SMEs and Startups in Saudi Arabia: A Mixed-Methods Empirical Investigation in the Context of Vision 2030

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ABSTRACT
The recent Saudi Vision 2030 plan has driven much of the development of small and medium-sized enterprises (SMEs) in the tertiary sector. While the Saudi BCG report records higher growth of young entrepreneurs, they still encounter significant structural, financial, and sociocultural constraints in their businesses that restrict them from performing optimally and growing. The study adopted a mixed-methods approach characterized by semi-structured interviews and a survey of young entrepreneurs from Saudi Arabia. Furthermore, policy documents/institutional records from the beginning of the Kingdom's existence until the present were examined. Findings showed that the barriers faced by Saudi entrepreneurs are financing problems (90%), burden of regulatory requirements (82%), and socio-cultural norms (75%). Simultaneously, government initiatives have made a significant contribution through Saudi Venture Capital companies Monsha'at and Badir Technology Incubator to provide access to institutional support. Through thematic analysis, six broad issues that pose challenge to Saudi entrepreneurs were identified in this study. Quantitative data (interviews, survey, document analysis) showed that, on average, years in operation had a positive relationship with the annual turnover of enterprises, with a rapid increase in the number of enterprises registered between 2013 and 2023. The study concludes with recommendations for refinement of policies, strengthening the financial ecosystem, and making entrepreneurship education culturally sensitive to meet the Vision 2030 target for SMEs to contribute 35% to G.D.P. These findings can be used as guidelines for policymakers, support agencies, and researchers dealing with entrepreneurship in emerging economies in the Gulf.
Keywords: SMEs, startups, Saudi Arabia, Vision 2030, entrepreneurial ecosystem

INTRODUCTION

The Kingdom of Saudi Arabia set a trend by drafting the national development plan known as Vision 2030 which set targets for all sectors of the economy to move away from petro dependence. At the heart of this blueprint lies the development of a strong private sector characterized by small and medium enterprises (SMEs) and innovative entrepreneurial ventures as the main drivers of growth, job creation, and economic diversification (Cavallo et al., 2021). In 2016, SMEs contributed approximately 20% to the GDP, the Saudi General Authority for SMEs (Monsha'at) targeted to reach 35% of the GDP by 2030. Available studies also indicate that SMEs are the main component of regional economic development and innovation systems (Spigel, 2017; Yun et al., 2017). Saudi entrepreneurship is largely focused on the tertiary sector which includes technology, professional services, food and beverages,

retail trade, and creative industry sectors. This is indicated by the significantly increased number of registered startups and SMEs in Saudi Arabia, triggered by the rise in the young and educated population, expansion of digital infrastructure, and government incentives and schemes.

This development trend is common in emerging markets as other studies have shown, attributing a similar growth curve, where national development triggers youth entrepreneurship (Naradda Gamage et al., 2020; Neupane et al., 2025). However, the Saudi entrepreneurial situation is particularly complex due to historical reasons, gender norms, and legal frameworks. Compared to other economies where SMEs are flourishing, knowledge about SMEs and startups in Saudi Arabia is limited as is the research on them, creating a challenge for policymakers. While existing research concentrates on macro-level economic measures or individual subsectors, there is a gap in the research on real-life challenges that business leaders are coping with and their experiences of opportunities and constraints. Moreover, international literature emphasizes institutional, cultural, and systemic factors such as access to financing, institutional support, knowledge networks, and cultural attitudes towards risk, as being instrumental in the formation and survival of enterprises (Roundy et al., 2018; Kuratko et al., 2017; Malecki, 2011).

Therefore, careful empirical analysis of these factors, along with the government-led Vision 2030 initiatives in Saudi Arabia, is much needed to assess the present and forecast the future. One of the top-ranking challenges that hinder SMEs from growing internationally is financing, and Saudi Arabia is no different from the rest of the world in this regard. Although loan guarantee programs and venture capital co-investment vehicles have been created, many young entrepreneurs continue to express and experience high levels of access challenges to affordable capital, especially at the pre-seed and seed stages (Cavallo et al., 2019; Cumming et al., 2017). Coupled with these obstacles, collateral requirements place burden on first-generation entrepreneurs with limited asset portfolios. However, new demands and possibilities have emerged with digital outreach. Studies show that SMEs that over-embrace digital tools and platforms have better growth outcomes, but digitalization is not even across SMEs in Saudi Arabia (Hokmabadi et al., 2024; Tronvoll et al., 2020; Bella et al., 2024). The socio-cultural aspect is another consideration in Saudi entrepreneurial experience that has not been explored. Islamic business ethics, family aspirations, community rules of thumb for 'acceptable' professions, risk-taking, and changing gender roles since women joined the workforce are some major factors affecting entrepreneurial intentions and actions. While highlighting the critical role of lean startup methodologies and agile innovation for quick adaptation to markets, Shepherd and Gruber (2020) and Ghezzi and Cavallo (2020) pointed out the need for adaptation at a cross-cultural level for culturally specific contexts such as Saudi Arabia. In addition, the potential of universities and education centers to develop an entrepreneurial mindset is well documented in the European context (Ghio et al., 2020; Ghio et al., 2016) but has not received much attention in Saudi Arabia.

In the background of these studies, the present research aims to achieve three intertwined goals. One, it aims to highlight the status of SMEs and startups in Saudi Arabia's tertiary sector in terms of their distribution by sectors, sizes, and evolution over time. Two, it seeks to pinpoint and discuss the main problems encountered by young Saudi business entrepreneurs, with special reference to sociocultural issues, regulatory issues, networking, and finance. Three, it analyzes the institutional and policy environment impacting the entrepreneurial climate since the establishment of the Kingdom, highlighting their effectiveness and shortcomings. Through triangulation of data gathered via interviews, survey, and analysis of documents, the

study aims to produce a holistic, nuanced account that will inform scholarly knowledge and drive evidence-based policies which will contribute to realization of the goals stated in Vision 2030.

MATERIALS AND METHODS

This research used a mixed methods design to enable triangulation of the quantitative patterns revealed by the survey data with the leading themes identified in the interviews. This approach provides a broader and more accurate perspective of the phenomenon being studied (Shepherd & Gruber, 2020). Simultaneously, a detailed documentary analysis was conducted to evaluate Saudi Arabia's economic development history. The study sample included owners and senior managers of registered SMEs and startups in Saudi Arabia's tertiary sector. The inclusion criteria had four key dimensions: Between SAR 100,000 and SAR 50 million turnover; primary business activity in the tertiary sector (technology, retail, food and beverages, professional services, creative industries); at least two years of experience in a leadership position; intent to grow the business. Table 1 presents these details.

Table 1. Inclusion Criteria

Criterion	Definition	Threshold / Value
Annual Turnover	Total revenue generated in the preceding fiscal year	SAR 100,000 – SAR 50 million
Type of industry	Sector of primary business activity (tertiary sector focus)	Technology, retail, food & beverage, professional services, creative industries
Years as leader	Duration the individual has served as owner or senior leader	Minimum 2 years
Intent to expand	Declared interest in scaling operations within Saudi Arabia or internationally	Stated intent confirmed at screening
Business registration	Formal registration with the Ministry of Commerce, Saudi Arabia	Active registered entity

Note. SAR = Saudi Arabian Riyal. Criteria were verified at recruitment screening stage.

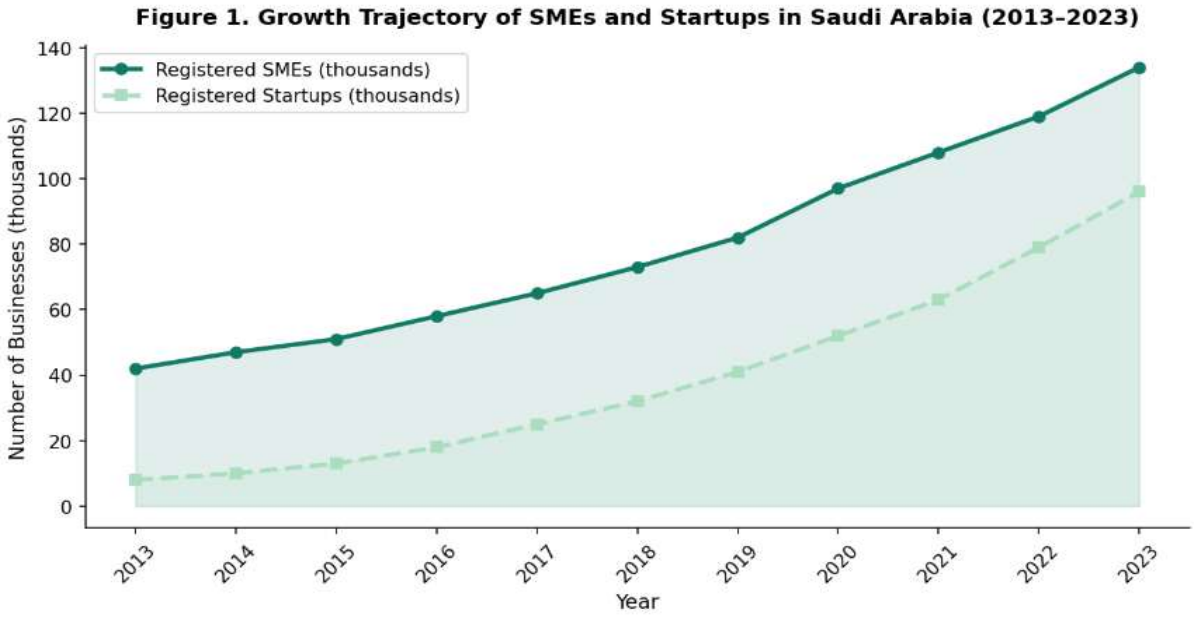
Three methods of participant recruitment were used, including the acquisition of the business database of the Monsha'at SME Authority, targeted outreach to SME business incubation firms, such as Badir, STC Ventures, and University entrepreneurship centers, and the snowball effect from initial interviews. The questionnaire which was designed in Arabic and English to make it accessible to all comprised five sections: business demographics, challenge perceptions, financing experiences, digital adoption, and Vision 2030 program awareness. All responses were elicited on the five-point Likert scale (1–5). In all, there were 114 respondents, 85 identified themselves as SME owners (65.9%) and 29 as startup leaders (34.1%). Demographic Profiling showed that 78% of respondents ranged between 25 to 40 years of age, 62% were male and 38% were female.

A purposive subsample of five respondents from the survey pool was randomly picked to collect qualitative data via semi-structured, one-to-one in-depth interviews. The interviews were conducted for 45–90 minutes, audio-recorded (with permission from the interviewees), and later transcribed. Thematic analysis was used for the transcription process, employing Braun and Clarke's six-stages for thematic analysis, starting from familiarization, initial coding, theme generation, theme review, theme definition, and finally, write up. Initial coding was performed by two separate coders, and Cohen's kappa ($\varkappa = 0.81$) was used to check interrater reliability which was found to be good. NVivo 14 software was used to manage and organize the qualitative data.

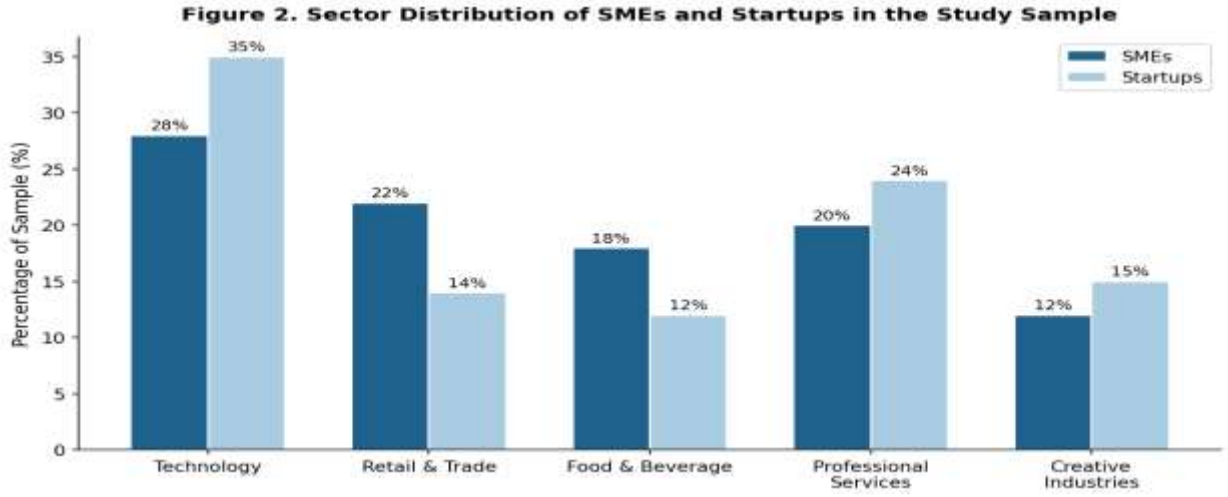
Documents included for analysis comprised policy documents, legislative papers, annual reports and institutional strategy papers since the inception of the Kingdom of Saudi Arabia in 1932 until the current time. This information was obtained from the Ministry of Commerce, Saudi Central Bank (SAMA), Monsha'at, Saudi Venture Capital Company, General Authority for Statistics, and Delivery Unit of Saudi Vision 2030. Content analysis was used to examine the documentary corpus considering the development of SME-enabling policies in the country, the provision of support institutions, and the expression of entrepreneurship-related policies in successive national development plans. This step was included as a historical dimension is useful for embedding ongoing issues and opportunities in the present context in the sense of long-term institutional history (Henrekson & Sanandaji, 2014; Neffke et al., 2011).

RESULTS AND DISCUSSION

Results obtained from this research are represented as three interconnected areas: the structural landscape of SMEs and startups in the tertiary sector in Saudi Arabia, main obstacles faced by business leaders, and the role of institutional support and government policy frameworks in influencing entrepreneurial turnouts. These dimensions illustrate a complex, dynamic landscape that has steadily moved towards achieving Vision 2030 goals while also highlighting some major structural and sociocultural challenges. The number of registered SMEs and start-ups in Saudi Arabia has grown over the years, as illustrated in Figure 1. A growth trajectory can be seen in the number of registered SMEs and startups in Saudi Arabia from 2013 to 2023, as shown in Figure 1. The number of registered SMEs jumped from approximately 42,000 in 2013 to 134,000 in 2023, representing more than 1,100% growth in the last decade while the number of registered startups grew from 8,000 to 96,000 over the decade, an increase of more than 1,100%. This growth is concurrent with other developments across the region and the world documented by Bella et al. (2024), Hokmabadi et al. (2024), and Neupane et al. (2025), who note that the entrepreneurial ecosystem in emerging and transitional economies has grown rapidly in the post-2015 era, fueled by digital enablement, a large population adding to the country's 'youth', and a supportive policy environment. The large growth in the number of registrations since 2019 is largely attributable to the simplification of regulatory formalities for business registration ensured by the facilitation program introduced by Monsha'at and the Vision 2030 Delivery Unit.



Sectoral distribution of SMEs and startups in the study sample is shown in Figure 2. In line with findings worldwide, technology was the leading industry in which startups were established (35% of the start-up subsample), reflecting the fact that like in other countries, digital technology platforms have claimed most of the entrepreneurial attention and investor interest in KSA (Cavallo et al., 2019; Ghezzi & Cavallo, 2020). In contrast, SMEs were much more evenly split, with 20% engaged in professional services, 22% in retail and trade, and 28% in technology. The sectoral distribution of SMEs and startups, which is somewhat different, can be explained by a wider range of risk and capital demands when juxtaposing startups and SMEs: startups tend to be concentrated in certain common high-growth, scalable sectors, and SMEs have a broader distribution across sectors which has to do with the variety of demands for specific, more localized market sectors. The food and beverages sector is a notable group with 18% of SMEs and 12% of startups categorized under this sector, as the importance of the hospitality and food sector cannot be understated in Saudi social life.



The landscape of challenges documented in Figure 3 and Table 2 indicates that access to finance is the biggest challenge in the Saudi economy, as cited by 90 per cent of the respondents interviewed and by 76 per cent of the respondents who participated in the survey

on the difficulty of accessing finance, which rates challenge categories between 'low' and 'very high.' This result is in line with earlier findings which identified financing as the leading constraint to SME growth (Gamage et al., 2023; Naradda Gamage et al., 2020; Pacheco et al., 2019). In Saudi Arabia, this is compounded by the conservative culture of commercial banks as they tend to offer credit to more established firms against new ventures. The Kafalah Loan Guarantee Program seeks to mitigate this obstacle by increasing the incentives for lenders to take loans by providing credit guarantees. However, many survey participants (59%) reported limited awareness of the program's criteria which means that information asymmetry is a major hurdle to effectively implementing the program.

Figure 3. Key Challenges Reported by SME Owners and Startup Leaders

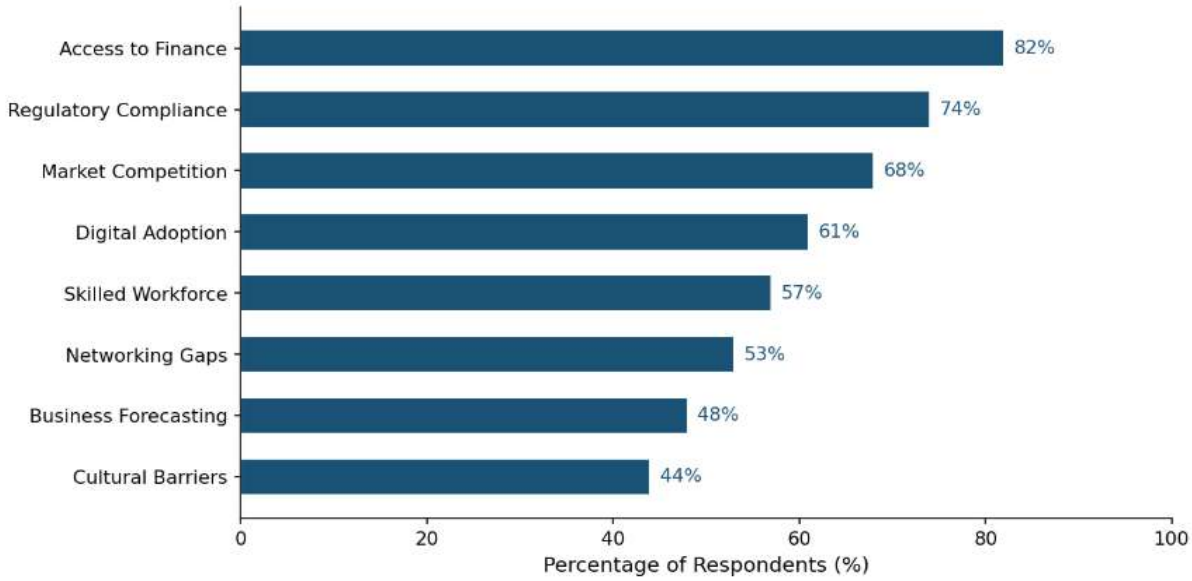


Table 2. Thematic Categories Identified from Semi-Structured Interviews (n = 30)

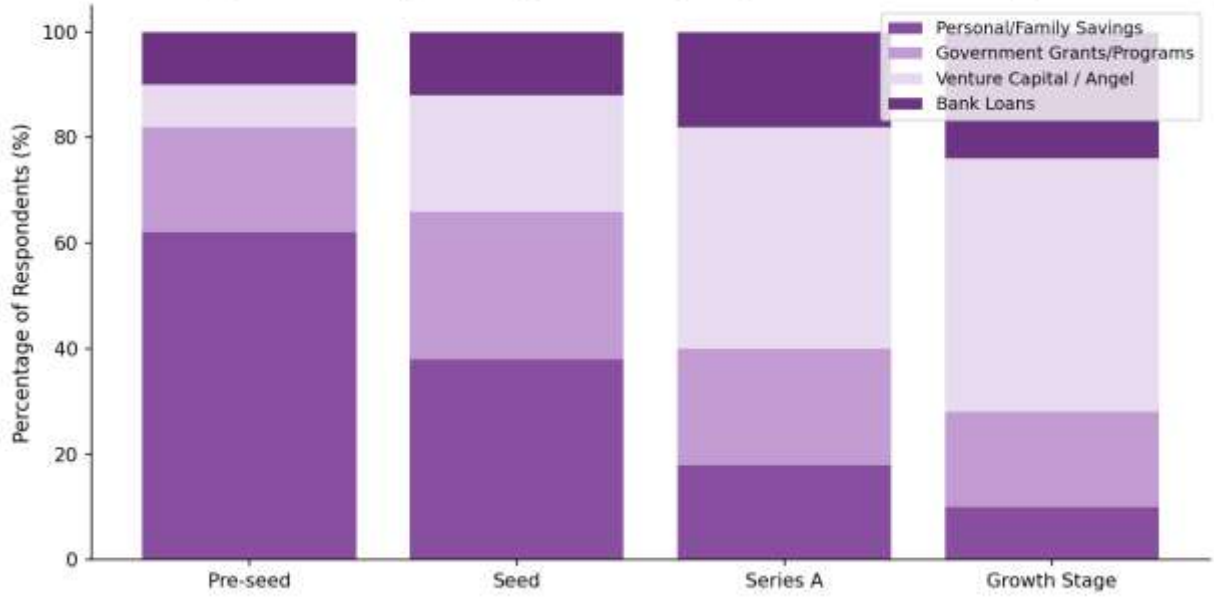
Theme	Sub-themes Identified	Frequency (n=30 interviews)
Financing constraints	Credit access, collateral requirements, informal lending	27 (90%)
Regulatory environment	Licensing complexity, compliance burden, policy ambiguity	25 (83%)
Socio-cultural norms	Risk aversion, family expectations, gender dynamics	23 (77%)
Digital readiness	Technology adoption, digital marketing, e-commerce	20 (67%)
Networking & mentorship	Ecosystem connectivity, peer learning, incubator access	19 (63%)

Vision 2030 awareness	Knowledge of programs, institutional support, government alignment	18 (60%)

Note. Multiple sub-themes could be associated with each theme. Frequency refers to the number of interviewees who raised the theme unprompted.

The financing aspect is further clarified in Figure 4 which shows the main sources of funding for businesses at various stages of their development. In collectivist cultural environments, 62% of the respondents mainly used personal savings and/or family-financing resources in the pre-seed stage, a figure comparable (with minor differences) to those reported in South African SME research (Ogujiuba et al., 2023) and in Albanian SME research (Shtembari, 2026). The percentages of pre-seed funding that were from venture capital and angels rose to the Series A round (42%), and then to the growth round (48%). Institutional support at the point of enterprise inception, in the form of government grants and programs, was a steady 20–28% funding source across early stages, highlighting an influential but non-dominant role in providing support at this early-stage. These patterns are consistent with the results of Cumming et al. (2017) who analyzed government and independent VC investment activity in Europe, concluding that government co-investment seems to work best as an addition to private investment, rather than as a substitute.

Figure 4. Primary Funding Sources by Stage of Business Development



The other most common challenge found in this study was Regulatory Compliance as reported by 82% of the respondents. Successive national development plans have shown that regulatory regimes for commercial activity in Saudi Arabia are mostly tuned to the interests of large and state-owned enterprises. Under Nitaqat, for example, and the nationalization of work requirements, there are wage and employment structures that target small businesses disproportionately. Some interviewees reported that licensing and adherence to permits are onerous processes, a finding which aligns with the results of SME studies from the Czech Republic and Albania which show that two challenges faced by small businesses are digital transformation and compliance with permits (Bradac Hojnik & Hudek, 2023; Simberova et al., 2022; Shtembari, 2026). The average time to register a business was reduced from 18-days to less than two days, which is regarded as beneficial by all interviewees as part of the Business

Environment Improvement Program introduced under Vision 2030. 75% of the participants termed socio-cultural norms as a major challenge. In the findings from qualitative data, socio-cultural sub-themes that emerged were risk aversion based on Islamic financial principles and expectations within the community, family pressure on women entrepreneurs to enter public sector jobs, and gender dynamics in relation to women entrepreneurs' access to networks and mentorship. Within entrepreneurial ecosystems, Minola et al. (2019) and Kuratko et al. (2017) emphasized the significance of legitimacy, and the interviewees were almost unanimous in acknowledging that facing community perceptions of business failure can be a serious psychological burden.

Networking in gender-segregated professional places was also cited as an additional limiting factor by women entrepreneurs in the study sample. At the same time, some reported that social changes arising from Vision 2030 significantly increased their professional opportunities to participate in certain sectors such as entertainment and sports, and in mixed-gender enterprises and environments. Sixty-eight percent of the interviewees identified digital readiness as a problem, and 42% of the SME respondents agreed with this, as noted in the survey. This discovery comes at a time when Saudi Arabia's digital economy is flourishing, and the Saudi government has made digital innovation its official priority, aiming to establish itself as a regional leader in the field. Hokmabadi et al. (2024), Tronvoll et al. (2020), and Bella et al. (2024) state that digital transformation and servitization are effective methods for making SMEs more resilient and competitive in the market. However, smaller firms tend to perform worse than large firms in embracing digital transformation as a tool to strengthen competitiveness. Capability constraints, cost pressures, and lack of digital talent among smaller firms are some of the reasons for this.

Digital gap and digital readiness are critical policy intervention points. Table 3 summarizes the principal government support programs that document analysis showed, their scope, and the main areas of intervention. Since the establishment of the Kingdom, the institutional landscape has undergone a significant change from an economy in which private sector infrastructure was developed largely on petro-dollar to a gradually diversified institutional framework with specific institutions dedicated to supporting the growth and development of the SME sector, institutions in the form of venture capital, and institutions that are universities and incubators that support the process of growth and development of the SME sector. The Badir Technology Incubator was founded in 2007; Vision 2030 could not directly resolve the issues it faced, but it has been greatly extended in scope since then, serving over 1,000 companies. Saudi Venture Capital Company, the leading venture capital firm in Saudi Arabia (SVC) founded in 2018 has committed capital to over 350 startups and has started offering co-investment incentives which is now encouraging international VC investments in the Saudi market.

Table 3. Government and institutional support programs for SMEs and startups in Saudi Arabia

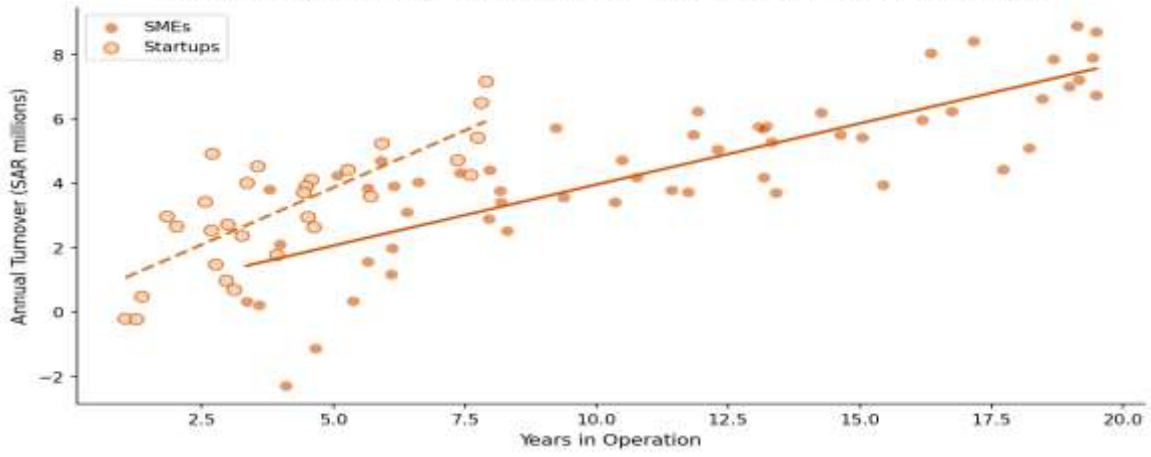
Program / Initiative	Launch Year	Primary Focus	SME/Startup Reach
Monsha'at (SME Authority)	2016	SME development, financing, training	200,000+

Saudi Venture Capital (SVC)	2018	VC co-investment and fund-of-funds	350+ startups
Badir Technology Incubator	2007	Tech startup incubation & acceleration	1,000+ companies
Kafalah Loan Guarantee Program	2006	Credit guarantees for SME bank loans	35,000+ beneficiaries
Vision 2030 Entrepreneurship Pillar	2016	Raise SME GDP contribution to 35% by 2030	National target

Note. Data compiled from documentary analysis of program reports, Monsha'at annual reports, and Ministry of Commerce publications.

Around 63% of the interview responses mentioned inadequate mentorship and lack of networking as major limitations. These responses correlate with the findings of Malecki (2011) who found that gap in the local entrepreneurial ecosystem has a significant impact on engagement with global innovation marketing networks. Limited access to experienced entrepreneurs who can help navigate the entire entrepreneurial process in the Saudi context was mentioned, with the majority of mentorship received coming from non-Saudi consultants whose advice was not always tailored to the Saudi context. Interviewees saw that university-industry linkages in Saudi Arabia were still a nascent effort to address this gap and required. Figure 5 shows as a scatter plot the relationship between annual turnover and years in operation for SMEs and startups. For both SMEs and start-up businesses, positive relationships were found between business longevity and revenue generation, with both having a correlation value above 0.5 and reaching a significance level of $p < 0.001$ for SMEs and $p < 0.002$ for start-up businesses when tested using Pearson's correlation. More importantly, however, the steeper regression slope observed for startups indicates that high-growth startups generate quicker turnover growth by number of years than traditional high-growth SMEs which aligns with the growth characteristics described by Cavallo et al. (2021) and Minola et al. (2019). Relevance of the pattern for the design of support programs is also highlighted: investments that can facilitate a rapid entry from the start to scale up, like the documented structured graduation pathways (Cavallo et al. 2019), can generate a disproportionately large amount of economic return.

Figure 5. Relationship Between Years in Operation and Annual Turnover



CONCLUSION

Overall, results in the study indicate high (91% of survey respondents) general awareness about Vision 2030 programs, but much lower specific awareness or substantive knowledge of the available support mechanisms (18 of 30 interviewees (60%) reported having some awareness of the programs). This is a common awareness–utilization gap found throughout the literature on SMEs support (Naradda Gamage et al., 2020; Ndlovu et al., 2025) indicating that programs and their outreach and communication should be carefully planned. This gap could be bridged effectively through the use of a digital communication platform, such as social media platforms which are extremely popular among Saudi youth. Documentary analysis also showed that previous stages of Saudi development had intermittently provided and eliminated SME support measures, resulting in periods of institutional discontinuity and adding to the fragmented SME support landscape. Most of the interviewees highlighted a lack of coordination among the ministries involved, specifically between Monsha'at, the Saudi Vision 2030 Delivery Unit, the Ministry of Human Resources, and the Ministry of Education, despite the role of the latter being consolidated since 2016. The study results are consistent with Spigel's (2017) entrepreneurial ecosystem organization model, which focuses on systems-level coordination within the ecosystem among institutional actors, cultural attitudes, social networks, and material resources. Sustainable business practices and environmental responsibility were two themes emerging from the data from both the interviews and surveys, especially for younger tech entrepreneurs and those in the professional services sector.

According to Martins de Souza et al. (2024), approximately 30% of the startups that participated in their study showed orientation toward sustainability which was perceived as generating additional competitive advantages. However, SME respondents were less likely to put sustainability at the top of their bucket list, saying that costs were an obstacle and that the absorptive capacity impact of the need to manage immediate operational challenges was low. Upon comparing sustainable product-service systems in startups and SMs, this difference in the sustainability orientations of startups was found to correspond to the study of Pacheco et al. (2019) on barriers to sustainable product-service systems in small firms. The combined results obtained from the three data strands (qualitative and quantitative datasets, and document analysis) show a dynamic and rapidly growing entrepreneurial ecosystem in the Kingdom of Saudi Arabia that faces numerous challenges, including financing, regulatory issues, and socio-cultural issues, which require focused targeted intervention. To better appreciate these findings, it will be helpful to look at them in terms of the entrepreneurial ecosystem framework that was referenced—namely, the institutional, relational, and cultural aspects (Spigel, 2017; Roundy et al., 2018), rather than the individual challenges.

Recommendations

This study systematically explored the current ecosystem of SMEs and startups in the tertiary sector in Saudi Arabia, highlighting the strong position created within the country by this transformation and the ongoing challenges with structural, regulatory, and sociocultural dimensions in terms of the growth of these ventures. The study identified five major factors that hinder enterprise performance and scalability: financing constraints, regulatory complexity, socio-cultural norms, digital divide, and networking deficiencies, using a mixed-methods approach.

The study's results have definite policy implications. Beyond guarantee programs, significant support from agencies and a more diverse range of funding options is needed, such as loans,

equity financing, and digital lending platforms tailored to match infant companies' risk profiles. Regulatory simplification, which has already taken place through changes to the way businesses are registered, should now be applied to all ongoing compliance obligations, including employers' and employees' duties in the workplace and tax obligations for businesses. Digital literacy programs and digital adoption should be integrated into the responsibility of Monsha'at and university entrepreneurship centers, allowing all SME groups, and not just tech ventures, to exploit the productivity benefits of digital transformation. Socio-cultural dimensions call for the most comprehensive, nuanced and long-term approach.

Entrepreneurship courses centered on culturally relevant stories of successful, failed, and resilient entrepreneurial journeys featuring Saudi business history and established businessmen and entrepreneurs may more effectively influence community norms around risk-taking and business formation than other worldly entrepreneurship courses at educational institutions. Indeed, the need for the continued proliferation of women's professional networks, women's mentorship platforms, and greater access to capital investment opportunities is a social equity goal, as well as an economic efficiency and sound business investment objective. Institutional dimension, a high degree of coordination between the different ministries, agencies, and programs involved in entrepreneurial support are all critical at the institutional level. A single data platform that correlates business registration, financing, mentorship, incubation, and outcome data would allow evidence-based decisions about who to provide support to meet targeted economic and employment return on investment goals. Available infrastructure should be utilized for research that is currently missing and needs to be conducted over time to assess the success of the Vision 2030 entrepreneurial goals.

Overall, results of this study add to the body of international research on entrepreneurship in developing and transition economies by providing context-specific and empirically based evidence from one of the most important development experiments in the Arab world. They reiterate the feasibility of achieving the entrepreneurship goals of Vision 2030 and the need to implement entrepreneurship in a culturally informed way in the financial, regulatory, educational, and social aspects of the Saudi entrepreneurship ecosystem.

There is considerable scope for future studies. Longitudinal data studies on SDI cohorts of SMEs and startups from start-up to different stages would help shed light on the dynamic interplay of challenge, support, and performance over time. Comparative analysis of Saudi entrepreneurial ecosystems and the different policy and institutional strategies found in other countries in the GCC region, such as the UAE and Bahrain, would provide valuable information on the comparative impact of different policy approaches. Poverty-focused research on the ability of women entrepreneurs and the extent to which specific experiences of women entrepreneurs in Saudi Arabia follow different patterns can be of interest in this context, as are other studies focusing on the special experiences or trajectories of female entrepreneurs over time. The impact of social change due to Saudi Arabia Vision 2030 is a research frontier with largely unknown results, especially regarding its effects on women entrepreneurs.

Limitations

The following are the limitations of this study that should be noted while analyzing the results. First, the survey had a cross-sectional design; thus, it cannot be used for causal inferences. Second, self-report surveys and interview data are susceptible to social desirability bias.

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