Effectiveness of Support Mechanisms and SME Rehabilitation in Fostering Entrepreneurship in Algeria's Industrial Sector

Ammam Rim, Merzoug Fetah, Boukhatem Lakhdar

Abstract

This study examines the impact of support systems and rehabilitation initiatives on small and medium-sized enterprises (SMEs) in Algeria, assessing the country's framework for supporting SMEs in comparison to Middle East and North Africa (MENA) nations, highlighting its strengths and weaknesses. Utilizing a comparative analytical methodology, the study relies on secondary data sourced from official institutional reports and regional analyses.

The results suggest that Algeria performs reasonably well in aspects like access to financing, business support services, and the overall operational environment, often exceeding the regional average. However, notable gaps remain when evaluated against leading countries, especially in areas such as internationalization, partnerships, e-government services, and second-chance initiatives for entrepreneurs who have faced failures. These gaps highlight structural issues, including limited integration into global value chains, insufficient institutional oversight, and weak partnerships driven by innovation.

The study concludes that while Algeria has made progress in its SME policies, further reforms are crucial to enhance competitiveness and sustainability. Suggested measures include expanding digital and e-government offerings, encouraging public-private partnerships, streamlining trade and registration processes, and creating more inclusive financing options. By addressing these important shortcomings, Algeria can fully leverage the capabilities of its SME sector to foster innovation, create employment opportunities, and maintain sustainable economic resilience.

Keywords: SMEs; Industrial Policy; Business Support Services; economic development; Entrepreneurship; Algeria; MENA nations.

JEL: L26; L52, L84; O10

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INTRODUCTION

In the context of the changing global economic landscape, characterized by rapid technological transformations, shifting trade patterns, and increasing competition, it becomes essential to analyze the effectiveness of support mechanisms and rehabilitation programs for small and medium-sized enterprises (SMEs) in developing the industrial sector in Algeria (Otman, 2021). This analysis aims to assess their ability to promote industrial growth and drive economic development (Gherghina et al., 2020). These mechanisms play a pivotal role in providing the necessary financial, technical, and training support to these enterprises to address challenges such as lack of funding, regulatory complexities, and difficulties in accessing markets (Gamage et al., 2020).

Recognizing the significant potential of these enterprises in transforming the industrial sector, the Algerian government has adopted and implemented a wide range of initiatives to support them (Ouki, 2019). These programs aim to improve efficiency and productivity, enhance the capacity of enterprises to innovate and adapt to market demands, and directly contribute to the development of the national industrial fabric (Mosbah & Debili, 2014). However, the effectiveness of these initiatives varies across sectors and regions, highlighting the need for a comprehensive analysis to identify successes and areas requiring improvement (Ait-Yahia Ghidouche, Nechoud, & Ghidouche, 2021). The support mechanisms for SMEs in Algeria include a variety of interventions. For example, Dris et al. (2022) point out that financial support programs, such as subsidized loans, grants, and tax incentives, aim to address the issue of capital shortage faced by many of these enterprises (Ghomari, 2020). Additionally, technical assistance programs provide support in areas such as quality control, production process improvement, and technology adoption, contributing to the modernization and increased competitiveness of these enterprises (Bouazza, Ardjouman, & Abada, 2015). Furthermore, training programs focus on developing managerial skills, financial literacy, and entrepreneurial capabilities among business owners and employees in these enterprises.

The regulatory environment plays a critical role in the development of SMEs (Dris, Benmouiza, & Bennour, 2022). Therefore, the government seeks to simplify bureaucratic procedures, reduce administrative burdens, and establish a legal framework conducive to the growth of these enterprises (Elasrag, 2010; Elasrag, 2012). These initiatives also include efforts to facilitate access to local and international markets through trade fairs, export promotion programs, and business matchmaking events (Mosbah & Debili, 2014).However, the effectiveness of these programs varies across sectors and geographic regions (Gribi, Amarouche, & Si Lekhal, 2024). Some initiatives have achieved significant positive results, leading to the growth of small enterprises that have become influential players in their industries (Chang & Webster, 2019). Meanwhile, other initiatives have faced implementation challenges and have not achieved the expected outcomes.

By studying the effectiveness of these mechanisms, policymakers and stakeholders can identify best practices, monitor gaps in the current system, and determine areas for improvement. This analysis may contribute to the development of new support tools and more effective strategies to meet the evolving needs of small and medium-sized enterprises.

Research Problem

This research explores the efficacy of support systems and rehabilitation initiatives in tackling the diverse challenges encountered by small and medium-sized enterprises (SMEs) within Algeria's industrial sector. While earlier studies have highlighted the presence of such systems, there is a lack of empirical data regarding their actual influence on enterprise performance, competitiveness, and sustainability over the long term. Thus, this research aims to thoroughly

examine how these systems operate in real-world scenarios, evaluate the balance between financial and non-financial support, and analyze the degree to which government interventions encourage sustainable entrepreneurship under the current economic climate.

Objective of the Study

The main aim of this research is to evaluate the efficiency of support structures and rehabilitation initiatives for SMEs in Algeria, set against the wider context of the MENA region. Through a comparative analysis, this study aims to identify the primary challenges and opportunities that Algerian SMEs face, particularly in terms of access to financing, regulatory environments, digital readiness, and sustainability. The ultimate objective is to provide evidence-based recommendations for enhancing Algeria's SME support framework and aligning it with best practices in the region.

Research Questions

RQ$_{1a}$: To what degree do limited access to data and inadequate institutional oversight impede the effectiveness of support systems for SMEs in Algeria?

RQ$_{1b}$: How does Algeria's stable but decelerating GDP growth affect the overall environment for the development and stability of SMEs?

RQ$_{1c}$: What is the perceived effect of inflation on the operational efficiency and purchasing power of SMEs in Algeria?

RQ$_2$: What are the main institutional, financial, and operational barriers that prevent Algeria's SME policy landscape from competing with leading countries in the MENA region despite its medium ranking?

RQ$_{2a}$: How does the performance of Algeria's institutional and regulatory framework for SMEs measure up against the median performance of both vulnerable and high-performing economies in the MENA region?

RQ$_{2b}$: To what extent do Algeria's capabilities in entrepreneurial learning, SME skill-building, and inclusiveness hinder the emergence of innovative and dynamic SMEs compared to regional leaders?

RQ$_{2c}$: Is the operational environment for SMEs in Algeria effectively managed, or are there significant hindrances such as slow company registration processes and inadequate e-government services?

RQ$_{2d}$: How does Algeria's policy environment for second chances after business failure compare with both fragile and leading economies in the MENA region, and what is its perceived influence on entrepreneurial re-entry?

RQ$_{2e}$: What are the major perceived obstacles that Algerian SMEs face regarding international expansion and access to public procurement opportunities?

RQ$_{2f}$: How does the availability of financing for Algerian SMEs stack up against the regional average and the top-performing MENA front-runners, such as the UAE and Bahrain, in terms of fostering growth and expansion?

RQ$_{2g}$: To what degree do the development and collaborative efforts of Algeria's business support services affect the overall efficiency of the SME support ecosystem when compared to regional best practices?

RQ$_{3a}$: How do sectoral disparities in the distribution of SMEs impact the fair allocation and outcomes of support programs in Algeria?

RQ₃ᵦ: How do geographical disparities in the distribution of SMEs affect the fair allocation and outcomes of support programs?

RQ₄: Does the degree of digital preparedness positively influence the relationship between SME support initiatives and growth, especially regarding access to financing and markets?

RQ₅: How is the adoption of green standards (such as ISO 9001/14001) related to the long-term sustainability and competitiveness of SMEs, and consequently, to the effectiveness of government support?

RQ₆: Do the collaborative efforts of FGAR, ANGEM, and CNAC yield a synergistic effect that is noticeably more effective in fostering entrepreneurship than their individual interventions?

Conceptual Framework

This conceptual model provides an outline of the determinants of the overall effectiveness and development of SME support systems in Algeria.
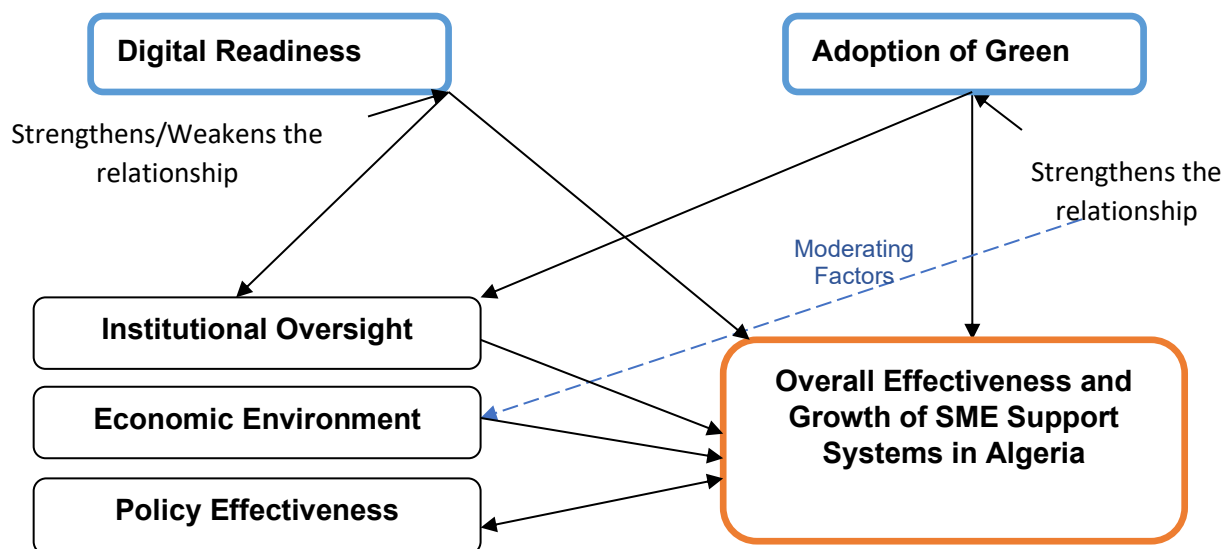

Fig. 1 Conceptual Framework
Source: Prepared by the researchers

1. LITERATURE REVIEW

The literature on the importance of supporting and rehabilitating small and medium-sized enterprises (SMEs) highlights their critical role in economic development and the industrial fabric of nations, particularly in contexts like Algeria, where the economy heavily relies on the oil sector. Research indicates that SMEs significantly contribute to job creation, innovation, and economic diversification, making them essential for achieving sustainable economic growth (Abisuga-Oyekunle et al., 2020; Kato, 2021).

Government support mechanisms are crucial in reducing the risks of these enterprises failing (Crawford, Cui, & Kewley, 2024). They provide the necessary resources to help SMEs overcome the financial and administrative challenges they face (Omopariola, Windapo,

Edwards, & Thwala, 2020). According to multiple studies, support can take various forms, such as financial grants, credit facilities, and technical assistance (Peter et al., 2018; Durst & Gerstlberger, 2020). Financial grants help alleviate immediate cash flow issues, while credit facilities enable businesses to invest in growth opportunities (Cowling, Brown, & Rocha, 2020; Ayensuwa Ekuban, 2021). Additionally, technical advice and vocational training equip entrepreneurs with the skills needed to enhance their operational capabilities and make strategic decisions (Azevedo & Almeida, 2021; Olaolu & Obaji, 2020).

Rehabilitation programs targeting SMEs are essential tools for enhancing competitiveness, especially in economies reliant on a limited number of sectors (Surya et al., 2021). Research emphasizes that diversifying the economic base is crucial for resilience, particularly in environments heavily dependent on oil (World Bank, 2018; Usman & Landry, 2021). These programs not only provide skills training but also foster innovation and adaptability, enabling SMEs to respond to market changes and consumer demands (Klein & Todesco, 2021; Pu, Qamruzzaman, Mehta, Naqvi, & Karim, 2021; Naradda Gamage et al., 2020).

Support structures, such as business incubators and accelerators, are critical factors in the success of startups. These structures provide financial and non-financial support that significantly enhances competitive advantages (Moitse, 2021; Alpenidze, Pauceanu, & Sanyal, 2019). According to Abbasi, Wang, and Abbasi (2017), by addressing perceived risks and barriers, government support emerges as an effective tool for improving the business environment. Khuong and Van (2022) also highlight that this leads to higher startup success rates.

However, SMEs in Algeria still face significant challenges, particularly in accessing financing. High costs and stringent collateral requirements create barriers that prevent them from securing the necessary funding (Otman, 2021; Barthelmess & Langlois, 2020). Addressing these barriers is essential to enable businesses to thrive, necessitating improvements in financing mechanisms and streamlining processes for accessing capital (Gamage et al., 2020; Testa et al., 2019).

Government initiatives play a crucial role in addressing these challenges. The Ministry of Industry and Mines in Algeria is responsible for formulating industrial policies that ensure a supportive environment for SMEs. Additionally, the National Agency for the Promotion of SMEs plays a significant role in ensuring entrepreneurs have access to the resources and training needed to develop their businesses (Nouibat, 2019; Aleisa, Djeflat, & Zou'bi, n.d.; Yoshida, 2018).

Financial tools such as the Algerian Guarantee Fund and the Investment Support Fund provide essential financial incentives to stimulate investment in SMEs (Ayadi & Shaban, 2021). These tools not only reduce perceived risks for lenders but also enhance the overall investment climate (Chigara & Hebri, 2021; Mosbah & Debili, 2014).

Business incubators and vocational training programs are vital components of the SME support system (Hewitt & Van Rensburg, 2020; Rens et al., 2021). They provide technical assistance that enhances entrepreneurs' skills and capabilities, which is crucial for improving overall business performance. Research indicates that this support can lead to increased innovation and productivity among SMEs (Peter et al., 2018; Prasanna et al., 2019).

Therefore, the literature emphasizes the importance of multifaceted support necessary for the success of SMEs. By creating a dynamic ecosystem focused on addressing financing challenges, enhancing competitiveness, and encouraging innovation, Algeria can facilitate sustainable economic growth and diversification. This approach not only benefits SMEs but

also strengthens the broader industrial landscape, making the economy more resilient to external challenges.

2. METHODOLOGY

To fulfill the study objective, this study employs the following stages:

(a) Literature Review: An extensive assessment of prior research regarding SMEs, entrepreneurship, and support mechanisms on a global scale and specifically within the MENA region, aimed at developing a conceptual framework.

(b) Secondary Data Collection: Accumulating official data from institutional sources such as the Algerian Ministry of Industry, the National Office of Statistics, FGAR, ANGEM, CNAC, and the World Bank, ESCWA, and ISO reports. These datasets offered insights into economic performance, inflation patterns, digital readiness, and the adoption of green standards.

(c) Comparative Analysis: Evaluating Algeria's SME ecosystem in comparison to other MENA nations based on key aspects, such as institutional frameworks, entrepreneurial education, access to financing, operational conditions, and internationalization.

(d) Mechanism Analysis: Assessing the efficacy of Algeria's primary support mechanisms—FGAR, ANGEM, and CNAC—by reviewing the distribution of financing across different regions, sectors, and types of projects.

(e) Quantitative Analysis: Utilizing Excel-based statistical tools to analyze economic indicators, growth rates across sectors, employment trends, and regional disparities among SMEs.

3. Analysis & Assessment

3.1. Comparative Analysis of Economic Performance and Data Gaps in MENA's SME Sector

This analysis examines the small and medium-sized enterprise (SME) sector. By employing a comparative framework, it juxtaposes Algeria with other nations in the MENA region, illustrating how Algeria's distinct problems and policy requirements correspond with or differ from regional patterns.

3.1.1. Data Accessibility and Institutional Challenges in Monitoring SMEs in MENA

Dependable and thorough data is essential for assessing the performance of small and medium enterprises (SMEs) and the efficacy of support mechanisms aimed at promoting entrepreneurship. Nevertheless, the MENA region faces significant deficiencies in the accessibility and validation of firm-level data, including details regarding firm dynamics, results from economic censuses, and registration figures related to sales and employment. Policy makers are unable to accurately assess the impact of financial tools and rehabilitation programs on the growth of **SMEs**. The table below highlights the significant gaps in data availability across 19 MENA economies, a key obstacle to effective, evidence-based policymaking. Accordingly, the following table will test the question:

RQ$_1$*a: To what degree do limited access to data and inadequate institutional oversight impede the effectiveness of support systems for SMEs in Algeria?*

Country	Published Firm Dynamics	Economic Census Data	Compiled Firm Registration Data with Sales & Employment	Data Verified
Algeria	Red	Yellow	Red	Red
Bahrain	Red	Red	Red	Red
Djibouti	Red	Red	Green	Red
Egypt (Arab Rep.)	Red	Green	Red	Green
Iran (Islamic Rep.)	Red	Yellow	Green	Red
Iraq	Red	Red	Red	Red
Jordan	Yellow	Green	Red	Green
Kuwait	Red	Red	Green	Green
Lebanon	Yellow	Yellow	Green	Green
Libya	Red	Yellow	Red	Red
Morocco	Green	Green	Green	Green
Oman	Red	Red	Green	Red
Qatar	Red	Green	Green	Green
Saudi Arabia	Red	Yellow	Green	Green
Syrian Arab Republic	Red	Green	Green	Green
Tunisia	Green	Red	Green	Green
United Arab Emirates	Red	Red	Red	Red
West Bank and Gaza	Yellow	Green	Red	Green
Yemen (Republic of)	Red	Yellow	Red	Red

Green (Full analysis): This indicates a comprehensive, in-depth analysis of firm dynamics. It examines both inter-firm ("between") and intra-firm ("within") components using detailed administrative data.
Yellow (Partial): This represents a limited analysis that focuses solely on employment transitions by firm size, also using firm-level administrative data.
Red (No analysis): This simply means no analysis was conducted in this area.

Table 1 MENA Micro-Firm Data Sources
Source: (Gatti et al., 2025)

The table indicates that only a small number of MENA economies, including Morocco, Tunisia, and Djibouti, possess relatively developed systems for the publication and verification of firm-level data. Conversely, numerous countries, like Algeria, lack up-to-date or confirmed databases. To effectively support SMEs and ensure policy success, we must first address the region's fundamental lack of reliable data. Enhancing statistical infrastructure is critical for collecting reliable data, which is essential for developing measurable and effective policies. **This analysis supports the question,** as it demonstrates a clear correlation between Limited data accessibility and weak institutional oversight to negatively affect the effectiveness of SME support systems in Algeria.

3.1.2. Representation of GDP growth rate in (MENA)

Understanding regional economic trends is crucial for assessing the performance and potential of small and medium-sized enterprises (SMEs). Table 01. illustrates the World Bank's predictions for real GDP growth in Middle East and North Africa (MENA) nations from 2022 to 2027. These forecasts highlight regional disparities, the impact of oil market volatility, and

the varying capacities of economies to sustain growth and recovery. Accordingly, the following table will test the question: *RQ$_{2a}$: How does Algeria's stable but decelerating GDP growth affect the overall environment for the development and stability of SMEs?*

Country/Region	2022	2023	2024e	2025f	2026f	2027f
Calendar year basis						
Algeria	3.6	4.1	3.6	3.3	3.2	2.9
Bahrain	6.2	3.9	3.0	3.0	2.9	2.7
Djibouti	3.7	6.7	6.0	5.2	5.1	5.0
Iraq	8.0	-2.7	5.0	4.5	4.5	4.0
Jordan	2.6	2.7	2.6	2.6	2.7	2.8
Kuwait	8.9	-0.6	2.6	2.6	2.5	2.5
Lebanon	-0.6	-0.8	-7.1	4.7	4.3	4.0
Libya	26.7	-12.2	7.9	13.5	6.8	5.6
Morocco	1.3	3.0	3.7	3.5	3.5	3.5
Oman	4.3	1.3	1.5	1.7	2.1	2.5
Qatar	4.9	1.5	2.0	2.4	5.4	7.6
Saudi Arabia	8.7	-0.8	1.8	4.0	5.9	5.9
Syrian Arab Republic	0.7	-1.2	-1.5	1.0	1.6	1.7
Tunisia	2.5	0.4	2.3	2.3	2.4	2.5
United Arab Emirates	7.6	3.7	3.5	4.6	4.0	4.0
West Bank and Gaza	4.1	-4.6	-26.0	-6.6	8.9	10.9
Yemen, Rep.	1.5	-2.0	2.0	5.0	6.0	6.0
Fiscal year basis						
Iran, Islamic Rep.	3.8	5.0	3.0	3.0	3.2	3.0
Egypt, Arab Rep.	6.6	3.8	2.4	3.8	4.2	4.6

Table 2 A Comparative Analysis of Real GDP Growth Forecasts in MENA (2022-2027)
Source: (World Bank Group, 2025)

The current economic outlook for Algeria paints a mixed picture. While Algeria's projected economic slowdown from 4.1% in 2023 to 2.9% by 2027 appears more stable than the volatile, oil-dependent growth of neighbors like Libya and Iraq, this stability is deceptive. It masks a fundamental fragility stemming from the country's own heavy reliance on energy. Algeria's persistent dependence on energy and structural limitations hinder long-term growth. Meanwhile, its regional competitors are charting different courses. Morocco and Tunisia anticipate moderate growth of about 3%, while Gulf nations like Saudi Arabia and the UAE are forecast to exceed 5% growth by 2026. This disparity underscores a critical challenge for Algeria, avoiding stagnation by diversifying its economy. Therefore. **The question holds partly**. Algeria's economy is stable, but its slowing GDP growth, coupled with a reliance on the energy sector, limits the long-term growth potential for small and medium-sized enterprises (SMEs). It contrasts with the more volatile economic conditions found in other Middle East and North Africa (MENA) economies. The solution lies in a multi-pronged strategy, empowering small and medium enterprises (SMEs) as engines of diversification, accelerating digital transformation, and nurturing an innovation-driven entrepreneurial ecosystem. Simultaneously, fostering regional inclusiveness can address structural inequalities and bolster competitiveness, ensuring Algeria's sustainable future isn't tied to the volatile cycles of resource dependency.

3.1.3. Inflation as a Determinant of SME Support Effectiveness

Increasing inflation poses a significant obstacle for small and medium-sized enterprises, posing direct risks to their stability and expansion. Escalating inflation raises the costs of inputs, diminishes consumer buying power, and makes it more difficult to obtain affordable funding, all of which weaken the efficacy of support programs aimed at promoting entrepreneurship.

The table presented below highlights the inflation trends in MENA economies between 2022 and 2025, providing a broader context for the recovery strategies of SMEs. Accordingly, the following table will test the question: ***RQ$_{1c}$****: What is the perceived effect of inflation on the operational efficiency and purchasing power of SMEs in Algeria?*

	2022	2023e	2024f	2025f
MENA	5.0	3.6	2.2	2.7
Gulf Cooperation Council	3.8	2.0	1.7	2.0
Qatar	5.0	3.1	1.3	1.9
United Arab Emirates	4.8	1.6	2.2	2.1
Bahrain	3.6	0.1	1.3	1.5
Kuwait	4.0	3.6	3.1	2.7
Saudi Arabia	2.5	2.3	2.1	2.3
Oman	2.5	0.9	1.0	1.4
Developing Oil Exporters	9.3	9.3	4.0	4.9
Islamic Republic of Iran	46.5	52.3	31.9	30.0
Algeria	9.3	9.3	4.0	4.9
Iraq	5.0	4.4	3.7	3.3
Developing Oil Importers	5.9	6.0	5.0	2.6
Arab Republic of Egypt	8.5	24.1	33.6	17.2
Tunisia	8.3	9.3	7.0	6.0
Jordan	4.2	2.1	2.0	2.7
Morocco	6.6	6.1	1.5	2.2
Djibouti	5.1	1.4	3.0	1.8
West Bank and Gaza	3.7	5.9	35.8	2.5
Other Countries				
Libya	4.6	2.3	2.5	2.4
Lebanon	171.2	221.3	45.7	NP
Syrian Arab Republic	63.7	92.5	37.7	11.3
Republic of Yemen	29.5	0.9	16.3	20.7

Table 3 Inflation in MENA, by economy, 2022–2025

Source: (Gatti et al., 2025).

The data reveals significant variation in inflation rates throughout the MENA region. Gulf Cooperation Council (GCC) nations, which benefit from robust fiscal reserves, enjoy low and stable inflation averaging approximately 2%, resulting in a more favorable climate for business. In contrast, emerging oil-exporting countries such as Algeria faced elevated inflation rates of 9.3% in 2022–2023, although a decrease to 4.9% is expected by 2025. While moderate compared to the **hyperinflation** seen in fragile nations like Lebanon and Syria, this level of inflation still poses **considerable risks** for small and medium-sized enterprises (SMEs). It directly impacts their bottom line by **raising operational costs** and **curtailing consumer demand**, making it harder for these businesses to survive and grow.

Oil-importing countries are experiencing even higher inflationary challenges. Inflation poses a significant challenge for North African economies. In Egypt, projections suggest a peak inflation rate of **33.6% in 2024**, while Tunisia's rate is expected to remain stubbornly high, **above 6% by 2025.** These situations highlight vulnerabilities associated with external shocks, currency fluctuations, and inherent weaknesses in local production systems. **The analysis confirms that inflation has significantly downgraded** the operational efficiency and purchasing power of SMEs in Algeria. Higher production costs, reduced consumer demand, and limited financial capability have converged to downsize the competitiveness of SMEs.

3.2. A MENA Comparison and Algeria's Entrepreneurial Environment

The structural composition of enterprises by size offers critical insights into the strengths and weaknesses of SME ecosystems. By examining the relative share of micro, small, medium, and large enterprises, it becomes evident how economies differ in terms of diversification, resilience, and capacity to generate employment. This comparison highlights Algeria's strong concentration of micro-enterprises and its implications for competitiveness and sustainability. Accordingly, the following tables will test the question *RQ2: What are the main institutional, financial, and operational barriers that prevent Algeria's SME policy landscape from competing with leading countries in the MENA region despite its medium ranking?*

3.2.1. Institutional and Regulatory Framework for SME Policy

The structure, which includes organizations and rules that affect small and medium-sized enterprises (SMEs), includes individual scores for components such as the institutional landscape, streamlining of legislation, and the relationships between the public and private sectors. Accordingly, the following table will test the question: *RQ2a: How does the performance of Algeria's institutional and regulatory framework for SMEs measure up against the median performance of both vulnerable and high-performing economies in the MENA region?*

Dimension	Jordan	UAE	Bahrain	Algeria	Syria	Sudan	Iraq	Kuwait	Morocco	Yemen	Tunisia	Palestine	Oman	Egypt	Türkiye	Regional Average	Best in
1. Institutional and regulatory framework for SME policy	2.33	3.56	2.95	3.14	1.46	1.65	1.56	2.58	2.39	1.70	2.69	2.20	2.87	1.71	2.56	2.45	3.58
1.1 Institutional framework for SME policy	2.42	3.88	3.83	3.54	1.66	1.76	1.79	2.82	2.76	2.71	2.09	3.06	2.49	3.07	1.88	2.79	2.59
1.2 Legislative and regulatory simplification	2.09	2.92	2.34	2.48	0.97	1.27	1.40	1.23	1.89	1.93	1.10	2.08	1.74	2.21	1.42	2.25	1.86
1.3 Public-private consultations	2.51	3.96	2.25	3.39	1.78	1.97	1.98	1.90	1.95	2.47	1.83	2.90	2.33	3.41	1.82	2.58	2.85

Table 4 A Comparative Study of SME Distribution in Algeria and the MENA Region

Source: (ESCWA, 2023)

The findings are consistent with the proposed question. Algeria's score is 3.14, which is above the regional average of 2.56 and significantly higher than scores from vulnerable economies like Sudan (1.65) and Yemen (1.70). However, it is below leaders such as the UAE (3.56). It suggests that, while Algeria has a relatively robust institutional base, weaknesses in simplifying

regulation (2.48) and in public-private consultation (3.39, compared to the UAE's 3.96) continue to limit the effectiveness of its policies.

4.2.2. Entrepreneurial Learning, SME Skills and Inclusivity

The advancement of entrepreneurial capabilities and the encouragement of inclusivity in the SME landscape encompass evaluations for entrepreneurial education, SME competencies, and inclusivity, which are crucial factors for nurturing a vibrant and creative business ecosystem. Accordingly, the following table will test the question: ***RQ₂b***: *To what extent do Algeria's capabilities in entrepreneurial learning, SME skill-building, and inclusiveness hinder the emergence of innovative and dynamic SMEs compared to regional leaders?*

Dimension	Jordan	UAE	Bahrain	Algeria	Syrian	Sudan	Iraq	Kuwait	Morocco	Yemen	Tunisia	Palestine	Oman	Egypt	Türkiye	Regional Average	Best in Class
2. Entrepreneurial learning, SME skills and inclusivity	2.11	3.39	3.58	2.43	1.37	1.39	1.61	1.53	1.94	1.97	1.27	2.59	2.19	3.17	1.54	2.09	1.90
2.1 Entrepreneurial learning	2.04	3.33	3.67	2.60	1.39	1.48	1.53	1.50	1.88	1.73	1.23	2.58	2.26	3.17	1.58	2.12	1.87
2.2 SME skills	2.16	3.35	3.56	2.41	1.38	1.35	1.73	1.70	1.71	1.94	1.35	2.65	2.20	3.26	1.56	2.09	2.03
2.3 Inclusivity	2.03	3.71	3.40	2.00	1.31	1.34	1.25	1.24	1.40	1.85	1.00	2.32	1.91	2.75	1.31	1.81	1.87

Table 5 An Evaluation of Entrepreneurial Education, Skills in SME, and Inclusivity

Source: (ESCWA, 2023)

The data corroborate the question. Algeria's performance in the areas of entrepreneurial learning, SME skills, and inclusivity stands at 2.43, which is above the regional average of 2.09 and well above the best-in-class benchmark of 1.90. It places Algeria ahead of various regional competitors, such as Morocco (1.94) and Tunisia (1.27), although it falls short of leading states like Bahrain (3.58) and the UAE (3.39).

In the sub-dimensions, Algeria scores 2.60 in entrepreneurial learning, surpassing the regional average of 2.12 and indicating strides made in weaving entrepreneurship education into the overall skills landscape. For SME skills, Algeria scores 2.41, slightly above the regional average of 2.09; however, it still trails behind frontrunners like Egypt (3.26) and Bahrain (3.56). As for inclusivity, Algeria scores 2.00, again exceeding the regional average of 1.81 but still significantly behind top performers like the UAE (3.71).

4.2.3. Operational Environment for SMEs

The practical elements of operating a business encompass areas such as company registration, e-government services, and intellectual property protection, all of which are crucial for minimizing bureaucracy and enhancing business efficiency. Accordingly, the following table will test the question: ***RQ₂c***: *Is the operational environment for SMEs in Algeria effectively managed, or are there significant hindrances such as slow company registration processes and inadequate e-government services?*

Dimension	Jordan	UAE	Bahrain	Algeria	Syria	Sudan	Iraq	Kuwait	Morocco	Yemen	Tunisia	Palestine	Oman	Egypt	Türkiye	Regional Average	Best in Class
3. Operational environment for SMEs	2.70	3.62	3.59	2.72	1.83	1.02	2.44	1.39	1.89	2.85	2.00	1.97	2.10	3.62	1.77	2.81	2.71
3.1 Company registration	2.56	2.77	2.88	2.48	1.53	1.70	2.44	1.39	1.89	2.40	1.84	2.44	1.96	3.22	1.72	2.57	2.26
3.2 Other indicators on registration, notification and compliance	2.57	4.03	3.60	2.51	1.79	1.52	2.86	1.52	2.58	2.88	1.76	3.02	1.98	3.92	1.69	2.96	2.73
3.3 E-Government services	2.75	3.93	4.40	2.88	1.75	1.50	3.13	1.62	3.25	3.23	1.77	3.12	1.94	3.75	1.50	2.88	3.28
3.4 Intellectual property and standards for SMEs	3.22	4.07	4.20	3.50	2.56	3.08	1.75	2.06	2.43	3.35	2.23	3.74	2.80	3.63	2.32	2.85	3.02

Table 6 A Comparative Assessment of the Operational Environment for SMEs

Source: (ESCWA, 2023)

The results of the investigation demonstrate that the question is correct. Algeria achieves a score of 2.72 in the operational environment for SMEs, which is slightly lower than the regional average of 2.81 and just above the best-in-class benchmark of 2.71. While this suggests a reasonable level of progress, Algeria continues to fall short of top contenders such as the UAE at 3.62 and Bahrain at 3.59.In terms of Company Registration (2.48), Algeria's performance is close to the regional average of 2.57, indicating some progress in making entry procedures easier for SMEs. Nonetheless, it does not reach Türkiye's score of 3.22 and Bahrain's 2.88, emphasizing the necessity for additional efforts to reduce bureaucracy and expedite the registration process. For Registration, Notification, and Compliance (2.51), Algeria performs similarly to the regional average of 2.96, suggesting a moderate level of efficiency. However, developed economies like Türkiye (3.92) and the UAE (4.03) reveal a notable discrepancy in the simplification of regulatory processes.In the area of E-Government Services (2.88), Algeria aligns with the regional average (2.88 vs. 2.88identical), indicating progress when compared to Morocco (3.25) and Oman (3.12). Nevertheless, leading nations like Bahrain (4.40) and the UAE (3.93) emphasize the necessity for increased digitalization and automation of government services.

When it comes to Intellectual Property and Standards for SMEs (3.50), this marks Algeria's strongest performing area, surpassing the regional average of 2.85 and approaching top-performing countries like Bahrain (4.20) and the UAE (4.07). It demonstrates institutional

advancements in safeguarding SME innovation and ensuring adherence to international standards.

4.2.4. Second Chance

The policy framework for entrepreneurs who have faced business setbacks evaluates the efficacy of bankruptcy processes and the accessibility of a second chance for these entrepreneurs. Accordingly, the following table will test the question: *RQ_{2d}: How does Algeria's policy environment for second chances after business failure compare with both fragile and leading economies in the MENA region, and what is its perceived influence on entrepreneurial re-entry?*

Dimension	Jordan	UAE	Bahrain	Algeria	Syria	Sudan	Iraq	Kuwait	Morocco	Yemen	Tunisia	Palestine	Oman	Egypt	Türkiye	Regional Average	Best in Class
4. Second chance	2.56	3.50	2.84	2.69	1.93	1.99	2.08	1.71	2.28	2.69	2.08	2.69	2.09	3.53	1.68	2.78	2.65
4.1 Bankruptcy procedures	2.94	3.40	3.19	2.83	2.33	2.33	2.50	1.98	2.42	3.00	2.50	2.81	2.46	3.56	2.22	3.42	2.52
4.2 Second chance	2.18	3.60	2.50	2.54	1.53	1.65	1.67	1.44	2.14	2.25	1.50	2.56	1.71	3.50	1.53	2.13	2.77

Table 7 An Evaluation Comparing the "Second Chance" Aspect

Source: (ESCWA, 2023)

The data resoundingly endorses the question. Algeria achieves a score of 2.69 in the Second Chance dimension, which places it slightly under the regional average (2.78) but comparable to the best-in-class benchmark (2.65). It indicates a somewhat encouraging atmosphere for entrepreneurs experiencing setbacks, although there are still significant differences when compared to leading regions such as the UAE (3.50) and Egypt (3.53).

Bankruptcy Procedures (2.83). Algeria demonstrates relatively strong performance, surpassing both the regional average (3.42) and the best-in-class benchmark (2.52). It indicates that Algeria has made significant strides in creating clearer regulations for bankruptcy and liquidation, although it still falls short of Egypt (3.56) and the UAE (3.40).

Second Chance (2.54). Algeria matches the regional average (2.13) but lags behind leading nations such as the UAE (3.60) and Egypt (3.50). Although the legal and institutional framework allows for a certain degree of re-entry into the market, social stigma and financial barriers continue to be major hindrances for entrepreneurs who have experienced failure and wish to restart their businesses.

4.2.5. Internationalization of SMEs and Public Procurement

In general, support for small and medium-sized enterprises (SMEs) in foreign trade is a significant focus of many governments and international organizations, as these businesses are often seen as key drivers of economic growth and job creation. Accordingly, the following table will test the hypothesis: *RQ_{3e}: What are the major perceived obstacles that Algerian SMEs face regarding international expansion and access to public procurement opportunities?*

Dimension	Jordan	UAE	Bahrain	Algeria	Syria	Sudan	Iraq	Kuwait	Morocco	Yemen	Tunisia	Palestine	Oman	Egypt	Türkiye	Regional Average	Best in Class
5.Internationalization of SMEs and public procurement	2.61	4.26	3.54	2.80	1.86	1.81	1.94	1.86	2.08	2.64	1.83	3.58	1.93	3.54	1.90	2.81	2.55
5.1 Implementing a pro-active trade policy	2.71	4.22	3.79	2.67	1.88	1.83	1.94	1.86	2.14	2.83	1.89	3.69	1.98	3.57	1.94	3.02	2.53
5.2 Simplification of procedures for international trade	2.49	4.40	3.00	3.17	1.65	1.53	1.50	1.82	1.60	2.58	1.50	3.44	1.67	3.38	1.71	2.47	2.45

Table. 8.An Evaluative Comparison of the "Global Expansion of SMEs and Government Procurement" Aspect

Source: (ESCWA, 2023)

The evidence supports the question. Algeria holds a score of 2.80, which is just under the regional average of 2.81 but exceeds the best-in-class benchmark of 2.55. It suggests that although Algeria has laid the groundwork for SME internationalization and engagement in public procurement, its advancements are somewhat inconsistent compared to top-performing nations like the UAE (4.26) and Egypt (3.54). Regarding the implementation of a Pro-Active Trade Policy, Algeria scores 2.67, which is near the regional average of 3.02 and exceeds the best-in-class benchmark of 2.53. However, it lags behind leading nations such as Bahrain (3.79) and Palestine (3.69). This suggests that while Algeria's trade policy is making headway, there is a need for better incentives to help integrate SMEs into export markets. In terms of streamlining procedures for international trade, Algeria achieves a score of 3.17, which is better than the regional average of 2.47 and surpasses the best-in-class benchmark of 2.45. It reflects a relative strength and demonstrates progress in areas like customs, documentation, and trade facilitation processes. Still, countries like the UAE (4.40) are significantly ahead, highlighting the need to digitize procedures, reduce bureaucratic delays, and align with international trade standards.

4.2.6. Access to Finance

The important issue of financing accessibility for small and medium-sized enterprises (SMEs). A strong score in this aspect suggests that companies find it easier to obtain the funds necessary for development and growth. Accordingly, the following table will test the question: **RQ$_{3f}$**: *How does the availability of financing for Algerian SMEs stack up against the regional average and the top-performing MENA front-runners, such as the UAE and Bahrain, in terms of fostering growth and expansion?*.

Dimension	Jordan	UAE	Bahrain	Algeria	Syria	Sudan	Iraq	Kuwait	Morocco	Yemen	Tunisia	Palestine	Oman	Egypt	Türkiye	Regional Average	Best in Class
6.Access to finance	2.45	4.28	3.20	2.93	1.90	1.86	2.13	1.67	2.15	2.23	1.60	3.38	1.92	3.55	1.89	2.48	2.48

Table 9 An Evaluation of the "Access to Finance" Aspect, Source: (ESCWA, 2023)

The data corroborate the question. Algeria has achieved a score of 2.93, exceeding both the regional average of 2.48 and the top benchmark of 2.48. It demonstrates that Algeria has made considerable advancements in facilitating SME access to financing, particularly when compared to regional peers such as Tunisia (1.60), Sudan (1.86), and Yemen (2.23). In comparison to nations such as Jordan (2.45) and Morocco (2.15), Algeria shows stronger institutional backing for SME funding. However, despite these advancements, Algeria remains behind regional frontrunners such as the UAE (4.28) and Egypt (3.55).

4.2.7. Business Support and Partnerships

The availability of effective services and partnerships to help businesses with assessments for support services, informational tools for small and medium enterprises, and collaborations aimed at addressing gaps in the support system. Nevertheless, these solutions help small and medium enterprises address challenges and obtain necessary resources. Accordingly, the following table will test the question: **RQ$_{3g}$**: *To what degree do the development and collaborative efforts of Algeria's business support services affect the overall efficiency of the SME support ecosystem when compared to regional best practices?*

Dimension	Jordan	UAE	Bahrain	Algeria	Syria	Sudan	Iraq	Kuwait	Morocco	Yemen	Tunisia	Palestine	Oman	Egypt	Türkiye	Regional Average	Best in Class
7. Business support and partnerships	2.43	3.95	3.55	2.91	1.58	1.82	1.91	1.71	2.07	2.53	1.61	3.01	2.13	3.42	1.54	2.32	2.39
7.1.Business support services	2.43	3.96	3.55	3.10	1.70	1.88	1.81	1.82	2.23	2.69	1.62	3.05	2.20	3.46	1.57	2.49	2.32
7.2.Information services for SMEs	2.42	3.94	3.60	2.98	1.53	1.61	1.60	1.60	1.95	2.43	1.78	3.00	1.98	3.30	1.48	2.44	2.58
7.3.Partnerships to close gaps in the support ecosystem	2.30	3.91	3.52	2.38	1.34	1.89	2.25	1.55	1.82	2.23	1.43	2.90	2.13	3.45	1.53	1.82	2.38

Table 10 An Evaluation of the "Business Support and Partnerships" Aspect, **Source: (ESCWA, 2023)**

The data corroborate **the proposed question**. Algeria has achieved a score of 2.91, which is higher than the regional average of 2.32 and close to the top benchmark of 2.39. It indicates that Algeria is performing relatively well in supporting SMEs through various services and partnerships compared to many peers in the MENA region. It also exceeds the regional average of 2.49, suggesting that institutions such as incubators, small and medium enterprise agencies, and training initiatives are showing a moderate level of effectiveness. However, the country still lags behind leaders like the UAE (3.96) and Egypt (3.46).

This rating reflects a strong performance, outpacing that of Morocco (1.95) and Tunisia (1.78), and highlights improvements in SME access to data, market insights, and consulting services. Still, there remain deficiencies in digital platforms and data-driven decision-making.

In this regard, Algeria's score is slightly above the regional average of 1.82, demonstrating progress in fostering partnerships among public institutions, the private sector, and international organizations. Nevertheless, in comparison to Bahrain (3.52) and Egypt (3.45), Algeria still lacks robust models of public-private partnerships and cross-sector collaborations.

Overall, the results confirm the general hypothesis. Algeria is positioned in the middle of the MENA nations, ahead of poor performers like Sudan, Yemen, and Syria, but still far behind leaders such as the UAE, Bahrain, and Turkey. Although institutional frameworks and access to finance have improved, structural barriers, particularly in skills, inclusivity, regulatory simplification, and internationalization, continue to be binding constraints that hinder SME competitiveness.

4.3.   Sectoral and Regional Dynamics of SMEs in Algeria

4.3.1.   Analysis of Sectoral Growth Rate Trends

This study compares sectoral growth rates, highlighting sectors with notable changes, whether positive or negative, Accordingly, the following table will test the question: *RQ$_3$a: How do sectoral disparities in the distribution of SMEs impact the fair allocation and outcomes of support programs in Algeria?*
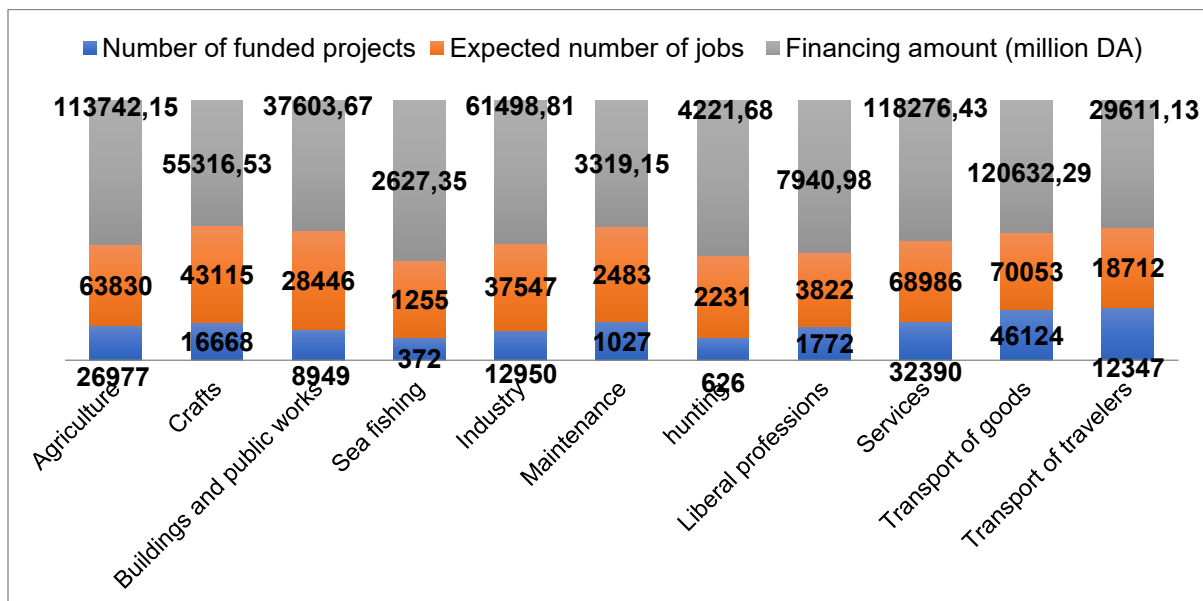
Fig. 2 Sectoral Financing and Employment Impact in Algeria

Source: the National Office of Statistics Algeria. (2023)

Figure 2. Indicate the financing, employment, and project funding allocation in key sectors in Algeria. Freight Transport and Services are the most funded sectors, with 120,632 and 118,276 million DZD financing, respectively, and leading job creation (70,053 and 68,986 jobs) and the number of funded projects (46,124 and 32,390). A key strategic objective is to develop the logistics and service sectors to accelerate economic growth. Agriculture receives significant investment of **113,742 million DZD** and employs **63,830 people**. This highlights its crucial role in maintaining rural economies and ensuring food security. The **Industry and Buildings** sector, with an investment of **61,499 million DZD**, created **37,547 jobs.** Similarly, the **Public Works** sector invested **37,604 million DZD**, generating **28,446 jobs**. This shows a balanced investment in both industrial growth and infrastructure development. **While** Water and Fishing experience the lowest expenditure levels (2,627.4 and 4,221.7 million DZD), corresponding to lower employment impacts, reflecting the potential for minimal development or upgrading of these industries. The analysis confirms the hypothesis by showing regional and sectoral imbalances. Notably, Maintenance shows moderate investment but facilitates niche employment, reflecting the potential for diversification of employment prospects. Overall, the strategic emphasis on Transport, Services, and Agriculture is aligned with national economic goals to maximize growth and employment and sustain key infrastructure and food security.

4.3.2. Evolution of the Number of Employees in SMEs in Algeria (2021-2022)

The evolution of the number of employees in Small and Medium Enterprises (SMEs) in Algeria between 2021 and 2022 reflects significant changes in the size of employment within this vital sector. The following analysis shows how the total number of employees in SMEs increased by 5.46%, with a focus on the difference between employment in private and public institutions.
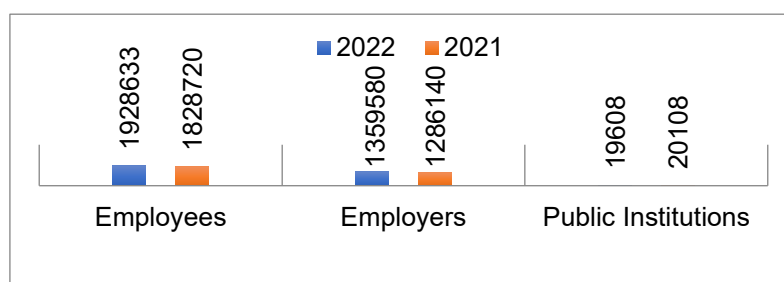
Fig. 3 Evolution of the Number of Employees in Small and Medium Enterprises (2021-2022)

Source: Prepared by the researchers based on the Ministry of Industry Algeria. (2023).

Figure 3.indicates a significant increase in the number of employees in SMEs in Algeria, with the total number rising by 5.46% from 2021 to 2022. This growth includes a 5.46% increase in the number of employees in private institutions and a 5.71% increase in employers. In contrast, public institutions experienced a slight decrease in the number of employees by -2.49%, reflecting challenges or changes in this sector.

4.3.3. Distribution and Types of SMEs in Algeria by the End of 2022

Small and Medium Enterprises (SMEs) are a fundamental part of the Algerian economy, playing a crucial role in the development of economic activity and the provision of job opportunities. By the end of 2022, the total number of SMEs in Algeria reached 1,359,803 entities, distributed among various types of enterprises. In this article, we will review the distribution of these enterprises by type, including private and public institutions, as well as their classification into legal entities and natural persons. This analysis will help us understand

how economic activity is distributed across different types of enterprises and the impact this has on the national economy.
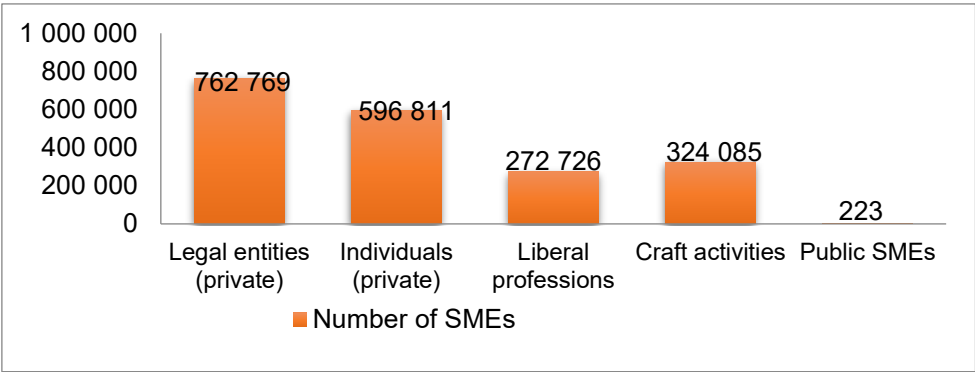

Fig. **4** Distribution of Small and Medium Enterprises in Algeria (2022)
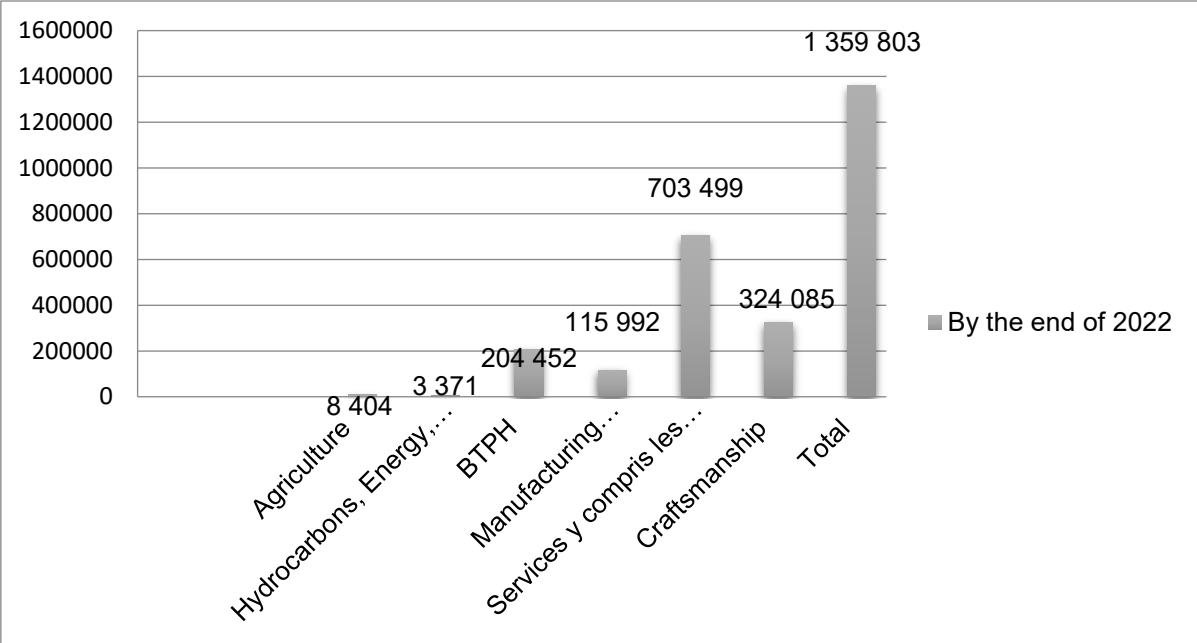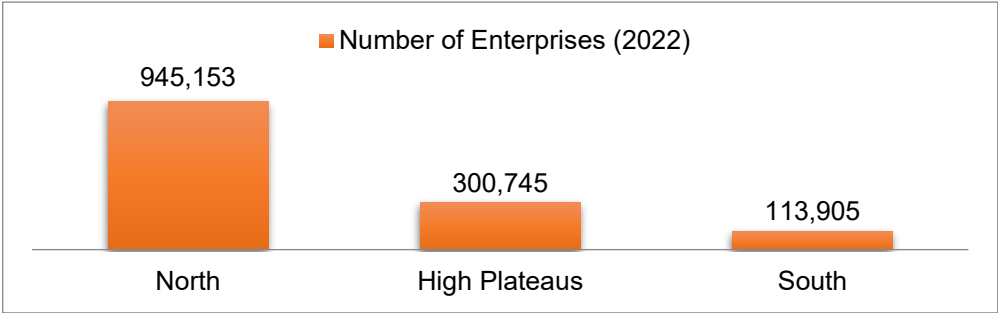
Source: Prepared by the researchers based on the Ministry of Industry Algeria. (2023)

Figure 4. illustrates the distribution of SMEs in Algeria, highlighting the dominance of private enterprises. Legal entities constitute 56.09% of the total, while natural persons account for 43.89%, with craft activities (23.83%) and liberal professions (20.06%) being the most prominent. Public enterprises represent only 0.02% (223 institutions), emphasizing the disparity between the private and public sectors. This distribution underscores the concentration of SMEs in private sector activities, particularly in crafts and liberal professions, emphasizing the need for support to drive economic growth and sustainable development. Meanwhile, public enterprises may require expansion to achieve a more balanced economic landscape.

(a)   **Distribution of SMEs by Sector and Employment Size in Algeria (2022)**

Small and Medium Enterprises (SMEs) are a fundamental part of the Algerian economy, playing a crucial role in providing job opportunities and promoting economic growth. At the end of 2022, the distribution of public and private enterprises based on sector and employment size shows notable differences. In this article, we will review the distribution of public and private enterprises across various sectors and how they impact the local market.

Fig.5 Distribution of SMEs by Sector in Algeria (2022)
Source: Prepared by the researchers based on the Ministry of Industry Algeria. (2023)

Figure 5 from 2022 illustrates that the data clearly indicates the project support initiatives achieved considerable success in terms of volume; however, there is a notable structural bias towards Services (51.7%) and Craftsmanship. Although these sectors are crucial for quick employment, the lack of representation from Manufacturing, BTPH, and particularly Agriculture highlights a challenge in directing entrepreneurial activities towards high-value, productive sectors that are essential for lasting economic diversification and sustainability.

(b)   Distribution of SMEs by Region in Algeria (2022)

The data refers to the geographical distribution of small and medium enterprises in Algeria, where the geographical location plays an important role in determining the distribution of these enterprises across different regions. At the end of 2022, the data shows how small and medium enterprises are mainly concentrated in the northern regions, while they are present in lower proportions in the high plateaus and the south. In this article, we will review the distribution of small and medium enterprises across different regions and analyze the impact of this distribution on the local economy. Accordingly, the following table will test the hypothesis:

RQ_{3b}: How do geographical disparities in the distribution of SMEs affect the fair allocation and outcomes of support programs?

Fig. 6 Distribution of Small and Medium Enterprises by Region in Algeria (2022)

Source: Prepared by the researchers based on the Ministry of Industry Algeria. (2023)

Figure 6 shows that **the data analysis supports the question** that regional imbalances in the distribution of SMEs significantly influence the equitable allocation and outcomes of support mechanisms in Algeria. (SMEs) concentrated in the northern region, which accounts for 69.51% of the total number of enterprises. The high plateau region accounts for 22.12% of the country's total area, while the southern region has the lowest percentage at 8.38%. This distribution reflects the concentration of economic activity in the northern area. which is characterized by the presence of developed infrastructure and greater resources compared to other regions.

4.3.4. Digital Readiness and its impact on SMEs support

The digital infrastructure is progressively influencing the ways SMEs secure funding, embrace innovation, and connect with global value chains. Table X presents the 2024 rankings for Global Digital Infrastructure (GDI) among selected North African nations, offering a comparative perspective to assess Algeria's standing. Accordingly, the following table will test the hypothesis: ***RQ₄: Does the degree of digital preparedness positively influence the relationship between SME support initiatives and growth, especially regarding access to financing and markets?***.

Rank	Country	Score
57	Morocco	34.3
60	Egypt	32.7
62	Tunisia	32.6
69	Algeria	28.4

Table 11 GDI Ranking

Source: (Huawei, 2024)

Table 11 indicates that the Global Digital Index (GDI) 2024 provides some evidence that digital readiness has a positive moderating effect on the relationship between support programs and SME growth. Specifically, this effect is seen in the areas of access to financing and markets. Although Algeria has progressed (ranked 69, score 28.4), it remains far behind its regional counterparts.

Morocco (57, score 34.3), Egypt (60, score 32.7), and Tunisia (62, score 32.6) all surpass it. Though scores differ by narrow margins. In digital ecosystem-strong countries like Morocco and Egypt, Small and Medium-sized Enterprises (SMEs) are better positioned to benefit from digital financing, e-commerce, and technology capacity building. On the other hand, Tunisia has a stronger digital infrastructure than Algeria, creating a more favorable environment for businesses to grow and innovate, despite facing its own economic challenges.

There are gaps in digital adoption and integration in Algeria that limit its ability to leverage digital tools in moderating and enhancing support programs. Therefore, means that there is untapped potential for digital development.

4.3.5. Green Standards Adoption and Governmental Support for Sustainable SMEs

The implementation of ISO 9001 (which focuses on quality management) and ISO 14001)which pertains to environmental management) indicates the extent of commitment by governments and businesses to incorporate sustainable practices. By analyzing the spread of

these certifications throughout North African nations, we can assess how public policies contribute to the advancement of eco-friendly initiatives and the improvement of competitiveness for SMEs. Accordingly, the following table will test the question *RQ5: How is the adoption of green standards (such as ISO 9001/14001) related to the long-term sustainability and competitiveness of SMEs, and consequently, to the effectiveness of government support?*

Country	ISO 9001 2020/21	ISO 14001 2020/21	ISO 9001 2021/22	ISO 14001 2021/22	ISO 9001 2022/23	ISO 14001 2022/23
Algeria	400	99	528	153	483	122
Egypt	2010	890	1971	833	2812	1164
Libya	63	6	12	1	58	18
Mauritania	6	1	3	2	11	2
Morocco	1083	248	1152	213	1105	266
Sudan	54	25	53	21	22	5
Tunisia	897	232	1094	276	938	270

Table 12 Implementation of ISO 9001 and ISO 14001 Certifications in Specific North African Nations (2020–2023), **Source:** (ISO/CASCO, n.d.)

The data doesn't fully validate the question that the adoption of green standards, such as ISO 9001/14001, leads to increased long-term sustainability and competitiveness for SMEs, and subsequently, improved returns on government support. While it does show appreciable differences in ISO certification rates for adoption between North African nations, with solid gains for Egypt, Morocco, and Tunisia, Algeria lags far behind. In the 2022-23 period, Algeria's low adoption rates for ISO 9001 (400–528 certifications) and ISO 14001 (99–153 certifications) indicate that, despite some progress, the government needs to make more concerted efforts. These initiatives aim to integrate environmentally friendly and sustainable small and medium-sized enterprises (SMEs) more effectively with global targets.

4.4. Small and Medium Enterprise Support Devices in Algeria

4.4.1. Analysis of Project Financing by the Loan Guarantee Fund for Small and Medium Enterprises (FGAR)

In 2022, the Loan Guarantee Fund (FGAR) allocated financial support based on economic sectors and geographical regions, reflecting the diversity of funded projects. Small and medium-sized enterprises (SMEs) in the industrial and service sectors were the primary beneficiaries of these guarantees. FGAR's support extended across various regions, with a significant concentration in the central region, where the highest number of projects received financing. This distribution aligns with a broader strategy to support new projects and business expansions nationwide.

(a) Distribution of the Loan Guarantee Fund by Sectors and Geographical Regions

Analyzing the distribution of FGAR guarantees by sector and region provides key insights into the country's economic structure. The following table presents the distribution of guarantee agreements across different sectors, highlighting the dominance of the industrial sector, followed by services and construction. Additionally, it illustrates the regional distribution of these projects, offering a clearer picture of economic disparities across different areas.
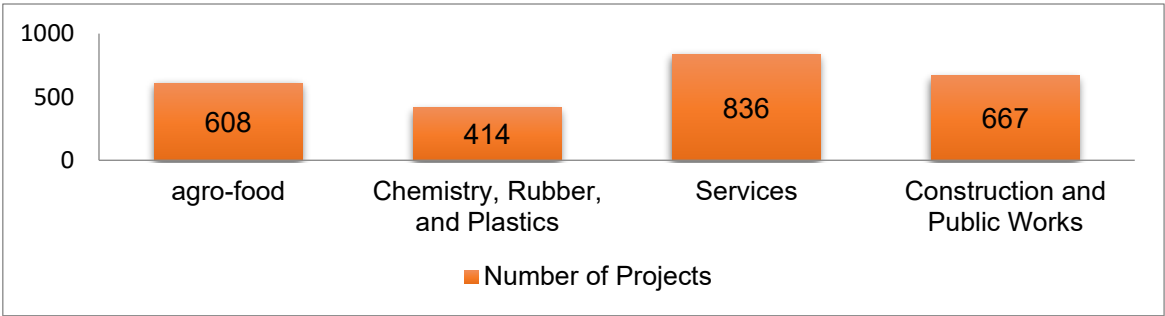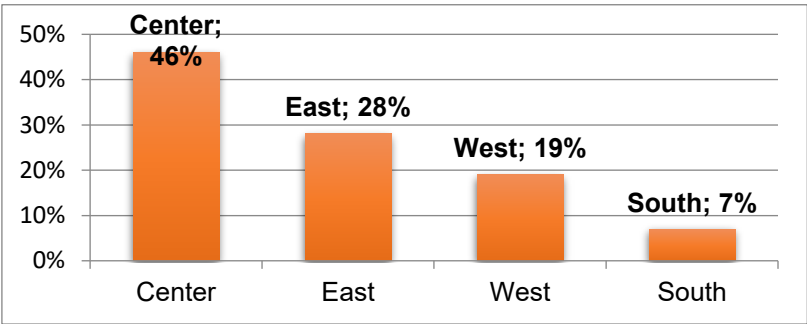
Fig. 7 Distribution of the Loan Guarantee Fund by Sectors for 2022
Source: Prepared by the researchers based on the Ministry of Industry Algeria (2023).

Figure 7.presents the distribution of the Loan Guarantee Fund for 2022 across various economic sectors and geographic regions in Algeria. The industrial sector received the largest share of funding, with **1,993 projects**, including **608 projects** in the food industries and **414 projects** in chemistry, rubber, and plastics. The services sector followed, with **836 projects**, while the construction and public works sector accounted for **667 projects**.

Fig. 8 Distribution of the Loan Guarantee Fund by Geographic Regions for 2022
Source: Prepared by the researchers based on the Ministry of Industry Algeria (2023).

Regionally, the **central region** received the highest number of financed projects **(46% of total guarantees)**, followed by the **eastern region (28%).** The **western region** secured **19%,** while the **southern region** received the smallest share at **7%.** These figures highlight regional disparities in project financing, with a stronger concentration of investments in the central and eastern regions. The table provides a comprehensive view of the sectoral and regional distribution of FGAR-backed investment activities.

(b) Distribution of the Loan Guarantee Fund: Analysis by Project Type and Region

In supporting investments and fostering economic projects, the Loan Guarantee Fund plays a pivotal role in mitigating financial risks and boosting investor confidence. This section provides a detailed analysis of how the Loan Guarantee Fund is distributed across project types and geographical regions, shedding light on which sectors benefit the most from these guarantees. The table below illustrates the types of funded projects, the guarantees provided, and their regional distribution, offering insights into how resources are allocated to drive sustainable economic growth.
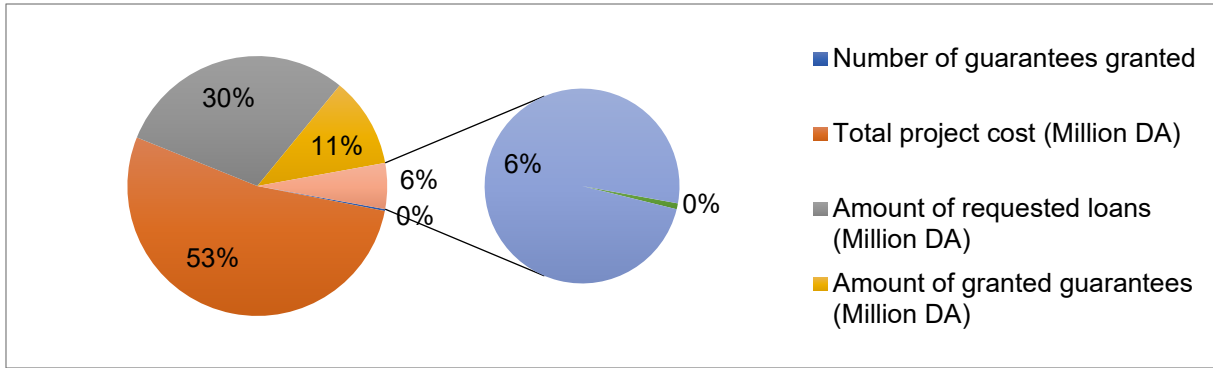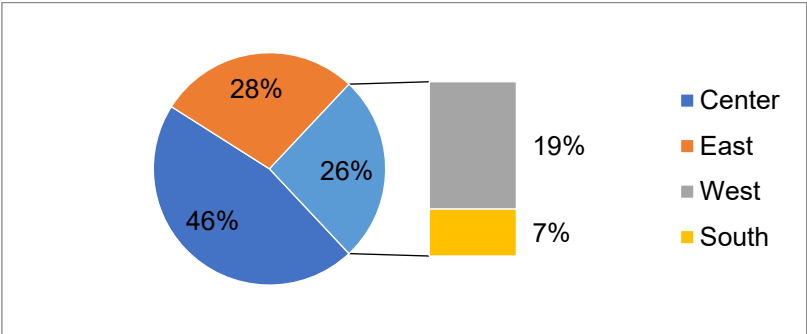
Fig. 9 Distribution of the Loan Guarantee Fund: Analysis by Project Type and Region for 2022

Source: Prepared by the researchers based on the Ministry of Industry Algeria (2023).

Figure 9. analyzes the distribution of the Loan Guarantee Fund by project type. Construction projects received the most significant support, with **167 guarantees** amounting to a total cost of **37.255 million Algerian dinars**, compared to **126 guarantees** for expansion projects, which had a cost of **23.304 million Algerian dinars**. The loan demand for construction projects totaled **20.959 million Algerian dinars,** while for expansion projects, it amounted to **16.383 million Algerian dinars**. The coverage ratio for construction projects reached **37.65%,** while expansion projects had a higher coverage ratio of **46.48%.** Regarding job creation, construction projects are expected to contribute to the creation of **3,967 jobs**, while expansion projects will create **3,812 jobs.**

Fig. 10 Distribution of the Loan Guarantee Fund by Geographic Regions for 2022
Source: Prepared by the researchers based on the Ministry of Industry Algeria (2023).

Regionally, the **central region** leads with **148 guarantees** (45.54%), followed by the **eastern region** with **86 guarantees** (26%). This data reveals a regional disparity in the distribution of guarantees, indicating the need for more balanced support to ensure sustainable development across all regions.

4.4.2. Analysis of Project Financing from the National Agency for Microcredit Management (ANGEM)

The National Agency for Microcredit Management (ANGEM) plays a critical role in fostering industrial activity in Algeria by providing micro-financing to support small and medium-sized enterprises (SMEs), which are a key pillar of the country's industrial landscape. Through its provision of interest-free loans for the establishment and development of small projects,

ANGEM has granted **989,313 loans** as of **July 31, 2024**. These loans have directly contributed to the creation of **1,444,640 jobs**, further strengthening the entrepreneurial ecosystem in Algeria.
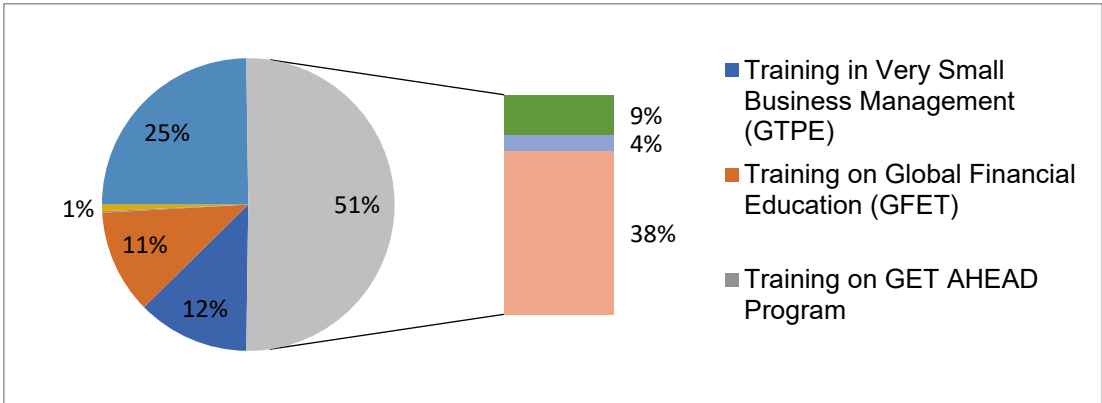

Fig. 11 Summary of Non-Financial Services

Source: Prepared by the researchers based on *(ANGEM ,2024).*

The data highlights a strong emphasis on business management training and financial education, with (Very Small Business Management) and (Global Financial Education) courses accounting for 63.4% of total participants. In contrast, specialized programs like get ahead (2,115 participants) and general entrepreneurship topics (8,786 participants) saw lower demand, possibly due to niche appeal or under promotion. Significant investment in trainer development (298,249 trained) suggests a strategic approach to knowledge dissemination. Additionally, 111,878 beneficiaries participated in (Skill Verification Tests), emphasizing the value of professional competency, while 43,209 engaged in trade shows and sales exhibitions, indicating moderate interest in market access. With a total outreach of 451,858 beneficiaries, the data reflects a robust business development initiative complementing financial support. However, the lower engagement in specialized training and market events suggests potential gaps in practical business application. Expanding specialized programs, increasing trade show participation, and enhancing the reach of get ahead training could further strengthen the program's impact.

(a) Distribution of the Loan Guarantee Fund by demographic

Besides providing financial assistance, (ANGEM) actively promotes social integration and economic empowerment through its lending programs. This introduction is followed by an analysis of loan distribution data that demonstrates the agency's dedication to empowering young entrepreneurs, women, and marginalized groups. Observing the distribution of loans discloses the tangible impacts of "ANGEM's" efforts toward building a more inclusive and diversified Algerian industrial economy.
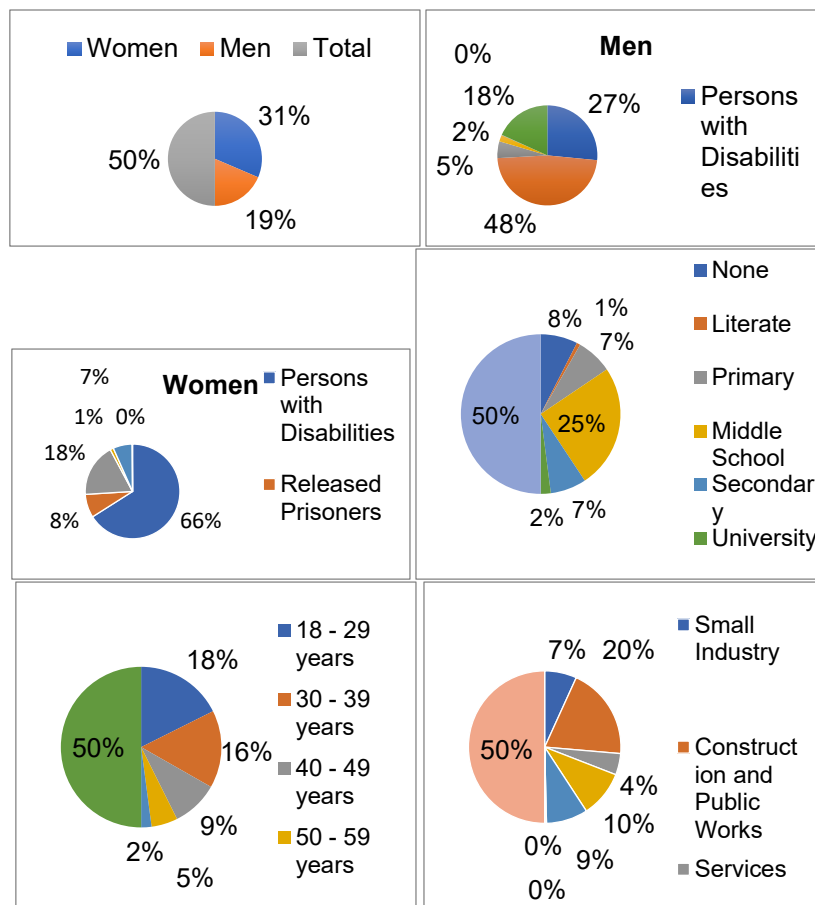
Fig. 12 Distribution of Loans Granted by demographic and Special Categories

Source: Prepared by the researchers based on *(ANGEM ,2024)*.

The data shows that **387,129** of the loans were directed towards the **small industry sector**, accounting for approximately **39.13%** of the total loans. This highlights the significant role ANGEM plays in supporting this sector. Additionally, the agency extended support to related sectors, including **construction and public works** (9.07%) and **services** (19.81%), helping to develop the necessary infrastructure for industrial growth nationwide.

In terms of demographics, the distribution of loans reveals a strong interest from younger individuals. **348,720 loans** (35.25%) were granted to young people aged **18 to 29 years**, indicating a high level of motivation among the new generation of industrial entrepreneurs. Furthermore, **621,863 women** (62.86%) benefited from these loans, showcasing ANGEM's commitment to enhancing the role of women in industrial entrepreneurship.

ANGEM also provides targeted support to vulnerable and marginalized groups. For example, **1,754 loans** were granted to people with disabilities, contributing to their integration into the national economy and increasing industrial diversity. Moreover, the geographical distribution of loans, particularly in **rural areas**, helps ensure balanced and inclusive development across the country.

4.4.3. The Role Played by the National Unemployment Insurance Fund towards the Promotion of Small and Medium Enterprises

The National Unemployment Insurance Fund helps small and medium-sized businesses (SMEs) by extending services to those aged between thirty and fifty-five years, facilitating them to set

up and sustain their enterprises. The fund extends triple financing up to ten million Algerian dinars to eligible projects, tax benefits, and exemptions. The fund also extends non-financial support in terms of training and guidance to enhance project viability. Its performance can be measured by analyzing the cumulative amount of funding made available and the number of projects initiated since it was started in 2023.
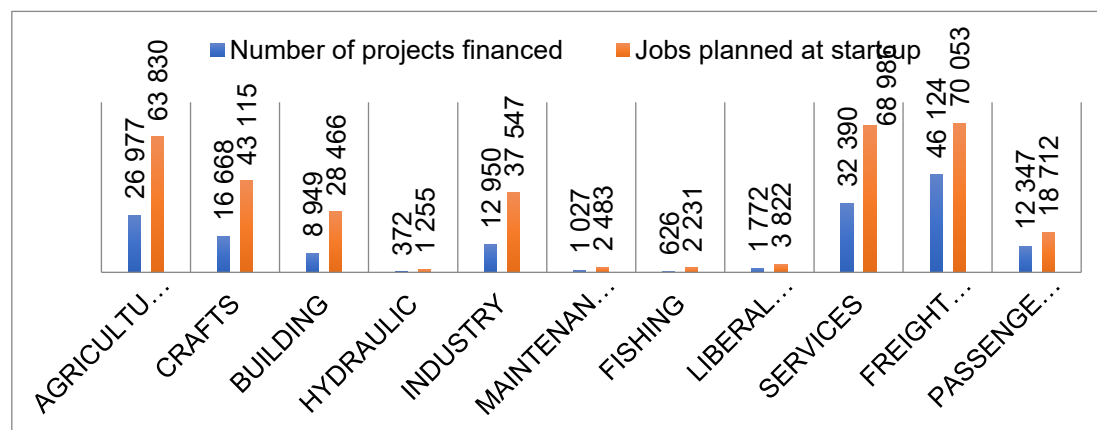

Fig. 13 financing and employment impact by sector of activity as of 12/31/2022
Source:(industry.gov, 2023)

The National Unemployment Insurance Fund (CNAC) helps promote Algeria's industrial sector by providing financial support to entrepreneurs that aid the growth of small and medium-sized enterprises (SMEs) and boost economic resilience. As of December 2022, CNAC supported 160,202 projects in various sectors, made a substantial contribution to economic growth and employment, and created approximately 340,500 jobs in industrial, agricultural, and services sectors. Its strategic investments promote sectoral diversification and reduce economic dependence on traditional sources of income. In 2022 alone, CNAC provided 554,780.18 million Algerian dinars in financing, enabling SMEs to expand and increase productivity. By financing agriculture, industry, construction, and services, CNAC supports major pillars of the economy and drives sustainable growth, positioning it as a major engine of Algeria's economic transformation.

4.5.   Comparison of the activity of the three mechanisms (ANGEM, FGAR, CNAC)

A comparative overview of key performance indicators of three major Algerian support programs—ANGEM, FGAR, and CNAC—up to the end of 2022 examines their role in stimulating entrepreneurship and SME development. Through comparison of the number of supported projects and related jobs created, the analysis of the program's effectiveness and magnitude in furthering economic progress and enhancing job creation. Accordingly, the following figure will test the question. ***RQ6***: *Do the collaborative efforts of FGAR, ANGEM, and CNAC yield a synergistic effect that is noticeably more effective in fostering entrepreneurship than their individual interventions?*.
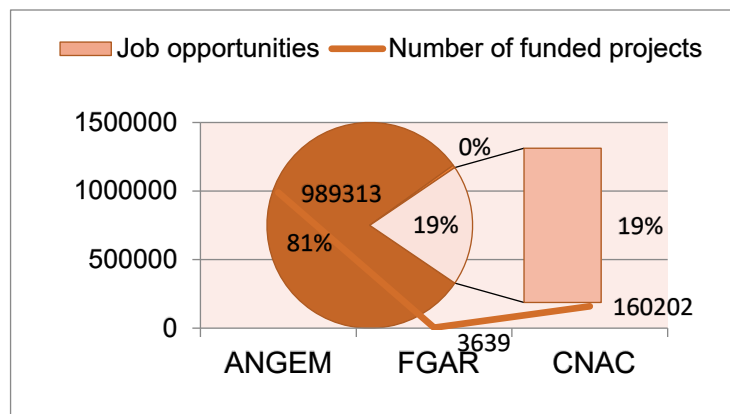
Fig. 14 Comparative Performance of Three Algerian Agencies
Source: Prepared by the researchers based on *(*the Ministry of Industry Algeria ,2023; *ANGEM ,2024).*

The question is fully supported. The data reveal substantial disparities in the volume of funded projects and employment opportunities across the three support mechanisms. ANGEM demonstrates a notably higher level of project funding and job creation, likely due to its focus on youth employment and broader accessibility. CNAC, despite funding fewer projects than ANGEM, shows a strong impact on employment generation, indicating a preference for projects with higher job-creation potential. In contrast, FGAR exhibits more limited outcomes in both areas, possibly reflecting its role as a guarantee fund rather than a direct financier. To fully understand these differences, it is essential to examine the contextual factors influencing each mechanism, such as target populations, funding criteria, and sectoral priorities. Additionally, assessing the sustainability and long-term impact of the generated jobs is crucial.

The model for supporting SMEs in Algeria exhibits both advantages and disadvantages when compared to regional norms and top-performing nations. Although Algeria demonstrates a comparatively solid performance in terms of financing and business support services relative to the regional average, various structural and institutional obstacles still hinder the overall efficiency of these systems. The table below presents a comparative summary of the key strengths and weaknesses of Algeria's SME support framework.

4.6. Strengths and Weaknesses of the Algerian SME Support Model

The model for supporting SMEs in Algeria exhibits both advantages and disadvantages when compared to regional norms and top-performing nations. Although Algeria demonstrates a comparatively solid performance in terms of financing and business support services relative to the regional average, various structural and institutional obstacles still hinder the overall efficiency of these systems. The table below presents a comparative summary of the key strengths and weaknesses of Algeria's SME support framework.

Dimension	Strengths	Weaknesses
Access to Finance	- Enhanced performance in relation to the regional average - Presence of institutions providing subsidized loans (ANGEM, CNAC, FGAR). - Measures taken to encourage youth to start projects through micro-financing.	- Excessive reliance on public banks; low private bank participation. - Lack of diversification of financing instruments (venture capital, crowdfunding, bonds). - Impact of inflation and weak business environment on financing capacity.
Business Support Services	- Well above the regional average. - Availability of support agencies and business incubators. - Small business and start-up training programs.	- Lack of coordination among stakeholders (dual functions between agencies). - Failure in post-service follow-up (Monitoring & Evaluation).

Information Services	- Higher than the majority of countries in the region (Morocco, Tunisia). - The beginning of adopting digital platforms to provide some information.	- Inadequate and not up-to-date enough databases. - Failure of SMEs to obtain reliable market and financial information.
Partnerships	- Above the regional average. - Coordination with international agencies (UNDP, World Bank).	- Deficient public-private partnerships. - Weak engagement of professional associations and chambers of commerce. - Shortage of strategic partnerships with Anchor Firms (major companies).
Overall	A solid support system compared to the regional mean. - Institutional framework and national program development.	- The model remains "state-driven" and not "market-driven." - The appeal for more openness towards new financing tools, strategic partnerships, and flexible governance.

Table 13 Algeria's SME Support Ecosystem: Strengths, Weaknesses, and Key Challenges
Source: Prepared by the researchers

DISCUSS THE RESULT

The importance of supporting and assisting small and medium-sized enterprises (SMEs) is well substantiated in the literature, particularly for those economies largely dependent on the petroleum industry such as Algeria. Previous literature typically emphasizes that SMEs are at the center of the drivers of growth in economies, employment generation, innovation, and sustainable development (Abisuga-Oyekunle et al., 2020; Kato, 2021). This is echoed by the recent study, whose evidence too is centered on the positive impact of SMEs on employment generation, which is evidenced by a 5.46% increase in employment in the sector.

   However, there are a few studies that are at variance with the new regional and sectoral trends. While previous studies highlight diversified economic growth backed by robust manufacturing and agriculture sectors (World Bank, 2018; Usman & Landry, 2021), the current study finds a precipitous decline in agriculture (-37.74%) and a steep plunge in manufacturing (-87.50%), presumably due to climate-related factors and supply chain disruptions. This goes against the contribution of these sectors towards economic resilience.

   The two recent papers agree in recognizing the efficacy of government intervention instruments, such as funding grants, credit lines, and technical guidance, in mitigating SME distress (Crawford, Cui, & Kewley, 2024; Omopariola et al., 2020). However, the current research targets regional loan guarantee imbalance with emphasis on resource concentration in the center (46%), whereas other research suggests the equal distribution of resources for balanced development (Chigara & Hebri, 2021; Mosbah & Debili, 2014).

   Also, service sector dominance consisting of 75.58% of private enterprise in the study mirrors earlier documentation that documents the sector as a pole of economic growth (Ayensuwa Ekuban, 2021). The SME dominance which was dominated from the north to the

tune of 69.51%, however, cancels out the calls for a geographically diversified SME landscape to drive a region's economic growth (Nouibat, 2019).

Lastly, while the study aligns with current literature in terms of the overall significance of SMEs and a call for government support, it reveals necessary shortcomings in sector performance and territorial progress. Such discoveries give great significance to the plea for visionary policy interventions addressing such imbalances to a more balanced and sustainable Algerian economic potential in the future.

CONCLUSION

The **Algerian economy** between **2018 and 2023** presents a complex mix of growth and contraction across various sectors, coupled with persistent regional disparities and a strong reliance on the extractive industries. While sectors like **finance** and **extractive industries** demonstrated robust growth, driven by both external factors and internal resilience, others—particularly **agriculture** and **manufacturing**—faced significant challenges. The **SME sector**, largely concentrated in the northern regions, shows potential but requires further diversification and targeted support. Moreover, the distribution of **loan guarantees** and other financial support mechanisms highlights the need for a more balanced regional approach to development. Addressing these issues is crucial for fostering **sustainable** and **inclusive economic growth** in Algeria.

Based on this analysis, the following seven recommendations are proposed:

- Diversify the Economy: Shift away from reliance on extractive industries by fostering growth in manufacturing, renewable energy, and technology through strategic investments and regulatory support.
- Revitalize Agriculture: Enhance agricultural productivity by adopting climate-resilient practices, modernizing irrigation systems, improving access to credit, and strengthening research and development.
- Strengthen Manufacturing: Boost the manufacturing sector by simplifying regulations, enhancing infrastructure, supporting local supply chains, and encouraging innovation-driven policies.
- Promote Regional Development: Reduce regional imbalances by supporting SME growth in underserved areas through tax incentives, improved infrastructure, and better access to education and skills training.
- Support SME Growth: Facilitate access to finance, business development services, training, and mentorship for SMEs, while promoting diversification into emerging industries.
- Enhance Financial Inclusion: Expand access to financial services for underserved SMEs and entrepreneurs, particularly through innovative financial products and fintech solutions.
- Improve Data Analysis: Strengthen data collection and analysis to better monitor economic trends and support data-driven policymaking.

LIMITATIONS

Several limitations of the study exist. The study's primary reliance on **secondary data** from official sources and international institutions limits its scope. This credible data fails to accurately capture the realities of Algeria's **informal sector** and unreported **SME activity**. Second, regional and sectoral indicators used to estimate disparities are limited by data availability, particularly in the south, where reporting is irregular. Third, the study employs a comparative and descriptive research design, which is effective in identifying patterns and structural holes but less so in forming causality links. The dynamic nature of the international economic environment, characterized by inflationary pressures, climate change, and technological shocks, means that these findings are a snapshot in time and should be **revalidated** as conditions evolve.

FUTURE RESEARCH DIRECTIONS
To overcome these limitations, future studies should include primary data collection, such as interviews and surveys with SME owners and managers, to gain a more in-depth understanding of operational difficulties and resilience strategies. Furthermore, more robust econometric and longitudinal analyses could be conducted to establish causal inference between support structures, the macroeconomic climate, and SME performance. Additionally, sectoral analyses in agriculture, manufacturing, and information and communication technologies would be relevant for establishing differentiated policy impacts. Research should also address how green innovation and environmental standards help shape the competitiveness of small and medium-sized enterprises (SMEs) in Algeria. Finally, extrapolating this comparison to more generalized MENA and Sub-Saharan African contexts could yield new knowledge on best practices and policy transferability, informing the development of a more inclusive and sustainable SME support system in Algeria.

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