press.

15. Pak, B. D., & Bugai, N. F. (2004). 140 let v Rossii: Ocherk istorii rossiiskikh koreitsev [140 years in Russia: An essay on the history of Russian Koreans]. IV RAN.

16. Pivovar, E. I., Ershov, V. F., & Katagoshchina, M. V. (2021). Post-Soviet diasporas in the age of the internet. RUDN Journal of Russian History, 20(3), 437-447.

17. Safran, W. (1991). Diasporas in modern societies: Myths of homeland and return. Diaspora: A Journal of Transnational Studies, 1(1), 83-99. https://doi.org/10.1353/dsp.1991.0004

18. Son, Z. G. (2025). The Russian Koreans in the 1920s and 1930s: An ethnic community in the face of Soviet power (Brill's Korean Studies Library, Vol. 10). Brill.

19. Vertovec, S. (1997). Three meanings of diaspora, exemplified among South Asian religions. Diaspora: A Journal of Transnational Studies, 6(3), 277-299. https://doi.org/10.3138/diaspora.6.3.277

TECHNICAL SCIENCES

ESTABLISHMENT OF AN EXPERT GROUP TO ASSESS FACTORS INFLUENCING REGIONAL SPATIAL PLANNING

Radzinska Yu.,
Cand. Sc. (Tech.), associate professor,
department of land administration and geographic information systems
O.M. Beketov National University of Urban Economy in Kharkiv
https://orcid.org/0000-0002-1661-7975
Prunenko D.,
D. Sc. (Econ.), associate professor
department of transport systems and logistics
O.M. Beketov National University of Urban Economy in Kharkiv
https://orcid.org/0000-0001-7322-9998
Kovalchuk V.,
graduate student,
department of land administration and geoinformation systems
O.M. Beketov National University of Urban Economy in Kharkiv
https://orcid.org/0009-0007-1394-7008
Pavlov-Udovenko A.
graduate student,
department of land administration and geoinformation systems
O.M. Beketov National University of Urban Economy in Kharkiv
https://orcid.org/0009-0003-5537-6806
https://doi.org/10.5281/zenodo.21706925

Abstract

This article sets out a comprehensive scientific and methodological approach to the creation of a relevant expert environment designed for the qualitative and quantitative assessment of factors influencing territorial development planning at regional level.

It is demonstrated that, given the multifactorial nature of spatial data, environmental uncertainty and the integration of geographic information systems (GIS), the accuracy of urban planning and land-use planning directly depends on the level of competence of the specialists involved. The aim of the study is to minimise subjectivity and formalise the procedure for selecting candidates for expert groups.

A system comprising 11 specific selection criteria has been developed, systematised and mathematically described. This system covers such key parameters as: general professional experience in the field, possession of a relevant higher education qualification and academic degree, experience in developing sustainable development concepts, as well as practical skills in implementing functional, socio-economic, environmental (in particular, soil condition monitoring) and security projects in the field of spatial planning for local authorities.

To ensure an objective assessment of candidates' potential, a scoring scale ranging from 0 to 10 was introduced. The selection process was carried out by calculating the average individual scores of the candidates and comparing them with the overall benchmark average for the criteria, which, according to the study's findings, stands at 3.909 relative units.

A representative sample of 18 candidates was assessed, and based on the results of this assessment, an optimal working group comprising eight members was formed. This quantitative and qualitative composition fully meets the theoretical and methodological requirements of expert theory regarding the representativeness and minimum required size of expert commissions.

The practical value of the results obtained lies in the creation of a universal tool for optimising staffing for local authorities and central government bodies when rolling out urban planning systems for property monitoring and rational land-use zoning.

Keywords: geographic information systems, assessment of factors, regional development, spatial planning, expert method.

Introduction. Effective spatial planning and sustainable regional development are critically dependent on the objectivity of the assessment of initial factors and risks. As these processes take place in a context of multiple factors and information uncertainty, the expert assessment method remains a key decision-making tool. However, the reliability of expert analysis is directly determined by the calibre of the specialists involved. Subjectivity and the lack of clear, mathematically sound criteria during the selection of experts often lead to a reduction in the effectiveness of territorial development planning. In view of this, a pressing scientific and practical task is the development and implementation of an expert selection procedure that will improve the quality of planning processes and ensure the balance of regional development.

Justification of existing theoretical approaches. The development of a modern system of land relations and the creation of conditions for regional spatial planning are carried out on the basis of theoretical and methodological principles [1, 2]. Furthermore, the key areas and characteristics of conducting expert assessments are highlighted [3].

In this context, to carry out expert assessments using mathematical modelling, a spatial, urban planning, analytical and other framework is established, as emphasised in the studies [4, 5].

Main section. To identify factors relating to spatial planning, an expert group is formed and appropriate criteria are established. The composition of the expert group is determined on the basis of the following criteria:

– participation in spatial planning projects (F_{TDP1});

– participation in the development of spatial development projects (F_{TDP2});

– experience in the field of spatial and regional development (F_{TDP3});

– holding a higher education qualification (F_{TDP4});

– holding a specialised qualification (F_{TDP5});

– experience of participating in expert assessments (F_{TDP6});

– experience in compiling spatial information at regional level (F_{TDP7});

– the level of implementation of functional land-use categories in the region (F_{TDP8});

– the level of implementation of socio-economic priorities (F_{TDP9});

– the level of implementation of environmental aspects at regional level (F_{TDP10});

– the level of implementation of security projects (F_{TDP11}).

The expert group is formed from a shortlist of 18 candidates (PE_i).

A questionnaire has been drawn up in accordance with the specified criteria, with scores ranging from 0 to 10 depending on their significance. It should be noted that corresponding scores are determined for each criterion or group of criteria. Appropriate levels have been defined for the selection of candidates as experts (Table 1).

Table 1

Level scale for the selection of candidates as experts, scores

Points	Levels
0	parameter missing for the criterion
1	low parameter value
2	minor
3	insignificant
4	moderate value
5	moderate to significant
6	moderate but significant
7	significant
8	significant
9	high
10	absolute

In addition, corresponding scores are assigned for each of the criteria listed. Specifically, for the criteria «participation in spatial planning projects» (F_{TDP1}) and «participation in the development of projects relating to territorial development» (F_{TDP2}) the following scores have been defined:

0 points – no participation in projects;
1 – 1 project;
2 – 2–4 projects;
3 – 5–6 projects;
4 – 7 or more projects.

For work experience in the field of territorial and regional development (F_{TDP3}) the following are set:

0 points – no experience;
1 – from 1 month to 1 year;
2 – 1.1 to 2 years;
3 – 2.1 to 3 years;
4 – 3.1–4 years;
5 – 4.1–5 years;
6 – 5.1 years or more.

The criteria for holding a higher education qualification (F_{TDP4}) and specialised education (F_{TDP5}) are assessed as follows:

0 – no education;
4 – holds a higher education qualification;
5 – specialised education present.

Experience of participating in expert assessments (F_{TDP6}) and experience of compiling spatial information at regional level (F_{TDP7}) is characterised by the following scores:

0 points – no experience;
1 – participation in 1 project;
2 – in 2 projects;
3 – in 3 projects;
4 – in 4 projects;
5 – in 5 or more projects.

The following scores have been assigned to the criteria for the levels of: implementation of functional land-use priorities in the region (F_{TDP8}); implementation of socio-economic priorities (F_{TDP9}); and the level of implementation of environmental priorities at regional level (F_{TDP10}):

0 points – no implementation of priorities;
1 – 1 project implemented;
2 – 2 projects;
3 – 3 projects;
4 – 4 projects;
5 – 5 projects;
6 – 6 projects;
7 – 7 projects;
8 – 8 projects;
9 – 9 projects;
10 – 10 or more projects.

The level of implementation of security projects (F_{TDP11}) is characterised by the following scores:
0 – no participation in security projects;
2 – participation in 1 security project;
4 – 2 security projects;
6 – 3 security projects;
8 – 4 security projects;
10 – 5 or more projects.

The results of the questionnaire survey of candidates for expert positions according to the specified criteria are presented in Table 2.

Table *2*

Results of the questionnaire survey of candidates for expert positions according to specified criteria, scores

Candidates for the expert panel	Criteria										
	F_{TDP1}	F_{TDP2}	F_{TDP3}	F_{TDP4}	F_{TDP5}	F_{TDP6}	F_{TDP7}	F_{TDP8}	F_{TDP9}	F_{TDP10}	F_{TDP11}
PE_1	1	1	0	4	0	0	0	1	2	2	2
PE_2	1	1	1	4	0	1	1	2	1	1	2
PE_3	2	2	1	4	0	0	1	1	1	1	0
PE_4	3	4	4	4	0	1	1	5	4	5	6
PE_5	4	4	5	4	5	4	4	4	5	5	6
PE_6	4	4	5	4	5	4	4	6	6	6	6
PE_7	3	4	5	4	5	5	5	6	5	5	4
PE_8	4	4	5	4	5	4	4	5	5	6	4
PE_9	4	4	4	4	5	4	4	6	5	5	6
PE_{10}	4	4	4	4	5	4	4	6	6	6	4
PE_{11}	2	0	1	4	5	5	4	1	0	1	2
PE_{12}	1	1	1	4	5	5	4	2	2	2	2
PE_{13}	1	1	1	4	0	1	0	2	1	2	2
PE_{14}	1	1	1	4	0	1	1	1	2	3	2
PE_{15}	4	4	4	4	5	5	4	6	5	5	4
PE_{16}	4	4	5	4	5	4	4	5	5	5	4
PE_{17}	3	3	5	4	5	4	4	2	3	3	2
PE_{18}	2	0	2	4	0	2	2	1	0	1	0

The threshold scores for the selection criteria for expert candidates are as follows:

participation in spatial planning projects (F_{TDP1}), participation in the development of projects relating to territorial development (F_{TDP2}) – 2 points each;

work experience in the field of territorial and regional development (F_{TDP3}) – 3 points;

holding a higher education qualification (F_{TDP4}) and holding a qualification in the relevant field (F_{TDP5}) – 4 and 5 points, respectively;

experience of participating in expert assessments (F_{TDP6}) and experience of compiling spatial information at regional level (F_{TDP7}) – 3 points each;

the level of implementation of functional land-use priorities in the region (F_{TDP8}); implementation of socio-economic priorities (F_{TDP9}); implementation of environmental priorities at regional level (F_{TDP10}) – 5 points each;

the level of implementation of security projects (F_{TDP11}) – 6 points.

The overall score for the criteria for selecting candidates as experts is determined by the arithmetic mean. The results of the assessment of the overall average score for the criteria are presented in Table 3.

Table 3

Results of the assessment of the overall average score for the selection criteria for candidates for the expert panel on regional development

Criteria	Minimum and maximum marks
participation in land-use planning projects (F_{TDP1})	2
participation in the development of projects relating to regional development (F_{TDP2})	2
work experience in the field of territorial and regional development (F_{TDP3})	3
holding a higher education qualification (F_{TDP4})	4
relevant educational background (F_{TDP5})	5
experience of participating in expert assessments (F_{TDP6})	3
experience in compiling spatial information at regional level (F_{TDP7})	3
the level of implementation of functional land-use categories in the region (F_{TDP8})	5
the level of implementation of socio-economic priorities (F_{TDP9});	5
the implementation of environmental initiatives from a regional perspective (F_{TDP10})	5
the level of implementation of security projects (F_{TDP11})	6
Overall average ($\overline{F_{TDP}}$), relative units	3,909

Provided that the overall average ($\overline{F_{TDP}}$) score exceeds the average calculated score for each candidate for expert status ($\overline{F_{TDPi}}$), a decision is made to upgrade their status from candidate to expert. If the opposite is true, the candidate for expert status is not included in the expert group.

The results of the assessment of average scores against the selection criteria for candidates for expert status regarding the conduct of research on territorial development are presented in Table 4.

Table 4

Results of the assessment of average scores against the selection criteria for candidates for expert status regarding the conduct of research on territorial development, relative units

Candidates for the expert panel	Criteria $\overline{F_{TDPi}}$
PE_1	1,182
PE_2	1,364
PE_3	1,182
PE_4	3,364
PE_5	4,545
PE_6	4,909
PE_7	4,636
PE_8	4,545
PE_9	4,636
PE_{10}	4,636
PE_{11}	2,273
PE_{12}	2,636
PE_{13}	1,364
PE_{14}	1,545
PE_{15}	4,545
PE_{16}	4,455
PE_{17}	3,455
PE_{18}	1,273

Candidates have been shortlisted for the formation of an expert group in accordance with the established requirements (Table 5).

Table 5

Results of the shortlisting of candidates for the formation of an expert group to conduct a study on territorial development, relative units

Candidates for the expert panel	Experts (+), candidates (-)
	$\overline{E_{TDPi}}$
PE_1	-
PE_2	-
PE_3	-
PE_4	-
PE_5	+
PE_6	+
PE_7	+
PE_8	+
PE_9	+
PE_{10}	+
PE_{11}	-
PE_{12}	-
PE_{13}	-
PE_{14}	-
PE_{15}	+
PE_{16}	+
PE_{17}	-
PE_{18}	-

An expert group comprising eight members has thus been formed, numbered from 1 to 8: E_{TDP1},…, E_{TDP8}. The minimum required number of experts for conducting research into regional development has been determined. According to the experts [6–8] the minimum number of experts is between 7 and 10, which corresponds to the figure given in the study.

Conclusions. A scientific and methodological approach to the formation of expert groups has been developed, based on the use of 11 specific criteria and a 10-point scale to ensure objectivity in territorial development planning. Testing of the method enabled the selection of 8 experts from 18 candidates, ensuring the representativeness of the assessment and minimising subjectivity.

It is proposed that this algorithm be implemented in local government bodies and used in the management of land relations, whilst future research should focus on developing geoinformation support and calculating individual weighting coefficients for experts on a quantitative basis.

References:

1. Mamonov, K., Goi, V., Shterndok, E., & Voronkov, O. (2025) Mathematical modelling of the normative monetary valuation level at the regional level. Automobile roads and road construction. 118(2), 129–137. http://publications.ntu.edu.ua/avtodorogi_i_stroitelstvo/118.2/129.pdf
2. Mamonov, K., Pilicheva, M., Frolov, V., Viatkin, R., & Voitenko, O. (2024) Mathematical modelling of geospatial development indicators for local authorities. Ukrainian Journal of Applied Economics and Technology, 9(3), 287–292. https://doi.org/10.36887/2415-8453-2024-3-50
3. Mamonov, K., Afanasyev, O., & Voitenko, O. (2026) Standardisation of expert assessments in the system of accounting and control of land in local authorities. Municipal Economy of Cities, 1(196), 190–196. https://khgts.kname.edu.ua/index.php/khgts/uk/article/view/6735/6565
4. Mamonov, K., Goi, V., & Bubela, A. (2026) Information-analytical support for assessing the level of development and utilisation of geo-ecological monitoring in the restoration of transport infrastructure land: theoretical aspects. Automobile roads and road construction, 119, 100–106. https://doi.org/10.33744/0365-8171-2026-119-100-106
5. Pilicheva, M., & Shterndok, E. (2026) The role of statistical data in the mass valuation of agricultural land: a regional perspective on the Kharkiv region. Municipal Economy of Cities, 1(196), 206–215. https://khgts.kname.edu.ua/index.php/khgts/uk/article/view/6698/6567
6. Zhyvko, Z. (2014) Expert assessment in the monitoring of an enterprise's economic security system. Bulletin of the Priazovsk State Technical University. Series: Economic Sciences, 28, 111–116. http://nbuv.gov.ua/UJRN/VPDTU_ek
7. Lukova-Chuyko, N. & Lapteva, T. (2022) Improving the method for detecting false information based on the Delphi expert assessment method. Science-Intensive Technologies. 3, 193–199. http://nbuv.gov.ua/UJRN/Nt_2022_3_5
8. Kupich, N. (2015) The use of the Delphi expert assessment method in decision-making tasks. Mathematical Modelling, 2, 14–16. http://nbuv.gov.ua/UJRN/Mm_2015_2_7

№110/2026

ISSN 3375-2389

The journal publishes materials on the most significant issues of our time.
Articles sent for publication can be written in any language, as independent experts in different scientific and linguistic areas are involved.
The international scientific journal "Danish Scientific Journal" is focused on the international audience. Authors living in different countries have an opportunity to exchange knowledge and experience.
The main objective of the journal is the connection between science and society.
Scientists in different areas of activity have an opportunity to publish their materials.
Publishing a scientific article in the journal is your chance to contribute invaluably to the development of science.

1000 copies
Danish Scientific Journal (DSJ)
Istedgade 104 1650 København V Denmark
email: publishing@danish-journal.com
site: http://www.danish-journal.com