

Original Research

Received 24 May 2026

Revised 28 June 2026

Accepted 16 July 2026

Natural Resources for Human Health 2026, Vol. 6 (7s): 924–937

KEYWORDS:

Azerbaijan, MSMEs, government support, loans, fixed-capital investment.

Assessing State Support for MSMEs in Azerbaijan: Evidence from Concessional Lending (2020-2024)

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ABSTRACT: This study assesses state support for MSMEs in Azerbaijan by examining concessional lending and its relationship with selected macroeconomic indicators during 2020–2024. The analysis is limited to five observations because pre-2020 MSME indicators were compiled under a different methodology, while 2024 is the latest year with comparable official data. Using descriptive analysis, indexed trends, and Pearson correlations of logarithmically transformed variables, the study identifies strong positive co-movement between concessional lending and MSME value added ($r = 0.9278$). Concessional lending more than doubled and MSME value added rose by 93%, whereas fixed-capital investment peaked in 2022 and fell below its 2020 level by 2024. The MSME share of GDP declined to 12.8% in 2022 before recovering to 16.8% in 2024. Sectoral structure remained stable in 2023–2024. Given the limited observations, the correlations are interpreted descriptively rather than causally, highlighting the importance of investment dynamics and sectoral structure in assessing state support.

INTRODUCTION

Entrepreneurship plays an important role in employment creation, innovation and economic development, while micro, small and medium-sized enterprises (MSMEs) constitute a major component of entrepreneurial activity in market-based economies. From a Schumpeterian perspective, entrepreneurial development is closely associated with innovation, market entry and the productive use of economic resources (Schumpeter, 1934). The economic significance of MSMEs has consequently generated sustained academic and policy interest in the institutional, financial and structural conditions that shape their development (Pal et al., 2025).

The development of MSMEs is particularly important in transition economies, where institutional transformation and market-oriented reforms influence the conditions under which private enterprises emerge and expand. Azerbaijan underwent a transition from a centrally planned to a market-based economy and progressively increased its emphasis on private-sector development and economic diversification (Musayev, 2025a). In such an environment, entrepreneurial activity depends not only on individual initiative but also on the quality of the regulatory and institutional framework. Entry regulation, administrative

requirements and government policy can affect both the formation and subsequent performance of enterprises (Klapper et al., 2006; Krichevskiy & Snyder, 2015). Access to finance represents an important component of this environment because financial constraints may restrict the capacity of MSMEs to expand production, invest in productive assets and improve competitiveness.

State-supported concessional lending can potentially ease these constraints by improving access to financial resources on more favourable terms (Beck, et al., 2005). State-supported concessional lending can potentially ease these constraints by improving access to financial resources on more favorable terms. However, an increase in the volume of credit does not necessarily translate into a proportional improvement in firm performance or productive investment. Empirical evidence suggests that financing outcomes may vary depending on the financial conditions faced by firms and the effectiveness with which borrowed resources are used (Saadallah & Salah, 2019). More broadly, the economic outcomes associated with additional finance may depend on its allocation across firms and sectors, as well as on prevailing macroeconomic conditions. Evaluating state support therefore requires attention not only to the scale of financial assistance but also to its relationship with value creation, investment dynamics and the structural characteristics of MSME activity.

Although previous research has examined entrepreneurship policy, institutional quality, access to finance and MSME performance, these dimensions are frequently considered separately. In Azerbaijan, limited empirical attention has been devoted to the joint dynamics of state-supported concessional lending, MSME value added, fixed-capital investment and sectoral structure. This gap is important because expanding concessional finance may coincide with higher MSME output without necessarily being accompanied by comparable growth in fixed-capital investment or by substantial changes in the sectoral composition of entrepreneurial activity.

This study addresses this gap by assessing state support for MSMEs in Azerbaijan over the methodologically comparable 2020-2024 period. Its contribution lies in jointly examining the expansion of concessional lending, changes in MSME value added and its share of GDP, fixed-capital investment dynamics, and the sectoral structure of active MSMEs. Given the limited number of comparable annual observations, the empirical analysis is explicitly exploratory and does not seek to establish causal effects. Accordingly, the study addresses three interrelated questions: (1) how did concessional lending and the macroeconomic contribution of MSMEs evolve during 2020-2024; (2) what patterns of co-movement are observable among concessional lending, MSME value added and fixed-capital investment; and (3) did the recovery in the MSME share of GDP in 2023-2024 coincide with an observable change in the sectoral structure of active MSMEs?

LITERATURE REVIEW

Institutional Environment and MSME Development

The literature on entrepreneurship emphasizes that firm development is shaped by the interaction between entrepreneurial initiative and the institutional environment. Schumpeter (1934) identifies entrepreneurship as a central mechanism through which innovation and economic change occur, while subsequent research has demonstrated that the regulatory conditions surrounding firm entry and operation can materially influence entrepreneurial activity. Klapper et al. (2006) show that entry regulation can constitute an important barrier to entrepreneurship, whereas Krichevskiy and Snyder (2015) emphasize the role of government policies in shaping entrepreneurial incentives and outcomes.

For MSMEs, institutional conditions are particularly relevant because smaller firms generally possess fewer internal resources with which to absorb regulatory, administrative and financing constraints. Government intervention may therefore facilitate MSME development by reducing barriers, improving access to resources and supporting innovation. At the same time, the existence of public support does not guarantee productive outcomes. Evidence from transition-economy settings indicates that the effectiveness of government support may depend on its interaction with firms' own capabilities and investment decisions. Hong et al. (2015), for instance, demonstrates that public support and private investment can interact in shaping innovation efficiency. The broader institutional environment also encompasses human-capital formation and knowledge development. In the Azerbaijani context, Muradov (2017) emphasizes the role of university education in supporting economic development. This broader perspective suggests that financial and regulatory support for MSMEs should be considered alongside the development of skills and knowledge that strengthen firms' capacity to use available resources effectively.

Access to Finance, MSME Performance and Investment

Access to external finance represents an important determinant of MSME development, as smaller firms are generally more constrained by financial and legal barriers than larger enterprises. Cross-country evidence shows that such constraints have a disproportionately stronger adverse effect on the growth of smaller firms (Beck et al., 2005). Limited access to finance may therefore restrict working capital, investment and business expansion. Empirical evidence nevertheless indicates that the relationship between finance and firm performance is heterogeneous. Giang et al. (2019) find that access to finance can improve SME productivity, although the magnitude of the effect varies with the form of financing and firm characteristics. Similarly, evidence from microcredit interventions suggests that expanded credit access does not necessarily generate uniformly large improvements in business outcomes. Meager (2019), synthesizing evidence from seven randomized microcredit evaluations, reports relatively modest average effects and substantial variation across borrowers and contexts.

The effectiveness of external finance may also depend on the design and implementation of financial support programmes. Evidence from Indonesia indicates that capital-strengthening initiatives for micro and small enterprises do not automatically translate into effective policy outcomes, highlighting the relevance of financing feasibility and programme implementation (Reniaty et al., 2023). Beyond the volume of finance, the design of financial services may also influence MSME outcomes. Evidence from Kenya indicates that access to savings schemes, managerial training and appropriate loan grace periods can contribute to improved MSME performance, highlighting the relevance of complementary financial and non-financial support mechanisms (Rotich et al., 2015). The effectiveness of external finance may also depend on the level and allocation of indebtedness. Serrasqueiro et al. (2023) indicate that the relationship between debt, growth and productivity may be non-linear, suggesting that additional finance cannot automatically be equated with proportional improvements in firm performance. From a broader resource-allocation perspective, Cusolito et al. (2024) further emphasize that the economic impact of finance depends not only on the quantity of credit available but also on how financial resources are allocated across firms and productive uses. These findings provide an important basis for distinguishing between credit expansion itself and the productive outcomes associated with that expansion.

A related strand of the literature focuses specifically on the investment channel. Islam and Ganguly (2019) show that effective utilization of loan services can support capital formation by MSMEs through investment in buildings, machinery and equipment, while Al-Maamari et al. (2025) identify a positive relationship between microcredit access and asset accumulation in a developing-economy context. However, external finance need not be directed exclusively toward fixed assets. Nicolas (2022) demonstrates that working-capital requirements can influence the fixed-investment decisions of SMEs, as short-term liquidity needs may compete with longer-term capital expenditure. Investment decisions of smaller firms may also be particularly sensitive to uncertainty, potentially leading firms to postpone or reduce capital expenditure (Panagiotidis & Printzis, 2021). Consequently, differences between the dynamics of credit and fixed-capital investment do not, by themselves, establish either the effectiveness or ineffectiveness of financial support.

Sectoral Structure and Productive Transformation

The sectoral composition of economic activity provides an additional dimension for evaluating MSME development. Structural-change literature emphasizes that aggregate productivity can improve through both productivity gains within existing sectors and the reallocation of economic resources toward more productive activities. McMillan, Rodrik and Verduzco-Gallo (2014) show that the contribution of structural change to economic growth depends critically on the direction in which resources are reallocated across sectors. This distinction is particularly relevant when an economy experiences improvements in aggregate output without an accompanying major change in its sectoral structure, since growth may also result from stronger performance within existing activities.

For Azerbaijan, the structural dimension of MSME development is closely connected with the broader objective of diversifying economic activity beyond the oil sector. Babayev and Huseynov (2021) emphasize the role of entrepreneurship and non-oil activities in Azerbaijan's diversification process, while Mammadova (2019) highlights the potential of agriculture and export-oriented production to contribute to the country's economic development. From this perspective, the sectoral distribution of MSMEs is relevant not because activity in any sector can automatically be classified as productive or unproductive, but because persistent sectoral patterns may influence the channels through which financial support contributes to investment, value creation and longer-term economic diversification.

The ownership structure of Azerbaijan's MSME sector provides an additional contextual consideration. Survey evidence indicates that 89.3% of MSMEs in Azerbaijan can be classified as family businesses (Musayev, 2025). This suggests that policies directed toward the MSME sector are also likely to affect a substantial population of family-owned enterprises, even when such firms are not treated as a separate empirical category. In this context, targeted mechanisms such as ABAD complement broader MSME-support institutions by providing business-development assistance to family-based micro and small enterprises. The relevance of such mechanisms is therefore considered here as part of the institutional environment surrounding MSME development rather than as a separate object of the quantitative analysis. Taken together, the literature indicates that access to finance, investment behavior and sectoral structure represent interrelated dimensions of MSME development. However, relatively limited evidence is available on how these dimensions have evolved jointly within Azerbaijan's state-supported MSME framework. The present study therefore combines financial, macroeconomic, investment and sectoral evidence in order to provide an exploratory assessment of these relationships over the methodologically comparable post-2020 period.

INSTITUTIONAL FRAMEWORK FOR MSME SUPPORT IN AZERBAIJAN

Azerbaijan's MSME support framework has developed alongside broader efforts to diversify the national economy and strengthen non-oil entrepreneurial activity (Babayev & Huseynov, 2021). The Law of the Republic of Azerbaijan "On State Support for Small Entrepreneurship", adopted in 1999, and its subsequent replacement by the Law "On the Development of Micro, Small and Medium Enterprises" in 2022 established and subsequently updated the legal basis for state support mechanisms directed toward MSMEs. These reforms reflect the increasing institutional importance assigned to MSMEs within the country's private-sector development strategy (Musayev, 2025a). An important component of this institutional framework is the Small and Medium Business Development Agency (KOBIA), established in 2017 under the Ministry of Economy. KOBIA supports MSME development through information and advisory services, training, legal assistance, coordination with public institutions, and measures aimed at improving access to markets and financial (KOBIA, 2026). Its role therefore extends beyond direct financial assistance and includes institutional support intended to reduce administrative and capacity-related constraints faced by smaller enterprises.

The Entrepreneurship Development Fund (EDF) under the Ministry of Economy represents the principal financial institution considered in the present study. Through concessional lending and related financial instruments, the EDF seeks to facilitate entrepreneurs' access to finance and support business and investment projects. Since the empirical analysis focuses specifically on the volume of concessional finance directed toward MSMEs, the EDF provides the central institutional link between Azerbaijan's state-support framework and the quantitative assessment undertaken below (EDF, 2025).

A complementary mechanism is provided by ABAD (Facilitated Support to Family Business), established in 2016 under the State Agency for Public Service and Social Innovations. ABAD supports family-based micro and small enterprises through business consulting, technical assistance, marketing and branding, financial and legal services, and support for logistics and sales. Official information for 2025 reports 696 beneficiaries, indicating that the programme has expanded to nearly 700 supported entrepreneurs (ABAD, 2025). This mechanism is particularly relevant in light of survey evidence indicating that 89.3% of Azerbaijani MSMEs satisfy internationally accepted criteria for classification as family businesses (Musayev, 2025b). Accordingly, family-owned enterprises may benefit both from specialized instruments such as ABAD and from the broader services and financing mechanisms provided through KOBIA and the EDF.

Taken together, these institutions illustrate the multidimensional nature of MSME support in Azerbaijan, encompassing regulatory coordination, business-development services and concessional finance. The empirical analysis that follows concentrates on the financial and macroeconomic dimensions of this framework, while institutional mechanisms such as KOBIA and ABAD provide the broader policy context within which the observed MSME dynamics should be interpreted.

METHODOLOGY AND DATA

This study adopts an exploratory empirical design combining descriptive statistical analysis, correlation analysis, index-based trend comparison, sectoral assessment, and a documentary review of the institutional framework supporting MSMEs in Azerbaijan. The quantitative component covers annual observations for 2020-2024 and focuses on three principal variables: concessional lending to MSMEs, MSME value added, and fixed-capital investment by MSMEs. Azerbaijan's GDP and the share of MSME value added in GDP are used as supplementary indicators to assess changes in the relative macroeconomic

contribution of MSMEs, while sectoral data are employed to examine the distribution of active MSMEs across economic activities.

The quantitative data were obtained from the State Statistical Committee of the Republic of Azerbaijan and the annual reports of the Entrepreneurship Development Fund (EDF) under the Ministry of Economy. Official legal, policy, and institutional materials from relevant government bodies, including KOBIA and ABAD, are additionally reviewed to contextualize the broader MSME support framework. These institutional sources are used for contextual and policy analysis only and are not incorporated as variables in the quantitative or correlation analyses.

The 2020-2024 period was selected primarily because of data comparability and availability. The methodology used to compile and report the relevant official MSME indicators prior to 2020 differs from that applied in the subsequent statistical series, thereby limiting the comparability of earlier observations with the data used in this study. At the same time, 2024 represents the latest year for which the required methodologically comparable official statistics are available. Consequently, the quantitative analysis is restricted to five annual observations ($N = 5$). The short time series therefore reflects a constraint imposed by the availability of comparable official data rather than an arbitrary restriction of the study period.

To examine patterns of association among the three principal quantitative variables, their natural logarithms are used. The logarithmic transformation facilitates the comparison of proportional movements across the series and moderates the influence of large absolute differences in their levels. Pearson correlation coefficients are calculated for the natural logarithms of MSME value added, fixed-capital investment, and concessional lending. Given the very limited number of annual observations, the resulting coefficients are interpreted strictly as descriptive and exploratory indicators of co-movement. They are not treated as evidence of causality, nor are they used for statistical generalization beyond the observed period. Accordingly, no causal econometric modelling or inferential hypothesis testing is undertaken.

For a scale-independent comparison of trends measured in different units, the three principal quantitative series are additionally normalized by setting their respective 2020 values equal to 100. Each subsequent annual index is expressed relative to the corresponding 2020 base-year value. This procedure makes it possible to compare the direction and relative magnitude of changes in concessional lending, MSME value added, and fixed-capital investment within a common analytical scale and to identify their differing trajectories over the observation period.

The sectoral assessment focuses on 2023 and 2024 because these consecutive years correspond to the recovery phase in the MSME share of GDP identified in the descriptive analysis, following its decline in 2022. The comparison is used to assess whether this recovery coincided with an observable reallocation of active MSMEs across economic activities. The sectoral indicators refer to the distribution of active MSMEs rather than to sector-specific value added, productivity, investment intensity, or firm performance. Accordingly, the analysis is intended to identify broad structural stability or change in the composition of active MSMEs and should not be interpreted as a direct measure of sectoral productivity or structural transformation.

RESULTS

Trends in Concessional Lending and MSME Value Added

The first stage of the empirical analysis examines the evolution of state-supported concessional lending to MSMEs and the corresponding dynamics of their macroeconomic contribution over the 2020-2024 period. The analysis first considers the scale and distribution of concessional lending before turning to changes in MSME value added and its share of GDP. As shown in Figure 1, concessional lending to MSMEs increased substantially over the 2020-2024 period. The volume of concessional loans allocated to MSMEs rose from AZN 106.8 million in 2020 to AZN 231.8 million in 2024, representing an increase of approximately 117%. Over the same period, total concessional lending provided by the EDF increased from AZN 126.9 million to AZN 248.1 million.

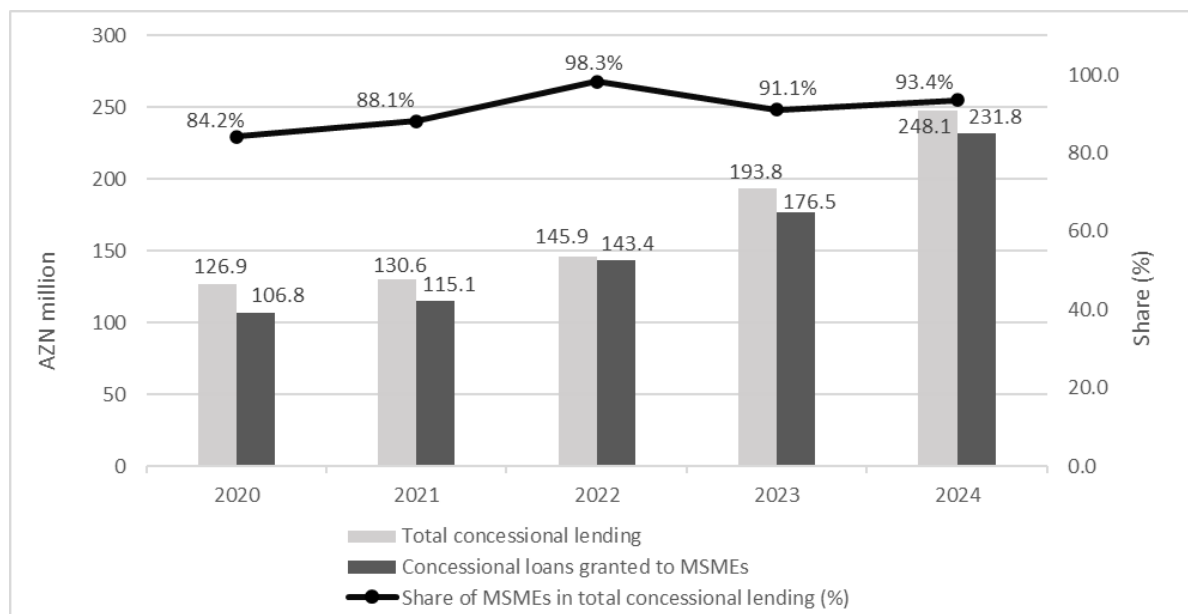


Figure 1 Share of MSMEs in concessional loans granted to entrepreneurs, 2020-2024

Source: The authors' calculation based on the EDF (2020, 2024) annual reports

MSMEs accounted for the majority of concessional lending throughout the observation period: their share increased from 84.2% in 2020 to 88.1% in 2021 and reached a peak of 98.3% in 2022. Although the share declined to 91.1% in 2023, it recovered to 93.4% in 2024. Overall, these figures indicate that MSMEs remained the principal recipients of EDF concessional finance, while the absolute volume of financial support directed to them more than doubled during the period under review. The expansion of concessional lending coincided with continued growth in the value added generated by MSMEs, the dynamics of which are examined in Figure 2.

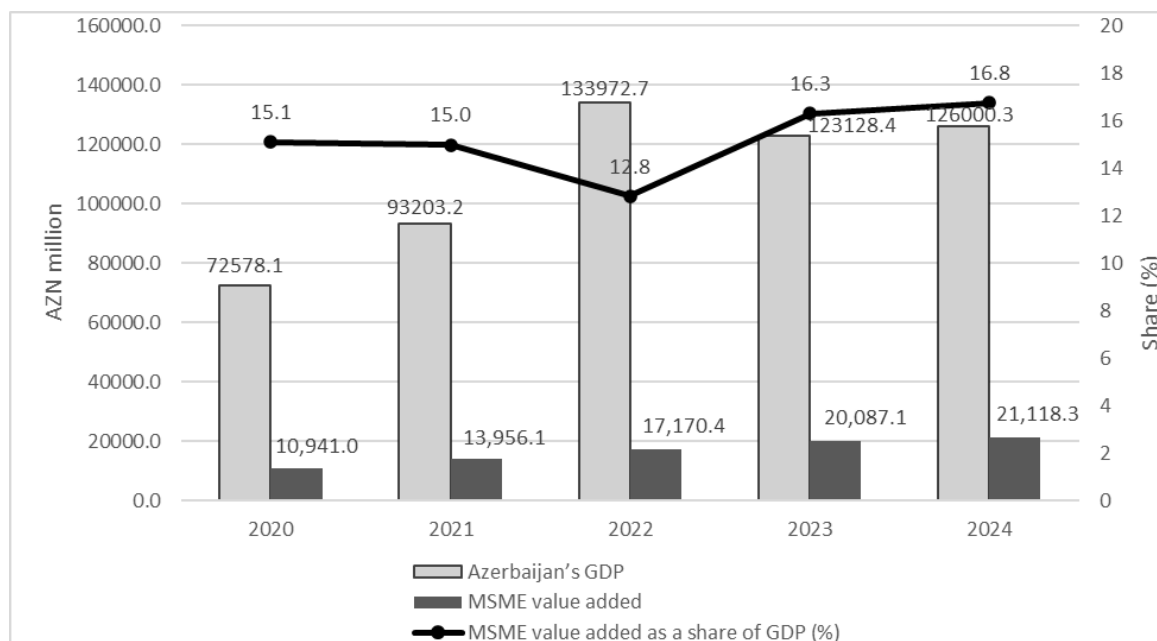


Figure 2 MSMEs value added and its share in Azerbaijan's GDP, 2020-2024

Source: The authors' calculation based on the State Statistical Committee of the Republic of Azerbaijan (2022-2025) statistical yearbooks

As shown in Figure 2, the value added generated by MSMEs increased continuously from AZN 10,941.0 million in 2020 to AZN 21,118.3 million in 2024, representing an increase of approximately 93% over the observation period. Despite this sustained growth in absolute terms, the share of MSMEs in Azerbaijan's GDP did not follow a uniform trajectory. It declined from 15.1% in 2020 to 15.0% in 2021 and further to 12.8% in 2022, indicating that total GDP expanded more rapidly than MSME value added during this phase. The pattern subsequently reversed, with the MSME share of GDP increasing to 16.3% in 2023 and 16.8% in 2024, thereby exceeding its 2020 level by 1.7 percentage points. Thus, the observed dynamics do not indicate a persistent decline in the relative macroeconomic contribution of MSMEs. Rather, they reveal a temporary weakening through 2022 followed by a marked recovery in 2023-2024. This distinction is important because growth in MSME value added in absolute terms and changes in its share of GDP reflect different dimensions of MSMEs' contribution to the national economy. Taken together, Figures 1 and 2 show that the expansion of concessional lending coincided with sustained growth in MSME value added, whereas the relative contribution of MSMEs to GDP followed a less uniform trajectory. To examine whether similar patterns of co-movement are observable across concessional lending, MSME value added and fixed-capital investment, the analysis next considers the correlations among the logarithmically transformed variables.

Exploratory Correlation Analysis

Pearson correlation coefficients were calculated for the natural logarithms of MSME value added, fixed-capital investment and concessional lending over the 2020-2024 period. The observation window is restricted to five annual observations because official MSME indicators reported prior to 2020 were compiled under a different statistical methodology, limiting their comparability with the subsequent series, while 2024 is the latest year for which the required comparable official data are available. Consequently, the coefficients reported below are interpreted strictly as descriptive and exploratory measures of co-movement rather than as inferential estimates or evidence of causal relationships.

Table 1. Pearson correlation matrix of logarithmically transformed variables, 2020-2024

Variables	ln (value added)	ln (fixed-capital investment)	ln (concessional loans)
ln (value added)	1.0000		
ln (fixed-capital investment)	-0.3581	1.0000	
ln (concessional loans)	0.9278	-0.5593	1.0000

Source: The authors' calculation based on the EDF (2020, 2024) annual reports and State Statistical Committee of the Republic of Azerbaijan (2022-2025) statistical yearbooks

The strongest association is observed between concessional lending and MSME value added ($r = 0.9278$), indicating that the two variables moved closely in the same direction during the period. By contrast, fixed-capital investment exhibits a relatively weak negative association with MSME value added ($r = -0.3581$) and a moderate negative association with concessional lending ($r = -0.5593$). These coefficients do not imply that lending causes value added to increase or that concessional lending reduces fixed-capital investment. Rather, they describe divergent movements within the five-year window. In particular, fixed-capital investment followed a different trajectory after 2022, while both concessional lending and MSME value added continued to increase.

Lending, Value Added and Fixed-Capital Investment Dynamics

To illustrate these differences independently of the original measurement scales, Figure 3 presents the three series as indices, with their 2020 values normalized to 100.

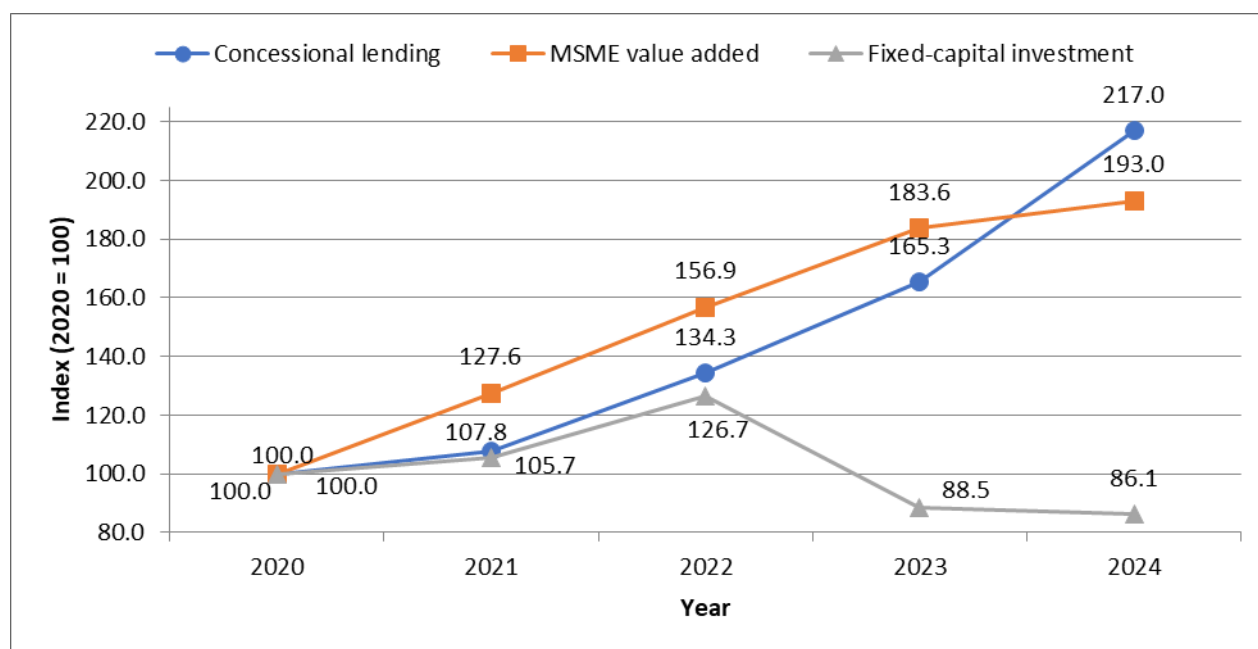


Figure 3 Indexed Trends in MSME Lending, MSME Value Added and Fixed-Capital Investment (2020 = 100)

Source: The authors' calculation based on the EDF (2020, 2024) annual reports and State Statistical Committee of the Republic of Azerbaijan (2022–2025) statistical yearbooks

Figure 3 provides a scale-independent comparison of the three quantitative indicators by setting their 2020 levels equal to 100. Concessional lending increased to an index value of 217.0 by 2024, while MSME value added reached 193.0. Fixed-capital investment initially increased to 126.7 in 2022 but subsequently declined to 88.5 in 2023 and 86.1 in 2024. The indexed series therefore reveal a clear divergence after 2022: concessional lending and MSME value added continued to expand, whereas fixed-capital investment fell below its 2020 level. This pattern is consistent with the correlation coefficients reported in Table 1 and indicates that the expansion of concessional finance was not accompanied by a parallel increase in aggregate fixed-capital investment during the latter part of the observation period. The observed divergence should not be interpreted as evidence that concessional lending reduced fixed-capital investment, as the aggregate data do not identify the purposes for which individual loans were used.

Taken together, the results reveal several interrelated patterns in the development of Azerbaijani MSMEs over 2020–2024. Concessional lending and MSME value added increased substantially and exhibited a strong positive association, whereas fixed-capital investment followed a divergent trajectory after 2022. At the same time, the recovery in the MSME share of GDP in 2023–2024 occurred without substantial changes in the sectoral distribution of active MSMEs, indicating that the improvement was not accompanied by a pronounced structural reallocation of MSME activity. These empirical patterns provide the basis for the following discussion, which considers the relationship between concessional finance and MSME value creation, the divergence of fixed-capital investment, and the implications of the observed sectoral stability for structural upgrading and MSME policy.

DISCUSSION

Concessional lending and MSME value creation

Against this empirical background, the strong positive association between concessional lending and MSME value added ($r = 0.9278$) suggests that the two indicators moved closely together during 2020–2024. The observed co-movement is broadly consistent with the proposition that improved access to finance may relax financing constraints and support business activity. However, the wider empirical literature does not suggest a uniform relationship between credit expansion and MSME performance.

Previous research indicates that the effects of external finance depend on the form, intensity, and use of credit. Giang et al. (2019), for example, report heterogeneous productivity effects associated with different forms of external finance, while Meager (2019) finds relatively modest average effects of microcredit expansion. Serrasqueiro et al. (2023) further suggest that the relationship between business debt, productivity, and growth may be non-linear, particularly when firms become highly dependent on external finance. These findings imply that an increase in credit availability should not automatically be equated with a proportional improvement in firm productivity.

The literature on financial misallocation provides an additional qualification. Cusolito et al. (2024) emphasize that the economic effect of finance depends not only on the quantity of credit available but also on whether financial resources are allocated toward more productive uses. This consideration is particularly relevant to the present study because the aggregate indicators demonstrate a simultaneous increase in concessional lending and MSME value added but do not reveal how individual recipient firms used the financing. The available data therefore do not permit a direct assessment of the efficiency of credit allocation among Azerbaijani MSMEs. (Karimli, et al. (2026)) Accordingly, the positive correlation identified in this study should be interpreted as evidence of co-movement rather than as proof that concessional lending caused the observed increase in MSME value added.

Fixed-capital investment and the productive use of concessional finance

A different pattern emerges when fixed-capital investment is considered. Although concessional lending to MSMEs increased substantially throughout 2020–2024, fixed-capital investment rose only until 2022 and subsequently declined below its 2020 level. The negative association between concessional lending and fixed-capital investment ($r = -0.5593$) should therefore not be interpreted as evidence that additional credit reduces investment. Rather, it indicates that the two aggregate series followed divergent trajectories during the latter part of the observation period.

Previous studies provide reasons to expect that access to finance can, under appropriate conditions, facilitate capital formation. Islam and Ganguly (2019) show that the effective utilization of loan services can support MSME investment in buildings, machinery, and equipment, while Al-Maamari et al. (2025) report a relationship between microcredit access and asset accumulation in another developing-economy context. These findings provide an important comparative benchmark, but they do not imply that all concessional finance is necessarily transformed into fixed assets.

Nicolas (2022) shows that increases in working-capital needs can affect MSMEs' fixed-investment decisions, as firms may prioritize liquidity and short-term operating requirements over longer-term asset accumulation. More generally, the investment decisions of smaller firms have been shown to be particularly sensitive to uncertainty, which may encourage the postponement or reduction of capital expenditure (Panagiotidis & Printzis, 2021). These mechanisms offer plausible interpretations of the divergence observed in Figure 3. Concessional finance may have supported working capital, liquidity, inventories, employment retention, or other operating expenditures rather than immediate investment in fixed assets. Investment responses may also occur with a lag and may depend on sectoral conditions, demand expectations, firm-level productivity, and the broader investment environment.

The available aggregate data, however, do not identify the specific purposes for which individual concessional loans were used or the subsequent investment behavior of recipient firms. Consequently, these alternative mechanisms cannot be tested directly for Azerbaijan within the present dataset. The post-2022 decline in fixed-capital investment should therefore be treated as an empirical pattern requiring further investigation rather than as evidence of ineffective or misallocated lending. From this perspective, the distinction between the volume of finance and its allocation across productive and non-fixed-investment uses, emphasized by Cusolito et al. (2024), remains particularly relevant for future firm-level research. Taken together, the results indicate that concessional lending and MSME value added expanded over the observation period, whereas fixed-capital investment followed a divergent trajectory after 2022. This combination suggests that higher financial support and output growth were not accompanied by a corresponding increase in aggregate fixed-capital formation during the final two years of the study period. Whether the recovery in the MSME share of GDP was also accompanied by a broader structural reallocation of MSME activity is considered in the following subsection.

Sectoral structure and the recovery of the MSME share of GDP

The recovery of the MSME share of GDP from 12.8% in 2022 to 16.3% in 2023 and 16.8% in 2024 raises an important question: does this improvement primarily reflect broader macroeconomic dynamics, or is it also associated with a structural reallocation of MSME activity? To explore this issue, Figure 4 compares the sectoral distribution of active MSMEs in 2023 and 2024. The comparison focuses on these two consecutive years because they capture the period during which the MSME share of GDP recovered following its 2022 decline.

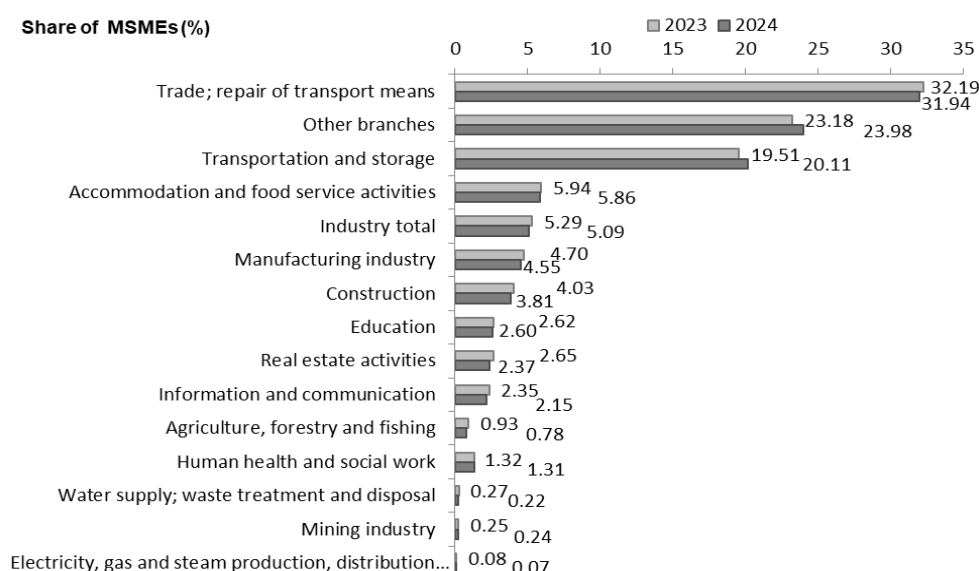


Figure 4 Sectoral distribution of MSMEs in Azerbaijan, 2023-2024 (%)

Source: The authors' calculation based on the State Statistical Committee of the Republic of Azerbaijan (2022-2025) statistical yearbooks

Figure 4 indicates that the sectoral composition of active MSMEs remained broadly stable between 2023 and 2024. Trade and repair of transport means constituted the largest individual category in both years, declining only marginally from 32.19% to 31.94%. Transportation and storage increased from 19.51% to 20.11%, while the share of other branches rose from 23.18% to 23.98%. Changes in the remaining sectors were comparatively limited. Accommodation and food service activities declined slightly from 5.94% to 5.86%, manufacturing from 4.70% to 4.55%, and construction from 4.03% to 3.81%, whereas education remained almost unchanged at 2.60% and 2.62%, respectively. Real estate activities and information and communication also recorded only modest declines. Overall, apart from relatively small increases in transportation and storage and in other branches, the year-to-year distribution exhibits a high degree of structural continuity.

Consequently, the increase in the MSME share of GDP during 2023–2024 cannot, on the basis of the available evidence, be attributed to a substantial reorientation of MSME activity toward manufacturing, technology-intensive activities, or other potentially higher-productivity sectors. Instead, the recovery appears to have occurred within a largely unchanged sectoral structure. This does not exclude productivity improvements within individual sectors, changes in firm size or performance, or shifts in the contribution of enterprises; such developments cannot be identified from sectoral shares based on the number of active MSMEs alone.

This distinction is important because an increase in the relative macroeconomic contribution of MSMEs is not necessarily equivalent to structural transformation. Changes in the MSME share of GDP depend on both the value added generated by MSMEs and the dynamics of total GDP. The decline in the MSME share through 2022 occurred despite increasing MSME value added because aggregate GDP expanded more rapidly during that phase. Conversely, the subsequent recovery may reflect stronger MSME performance within the existing sectoral structure, changes in the growth rates of other parts of the economy, or a combination of broader macroeconomic factors. Therefore, changes in the MSME share of GDP should be interpreted jointly with absolute value-added dynamics rather than as an independent measure of MSME performance.

The study period also overlaps with the economic disruption associated with the COVID-19 pandemic. Crisis conditions may alter both the demand for government-supported finance and the short-term relationship between financing, investment, and output because firms may use external finance to preserve liquidity, maintain employment, and ensure business continuity rather than to undertake immediate productive expansion. The pandemic may therefore constitute part of the broader macroeconomic context within which the observed relationships developed. Nevertheless, the present study does not isolate the independent effect of the pandemic, and this mechanism should be treated as contextual rather than causal.

Policy implications and structural upgrading

The findings suggest that the assessment of MSME support should extend beyond the aggregate volume of concessional lending. The strong positive association between lending and value added indicates that the expansion of state-supported finance coincided with higher MSME output during 2020–2024. At the same time, the decline in fixed-capital investment after 2022 and the limited change in the sectoral distribution of active MSMEs indicate that the composition, allocation, and productive use of financial support remain important policy considerations. These results do not imply that the existing financing mechanism is ineffective; rather, they suggest that the evaluation of policy effectiveness should distinguish between the amount of finance provided and the economic activities and investment outcomes ultimately supported by that finance.

From a structural perspective, stronger incentives for investment in manufacturing, food processing, export-oriented agribusiness, information and communication technologies, and other productivity-enhancing activities may strengthen the capacity of MSMEs to translate financial support into longer-term competitiveness. This policy direction is consistent with Azerbaijan's broader emphasis on economic diversification, innovation, agribusiness, and the development of non-oil sources of income discussed by Babayev and Huseynov (2021). The emphasis on improving the competitiveness of entrepreneurial activity in agriculture and related sectors, as discussed by Mammadova (2019), further supports the need to align financial support with sector-specific development objectives.

Such an approach does not necessarily require reducing financial support to sectors that primarily serve domestic consumption or short-term operating needs. Rather, it implies complementing general access to finance with policy instruments that encourage productive investment, technological upgrading, innovation, export capacity, and stronger integration into higher-value-added activities. In this context, concessional lending may generate stronger long-term effects when combined with investment incentives, business-development services, entrepreneurship-support institutions, industrial parks and technoparks, tax incentives, subsidies, and targeted training programmes. Azerbaijan's existing industrial-development infrastructure, including the Ganja, Mingachevir and Sumgayit Industrial Parks, as well as the Aghdam Industrial Park and the Araz Valley Economic Zone Industrial Park, provides an institutional setting through which financial support and productive investment may potentially be more closely connected.

Digital transformation and entrepreneurial human capital represent complementary dimensions of structural upgrading. Digital technologies can expand market access, improve information flows, reduce transaction costs, and enhance the ability of MSMEs to adopt more productive business models. Musayev (2024) emphasizes the broader economic significance of digital transformation, while evidence from Kazakhstan suggests that government digital priorities can influence socio-economic well-being by improving access to information and expanding opportunities within the education and business environment (Kushzhanov & Dashqin, 2019). In parallel, the development of business skills and continuous entrepreneurial learning is important for enabling firms to use financial and technological resources more effectively. Mammadova (2021) highlights the role of lifelong business education and interactive learning methods in strengthening the educational environment for business. Taken together, these perspectives suggest that financial support is likely to generate more sustainable outcomes when accompanied by digital capabilities, managerial knowledge, technological adaptation, and continuous skills development.

The effectiveness of MSME support also depends on the wider institutional and regulatory environment in which enterprises operate. Access to finance alone may be insufficient to promote structural upgrading if firms face weaknesses in management, investment planning, organizational capacity, or the ability to reinvest resources productively. In this respect, the institutional and regulatory dimensions of enterprise development discussed by Musayev (2025) provide an additional basis for considering concessional finance as one component of a broader entrepreneurship-support ecosystem rather than as an isolated policy instrument. This perspective is particularly relevant for smaller and owner-managed enterprises, where financial constraints may interact closely with managerial, organizational, and institutional factors.

More generally, the results support a policy framework in which the success of concessional financing is assessed through multiple outcomes rather than through lending volume alone. In addition to the amount of finance distributed, evaluation could consider the purpose of financing, the sector of the recipient, investment in fixed assets, employment effects, productivity developments, export participation, digital adoption, and firm survival. Such information would make it possible to distinguish between financing that primarily supports short-term business continuity and financing that contributes to longer-term productive capacity. It would also provide a stronger empirical basis for assessing whether concessional resources are reaching firms and activities with greater potential for productivity growth, technological upgrading, and structural diversification.

Study limitations and directions for further research

The interpretation of these findings must take account of the limited number of annual observations. The 2020–2024 period provides only five comparable annual observations, meaning that the reported correlation coefficients should be regarded as descriptive and exploratory rather than as estimates of stable structural relationships. The restricted sample is not merely a numerical limitation. Official MSME statistics for the period before 2020 were compiled using a different methodology, which reduces their comparability with the subsequent series, while the post-2020 period is constrained by the years currently available in official statistics, with 2024 representing the latest published observation included in the analysis. Extending the time series backwards would therefore increase the number of observations at the cost of methodological consistency.

The aggregate nature of the data imposes an additional limitation. The analysis cannot identify individual loan recipients, loan purposes, firm-level investment behavior, productivity changes, or the time lag between financing and subsequent investment or output. It is therefore not possible to determine whether concessional lending directly generated additional value added, whether financing was primarily used for working capital or fixed investment, or whether the observed relationships reflect broader macroeconomic developments. Future research based on firm-level or loan-level data could address these questions more directly by distinguishing between financing purposes, sectors, firm sizes, and recipient characteristics and by examining the timing of investment and productivity responses.

Within these limitations, the present findings nevertheless provide evidence of three important patterns: concessional lending and MSME value added moved strongly together during 2020–2024; fixed-capital investment diverged from both indicators after 2022; and the recovery in the MSME share of GDP during 2023–2024 occurred without substantial change in the sectoral composition of active MSMEs. Considered jointly, these results suggest that the future evaluation of MSME policy should focus not only on expanding access to finance but also on understanding how financial resources are used and how effectively they contribute to investment, productivity, and structural upgrading.

CONCLUSION

This study examined the relationship between state-supported concessional lending and the macroeconomic performance of MSMEs in Azerbaijan using methodologically comparable official data for 2020–2024. The results reveal three main empirical patterns. First, concessional lending to MSMEs expanded substantially over the observation period and was strongly positively associated with MSME value added ($r = 0.9278$), indicating close co-movement between the two indicators. Second, fixed-capital investment followed a divergent trajectory, rising until 2022 but subsequently declining below its 2020 level despite the continued expansion of concessional lending and MSME value added. Third, the recovery of the MSME share of GDP to 16.8% in 2024 occurred without substantial changes in the sectoral distribution of active MSMEs between 2023 and 2024.

Taken together, these findings suggest that the performance of state-supported MSME financing should not be assessed solely because of the volume of concessional lending. The simultaneous expansion of lending and MSME value added represents a positive macroeconomic development, but the divergence of fixed-capital investment after 2022 indicates that higher financing volumes were not accompanied by a corresponding increase in aggregate fixed-capital formation during the latter part of the study period. Similarly, the relative stability of the sectoral structure suggests that the recovery in the MSME share of GDP was not associated with a pronounced reallocation of MSME activity toward manufacturing, information and communication technologies, or other potentially higher-productivity sectors. These patterns highlight the importance of considering not only access to finance but also the allocation, purpose, and productive use of concessional resources.

From a policy perspective, concessional lending may therefore be most effective when integrated with complementary measures that encourage productive investment, technological upgrading, sectoral diversification, digital transformation, managerial

capacity development, and stronger participation in higher-value-added and export-oriented activities. Policy evaluation could consequently extend beyond aggregate lending volumes to include the purpose of financing, sectoral allocation, fixed-capital investment, productivity, employment, export participation, digital adoption, and firm survival. Such an approach would provide a more comprehensive basis for assessing whether state-supported finance contributes primarily to short-term business continuity or also to longer-term productive capacity and structural upgrading.

The findings should, however, be interpreted within the methodological limitations of the study. The analysis is based on five annual observations and is therefore descriptive and exploratory rather than causal. The restricted time span reflects not only the limited number of available observations but also a comparability constraint: official MSME statistics prior to 2020 were compiled using a different methodology, while the post-2020 period is limited by the currently published official series, with 2024 being the latest available year included in the analysis. In addition, the aggregate data do not identify individual loan recipients, financing purposes, firm-level investment decisions, productivity responses, or possible time lags between financing and subsequent economic outcomes.

The contribution of the study therefore lies in integrating financial, value-added, investment, GDP-share, and sectoral evidence within a single exploratory framework for assessing state support to MSMEs in Azerbaijan. Future research should extend the analysis as additional methodologically comparable observations become available and, where possible, employ firm-level or loan-level data to examine how concessional finance is allocated and utilized across sectors, firm types, and investment purposes. Such evidence would make it possible to assess more directly whether concessional financing contributes to productivity growth, capital formation, and the structural transformation of the MSME sector.

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