THE 20TH EDITION OF THE INTERNATIONAL CONFERENCE
EUROPEAN INTEGRATION
REALITIES AND PERSPECTIVES

Foreign Trade and Green Energy. Aspects of Economic Relations of EU with Azerbaijan and Central Asia countries

Murad Akhundov[1]

Abstract: Objectives: This paper aims to explore the role foreign trade and green energy aspects of economic development of Azerbaijan and Central Asia countries, focusing on tools economic cooperation with EU. **Prior Work:** This study allows seeing the strategic role trade and energy cooperation beetwen EU and Central Asia region. Suggested that trade and energy cooperations may transforming and resulting in regional effects. **Approach:** The approach comprises the three elements of relations (trade, Partnership and Cooperation Agreement and green projects). The economic development for the region countries hinges on the structure of economy, human capital, resource productivity and regional cooperation. **Results:** The trade and green energy cooperation depends on different factors driving. For Azerbaijan, Kazakhstan and Uzbekistan, the model of economic development demonstrated good forecast for trade, green energy and agreement with EU, indicating positive dynamics for relations with EU. Particularly increased participation around sustainable development. **Implications:** Ensuring green projects initiatives and ecomomic sustainability is crucial for implementing the transregional economic projects between European Union (EU) countries, Azerbaijan and Central Asia. **Value:** The purpose of this paper is to explore the trade, green energy and common interest aspects of the transregional relations with the EU and their economic integration prospect.

Keywords: economic relations; trading partners; green energy; transregional projects; sustainable development

JEL Classification: F15; F18; Q56

1. Introduction

Main fossil energy consumers of the developed world, have been revising their national energy strategies, and substantiating their strategy especially for Caucasus and Central Asian countries. EU and other OECD countries motivated to foster their roles in energy transition across Central Asia after Russia's invasion of Ukraine in 2022. Green transition policy of EU highlighted the importance of securing alternative (non-Russian) conventional energy supplies and access to energy transition resources, making Central Asian countries desirable partners for them (Shadrina, 2025). With vast human and natural resources, Central Asia economies have srtategic regional economic persperctives. Yet Central Asia is a region of enormous disparity in income levels, living standards, and socioeconomic conditions.

[1] PhD. Student, The Academy of Public Administration under the President of the Republic of Azerbaijan, Address: AZ 1001, 74 Lermontov Street, Baku, Azerbaijan, Corresponding author: makhundov77@gmail.com.

Copyright: © 2025 by the authors.
Open access publication under the terms and conditions of the
Creative Commons Attribution-NonCommercial (CC BY NC) license
(https://creativecommons.org/licenses/by-nc/4.0/)

Azerbaijan and the Central Asian states are situated at "the crossroads of Asia" on the route of the Silk Road. Economically the area represents a transition zone between EU and Chine. In the region, several global and regional actors compete for influence. Azerbaijan and Central Asia countries is one of the largest agrefood and cotton-producing areas in the world, and it contains substantial deposits of oil, gas, and non-ferrous metals and other nature minerals.

Rising globalization and regional cooperation facilitates the technological transfers across the nations. More specifically in EU, green technology promotes economic growth of an economy by lowering carbon emissions.

Green energy transition plays a vital role in mitigating climate change. Accordingly, EU partner countries are strengthening their institutional frameworks for renewable energy to attract foreign direct investment and accelerate green energy projects whith Azerbaijan and Central Asia.

2. Related Work

Diversification of trade relations is an important component of the development of oil and gas produced nations of Caspian and Central Asia region. The reason for this is the increase in the country's resilience to external stimuli, the study of the possibilities of diversifying the economy is very relevant, especially in today's geopolitical conditions (Guliyev & Azizov, 2022, pp. 62-70). Improving energy resilience is significant for climate change mitigation, and green transition. To move toward a more sustainable economy, suggestions include enacting green taxes, luring in foreign direct investment, and bolstering green finance (Zhang et al., 2025).

The world has witnessed significant economic growth in many economies, driven by large amounts of FDI between nations. However, FDI has questionable effects in terms of reducing pollution and supporting green energy (Viglioni, 2025) .

Azerbaijan and Central Asia has already demonstrated its capacity for collaboration with international energy projects. The planned green energy corridors connecting Kazakhstan, Uzbekistan, Azerbaijan, Türkiye, and the EU could bring together diverse renewable sources, delivering low-cost, sustainable power across borders (Alparslan , 2024). Both regions need independence in terms of energy supplies from Russia, the second-largest supplier of natural gas and oil in the world (Gaffuri, 2024). The need for energy security can be intertwined and lead to cooperation between the EU and Central Asia.

A comparative analysis of the trade and green strategies of global corporations in European and Chinese industrial multinational corporations identifies differences in approaches and similarities in the pursuit of competitiveness (Guliyev et al., 2025). Such a study provides valuable insight into contributing and bringing innovation to the Azerbaijan economy and Central Asia's region market.

The EU Green Energy Initiative is wide, it will include actions at continental and different regional level. Since the launch of the EU-Africa Global Gateway Investment Package, the first 30 national and regional actions and projects under the Africa-EU Green Energy Initiative have been approved by the European Commission, for a total budget of €540 million (GlobalGateway, 2023) .

The EU, Azerbaijan and Kazakhstan have complementary interests for a mutually beneficial cooperation in the energy sector, where international consortia had built pipelines to bring gas and oil to Western markets (Mantel, 2015). In the context of its strategy of energy supply diversification, region countries are a welcome supplier for the EU independent from Russia and the Middle East.

3. Problem Statement

Highlights the role trade relations and green energy corridors in strengthening regional connectivity and enabling cost-effective expansion prospect of cooperations.

COP29 host Azerbaijan and its neighbors are still largely fossil dependent. Diversification of trade realations and regional collaboration around renewables could usher in a new era in economic and sustynaible development Azerbaijan and Central Asia regions nations. The region has much to gain from enhancing these efforts by tapping into the EU investment.

4. Transforming regional economy and Energy Landscape: The EU with Azerbaijan and Central Asia Initiative

4.1. Azerbaijan and Central Asia region countries towards open and fair world-wide trade: the role cooperation with EU

The European Union is one of the most outward-oriented trade bloc in the world and world's largest single regional market area. Free trade one of the EU's founding principles, and it is committed to developing up regional trade with neighbors regions countries. The EU actively engages with Central Acia countries to negotiate trade agreements. These agreements have a strategic role for these countries. They grant mutually-beneficial access to the markets of both the EU and the countries concerned. Especially EU companies can grow their business, and can also more easily import the raw materials they use to make their products.

The EU has boosted its bilateral and regional relations with most African, Caribbean and Pacific (ACP) and including countries Central Asia, implement or have signed Economic Partnership Agreements with the EU. The EU looks at 'behind-the-border issues' such as technical, social and environmental matters when creating such types of agreements with a view to making trade policy contribute to the development and cooperation of those countries or regions (EU, 2023). The convergence of regional economies and support for sustainable development are strategically important today and are global challenges of the new era.

Economic Partnership Agreements (EPAs) and other trade agreements with Azerbaijan and Central Asia countries bring them mutual benefits. Table 1 shoes the figures and latest developments EU trade with the region's nations.

Table 1. European Union Trade with Azerbaijan, Kazakhstan, Uzbekistan, Kyrgyz Republic, Tajikistan and Turkmenistan (Mio euros)

	Import 2023	Export 2023	Total 2023	Total trade with EU 27 % World	Annual average growth rate,% import/export 2019 - 2023
Azerbaijan	19,065	2,340	21,405	48.6	15.8 / 6.2
Kazakhstan	30,287	12,120	42,407	27.9	13.3/19.6
Kyrgyz Republic	116	2,730	2,846	5.9	2.5/ 69.7
Tadjikistan	174	326	500	7.1	40.8/18.1
Turkmenistan	1,204	670	1,875	11.4	33.8/4.8
Uzbekistan	780	4,352	5,132	12.0	42.4 /14.9

Sourse: By the author

The EU is region's main trading partner, accounting for around 48.6 % of Azerbaijan's, 27.9% of Kazakhstan's, 12.0% of Uzbekistan's, 11.4% of Turkmenistan's total trade. The EU continues to be Azerbaijan's biggest export market, and is now its third-biggest import market, with a 64% share of Azerbaijan's exports and a 17.4% share of Azerbaijan's imports. EU imports from Azerbaijan chiefly consist of mineral fuels, lubricants and related materials. EU exports to Azerbaijan are dominated by machinery and transport equipment. Other EU exports to Azerbaijan include mainly chemicals and related products, manufactured goods and articles (EU, 2022). Since 1999 EU-Azerbaijan trade relations are based on a Partnership and Cooperation Agreement (PCA). It should be noted that, the agreement does not include tariff preferences, but it eliminates trade quotas between the EU and Azerbaijan, with the aim of drawing Azerbaijan's standards closer to those of the EU.

According to the European Commission Kazakhstan is the first Central Asian partner to have concluded an EPCA with the EU. The Enhanced Partnership and Cooperation Agreement (EPCA 2020), governs trade and economic relations between the European Union and Kazakhstan. The EU is Kazakhstan's biggest overall trading partner, as the destination for 37% of total Kazakh exports and representing 27.9% of its total trade in 2023. The EU is also the biggest foreign investor in Kazakhstan, providing €54.8 billion of total foreign direct investment (FDI) stock in 2022 (EU, 2024).

Studying development macroeconomic levels and processes is an important aspect of learning about regional relations Central Asia. The region contains countries different range of developmental levels. The Kyrgyz Republic benefits from the EU Generalised Scheme of Preferences plus (GSP+), the special incentive arrangement for sustainable development and good governance (GSP+). It allows the Kyrgyz Republic to strengthen its economy by exporting products to the European Union with no tax duties regime (EU, 2021).

EU-Tajikistan development cooperation for the 2021-2027 period has in public finance management, water, energy and agriculture, while stepping up support on managing natural resources and greening the economy. According to the European Commission (EU-Tajikistan relations, 2025), EU bilateral development assistance allocation for 2021-2024 was €91 million, and as for he allocation for 2025-2027 is €51 million, following 3 priority areas: inclusive green and digital economy, human development, natural resources management, efficiency and resilience.

The EU has accepted Uzbekistan as the country of the special incentive arrangement for sustainable development and good governance (GSP+) under the unilateral Generalised Scheme of Preferences (GSP). From 2021, the EU started applying preferential tariffs for products imported from Uzbekistan under this arrangement. As is shown in table 1, the main import product group from Uzbekistan to EU are chemicals and related product (38,4%), manufactured goods classified chiefly by material (32.0%) and textiles (14.9%). EU's Generalised Scheme of Preferences plus (GSP+) gives Uzbekistan tariff-free quotation access to the EU market for the majority of tariff lines. To benefit from GSP+, Uzbekistan has committed to the implementation of 27 core international conventions on: support to democratic governance and digital transformation, inclusive, digital, and green growth, development of a smart and eco-friendly agro-food sector. As part of its Multi-Annual Indicative Programme for Uzbekistan (2021-2027), the EU has allocated €76 million in 2021-2024 (EU-Uzbekistan relations, 2025).

4.2. The EU Strategy and Green Energy Cooperations on Azerbaijan and Central Asia

The EU is one of the biggest oil and gas consumers in the world economy. As the European Union moves away from Russian energy recourse actively seeks to diversify its energy supply. The EU sees Azerbaijan and Kazakhstan as a very important oil and gas supplier. İn the mid-term European nations

could begin purchasing "green energy" from the traditional energy-rich Caspian and Central Asian region countries.

The European Union hopes two strategic pozitions (Rooks, 2023): pooling its gas demands will keep prices down through greater bargaining power. The coordinated effort is an attempt to make up for lost Russian gas and use infrastructure more efficiently. The bloc hopes guarantee a new stable supply while keeping energy prices down.

EU aims to ensure alternative energy supplies, to help Azerbaijan and Kazakhstan develop its renewable sector in the near future. Germany, as the largest EU economy, is already involved in the green hydrogen production in Kazakhstan. Kazakhstan aim to produce 2 million tons of hydrogen annually starting in 2032, with the export-oriented production beginning in 2030.

The EU and Azerbaijan's strategic energy cooperation has shown all its dynamism. If in 2019, there was only nature gas on the horizon, now The Southern Gas Corridor has evolved to become a forum for cooperation also on green energy. According to European politicians, this is an extraordinary result and is proof of how this project is forward looking and made clean energy a key part of EU-Azerbaijan bilateral relations (EU, 2024, March 4). The Black Sea electric cable is a new transmission route full of opportunities and new form green energy cooperation. Especially this project could also help bring electricity to Moldova and the Western Balkans.

The Black Sea electric cable partnership have dinamizm and more countries have signaled interest in joining this initiative. The partnership becomes consolidated and moves to transitions to tackle new work together:

- December 2022, Governments of Azerbaijan, Georgia, Romania and Hungary signed agreement on strategic partnership in the field of green energy in Bucharest;
- June 2023, Bulgaria, Serbia and Moldova announced its intention to join the project
- May 2024 energy operators from Azerbaijan, Romania, Georgia and Hungary signed a memorandum to establish a joint venture as part of the Black Sea Energy implementation (report.az, 2025).

In late 2024, TEN-E Regulation (Regulation - 2022/869- EN – EUR - Lex) Regulation (EU) 2022/869 sets out new guidelines for the development and interoperability of European Union (EU)-wide energy infrastructure corridors bringing them in line with the European Green Deal. The new Regulation, among others, aims to:

- conform the infrastructure development to reflect the climate mitigation's targets;
- promote the integration of renewable and of clean energy technologies into the energy system;
- continue to connect isolated regions;
- strengthen existing cross-border interconnections and promote cooperation with partner countries.

The Black Sea Energy project is included as a stretegic project under the EU Global Gateway strategy, which opens new opportunities and prospects for EU funding under instrument of international green energy cooperation.

It should be noted that, Azerbaijan and Kazakhstan seeks to enhance green energy cooperation not only with EU nations, already eyes joint green energy projects with China. In Azerbaijan Since 2020, cooperation on renewable energy projects has begun with a large number of corporations, as Masdar, ACWA Power, bp, Fortescue Future Industries, China Gezhouba Group Overseas Investment, Total Energies, Nobel Energy, A-Z Czech Engineering and Baltech (minenergy.gov.az, 2024). Kazakhstan it

also plans to attract at least $150 billion FDI by 2029, a significant portion of this investment will be directed towards Kazakh renewables (Mikovic, 2024).

Should be added about The Trans-Caspian Pipeline project was first suggested in 1996 by the United States. The project never progressed. This pipeline gains renewed significance. In 2023 Turkmenistan signed its first deal to supply natural gas to the EU. With Ukraine indicating it won't continue as a transit route for Russian gas to EU, Hungary is redirecting its focus to the Caspian region for improved energy security (Nelson, 2023). However, this transition is exposing constraints in the current energy infrastructure and reviving discussions about the feasibility of the Trans-Caspian pipeline. Human rights are an essential aspect of bilateral relations with Turkmenistan. The EU and Turkmenistan hold an annual Human Rights Dialogue and democratisation (EU-Turkmenistan relations, 2025). The EU Action "EU for a green Turkmenistan: Policy Dialogue and Climate Action 2024 – 2028" contributes to the Team Europe Initiative on Water, Energy and Climate Change in Central Asia (Green Central Asia, 2024). There is also an increasing understanding that the climate-related challenges cannot be tackled individually. In this respect, the project will support to realize Turkmenistan's policy objectives for sustainable green growth by applying EU best practices and standards.

The EU also supports Uzbekistan's sustainable development, in line with the EU Strategy for Central Asia. There are several key initiatives. The EU signed a Memorandum of Understanding for cooperation on Critical Raw Materials with Uzbekistan in 2024 (EU, 2025). The actions builds on inclusive green economy, and improvements to the living conditions in the Central Asia region. The EU is dedicated to improving transport connectivity along the Trans-Caspian Corridor with Central Asia, including with Uzbekistan.

Uzbekistan plays an important role securing critical raw materials, which are crucial for strategic technologies used for the green and other sectors.

5. Analysis of Results

Three basic interrelated strategies can be used to development regional cooperation in such a way as to cover a variety of differences between countries.

First, Regional Cooperation and Integration Strategy, Including Regional Cross-Border Infrastructure, it can refer to some region countries achivments.

A second strategy is to rely on a trade diversification and Investment Cooperation. In terms of trade liberalization, the EU and WTO-led process of multilateral trade negotiation is the most important mechanism for Azerbaijan and Central Asia, as the region's economic future depends to a significant extent on the openness of global markets.

The third strategy is to have EU identifies green transformation as a strategic priority. Green energy cooperation is one of the key instruments that EU will use to reduce poverty. It is therefore not an end in itself but a means to achieve a poverty-free Central Asia. EU provides an transregional platform that complements national policies and programs aimed at socioeconomic development and poverty reduction.

6. Conclusions

The tendency mutual trade cooperation with EU and development economy policy emphasizes that these countries should have increasing coordination, diversification and development strategies. They need to implement trade policies and make necessary domestic reforms to stimulate trade and investment, ensure that benefit from trade-led growth, and make sure their economic development is for the long term.

In case of integration strategies, the countries have a choice to move in the value chain by adopting forward and backward integration. In this regard diversification strategy is another strategic alternative available for region countries to expand cooperation with the EU and economy grow.

7. Future Work

In this article, we provide a summary of the most commonly available economic tendency, especially trade and green aspects of development cooperation EU with Azerbaijan-Central Asian republics nations—Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan. Future works can include aspects on matters such as intellectual property, sustainable development and human capital. We need learn how global trends like tech innovation and green transition will transform jobs, skills, and workforce strategies in The Future of cooperation EU with Azerbaijan and Central Asia region nations. And discuss ways in which these and other factors can be addressed when studying about present and future development in the South Caucus and Central Asia region.

References

Alparslan, U. (2024, November 14). *Green energy corridors for Central Asia and the Caucasus.* Ember. https://ember-energy.org/latest-insights/green-energy-corridors-for-central-asia-and-the-caucasus/.

EU. (2021). *The European Union and the Kyrgyz Republic*. https://www.eeas.europa.eu/kyrgyz-republic/european-union-and-kyrgyz-republic_en?s=301.

EU. (2022). *Azerbaijan*. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/azerbaijan_en.

EU. (2023). *Support for developing countries*. https://policy.trade.ec.europa.eu/development-and-sustainability/support-developing-countries_en.

EU. (2024). *Kazakhstan*. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/kazakhstan_en.

EU. (2024, March 4). *EU steps up renewable energy cooperation with Azerbaijan*. https://enlargement.ec.europa.eu/news/eu-steps-renewable-energy-cooperation-azerbaijan-2024-03-04_en.

EU. (2025). *Uzbekistan*. https://international-partnerships.ec.europa.eu/countries/uzbekistan_en.

EU-Tadjikistan relations. (2025, March). https://www.eeas.europa.eu/sites/default/files/documents/2025/FACTSHEET-Tajikistan_2025_1.pdf.

EU-Turkmenistan relations. (2025). https://www.eeas.europa.eu/sites/default/files/documents/2025/FACTSHEET-Turkmenistan_2025.pdf.

EU-Uzbekistan relations. (2025, March). https://www.eeas.europa.eu/sites/default/files/documents/2025/FACTSHEET-Uzbekistan_2025.pdf.

Gaffuri, C. (2024, June). How does the EU's energy strategy impact central Asia? https://hagueresearch.org/eu-energy-strategy-centralasia/.

Global Gateway. (2023, October). *EU-Africa: Global Gateway Investment Package – Green Energy Initiative*. https://international-partnerships.ec.europa.eu/document/download/91802393-289f-4c46-b57f-baf8a6f0bb2a_en?filename=aegei-factsheet-nov-2023_en.pdf

Green Central Asia. (2024). *Green Central Asia*. file:///C:/Users/oxucu1/Downloads/2024-04-19_EU-TKM-Facility_ENG.pdf.

Guliyev, M., & Azizov, T. (2022). Diversification through promotion of export-oriented production and "green transformation" in Azerbaijan. *Scientific Horizons*, 25(10), 62–70.

Guliyev, M., Muradova, H., Hajiyeva L., & Huseynova, L., (2025), Comparative analysis of marketing strategies of global corporations in industrial and innovation clusters in Europe and China. *Strategic Change*.

Mantel, R. (2015). EU-Central Asia relations in the energy sector with a special focus on Kazakhstan. *Europe en Formation*, 375(1), 55.

Mikovic, N. (2024, August 1). Is Kazakhstan's green electricity a key to Europe's energy future? *The Astana Times*. https://astanatimes.com/2024/08/is-kazakhstans-green-electricity-a-key-to-europes-energy-future/

Minenergy.gov.az. (2024). *The use of renewable energy resources in Azerbaijan*. https://minenergy.gov.az/en/alternativ-ve-berpa-olunan-enerji/azerbaycanda-berpa-olunan-enerji-menbelerinden-istifade.

Nelson, H. (2023, August 24). *Turkmenistan signs its first-ever energy deal with the EU*. https://www.caspianpolicy.org/research/energy-and-economy-program-eep/turkmenistan-signs-its-first-ever-energy-deal-with-the-eu.

Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022 on guidelines for trans-European energy infrastructure. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R0869&qid=1654587354725&from=en.

Report.az. (2025). *EU following Black Sea green cable project from Azerbaijan with great interest.* https://report.az/en/energy/eu-following-black-sea-green-cable-project-from-azerbaijan-with-great-interest/.

Rooks, T. (2023, March 15). *EU muscles into gas market with joint buyers' club.* https://www.dw.com/en/gas-energy-security-eu-energy-platform-aggregateeu-opens-for-business/a-64944583.

Shadrina, E. (2025). EU's and Japan's strategies for energy transition enhancement in Central Asia: Exploring comparative and synergic perspectives. *Energy Strategy Reviews*, Volume 58, 101658.

Viglioni, M. T. D., Calegario, C. L. L., & Ferreira, M. P. (2025, June 15). Exploring the link between renewable energy policy and foreign direct investment in promoting renewable energy in Belt and Road Initiative countries. *Renewable Energy*, Volume 246, 122915.

Zhang, Y., Li, Y., Wu, H., & Peng, Y. (2025, April). Evaluating the role of green innovation and global supply chain digitization in natural resource utilization for energy resilience: An empirical evidence from panel quantile regression. *Energy Economics*, Volume 144, 108401.