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Entrepreneurial Orientation, Innovation Culture, Resource Management and IT Adoption on SMEs Performance among Al Dakhiliyah Governorate

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The study underscores the critical contribution of small and medium enterprises (SMEs) to Oman's economic development, accounting for 25% of the GDP. This aligns seamlessly with the vision 2020-2040 goals of diversifying the economy and reducing dependence reliance on oil revenue. The study underscores the vital contribution of small and medium enterprises (SMEs) to Oman's economic development, accounting for 25% of the GDP. This study aimed to evaluate the influence of entrepreneurial orientation, innovation culture, resource management, and IT adoption on the performance of SMEs in Al Dakhiliyah Governorate. A total of 35 respondents participated in the pilot survey in this study. The study's findings provide strong evidence supporting the proposed hypotheses, affirming that each independent variable has a significant and positive influence on the performance of SMEs in the region. These results underscore the critical role that entrepreneurial orientation and innovation culture play in driving growth, while effective resource management and IT adoption further enhance operational efficiency and competitiveness. This study contributes valuable insights into SME development and aligns with broader economic goals aimed at fostering sustainable growth in Oman's business sector.

Keywords: Entrepreneurial Orientation, Innovation Culture, Resource Management, IT adoption, SME performance, Al Dakhiliyah Governorate, Oman.

1. Introduction

SMEs play a crucial role in Oman's economy, contributing 25% (8 billion Omani Rial) to the GDP in 2023, rising from 15-20% in 2018 (Mohammad, 2023). Al Dakhiliyah Governorate accounted for 10% of SMEs, highlighting regional contributions (NCSI Oman, 2024). Their role has grown markedly, with a 46.8% increase in registered enterprises between 2021 and 2022. By 2023, Oman recorded a total of 135,035 SMEs, categorised into 114,017 small, 19,934 medium, and 1,113 large enterprises (SMEDA, 2024). Among Oman's 11

governorates, Al Dakhiliyah is noteworthy, contributing 13,328 SMEs, or about 10% of the national total (NCSI Oman, 2024).

The primary objective of this study was to evaluate the effectiveness of entrepreneurial orientation, innovation culture, resource management, and IT adoption in enhancing the performance of SMEs in the Al Dakhiliyah Governorate. By addressing these objectives, the research provides a comprehensive understanding of the critical factors contributing to SME performance, offering valuable insights for policymakers, business leaders, and stakeholders seeking to strengthen the SME sector in alignment with Oman's Vision 2020–2040.

Entrepreneurial orientation

Entrepreneurial orientation encompasses practices, processes, and strategies defining an organisation's entrepreneurial behaviour, which is crucial for growth and sustainability (Covin & Wales, 2019). SMEs with strong entrepreneurial orientation demonstrate proactiveness, innovation, competitiveness, and risk-taking, allowing them to seize opportunities, adapt to market changes, and sustain competitive advantages (Kadarusman & Rosyafah, 2022; Kiyabo & Isaga, 2019; Sinaga et al., 2022). According to Alam et al. (2022), entrepreneurial orientation enhances innovation, performance, and competitiveness by promoting creativity, rational decision-making, and adaptability. Yi et al. (2021) contended that entrepreneurial orientation fosters a culture of creativity and innovation, attracting skilled employees and enabling rapid adaptation to market changes and customer needs. However, its impact on performance depends on strategic resource allocation and balancing entrepreneurial efforts to optimize outcomes (Sharma et al., 2019). In Oman, entrepreneurial SMEs often pursue radical innovation but face risks associated with new ventures, requiring effective risk management and resource flexibility to balance proactiveness with core activities (Gupta & Hoda, 2021).

Innovation Culture

Innovation culture, as defined by Nimfa et al. (2021), emphasises continuous learning and knowledge development to bridge market gaps. Leader plays a pivotal role by providing resources and encouraging risk-taking to foster experimentation (Fitriati et al., 2020). Effective decision-making by top management, including financial budgeting and Research and Development (R&D) resource allocation, facilitates partnerships and resource access (Ramdan et al., 2022). Employee engagement and knowledge sharing, supported by training and experimentation, enhance task flexibility and enable customer-focused innovation, guided by feedback, to drive product and service development (Kiyabo & Isaga, 2019; Shabbir et al., 2024). Innovation spans various areas, including product, service, process, organisational, marketing, and business model improvements, which are critical for the competitiveness of Omani SMEs (Abdelfattah et al., 2024). Product and service innovations address evolving customer needs; process innovations enhance efficiency, and organisational innovation fosters creativity and collaboration (Taghizadeh et al., 2022). Marketing and business model innovations attract customers and generate revenue streams to enhance innovation potential (Al Yahyaei et al., 2020). Open innovation helps address resource limitations by enabling the development of unique solutions in the Oman market (Azizah et al., 2023). However, challenges such as resource constraints, risk aversion, organisational inertia, and funding uncertainties remain (Alqassabi, 2020). Strategic innovation management, strong leadership, and a supportive culture are essential to overcoming these obstacles (Ramdan et al., 2022).

Resource management

Resource management involves aligning an organization's resources, capabilities, and competencies with strategic objectives to enhance competitiveness and achieve sustainability (Murimi et al., 2021). Effective resource management requires identifying key resources, assessing strengths and weaknesses, and optimizing their utilization (Rahman, 2022). Competitive advantage is derived from developing knowledge-based assets and core competencies, as emphasized by resource-based and knowledge-based views (Kiyabo & Isaga, 2019). Strategic resource management includes planning, allocating, and optimizing tangible and intangible resources to achieve organizational goals (Caballero-Morales, 2021). Key practices include financial resource management to secure funding (Zarrouk et al., 2020), human resource strategies like talent acquisition and training to build a motivated workforce (Kandukuri, 2023), and technology investments to enhance efficiency (Prause, 2019). Managing physical and intellectual resources ensures cost savings and competitive advantages (Heriyanto et al., 2021). In Oman, SMEs face challenges like limited access to capital, specialized skills, and efficient resource allocation, restricting innovation, technology adoption, and scalability (Alalawi, 2020; Alqassabi, 2020). These limitations hinder adaptability, competitiveness, and growth potential (Al Jabri et al., 2023; Salim & Sulphey, 2021). Resource constraints also impact R&D investments and the execution of innovative initiatives (Al Yahyaei et al., 2020).

IT adoption

Technology adoption involves integrating and utilizing new technologies through stages like awareness, interest, evaluation, implementation, and adoption, enhancing SMEs' competitiveness, efficiency, and performance (Alraja et al., 2020). By aligning new technologies with existing systems and assessing resource visibility and competencies, SMEs can improve operational processes and customer reach, as demonstrated during the COVID-19 pandemic (Kumar & Ayedee, 2021; Mishrif & Khan, 2023). IT adoption impacts SME performance by increasing efficiency, productivity, and collaboration through tools like ERP systems, workflow automation, and project management software (Abduwahab & Al-Dubai, 2024). Collaborative IT tools improve remote work, team coordination, and knowledge sharing, fostering employee engagement and innovation (Ordoñez de Pablos, 2023). SMEs in Oman face challenges like inadequate infrastructure, limited expertise(Alriyami & Ahmed, 2023), resistance to change, technological complexity, and cybersecurity concerns (Al Hinai et al., 2023; Alraja et al., 2020). Many struggles with IT investments, retaining skilled professionals, and implementing cybersecurity measures (Al Busaidi et al., 2019; Nasution et al., 2021). Additionally, the lack of IT governance frameworks and strategic investments hampers effective technology adoption (Abduwahab & Al-Dubai, 2024).

SMEs Performance

Performance is the result of decisions aimed at achieving goals effectively and efficiently within a set timeframe (Gs et al., 2019). For SMEs, it involves managing inputs, outputs, transformations, and feedback to meet objectives (Alalawi, 2020), with resource utilization being a key determinant (Sinaga et al., 2022). Performance is assessed using financial metrics like sales and ROI, and non-financial indicators such as innovation, customer satisfaction, and productivity (Banelienė, 2021; Fan et al., 2021; Kiyabo & Isaga, 2019). Innovation plays a

vital role in enhancing competitiveness and performance (Rybárová et al., 2019). High-quality products contribute to competitive advantage (Kadarusman & Rosyafah, 2022; Sinaga et al., 2022). Key challenges in performance management include a lack of standardised metrics, limited resources, and external factors(Alhattali et al., 2023). Performance enhancers for SMEs include entrepreneurial orientation, innovation culture, competitiveness (Alalawi, 2020; Gupta & Hoda, 2021), and technology adoption (Al Jabri et al., 2023). Innovation, resource management, and digitalization are critical for sustainability and resilience, particularly during crises like COVID-19 (Rahman, 2022). Leadership and e-commerce adoption also contribute significantly to sustainable SME development (Abduwahab & Al-Dubai, 2024; Al Hinai et al., 2023). This study, therefore, proposed the following hypotheses.

H1: Entrepreneurial Orientation and SME Performance

Entrepreneurial orientation, encompassing proactiveness, innovativeness, aggressiveness, autonomy, and risk-taking, significantly enhance SME performance by fostering resilience, competitive advantage, and innovation, particularly in Al Dakhiliyah Governorate (Al Jabri et al., 2023; Gs et al., 2019; Paulus & Hermanto, 2022).

H2: Innovation Culture and SME Performance

Innovation culture positively impacts SME performance by driving productivity, profitability, R&D, and sustainability, with particular importance during post-COVID-19 recovery in Al Dakhiliyah Governorate (Al Yahyaei et al., 2020; Taghizadeh et al., 2022).

H3: Resource Management and SME Performance

Effective resource management, including the prioritization of financial, human, and technological resources, enhances SME performance through operational efficiency, adaptability, and cost-saving measures, especially during supply chain disruptions in Al Dakhiliyah Governorate (Abdelfattah et al., 2024; Nusair et al., 2022).

H4: Technology Adoption and SME Performance

Technology adoption, despite challenges like financial and expertise barriers, significantly boosts SME performance by improving competitiveness, reducing costs, and driving operational efficiency, with strategies such as e-commerce and social media aiding resilience in Al Dakhiliyah Governorate (Abduwahab & Al-Dubai, 2024; Alraja et al., 2020; Kumar & Ayedee, 2021).

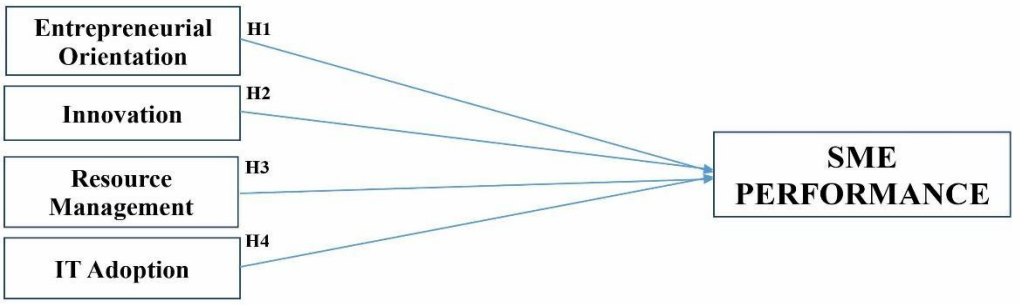

Figure 1.1: The research framework

2. The Underpinning Theories

The Resource-Based View (RBV) underscores the importance of valuable, rare, inimitable, and non-substitutable resources such as knowledge, capabilities, and customer relationships for achieving competitive advantage (Barney, 1995). RBV promotes entrepreneurial orientation, innovation, resource management, and IT adoption, encouraging SMEs to develop unique capabilities and align strategies with internal resources to enhance performance and competitiveness (Abu-Rumman et al., 2021; Kura et al., 2020). RBV emphasises that competitive advantage stems from the effective utilisation of valuable, rare, inimitable, and non-substitutable (VRIN) resources (Weigel & Hiebl, 2023). This perspective aligns with analysing entrepreneurial capabilities, innovation as an intangible asset, IT systems as strategic resources, and resource management practices. RBV helps explain performance variations among SMEs by linking resource capabilities to competitive advantage and operational efficiency (Kiyabo & Isaga, 2019). By applying RBV, the study can identify key resources, assess their strategic value, and provide actionable insights for aligning these elements to achieve sustained growth and superior SMEs performance (Sinaga et al., 2022).

The Knowledge-Based View (KBV) identifies knowledge as a critical strategic resource, emphasizing skills, expertise, continuous learning, and innovation to sustain competitive advantage (Amit & Schoemaker, 1993). KBV integrates knowledge-sharing, talent management, and IT platforms to support growth and adaptability in SMEs through entrepreneurship training, feedback mechanisms, and innovation culture (Al Hinai et al., 2023; Kiyabo & Isaga, 2019).

3. Methodology

A total of 35 participants from SMEs in Al Dakhiliyah Governorate participated in the pilot survey. The survey utilized a five-point Likert scale (Wright, 2008) and was distributed through multiple channels, including email, WhatsApp, and in-person visits within the region. The survey is divided into three sections: the first section gathers demographic and personal information from respondents, providing context for the study. The second section focuses on the independent variables namely the entrepreneurial orientation, innovation culture, resource management, and technology adoption exploring how these factors influence SME performance. The third section assesses SME performance using Key Performance Indicators (KPIs), offering a measure of the impact of these variables. The researcher utilized SPSS (Statistical Package for Social Sciences), version 24.0, to perform statistical analysis on the collected data. This structured approach ensures a comprehensive analysis of the factors contributing to SME success in the region (Cooper & Schindler, 2014).

4. Results and Discussion

Demographic Profile of Participants

The study highlights several key insights into the demographic and business characteristics of SMEs in Al Dakhiliyah Governorate, see Table (4.1). Gender representation shows a significant imbalance, with 88% of participants being male and only 12% female, indicating

the need for initiatives to boost female participation in SMEs. The participants are relatively young, with 48% aged between 26 and 45, emphasizing the role of younger entrepreneurs in the region. Over half (56%) of respondents hold an undergraduate degree, and 8% possess a Master's degree, reflecting a well-educated workforce contributing to business growth and innovation. Most participants (72%) are business owners, while 20% are executives, and 8% are managers, demonstrating a high level of involvement in decision-making. SMEs are predominantly small-scale, with 58% employing fewer than nine individuals, while medium-sized enterprises (11–50 employees) account for 40%, and only 2% employ 51–250 workers. Sectoral engagement is diverse, with significant involvement in manufacturing and production (25%) and information technology (18%), whereas food and beverages (12%) and construction (5.5%) have lower representation. Furthermore, 59% of businesses have operated for fewer than 10 years, signifying a rising trend in entrepreneurial activity, while 16% have a market presence exceeding 15 years. Geographic concentration is notable, with most SMEs located in Bahla (51%) and Nizwa (37%), and minimal representation from other regions such as Al Hamra, Manah, Samail, and Izki (3% each), and no representation from Adam and Jebel Akhdar.

Table 1: Demographic Characteristics of Al Dakhiliyah SMEs

Demographic Characteristics		*Al Dakhiliyah SMEs Frequency*	*Percentage (%)*
Gender	Male	31	88%
	Female	4	12%
Status	Single	33	94%
	Divorced	2	6%
Nationality	Omani	34	97%
	Non-Omani	1	1%
Age (Years)	Less than 26	3	8%
	26 – 35	14	40%
	36 – 45	12	34%
	Over 45	6	18%
Education	Secondary or Basic	10	28%
	Undergraduate	19	56%
	Master	3	8%
	Other	3	8%
Position	Owner	25	72%
	Executive	7	20%
	Manager	3	8%
No. of Employees	Less than 9	20	58%
	11 – 50	14	40%
	51 – 250	1	2%
Types of business involved	Food & Beverages	4	12%
	Automotive	6	18%
	Manufacturing and Production	9	25%
	Construction sector	2	5.5%
	Information technology	6	18%
	other	8	22.5%
Years in Market	1- 4	9	25%
	5-9	11	34%
	10-15	9	25%
	15-20	3	8%
	21 More than	3	8%
Governorate	Nizwa	13	37%
	Bahla	18	51%

	Al Hamra	1	3%
	Manah	1	3%
	Samail	1	3%
	Adam	-	-
	Bid Bid	-	-
	Izki	1	3%
	Jebel Akhdar	-	-

Reliability Statistics

Table 2: Cronbach's Alpha

Reliability Statistics			
Variables	**Cronbach's Alpha**	**Cronbach's Alpha Based on Standardized Items**	**N of Items**
Entrepreneurial Orientation	**0.962**	**0.966**	**6**
Innovation Culture	**0.951**	**0.952**	**6**
Resource Management	**0.977**	**0.978**	**5**
IT Adoption	**0.963**	**0.963**	**5**
SMEs Performance	**0.951**	**0.952**	**7**

All constructs demonstrated excellent reliability, with Cronbach's Alpha values exceeding 0.95, indicating highly consistent scales. EO ($\alpha = 0.962$) was measured with six items focusing on proactive market behaviour, risk-taking, and customer orientation. IC ($\alpha = 0.951$) included six items emphasising creativity, innovation, and prioritisation of research and development. RM ($\alpha = 0.977$) assessed the effectiveness and productivity of resource management systems using five items. IT ($\alpha = 0.963$) comprised five items evaluating the integration and impact of technology on organisational performance. P ($\alpha = 0.951$) was measured with seven items addressing cost-effectiveness, market share, and staff morale. The high reliability of all constructs and the comprehensive design of the items confirm the suitability of these scales for broader application in the main study, as table (4.3) refers to Rule of Thumb of Cronbach Alpha (Mulud, 2017)

Correlation Coefficients

The results revealed strong, statistically significant positive correlations among all constructs, with significance levels at $p<0.01p < 0.01p<0.01$. EO exhibited the highest correlation with IC ($r=0.949r = 0.949r=0.949$), followed by RM ($r=0.875r = 0.875r=0.875$) and IT ($r=0.853r = 0.853r=0.853$). IC was also strongly correlated with RM ($r=0.920r = 0.920r=0.920$) and IT ($r=0.909r = 0.909r=0.909$). RM and IT were highly correlated ($r=0.915r = 0.915r=0.915$), while P demonstrated moderately strong correlations with EO ($r=0.774r = 0.774r=0.774$), IC ($r=0.763r = 0.763r=0.763$), RM ($r=0.774r = 0.774r=0.774$), and IT ($r=0.788r = 0.788r=0.788$). These findings indicate interconnected relationships among the constructs, emphasising their collective influence on SMEs' performance. The high correlation coefficients suggest consistency in the constructs' theoretical alignment, supporting their relevance and validity for the main study.

Table 3: Pearson Correlations

Correlations

		Entrepreneurial Orientation	Innovation Culture	Resource Management	IT Adoption	SMEs Performance
Entrepreneurial Orientation	Pearson Correlation	1	.949**	.875**	.853**	.774**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	35	35	35	35	35
Innovation Culture	Pearson Correlation	.949**	1	.920**	.909**	.763**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	35	35	35	35	35
Resource Management	Pearson Correlation	.875**	.920**	1	.915**	.774**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	35	35	35	35	35
IT Adoption	Pearson Correlation	.853**	.909**	.915**	1	.788**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	35	35	35	35	35
SMEs Performance	Pearson Correlation	.774**	.763**	.774**	.788**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	35	35	35	35	35

Correlation is significant at the 0.01 level (2-tailed).

5. Conclusion

The study's findings align with the proposed hypotheses, confirming the significant positive influence of each factor on SME performance in Al Dakhiliyah Governorate. For H1 entrepreneurial orientation, encompassing proactiveness, innovativeness, aggressiveness, autonomy, and risk-taking, significantly enhances SME performance by fostering resilience, competitive advantage, and innovation. Through encouraging innovation to create unique products or services, encouraging proactive market strategies to capitalise on emerging opportunities, and promoting adaptability and resilience by calculated risk-taking, allowing SMEs to thrive in dynamic and challenging environments, (Al Jabri et al., 2023; Gs et al., 2019). In fact, the significant influence on these factors is also supported by findings by Paulus & Hermanto, (2022). While H2, innovation culture drives productivity, profitability, R&D, and sustainability, consistent with findings from previous scholar (Al Yahyaei et al., 2020). Effective resource management, which prioritises financial, human, and technological resources, enhances SME performance through operational efficiency, adaptability, and cost-saving measures, even amidst supply chain disruptions matching as H3. Through allocation and utilization of tangible and intangible resources to gaining competitive advantage, maintain financial stability and to achieve SMEs goals (Abdelfattah et al., 2024; Nusair et al., 2022). Finally, for H4, IT Adoption boosts SME performance by improving competitiveness, reducing costs, and driving operational efficiency through strategies like e-commerce and social media, despite financial and expertise barriers (Abduwahab & Al-Dubai, 2024; Alraja et al., 2020; Kumar & Ayedee, 2021). Collectively, these factors confirm their synergistic contribution to improving SME performance in Al Dakhiliyah Governorate.

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