The role of the Non-Oil Sector in Advancing Sustainable Economic Development in the Republic of Azerbaijan

by *Kamran Abdullayev*[*], *Ilgar Sadigov*[**], *Mahir Zeynalov*[***], *Gulnara Fataliyeva*[****]

Abstract

This paper investigates the role of the oil sector in Azerbaijan's sustainable economic development and its impact on economic diversification, job creation, infrastructure development, and increased export earnings. By analysing data on gross domestic product and investment, the oil sector is shown to be growing steadily, reflecting a gradual shift towards a more resilient and sustainable economic model. The study also examines the role of small and medium enterprises within the non-oil sector and highlights initiatives promoting regional recovery and entrepreneurship. It emphasizes the importance of developing human capital in the oil and non-oil sectors by providing qualified personnel and social support for workers as prerequisites for long-term sustainability.
Keywords: diversification, technological progress, investment, sustainability, human capital.

First submission: 22/09/2025, accepted: 26/11/2025

[*] Department of Economy of Service Sphere, Institute of Economics of the Ministry of Science and Education of the Republic of Azerbaijan, 115 H. Javid Ave., Baku, AZ1143, Azerbaijan.
[**] Department of Economics, Baku State University, 23 Academician Zahid Khalilov Str., Baku, AZ1148, Azerbaijan.
[***] Department of Regulation of Business Environment and Entrepreneur Development, Institute of Economics of the Ministry of Science and Education of the Republic of Azerbaijan, 115 H. Javid Ave., Baku, AZ1143, Azerbaijan.
[****] Department of Innovative Economy and Digital Transformation, Institute of Economics of the Ministry of Science and Education of the Republic of Azerbaijan, 115 H. Javid Ave., Baku, AZ1143, Azerbaijan.

Rivista di Studi sulla Sostenibilità, (ISSNe 2239-7221), 2025, 2 Thematic Issue

Doi: 10.3280/riss2025oa21079

Introduction

The decline in oil prices, due to both external factors and internal changes in the development strategies of the global economy, calls into question the sustainability of economies strongly oriented towards the oil and gas sector. In the context of Azerbaijan, a country with abundant oil resources, the need to diversify the economy becomes even more vivid. Limited investment in the non-oil sector, particularly in innovation and technology development, is a serious constraint to its potential. In addition, insufficient infrastructure development and human resource shortages may also hamper the successful advancement of the non-oil sector.

Investing in the non-oil industry can generate new jobs, boost employment, and enhance the socio-economic conditions for the population (Aliyev et al., 2023; Huseynova et al., 2022). Additionally, the expansion of the non-oil sector supports the improvement of infrastructure, education, and healthcare, all of which contribute to the sustainable economic progress of the nation holistically. The key factors influencing the development of the non-oil sector are investment, technological progress, and human capital development (Pürhani et al., 2022). Creating an environment conducive to the expansion of the non-oil industry necessitates the attraction of both domestic and foreign investment.

Huseynli (2022) and Ideh, Okolo, and Emengini (2021) emphasize that the advancement of non-oil industry can significantly reduce economic risks for the country, especially during periods of oil price fluctuations. Rzayeva and Rzayeva (2020), in turn, proposed specific strategies for government support and stimulation of investment in the non-oil industry. Babayev and Huseynov (2021), Omodero and Ehikioya (2020) drew attention to the importance of infrastructure development in the non-oil sector. Waheed, Sarwar, and Dignah (2020) and Al-Khalidi Al-Maliki (2021) delved into the significance of innovation and technological advancement within the non-oil industry. Ezu and Osakwe (2023) explored how the advancement of the non-oil sector affects employment and socio-economic progress in the country. Moreover, Mirhoseyni, Izadi, and Khorasani (2023) underscored the critical role of small and medium enterprises (SMEs) in the non-oil sector, demonstrating their capacity to drive economic expansion and job creation. Li et al. (2021) investigated the non-oil sector's significance within the broader context of global economic shifts.

The authors' results show that the development of this sector can significantly reduce economic risks for the country and increase its resilience, especially in the context of oil price fluctuations. They also emphasize the importance of government support and investment in new

industries, infrastructure, and innovation in the non-oil industry. Analyses of the role of this sector also cover its impact on employment and socio-economic development, as well as the importance of SMEs. However, issues such as the advancement potential of the non-oil sector in light of changing conditions and the growing attention to the environmental aspects of energy production remain unexplored. It also remains relevant to study the impact of global economic trends such as digitalization and international trade on the economic advancement of the non-oil sector in Azerbaijan.

The main objective of this study is to assess the influence of Azerbaijan's non-oil sector on its sustainable economic development, taking into account diverse methodologies and the challenge of uncertainty. To fulfil this objective, the study has identified the following goals: to pinpoint uncertainties within this domain and to evaluate the sector's growth potential amidst shifting conditions and global economic patterns.

Materials and Methods

Various datasets sourced from multiple channels were utilized to analyse the economic progress of Azerbaijan. The primary reservoir of information was derived from the materials provided by the State Statistical Committee of the Republic of Azerbaijan (2023). The first key aspect of the analysis was data on gross domestic product (GDP) by economic sectors. For this purpose, GDP data covering different economic sectors from 2014 to 2023 were used. This data allowed analysing the contribution of different sectors to the overall economic growth of the country and identifying trends in their development. To examine the trajectory of non-oil sector development in Azerbaijan, the study employed the method of time series analysis. This methodology hinges on scrutinizing data amassed over a specific duration to discern trends and shifts in industry development over time. This strategy also makes it possible to spot long-term trends that promote sustainable development by emphasising industries with strong economies, high employment rates, and minimal environmental impact.

A comprehensive analysis of policies and initiatives aimed at promoting the advancement of the oil sector has been conducted. This analysis reveals the regulatory framework and motivational measures that encourage investment and entrepreneurship in the sector. Next, data on investment in the economy for the period 2014 to 2022 was used to examine investment activity in the non-oil sector. The year 2014 was chosen as the starting point because it marked a period of significant economic restructuring following the global decline in oil prices and the subsequent adjustment of Azerbaijan's

development strategy towards diversification. In addition, consistent and comparable industry data became available from 2014 onwards, ensuring methodological accuracy in the longitudinal analysis.

Analysing this data allowed estimating the amount of investment in the non-oil industry and its effect on the overall economic growth of the country. Assessing the distribution of investments to areas that support the Sustainable Development Goals (SDGs), like green technologies, infrastructure, and education, received particular attention. To gain a comprehensive insight into the economic landscape of Azerbaijan, the study analysed the contribution of SMEs to the economy from 2020 to 2022. This analysis involved examining data on the quantity and proportion of SMEs within the overall framework of entrepreneurial activities. These findings offered an additional dimension to understanding Azerbaijan's economic evolution, underscoring the pivotal role of the SME sector in fostering sustainable and vibrant national growth.

To analyse foreign trade activities, data on the structure of exports and imports of non-oil products for the period from 2014 to 2022 were used. These data helped to identify the main directions of Azerbaijan's foreign trade in the non-oil sector and assess their contribution to the country's economy. The sustainability aspect of trade was considered by examining the diversification of exports in relation to environmentally sound and value-added goods, in line with global green trade practices. For the study, a statistical method was used to assess the impact of various factors on economic indicators. The examination of indicators enabled the identification of pivotal trends and factors influencing the non-oil sector's progression. Statistical datasets encompassing investment patterns, the prevalence of SME, and the composition of exports and imports within the non-oil sector were scrutinised up to 2022, utilising information provided by the State Statistical Committee of the Republic of Azerbaijan.

The method of comparison was used to compare different periods and economic indicators. It allowed identifying changes and differences in the advancement of the non-oil and oil sectors in Azerbaijan. The comparative method also helped to identify the steady growth of the non-oil sector compared to the oil sector. In order to evaluate the sustainability potential of economic diversification initiatives and their conformity to environmental and social development standards, this comparative analysis was essential. Thus, the use of a variety of data sources enabled a comprehensive analysis of Azerbaijan's economic development and identified the key factors affecting its economy. Qualitative analysis was used to assess the quality of the data and conclusions. This stage included checking whether the results

were consistent with the objectives of the study and assessing the relevance of the findings to the economic situation in the country.

Results

The non-oil sector plays a vital role in the economic advancement of numerous countries, Azerbaijan included. The non-oil sector generates a substantial number of employment opportunities across various industries, thereby curbing unemployment rates and enhancing living standards (Ogunbiyi and Abina, 2019). This directly supports the pillars of sustainable development by fostering social stability, regional economic inclusion, and job creation. Investments in the non-oil sector contribute to the improvement of the country's infrastructure. Government support and private sector investments in the construction of roads, energy facilities, communications, and other infrastructure projects not only contribute to the development of the sector itself but also create favourable conditions for the advancement of other sectors of the economy (Nakashydze et al., 2021). Among the most effective state measures fostering non-oil sector growth are the "State Program on Socio-Economic Development of the Regions of the Republic of Azerbaijan (2019–2023)", which promoted balanced regional development and SME formation, and the "Strategic Roadmap for the Development of Small and Medium Enterprises (2016)", which introduced tax relief measures, preferential loans, and business incubation support. Additionally, the Azerbaijan Investment Company and the Entrepreneurship Development Fund have provided financial incentives and guarantees for investment in non-oil industries, while targeted infrastructure initiatives under the "Azerbaijan 2030: National Priorities for Socio-Economic Development" strategy have facilitated logistics, energy, and digital connectivity. These coordinated policy instruments have collectively enhanced the competitiveness, innovation capacity, and export potential of the non-oil economy (Al-Abri, Önel, and Grogan, 2019; Mayis et al., 2021). Table 1 delineates the GDP volume by economic sector in Azerbaijan.

The non-oil sector has exhibited consistent growth from 2014 to 2023. This sustained expansion underscores the trajectory of Azerbaijan's economy towards greater diversity and sustainability. Firstly, the stable growth observed in the non-oil industry implies the advancement of other sectors within the economy. Table 2 delineates the investment structure within Azerbaijan's economy. The volume of investment in the non-oil sector has been gradually increasing over the period under study. This trend indicates that both governmental and private investors are demonstrating

keen interest in diverse sectors of the economy beyond the oil industry. The breadth of investments across different sectors contributes significantly to the diversification of Azerbaijan's economy and bolsters its sustainability.

Table 1 – Volume of GDP by economic sectors in Azerbaijan from 2014 to 2023, million manat

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*
GDP	59014	54380	60425	70338	80092	81896	72578	93203	133973	123005
Oil sector	21405	15382	19553	25005	32232	30052	20418	34501	62491	43473
Part of GDP, %	36.3	28.3	32.4	35.6	40.2	36.7	28.1	37	46.6	35.3
Non-oil sector	33196	34139	35951	40328	41662	44482	45312	51122	61509	68341
Part of GDP, %	56.3	62.8	59.5	57.3	52	54.3	62.4	54.9	45.9	55.6
Net taxes on products and imports	4413	4859	4921.5	5004.4	6198.3	7362.5	6848.4	7579.6	9973.1	11191.7
Part of GDP	7.5	8.9	8.1	7.1	7.7	9	9.4	8.1	7.4	9.1

Source: Compiled by the authors based on State Statistical Committee of the Republic of Azerbaijan (2023).

Table 2 – Investment in the economy of Azerbaijan from 2014 to 2022, million manat

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*
Total	17619	15957	15773	17430	17245	18539	17226	16815	17878
Oil sector	5959	7137	8648	8484	5995	5848	5987	5813	5464
Share of total investments, %	33.8	44.7	54.8	48.7	34.8	31.5	34.8	34.6	30.6
Non-oil sector	11659	8820	7125	8946	11250	12691	11238	11002	12413
Share of total investments, %	66.2	55.3	45.2	51.3	65.2	68.5	65.2	65.4	69.4

Source: Compiled by the authors based on State Statistical Committee of the Republic of Azerbaijan (2023).

In the context of Azerbaijan's economic progress, the evolution of transport infrastructure holds paramount importance for the non-oil industry. Transport infrastructure development promotes logistical efficiency for the non-oil sector. Improved road, railway and maritime infrastructure can

reduce the delivery time of raw materials and finished products, which reduces logistics costs and improves product competitiveness (Aliyev, 2014). From a sustainable development perspective, efficient transport systems contribute to reduced emissions, lower energy consumption, and more equitable access to economic resources across regions (Aliyev et al., 2024). Furthermore, expanding markets is an important aspect of the development of transport infrastructure influences the non-oil industry. Improved transport links allow reaching new markets and expanding the customer base. Sustainable transport networks also promote inclusive economic participation, linking rural areas with industrial and commercial hubs, thus reducing spatial inequality and supporting regional development goals (Karlilar Pata et al., 2025). The advancement of transport infrastructure plays a key role in establishing favourable conditions for attracting investment in the non-oil sector (Yang et al., 2023).

The expansion of the Zangezur and Middle Corridors represents a significant opportunity for the growth of the non-oil sector in Azerbaijan. The development of the Zangezur and Middle Corridors opens up new prospects for the export of non-oil products from Azerbaijan to world markets. These transport routes provide more direct and efficient transport routes, reducing the time and costs of delivering goods to Europe and other regions of the world (Valiyev, 2023). By encouraging international collaboration, facilitating low-carbon trade routes, and permitting effective resource use throughout Eurasia, these corridors also promote regional sustainable development. Investments in the construction and modernisation of ports, railway and road networks create more efficient and reliable transport routes. Thanks to the advancement of the Zangezur and Middle Transport Corridors, the development of transport and transit relations between Central Asia, Azerbaijan, and Europe is becoming increasingly important.

Azerbaijan's experience in developing its non-oil sector both confirms and refutes the key assumptions of the “resource curse” theory. Traditionally, this theory argues that countries rich in natural resources tend to have slower economic growth, weak institutions, and limited diversification due to excessive dependence on resource revenues. In the case of Azerbaijan, the initial dominance of the oil industry fit this paradigm, as high oil revenues limited incentives for structural reforms and investment in other sectors. However, in recent years, the country has consciously pursued policies that challenge the resource curse by prioritizing economic diversification, human capital development, and investment in non-oil sectors such as agriculture, manufacturing, transportation, and information technology. These measures demonstrate a strategic effort to transform resource wealth into long-term

sustainable development, thereby repositioning Azerbaijan as an example of how proactive governance and institutional modernization can mitigate and possibly overcome the negative effects predicted by the resource curse theory.

In the sphere of transport and logistics services, public-private partnership (PPP) plays a pivotal role in the development of the economy and ensuring the effective functioning of transport infrastructure (Ramsey and El Asmar, 2020). In the context of the influence of the non-oil sector on the economic development of Azerbaijan, the consideration of PPP becomes particularly important, as it allows for the effective management and modernization of the country's transport infrastructure, including roads, railways, ports, and airports. Initially, PPP in Azerbaijan's transport and logistics sector focused on developing infrastructure to support oil and gas production and exports (Işık et al., 2025). However, over time, the partnership has expanded to include non-oil sectors such as agriculture, manufacturing, and services. In order to support inclusive, resilient, and sustainable infrastructure growth, sustainable PPP models encourage risk sharing, environmentally friendly practices, and long-term investment planning.

Sustainable reconstruction uses energy-efficient technologies, environmental conservation, and inclusive social development to rebuild better (Shafa, 2021; Shalbolova et al., 2014). This involves restoring the Karabakh Khan palace, building new roads and bridges, and creating tourism and cultural event-friendly environs (Gyulamirov, 2022). These developments promote sustainable tourism, cultural preservation, and economic sustainability.

The government also offers SMEs incentives and subsidies to develop in certain territories. This may include financial assistance, business training, advice, tax incentives, and preferential credit terms. SME growth creates jobs, raises income, and improves the region's socioeconomic status. SMEs operate in agriculture, consumer products, services, tourism, IT, and other non-oil industries (Krechko and Mikhaylov, 2025). This diversifies the economy and reduces oil dependence. SME development in the non-oil industry creates competitive products and services, increasing exports and foreign investment. SMEs also innovate and pioneer, which advances technology and the economy (Arnouz and Hamdani, 2024).

Table 3 shows the country's micro, SMEs' economic share. SMEs' investment share is much lower in the non-oil industry than other metrics, which may suggest restricted access to funding and investment resources. Overall, SMEs play a vital role in Azerbaijan's economy, notably in the non-

oil sector, and their contribution remains considerable in numerous economic sectors.

Table 3 – Share of SMEs in Azerbaijan's economy from 2020 to 2022, %

	2020			*2021*			*2022*		
	Total	*Small*	*Average*	*Total*	*Small*	*Average*	*Total*	*Small*	*Average*
In total value added by economy	16.7	9.3	7.4	16.4	9.6	6.8	13.9	8	5.9
Non-oil sector	23.7	13.4	10.3	26.6	15.9	10.7	27.2	13	11.2
Total employees of enterprises	42.1	16	26.1	41.8	16.7	25.1	41.8	16.6	25.2
Non-oil sector	43.8	19	24.8	43.3	17.3	25.9	43.1	17.2	25.9
Total investments directed to fixed capital by enterprises	23.2	11.7	11.5	31.1	23.9	7.2	29.1	18.6	10.5
Non-oil sector	11.5	11.1	0.4	30.8	23.6	7.2	22.8	14.6	8.2
Total operating enterprises	99.7	98.8	0.9	99.7	98.9	0.8	99.6	98.8	0.8

Source: Compiled by the authors based on State Statistical Committee of the Republic of Azerbaijan (2023).

Human capital advancement in the non-oil sector plays a key role in ensuring sustainable and efficient functioning of the economy. This includes not only the training and professional development of employees, but also the creation of conditions for developing human potential and ensuring a high level of qualification (Ndombi Ondze, 2021). An essential part of human capital development is also the creation of conditions for career development and professional development of employees. It is also important to provide social support for non-oil workers. One of the important aspects of social economy advancement in the non-oil industry is to ensure the safety and health of workers. This involves adhering to labour protection standards, ensuring access to healthcare and insurance, and implementing preventive measures to mitigate injuries and occupational diseases (López-Cabarcos, Vázquez-Rodríguez, and Quiñoá-Piñeiro, 2022). This can be achieved through the organization of training programmes, retraining courses, and internships, as well as through the participation of companies in various professional associations and communities.

The dynamics of import-export and production of non-oil products plays a key role in the economic advancement and sustainability of the country (Table 4). It is important to note that along with basic commodities such as vegetable products, textiles and machinery, there has also been an increase in exports of several other categories of goods, including precious metals and non-precious metals. This demonstrates the diversity of export commodities and the desire to diversify the export base.

Table 4 – Structure of exports of non-oil products from 2014 to 2022, million USD

Product groups	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*
All exports	21828.6	12729.1	13457.6	15320	19489.1	19635.2	13732.6	22208	38146.6
Non-oil products:	1401.7	1332.7	1000.8	1225.9	1367.4	1499.6	1453.3	1822.4	1986.8
Live animals, animal products	3.3	2.3	4.2	12.6	12.1	23.2	19.4	16.1	24.5
Vegetable products	331.1	335.9	386.6	518.3	584.7	625.9	624.3	658.6	695.1
Animal or vegetable fats and oils	190.3	153.3	17.1	17	16.9	18.5	24.7	32.2	30.6
Prepared foods; beverages, spirits, and vinegar; tobacco	316.1	278.9	117.6	111	90.7	104.6	91.4	109.2	162.2
Untreated hides, leather, natural fur, and products made of them	24.1	12.2	15.2	15.2	13.3	11.9	8.4	12.2	13.1
Wood and wood products, weaving materials	1.4	0.9	1.2	1.1	0.3	0.7	0.8	1.1	4.2
Wood pulp; paper, cardboard, and products made from them	5.4	4.7	4.5	5.4	9.9	7	4.4	4.9	4
Textiles and textile products	33.2	32.9	38.7	76.8	135.2	185.4	182.1	303	246.7
Shoes, hats, umbrellas, canes, feathers, artificial flowers.	0.03	0.2	0.3	0.4	0.2	0.8	0.9	0.4	0.6
Products made of stone, gypsum, cement, asbestos, mica; glass and glassware	3.2	0.4	0.8	7.9	4.8	3.2	2.8	14.5	27.6
Pearls, precious and non-precious stones, precious metals, and articles thereof	77.1	83.2	77.2	141.5	146.7	174.4	198.6	205.7	190.2
Non-precious metals and	141.8	133.6	223.5	245.1	252.5	232	208.5	375.5	402.5

articles made of non-precious metals									
Machines and mechanical devices, electrical equipment, apparatuses	63.6	59.2	39.1	50.4	64.6	77.7	67.2	54.5	113.4
Vehicles, associated transport equipment	7	2.5	60.8	11.5	9.4	10.9	4.4	7.9	44.7
Optical, photographic, cinematographic, control, medical instruments, and apparatus; clocks; musical instruments	7.8	17.5	7	6.8	12.3	17.3	9.1	15.8	13.4
Miscellaneous industrial goods	1.8	1.4	1.9	2.4	1.8	3.9	3.6	6.1	8.8
Works of art, collectibles, and antiques	0.1	0.1	0.5	0.1	0.1	0.1	0.1	0.2	0.2

Source: Compiled by the authors based on State Statistical Committee of the Republic of Azerbaijan (2023).

Continued investment across diverse sectors of the economy and the modernization of production are vital to ensuring the sustainable and well-rounded development of the country (Table 5).

Table 5 – Structure of imports of non-oil products from 2014 to 2022, million USD

Product groups	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*
All imports	9187.7	9216.7	8489.1	8783.3	11465.9	13667.5	10732	11703.2	14539.9
Non-oil products	7718.5	8033.5	7071.1	7107	9240.8	11138	8809.7	9492.4	10979.6
Live animals, animal products	149.6	136	176.1	255.9	278.9	299.5	322.8	313.8	387
Vegetable products	427	457.4	592	559.5	560.3	745.7	714.5	788.8	968.8
Animal or vegetable fats and oils	88.1	83.8	144.1	148.3	140.9	141.2	161.9	221.8	297.5
Prepared foods; beverages, spirits, and vinegar; tobacco	889	688.8	662.4	735.9	723.5	739.6	704.7	890.4	1038.6
Untreated hides, leather, natural fur and products made of them	6.7	5.4	19.8	19.3	28.1	29.7	17.7	22.6	27.7
Wood and wood products,	129.6	230.4	190.2	213.8	298.2	286.3	259.2	325	385.9

weaving materials									
Wood pulp; paper, cardboard, and products made from them	123.3	90.5	116.2	144.3	162.5	197.2	195.5	212.2	287.4
Textiles and textile products	100.3	89.1	314.3	316	431	461.7	401.9	496.7	532.9
Shoes, hats, umbrellas, canes, feathers, artificial flowers.	12.6	10.1	73.1	71.6	86.1	96.0	74	87.7	104.5
Products made of stone, gypsum, cement, asbestos, mica; glass and glassware	176.2	213.6	191.7	190.6	232.5	241.2	206	251.4	281.2
Pearls, precious and non-precious stones, precious metals, and articles thereof	426.7	7.3	28.7	30.8	839.1	2149.5	14.1	121.5	38.4
Non-precious metals and articles made of non-precious metals	1245.2	1872.3	1275.8	1060.8	1409.7	1288.8	1165.3	1115	1355.3
Machines and mechanical devices, electrical equipment, apparatuses	2583.4	2460.7	2013.4	1866.7	2589	2661	2536.7	2748.5	2891.6
Vehicles, associated transport equipment	810.9	706	787.9	598.2	818.8	1199.9	1028.5	1293	1669.8
Optical, photographic, cinematographic, control, medical instruments, and apparatus; clocks; musical instruments	287.3	243.7	191.9	175.8	214.2	253.6	240.1	243.5	300.7
Miscellaneous industrial goods	191.5	201.6	278.4	233.1	297.6	293.1	244.3	307.4	307
Works of art, collectibles, and antiques	0.2	0.3	0.2	2.1	0.4	0.7	0.6	0.2	0.7

Source: Compiled by the authors based on State Statistical Committee of the Republic of Azerbaijan (2023).

The integration of the digital economy and information and communications technology (ICT) into the non-oil sector presents a myriad of opportunities and challenges for the industry (Abdullayev et al., 2024b). The automation of production processes and the implementation of digital management systems improve resource efficiency and reduce costs. ICT development facilitates better communication and interaction between different market players. The creation of digital business platforms and electronic marketplaces allows entrepreneurs to find new partners, close deals and expand their business. Big data collected through ICT can be analysed with specialized algorithms and used for demand forecasting, inventory optimization and risk management (Abdullayev et al., 2024a). The creation of digital platforms, applications, and services allows companies to expand their product range, attract new customers and increase revenues. The digital economy opens new opportunities for entrepreneurs to launch their projects and obtain funding, which contributes to the development of the startup and innovation ecosystem (Olowo et al., 2020). Thus, the development of the digital economy and ICT in the non-oil sector is a key factor for improving production and business processes, increasing the competitiveness of companies, and creating new opportunities for business development.

Discussion

For Azerbaijan, which has traditionally depended on oil revenues, diversity in the economy helps mitigate the impact of oil price fluctuations and increase resilience to external shocks. The non-oil industry creates a significant number of jobs in various industries. This helps to reduce unemployment and improve the standard of living of the population. Adedapo (2023) underscore the significance of diversifying the country's economy and explore the role of the non-oil sector in this endeavour. The findings of the present study corroborate the importance of economic diversity in mitigating dependence on oil revenues. The advancement of the non-oil industry necessitates a skilled workforce, thereby fostering education and the advancement of human capital. Investments in sectors other than oil also play a pivotal role in enhancing the country's infrastructure (Guliyeva, 2023; Hasanov et al., 2025). According to Raid et al. (2024), state support is vital for the advancement of the non-oil sector. Their conclusions align with the arguments presented in the current study regarding the significance of state support in creating favourable conditions for the growth of the non-oil sector.

The evolution of transport infrastructure directly influences the expansion of non-oil exports. Enhancements in international transport routes and port infrastructure facilitate more efficient product transportation to global markets, thereby bolstering export potential and augmenting revenues (Hasanova and Najafova, 2024; 2025). Alshubiri, Tawfik, and Jamil (2020) highlight the critical importance of infrastructure, particularly transport infrastructure, for the advancement of both oil and non-oil sectors. The findings of both the authors and the present study underscore the necessity of investing in infrastructure development to bolster the non-oil industry.

To maintain long-term environmental and economic sustainability, green infrastructure must be incorporated into transportation expansion initiatives (Guliyev and Azizov, 2022). A significant opportunity for the advancement of the non-oil industry in Azerbaijan is the expansion of the Zangezur and Middle Corridors. The development of these transport corridors opens up new prospects for the export of non-oil products from Azerbaijan to world markets. The development of SMEs in the non-oil industry is pivotal in catalysing economic growth and diversification. These enterprises serve as engines of innovation, job creation, and economic competitiveness (Korsunska et al., 2022). They play a crucial role in generating a wide array of goods and services, thereby enriching consumer choices and fostering diversity in market supply. Surya et al. (2021) also argue that SMEs play a critical role in stimulating economic growth and diversification. The study confirms that SMEs contribute to job creation, innovation, and economic competitiveness. Government programmes may include wage subsidies, tax credits, credit incentives, staff training and marketing and promotion support. Gherghina et al. (2020) show that SMEs are the engine of innovation and advancement of new sectors of the economy. The authors describe support programmes such as wage subsidies, tax credits, credit incentives and staff training.

Human capital development in the non-oil sector is a key element in ensuring the sustainability and efficiency of the economy (Pata, 2025). This process encompasses a wide range of activities, from training and professional development of employees to creating conditions for unlocking human potential and ensuring a high level of qualification. Training programmes may include both general skills (e.g. management and communication skills) and the specialised knowledge and skills required to work in a specific area of the non-oil industry. Saliu (2023) and Obo, Iheanacho, and Lebo (2020) also drew their attention to the importance of human capital development in the non-oil sector and its relationship with employee training and professional development. This aspect aligns with the conclusions drawn from the current study regarding the significance of

training and human capital development for the sustainability and efficiency of the economy. The results corroborate the findings of these authors, rendering their research pertinent and significant in elucidating the role of human capital in the development of the non-oil sector. Banerjee and Majumdar (2021) focus in their study on the digitalisation of the non-oil sector and the role of ICT in its development. Their results concur with the findings of the current study on the importance of digital transformation in increasing the efficiency and competitiveness of the non-oil sector.

Conclusions

The study unequivocally affirms the significance of the non-oil industry in Azerbaijan's economic development. The advancement of this sector fosters economic diversification, diminishing reliance on oil revenues and enhancing resilience to external shocks. Its progression creates alternative income streams and stimulates inclusive growth, thereby reinforcing socio-economic stability. By strengthening institutional capacity, promoting entrepreneurship, and encouraging innovation across diverse industries, the non-oil sector contributes to the long-term transformation of Azerbaijan's economic structure. Furthermore, sustained investments in non-oil industries enhance infrastructure and human capital development, which in turn support broader national objectives of sustainable and balanced growth. These outcomes are not only essential for national economic stability but also serve as critical enablers of the United Nations SDGs, particularly those related to inclusive economic growth, resilient infrastructure, and reduced inequalities.

The non-oil industry of Azerbaijan grew steadily over the review period. The country's economy is improving. Non-oil industry production and services are rising, which could boost other industries. This opens up chances for agriculture, tourism, manufacturing, and services. The non-oil sector supports a more equitable, sustainable, and diversified economic model by promoting multi-sectoral growth. This symbiosis helps Azerbaijan's economy grow sustainably and diversify, making it less dependent on certain industries and more resilient to global market changes.

Transport infrastructure is crucial to the non-oil industries. Expansion and upgrading of the transport network ensures efficient transport of petroleum products and related goods and enhances non-oil sector potential in all aspects of operations. Transport infrastructure boosts non-oil logistical efficiency. The sector grows as non-oil exports to global markets increase, attracting investment and jobs. Transport development improves

environmental performance, smart logistics, and green connectivity between areas and trading partners when linked with sustainable planning. Economic growth and diversification depend on non-oil SMEs. Human capital development in the non-oil sector is essential for economic sustainability and efficiency. Government support and a favourable business environment boost SME development, creating jobs and raising incomes. This includes staff training and professional development, as well as creating settings that foster human potential and ensure high qualification and motivation among non-oil industry employees.

More research might examine how certain initiatives and investments have advanced the non-oil business in different Azerbaijani regions. Further research is needed on the factors that affect non-oil product competitiveness in global markets. The limited data in the studied tables may not cover all elements affecting Azerbaijan's non-oil business.

References

Abdullayev, K., Abdullayev, R., Yusifov, E., Babazade, I. and Fataliyeva, G. (2024a). Main areas of development of the digital economy in the Republic of Azerbaijan. *Economics of Development*, *23*(1): 78-88. Doi: 10.57111/econ/1.2024.78.

Abdullayev, K., Aliyeva, A., Ibrahimova, K., Badalova, S. and Hajizada, S. (2024b). Current trends in digital transformation and their impact on the national economy. *Scientific Bulletin of Mukachevo State University. Series "Economics"*, *11*(1): 9-18. Doi: 10.52566/msu-econ1.2024.09.

Adedapo, O. (2023). Analysis of non-oil exports – Economic growth relationship in Nigeria: The role of institutional qualities. *Journal of Developing Areas*, *57*(4): 107-122.

Al-Abri, I., Önel, G. and Grogan, K. A. (2019). Oil revenue shocks and the growth of the non-oil sector in an oil-dependent economy: The case of Oman. *Theoretical Economics Letters*, *9*(4): 785-800. Doi: 10.4236/tel.2019.94052.

Aliyev, S., Gulaliyev, M., Hurshudov, S., Hasanova, A. and Salahov, F. (2023). Effects of Taxes on the Development of the Non-Oil Industry Sector: The Case of Azerbaijan. *WSEAS Transactions on Business and Economics, 20*: 2400-2412. Doi: 10.37394/23207.2023.20.206.

Aliyev, S., Gulaliyev, M., Purhani, S., Mehdiyeva, G. and Mustafayev, E. (2024). Comparative Assessment of Energy Security Level: The Case of the South Caucasus Countries. *International Journal of Energy Economics and Policy*, *14*(1): 651-662. Doi: 10.32479/ijeep.14984.

Aliyev, S.T. (2014). Economics of Azerbaijan: Upgrading and implementation of effective instruments. *Life Science Journal*, *11*(SPEC. ISSUE 5): 321-326.

Al-Khalidi Al-Maliki, S. Q. (2021). Increasing non-oil revenue potentiality through digital commerce: the case study in KSA. *Journal of Money and Business*, *1*(2): 65-83. Doi: 10.1108/JMB-07-2021-0022.

Alshubiri, F. N., Tawfik, O. I. and Jamil, S. A. (2020). Impact of petroleum and non-petroleum indices on financial development in Oman. *Financial Innovation*, *6*: 15. Doi: 10.1186/s40854-020-00180-7.

Arnouz, A. and Hamdani, M. (2024). The role of small and medium-sized enterprises in promoting non-oil exports in Algeria during the period 2014-2022. *Economic Studies*, *23*(2): 151-173.

Babayev, B. and Huseynov, P. (2021). Analysis of the impact of Azerbaijan's oil strategy on the development of non-oil sectors. In: *Book of Proceedings of the 70th International Scientific Conference "Economic and Social Development"* (pp. 109-114). Baku: Varazdin Development and Entrepreneurship Agency, University North.

Banerjee, R. and Majumdar, S. (2021). The effect of non-oil diversification on stock market performance: The role of FDI and oil price in the United Arab Emirates. *Journal of Asian Finance, Economics and Business*, *8*(4): 1-9.

Ezu, G. K. and Osakwe, C. I. (2023). Effect of non-oil sector on the growth of Nigerian economy (1990-2021). *International Journal of Research and Innovation in Social Science*, *7*(3): 163-173.

Gherghina, Ş. C., Botezatu, M. A., Hosszu, A. and Simionescu, L. N. (2020). Small and medium-sized enterprises (SMEs): The engine of economic growth through investments and innovation. *Sustainability*, *12*(1): 347.

Guliyev, M. and Azizov, T. (2022). Diversification through promotion of export-oriented production and "Green Transformation" in Azerbaijan. *Scientific Horizons, 25*(10): 62-70. Doi: 10.48077/scihor.25(10).2022.62-70.

Guliyeva, S. (2023). Energy consumption, economic growth and CO2 emissions in Azerbaijan. *Multidisciplinary Science Journal, 5*(4), e2023052. Doi: 10.31893/multiscience.2023052.

Gyulamirov, G. (2022). *A conference on rehabilitation and reconstruction work in the liberated territories of Azerbaijan was held in Shusha*. -- https://azertag.az/ru/xeber/2268809.

Hasanov, R. I., Vasa, L., Guliyeva, S., Giyasova, Z. and Shakaraliyeva, Z. (2025). Assessing the impact of oil prices and inflation on bank deposits in Azerbaijan. *Banks and Bank Systems, 20*(1): 11-22. Doi: 10.21511/bbs.20(1).2025.02.

Hasanova, J. and Najafova, K. (2024). Development of Trade-Economic Relations between Azerbaijan-EU Countries in the Field of Natural Gas Supply. *WSEAS Transactions on Business and Economics*, *21*: 1104-1114. Doi: 10.37394/23207.2024.21.92.

Hasanova, J. and Najafova, K. (2025). Research and analysis of opportunities for regional economic integration among the countries of the Organization of Turkic States. *Economics of Development*, *24*(2): 54-67. Doi: 10.63341/econ/2.2025.54.

Huseynli, N. (2022). Impact of revenues from oil and non-oil sectors on the economic growth of Azerbaijan. *International Journal of Energy Economics and Policy*, *12*(5): 31-35. Doi: 10.32479/ijeep.13278.

Huseynova, A., Mazanova, O., Khudiyeva, P., Muradova, H., Leyla, H. and Kamala, N. (2022). Innovative Way of Solution of "Smart City" in Azerbaijan – City Problems. *WSEAS Transactions on Business and Economics*, *19*: 1394-1402. Doi: 10.37394/23207.2022.19.125.

Ideh, A. O., Okolo, N. M. and Emengini, E. S. (2021). Non-oil sector and economic growth in Nigeria: The national accounts perspective. *European Journal of Sustainable Development*, *10*(1): 185-202. Doi: 10.14207/ejsd.2021.v10n1p185.

Işık, C., Ongan, S., Yan, J. and Islam, H. (2025). Towards carbon neutrality & COP29 Baku / Azerbaijan - COP30 Belem / Brazil: Exploring the impacts of economic, environmental, social, and governance (ECON-ESG) factors on Climate Policy Uncertainty (CPU) for sustainable development. *Heliyon*, *11*(3), e41944. Doi: 10.1016/j.heliyon.2025.e41944.

Karlilar Pata, S., Pata, U.K. and Wang, Q. (2025). Ecological power of energy storage, clean fuel innovation, and energy-related research and development technologies. *Renewable Energy*, *241*, 122377. Doi: 10.1016/j.renene.2025.122377.

Korsunska, M., Butorina, V., Abdullayev, K., Kravtsov, Yu. and Ustymenko, L. (2022). The role of creative potential in the project management process for the implementation of the company's strategies. *Review of Economics and Finance*, *20*: 255-262. Doi: 10.55365/1923.x2022.20.30.

Krechko, O. and Mikhaylov, A. (2025). Global electricity generation from renewable sources using fuzzy sets and spatial analysis: revolution in solar and wind energy in BRICS countries. *Quality and Quantity*, *59*(2): 1553-1571. Doi: 10.1007/s11135-024-02033-2.

Li, Y., Chen, B., Chen, G. and Wu, X. (2021). The global oil supply chain: The essential role of non-oil product as revealed by a comparison between physical and virtual oil trade patterns. *Resources, Conservation and Recycling*, *175*, 105836. Doi: 10.1016/j.resconrec.2021.105836.

López-Cabarcos, M. Á., Vázquez-Rodríguez, P. and Quiñoá-Piñeiro, L. M. (2022). An approach to employees' job performance through work environmental variables and leadership behaviours. *Journal of Business Research*, *140*: 361-369. Doi: 10.1016/j.jbusres.2021.11.006.

Mayis, G. G., Shahin, B. V., Shafa, G. T., Yegana, A. J. and Mehpare, O. S. (2021). Granger causality analysis of foreign trade impact on economic growth and some socioeconomic indicators: Case of Azerbaijan. *WSEAS Transactions on Business and Economics, 18*: 276-283. Doi: 10.37394/23207.2021.18.28.

Mirhoseyni, S. V., Izadi, S. H. and Khorasani, N. (2023). Studying the impact of oil and non-oil indicators on financial development in Iran. *International Journal of Multicultural and Multireligious Understanding*, *10*(3): 76-84.

Nakashydze, L., Gabrinets, V., Mitikov, Y., Alekseyenko, S. and Liashenko, I. (2021). Determination of Features of Formation of Energy Supply Systems with the Use of Renewable Energy Sources in the Transition Period. *Eastern European Journal of Enterprise Technologies*, *5*(8-113): 23-29. Doi: 10.15587/1729-4061.2021.243112.

Ndombi Ondze, C. I. L. (2021). Effects of human capital expenditures on non-oil sector growth in the Republic of Congo. *Modern Economy*, *12*(12): 1748-1767. Doi: 10.4236/me.2021.1212089.

Obo, E. B., Iheanacho, M. U. and Lebo, M. P. (2020). The role of human capital development in a diversified economy. *International Journal of Business and Social Science*, *11*(7): 45-51.

Ogunbiyi, S. S. and Abina, P. A. (2019). The nexus between oil and non-oil revenue on economic development in Nigeria. *International Journal of Economics, Business and Management Studies*, *6*(2): 355-365.

Olowo, S. O., Daramola, K. O., Ogunsanwo, O. F. and Edewusi, D. G. (2020). Sectorial contributions of non-oil revenue to economic growth in Nigeria. *Open Access Library Journal*, *7*(8): 1-21. Doi: 10.4236/oalib.1106644.

Omodero, C. O. and Ehikioya, B. I. (2020). Oil and non-oil revenues: Assessment of contributions to infrastructural development in Nigeria. *Journal of Management Information and Decision Sciences*, *23*(5): 638-648.

Pata ,U. K. (2025). How to progress towards sustainable development by leveraging renewable energy sources, technological advances, and human capital. *Renewable Energy*, *241*, 122367. Doi: 10.1016/j.renene.2025.122367.

Pürhani, S., Guliyeva, S., Teymurova, V., Guliyeva, N. and Gahramanova, S. (2022). Human capital as a driver of sustainable development in Azerbaijan. *Journal of Eastern European and Central Asian Research, 9*(6): 927-937. Doi: 10.15549/jeecar.v9i6.1199.

Raid, M., Ahmad, N., Bagadeem, S. A., Alzyadat, J. and Alhawal, H. (2024). The non-oil institutional sectors and economic growth in Saudi Arabia. *Cogent Economics & Finance*, *12*(1), 2300819. Doi: 10.1080/23322039.2023.2300819.

Ramsey, D. and El Asmar, M. (2020). Cost and schedule performance analysis of transportation public-private partnership projects. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, *12*(1), 04519032.

Rzayeva, S. M. and Rzayeva ,F. Z. (2020). The investment in the non-oil sector and its state regulation. In: *Book of Proceedings Vol. 3/4 of the 55th International Scientific Conference "Economic and Social Development"* (pp. 486-495). Baku: Varazdin Development and Entrepreneurship Agency, University North.

Saliu, M. O. (2023). Foreign aids, human capital and economic growth: Evidence from African oil and non-oil producing countries. *International Journal of Finance & Banking Studies*, *12*(4): 57-64. Doi: 10.20525/ijfbs.v12i4.3173.

Shafa, A. (2021). Historical aspects of economic thought in Azerbaijan. *Voprosy Istorii*, *8*(2): 148-155. Doi: 10.31166/VoprosyIstorii202108Statyi41.

Shalbolova, U. Z., Yegemberdiyeva, S. M., Uderbayev, S. S., Elpanova, M.A. and Kazbekova, L. A. (2014). Specifics of oil pipeline systems' risks management. *Life Science Journal, 11*(11): 591-594.

State Statistical Committee of the Republic of Azerbaijan (2023). *Statistical Yearbook of Azerbaijan*. -- https://www.stat.gov.az/menu/6/statistical_yearbooks/?lang=en.

Surya, B., Menne, F., Sabhan, H., Suriani, S., Abubakar, H. and Idris, M. (2021). Economic growth, increasing productivity of SMEs, and open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1): 20.

Valiyev, J. (2023). The role of the existing middle corridor and the planned Zahngazur corridor in the economy of Azerbaijan. *Scientific Collection "InterConf"*, *144*: 34-42.

Waheed, R., Sarwar, S. and Dignah, A. (2020). The role of non-oil exports, tourism and renewable energy to achieve sustainable economic growth: What we learn from the experience of Saudi Arabia. *Structural Change and Economic Dynamics*, *55*: 49-58. Doi: 10.1016/j.strueco.2020.06.005.

Yang, Y., Xu, X., Yin, J. and Zhang, T. (2023). An empirical analysis of FDI and institutional quality on environmental quality and economic growth, evidence from the panel of Asian oil-producing and non-oil-producing economies. *Frontiers in Environmental Science*, *10*, 1066221.