

The Development of Entrepreneurial Activity and its Role in Raising the Employment Level of the Population in the Nakhchivan Autonomous Republic

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Abstract. *This article examines the relationship between entrepreneurial development and rising employment levels, with a concentrated focus on the Nakhchivan Autonomous Republic. The argument is that entrepreneurship should not be assessed only through business registration. In a regional economy, its employment effect depends on formal labour contracts, access to finance, sectoral diversification, digital registration, local value chains and a wider taxpayer base. The research uses official indicators for 2022-2024 and calculates several baseline values from published growth rates. The evidence shows a sharp expansion in active taxpayers, VAT payers, cashless turnover and non-state sector employment contracts in Nakhchivan during 2024. These dynamics indicate both new business activity and the formalization of existing economic activity. The article concludes that stronger employment outcomes in Nakhchivan require entrepreneurship policy to be linked with vocational training, agro-processing, tourism, logistics, digital services and transparent tax administration.*

Keywords: *entrepreneurship, employment, Nakhchivan Autonomous Republic, SMEs, labour market, regional development*

Introduction

Entrepreneurship is one of the most direct mechanisms through which a regional economy converts local resources into income, jobs and tax capacity (OECD/EBRD, 2023; World Bank, 2025). In regions outside the capital, each new workshop, farm-service firm, tourism facility or repair enterprise can change the labour market more visibly than it would in a large metropolitan economy. The central issue is not simply whether firms are registered. The more precise issue is whether business activity creates stable, formal and skill-improving employment for the population. This question is especially relevant for the Nakhchivan Autonomous Republic. Nakhchivan is geographically separated from the main territory of Azerbaijan and has developed under transport and market-access constraints. Because of this position, local entrepreneurship is not only a private economic activity. It is also a tool for reducing import dependence, retaining young workers, expanding household income and strengthening local production. Official descriptions of the region identify industry, agriculture, food processing, mineral products, building materials, light industry, vegetable growing and cattle breeding as key economic fields (Nakhchivan Presidential Library, 2026a).

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The current policy context gives the topic a practical framework. The State Program for the Socio-Economic Development of the Nakhchivan Autonomous Republic for 2023–2027 links regional development with infrastructure, social services, investment attraction, export-oriented value chains, and sustainable job creation (Cabinet of Ministers of the Republic of Azerbaijan, 2023; President of the Republic of Azerbaijan, 2023). The present article therefore analyses entrepreneurship as an employment mechanism. The method is descriptive-statistical. It uses official data from state institutions and international organizations, while derived baseline figures are clearly treated as analytical estimates rather than separate official totals.

Methods

This study employs a descriptive-statistical research design to examine the relationship between entrepreneurial development and employment growth in the Nakhchivan Autonomous Republic. The research is based exclusively on secondary data obtained from official national institutions and international organizations. The main sources include the Ministry of Economy of the Republic of Azerbaijan, the State Statistical Committee, the Nakhchivan Autonomous Republic Presidential Library, KOBIA, the World Bank, OECD, EBRD, and the International Labour Organization. The study covers the period of 2022–2024, allowing recent developments in entrepreneurial activity and labour-market formalization to be assessed. Comparative analysis is used to identify changes in economic indicators over time. Where official publications provide growth rates rather than baseline values, the previous-year indicators are calculated using simple reverse estimation. These calculated values are presented solely as analytical estimates and are clearly distinguished from officially published statistics. The research applies descriptive analysis, comparative analysis, and basic statistical calculations to evaluate changes in entrepreneurship, taxpayer activity, employment contracts, tax revenues, and digital transactions. Tables are compiled from official statistics to summarize the main indicators and facilitate interpretation. No econometric modelling or hypothesis testing is employed; therefore, the findings should be interpreted as descriptive evidence rather than causal relationships.

Results

The analysis demonstrates that entrepreneurial development in the Nakhchivan Autonomous Republic was accompanied by substantial improvements in business formalization and labour-market indicators during 2022–2024. The available official statistics indicate that the expansion of entrepreneurial activity was reflected not only in the number of registered business entities but also in higher tax revenues, a broader taxpayer base, increased digital transactions, and a significant rise in formal employment (Ministry of Economy of the Republic of Azerbaijan, 2025a). The most notable result concerns the expansion of formal private-sector employment. In 2024, the number of active employment contracts in the non-state sector reached 11,038, representing a 3.6-fold increase compared with the previous year. Based on reverse estimation from the published growth rate, the corresponding 2023 baseline is approximately 3,066 contracts, indicating an estimated increase of 7,972 formal employment contracts. This suggests that entrepreneurial expansion was associated with both new job creation and the legalization of previously informal employment (Ministry of Economy of the Republic of Azerbaijan, 2025a). Business formalization advanced across several complementary indicators. The number of active taxpayers increased by 71.4%, reaching 21,778, while the number of VAT payers rose by 87.1% to 709. Reverse calculations indicate estimated baseline values of approximately 12,706 active taxpayers and 379 VAT payers, reflecting increases of around 9,072 and 330, respectively. These findings indicate that entrepreneurial growth was accompanied by a wider formal business sector and improved tax compliance (Ministry of Economy of the Republic of Azerbaijan, 2025a).

Fiscal indicators reveal a similar positive trend. Tax revenues increased by 37.6%, reaching AZN 226.6 million in 2024. Estimated calculations suggest that tax revenues amounted to approximately AZN 164.7 million in the previous year, implying an increase of nearly AZN 61.9 million. At the same time, the share of local expenditures financed by local revenues rose from 30% in 2022 to 57% in 2024, demonstrating stronger regional fiscal capacity generated through expanding entrepreneurial activity. Digitalization also accelerated during the study period. Nearly 3,200 online control cash registers and more than 2,200 POS terminals were introduced across the region. As a result, cashless transaction turnover increased by 66.2%, exceeding AZN 1 billion, while POS terminal turnover rose by 38.8% to AZN 112 million. These developments indicate greater transparency of business operations and improved conditions for enterprise formalization and financial inclusion.

The sectoral analysis further shows that entrepreneurship in Nakhchivan possesses diversified employment potential. Industrial production reached AZN 593.9 million, and agricultural production amounted to AZN 358.4 million in 2023, while the Entrepreneurship Development Fund allocated AZN 6.2 million to 40 investment projects, with nearly 85% of financing directed to industrial production. These figures suggest that production-oriented entrepreneurial support has greater potential for generating stable wage employment than activities concentrated solely in small-scale trade.

Overall, the findings indicate that entrepreneurial development in the Nakhchivan Autonomous Republic has been accompanied by measurable improvements in labour formalization, fiscal performance, and business activity. Although the descriptive nature of the research does not permit causal inference, the simultaneous growth of employment contracts, taxpayer registration, tax revenues, and digital business transactions provides consistent evidence that entrepreneurship has become an increasingly important contributor to regional employment and economic development (Ministry of Economy of the Republic of Azerbaijan, 2025a; OECD/EBRD, 2023).

Discussion

Entrepreneurship and employment as a regional mechanism

The employment effect of entrepreneurship works through four channels. The first is direct job creation: a new firm hires workers or formalizes labour that had previously been informal. The second is indirect job creation: firms buy transport, repair, packaging, accounting, or digital services from other local firms. The third is induced employment: business income is spent in trade, catering, education, and household services. The fourth is fiscal: broader business activity increases local revenues, which can finance infrastructure and public services needed by firms.

In Azerbaijan, the SME sector already has a large employment footprint. In 2024, the number of SME entities reached 424,437; employment in SME entities rose from 390,800 in 2023 to 417,800 in 2024; SME value added reached AZN 21.1 billion; and the SME share in total employment rose to 45.3% (KOBIA, 2025). These national figures explain why regional entrepreneurship is not a secondary issue. When almost every second employed person is connected with the SME segment, changes in the business environment quickly affect household income and labour-market stability.

Still, entrepreneurship does not automatically create quality jobs. A registration increase may include self-employed persons, micro-activities with no employees, or low-productivity trade. Employment grows more strongly when entrepreneurs can access finance, premises, customers, digital tools, transport, and skilled labour. For Nakhchivan, the most valuable enterprises are those that hire outside

the family, use local inputs, enter formal accounting, and connect with agro-processing, tourism, logistics, or professional services (EBRD, 2024; World Bank, 2025).

Nakhchivan's economic base and entrepreneurial potential

Nakhchivan's economy has a compact but diversified structure. In 2023, total production exceeded AZN 1.552 billion. Industrial output was AZN 593.9 million, agricultural production was AZN 358.4 million, information and communication services were AZN 34.2 million, paid services to the population were AZN 178.2 million, and the average monthly wage was AZN 689.0 (Nakhchivan Presidential Library, 2026a). These indicators show that industry and agriculture remain central, while paid services and digital infrastructure are becoming more relevant. The 2023 financing pattern also matters for employment. The Entrepreneurship Development Fund of the Autonomous Republic provided AZN 6.2 million in favorable financing to 40 investment projects. Of this support, 84.8% was directed to industrial goods production, 11.7% to agriculture, and 3.5% to services (Nakhchivan Presidential Library, 2026a). Industrial and agro-processing projects usually generate more stable wage work than small short-cycle trade activity because they require operators, packers, drivers, accountants, repair workers, and sales staff.

Nakhchivan's challenge is conversion. Agricultural output, mineral water, construction materials, cultural tourism, and local services become employment only when entrepreneurs can convert them into saleable products and services. That conversion requires credit, certification, storage, packaging, transport access, marketing, and labour skills. Therefore, the success of entrepreneurship policy should be measured not only by the number of supported entrepreneurs but also by formal jobs, products certified, contracts signed, digital payments processed, and markets reached (OECD/EBRD, 2023; World Bank, 2025).

Table 1

Selected indicators of Nakhchivan's economic and entrepreneurial base

Indicator	Reported value	Employment meaning
Total production, 2023	AZN 1.552 billion	Base for local supplier networks.
Industrial output, 2023	AZN 593.9 million	Potential for wage jobs in production and maintenance.
Agricultural production, 2023	AZN 358.4 million	Potential for agro-processing and rural employment.
Entrepreneurship Fund support, 2023	AZN 6.2 million, 40 projects	Credit channel for production-oriented jobs.
Registered SME entities, 2023	+26% compared with 2022	Wider business base before the 2024 formalization cycle.

Source. Compiled from the Nakhchivan Presidential Library (2026a).

The figures in Table 1 show that Nakhchivan's employment potential is not concentrated in one sector only. Industry gives the region a production base, agriculture creates the raw material base for processing, and favorable financing links both fields with new enterprise formation. The main employment implication is that policy should not treat entrepreneurship only as business registration; it should move registered firms toward production, processing and permanent wage contracts.

Statistical analysis of formalization and employment

The strongest recent signal from Nakhchivan is the simultaneous rise of fiscal, digital, and employment indicators. In 2024, GDP in the Nakhchivan Autonomous Republic increased by 3.1% compared with the previous year. Local revenues covered 57% of expenditures, compared with 38%

in 2023 and 30% in 2022. Tax revenues rose by 37.6% and reached AZN 226.6 million. Active taxpayers increased by 71.4% and reached 21,778, while VAT payers increased by 87.1% and reached 709 (Ministry of Economy, 2025a).

The labour indicator is even more direct. The number of active employment contracts in the non-state sector increased 3.6 times and reached 11,038 in 2024 (Ministry of Economy, 2025a). Reversing the reported multiplier gives an approximate previous baseline of 3,066 contracts. The implied increase is around 7,972 contracts. This increase should be read carefully: it includes both new private-sector hiring and the formalization of existing work. Both are relevant for social welfare because formal work improves access to social insurance, unemployment insurance, and documented work history.

The taxpayer figures allow a simple descriptive ratio. The 2024 active taxpayer figure of 21,778 and the reported growth rate of 71.4% imply a previous baseline of about 12,706 active taxpayers. The increase is roughly 9,072 active taxpayers. Compared with the implied increase in non-state employment contracts, this equals about 88 additional formal private employment contracts per 100 additional active taxpayers. This is not a causal coefficient; it only shows that taxpayer activation and labour formalization moved strongly in the same direction. Digital payments strengthen the same interpretation. In the past two years, nearly 3,200 online control cash registers and more than 2,200 POS terminals were installed in Nakhchivan. In 2024, cashless transaction turnover increased by 66.2% and exceeded AZN 1 billion, while POS terminal turnover rose by 38.8% to AZN 112 million (Ministry of Economy, 2025a). For small firms, recorded turnover improves creditworthiness and makes labour relations more visible.

Table 2

Nakhchivan: Key formalization and business indicators, 2024

Indicator	2024 value	Reported change
GDP growth	+3.1%	Compared with 2023
Tax revenues	AZN 226.6 million	+37.6%
Active taxpayers	21,778	+71.4%
VAT payers	709	+87.1%
Commercial legal entities registered	241	83% electronically registered
Non-state employment contracts	11,038	3.6 times higher

Source. Compiled from the Ministry of Economy of the Republic of Azerbaijan (2025a).

Table 2 confirms that formalization in Nakhchivan has advanced on several fronts at the same time. The sharp increase in active taxpayers and VAT payers indicates a broader taxable business base, while the rise in non-state employment contracts shows that part of this business activity has entered the formal labour market. The employment result is therefore not only quantitative; it also improves traceability, social insurance coverage and the fiscal visibility of private-sector work.

Table 3

Derived comparison of selected indicators

Indicator	Estimated baseline	2024 value	Approximate increase
Tax revenues	AZN 164.7 million	AZN 226.6 million	+AZN 61.9 million
Active taxpayers	12,706	21,778	+9,072
VAT payers	379	709	+330
Non-state employment contracts	3,066	11,038	+7,972
Local revenue coverage	30% in 2022	57% in 2024	+27 percentage points

Note. Baseline figures are calculated from officially published values and growth rates.

The derived comparison in Table 3 makes the scale of change clearer than the raw 2024 figures alone. The estimated rise of about 7,972 non-state employment contracts is especially relevant, because it suggests that entrepreneurial formalization produced measurable labour-market effects rather than remaining limited to administrative registration. The increase in local revenue coverage from 30 percent to 57 percent also means that more of Nakhchivan's public expenditure capacity is now supported by its own economic base.

Sectoral channels for raising employment in Nakhchivan

The first employment channel is agro-processing. A farmer selling raw output usually creates seasonal income, while a small firm that sorts, stores, packages, or processes fruit, vegetables, dairy, or meat can create year-round work. For Nakhchivan, agro-processing should be linked with equipment leasing, food-safety certification, branding, and regional market access (World Bank, 2025). This would help rural entrepreneurs move from subsistence activity to formal enterprise.

The second channel is small industry and repair services. Nakhchivan's industrial base can support jobs in mineral products, food production, building materials, light manufacturing, and maintenance. These firms need technicians, machine operators, drivers, and accountants. Credit support should therefore be connected with vocational schools so that training follows actual enterprise demand rather than abstract curricula.

The third channel is tourism. In 2024, 1.0% of all nights spent in hotels and similar establishments in Azerbaijan were registered in the Nakhchivan Autonomous Republic. Since the national total was 4,282.8 thousand nights, this corresponds to roughly 42.8 thousand nights (State Statistical Committee, 2025b). The figure is modest, but tourism has a broad employment multiplier: hotels, guesthouses, transport, catering, guides, local products, and digital promotion all benefit from visitor demand.

The fourth channel is digital and professional services. Because Nakhchivan is geographically separated from the main national territory, digital services reduce distance. Accounting, e-commerce, online sales, design, software support, and repair services can serve local SMEs and clients outside the region. These activities are relevant for women and youth because they can be organized with more flexible working conditions.

Table 4.

Sectoral employment channels in Nakhchivan

Sector	Entrepreneurial activity	Employment effect
Agro-processing	Storage, packaging, dried fruit, dairy, juice	Turns seasonal farm income into regular jobs.
Small industry	Mineral products, materials, repair, light manufacturing	Creates work for operators and technicians.
Tourism	Guesthouses, catering, guides, transport, handicrafts	Expands service jobs for youth and women.
Digital services	Accounting, e-commerce, design, online sales	Reduces distance and supports higher-productivity work.
Logistics	Storage, delivery, packaging, wholesale links	Connects local firms with wider markets.

Table 4 shows that Nakhchivan's employment strategy should be sector-specific. Agro-processing and small industry can absorb workers with technical and vocational skills, tourism can create flexible service jobs in districts with cultural and natural assets, and digital services can reduce the economic

cost of geographic separation (EBRD, 2024). For this reason, the region's entrepreneurship policy should combine finance, training, and market access rather than relying on credit support alone.

Conclusion

The article shows that entrepreneurship in the Nakhchivan Autonomous Republic has a direct connection with employment, but the connection becomes stronger when business activity is formal, productive, and market-oriented. The 2024 increase in active taxpayers, VAT payers, tax revenues, cashless transactions, and non-state employment contracts demonstrates a visible shift toward a more transparent business environment. Nakhchivan's employment potential is concentrated in agriculture, agro-processing, small industry, tourism, logistics, and digital services (Azerbaijan State Statistical Committee, 2025b). These sectors correspond to the region's economic structure and to the 2023–2027 development agenda. The practical policy lesson is clear: business support should be tied to formal job creation, vocational training, market access, and digital accounting. A registered entrepreneur should become not only a taxpayer but also an employer, supplier, and participant in wider value chains. Sustainable employment will not come from enterprise numbers alone. It will come from enterprises that survive, grow, hire formally, and connect local resources with broader demand. For Nakhchivan, this is the main path through which entrepreneurship can raise the employment level of the population.

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