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Exploring the Nexus between Entrepreneurial Orientation Dimensions and Knowledge Management: Evidence from Yemeni Banks

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Abstract: This study investigates the intricate relationship between Entrepreneurial Orientation (EO) and Knowledge Management (KM) in the unique context of Yemeni banks. Employing advanced statistical methods, including Structural Equation Modeling, the study explores the multifaceted connections among EO dimensions—namely, Proactiveness, Innovativeness, Risk Taking, and Competitive Aggressiveness—and their influence on KM. The research adopted a Survey correlation design, targeting supervisory positions in Yemeni banks, with a sample of 282 participants. Findings reveal that EO dimensions collectively account for 75.2% of KM variability, indicating a robust overarching relationship. However, the individual dimensions yield distinct outcomes: Proactiveness is found to lack statistical significance in influencing KM, whereas Innovativeness significantly and positively affects KM practices. Conversely, Risk Taking exhibits no substantial effect on KM. Notably, Competitive Aggressiveness emerges as a potent driver of KM, emphasizing its pivotal role in shaping effective knowledge management strategies. This study provides valuable insights for both academia and practical applications in the fields of entrepreneurship and knowledge management.

Keywords: Entrepreneurial Orientation, Knowledge Management, Yemeni Banks, Structural Equation Modeling.

1. Introduction

In today's dynamic and competitive business environment, organizations are increasingly recognizing the significance of both entrepreneurial orientation (EO) and knowledge management (KM) in achieving sustainable success and gaining a competitive edge [1]. EO represents an organization's strategic approach and mindset. It encapsulates a willingness to embrace innovation, a proactiveness in identifying opportunities, a readiness to undertake calculated risks, and an unyielding commitment to exploring new horizons. EO marks a profound shift in how organizations formulate their strategies, prioritizing agility, adaptability, and the relentless pursuit of growth [2]. On the other hand, KM is the systematic process through which organizations create, store, share, and utilize their knowledge resources. In an era where information is abundant, KM allows organizations to harness this wealth of knowledge to enhance their decision-making processes, improve efficiency, and drive innovation [3].

In the realm of organizational research, entrepreneurial orientation (EO) and knowledge management (KM) have each garnered considerable attention in their own right. These concepts have been the focal points of extensive scholarly investigation and practical application due to their profound implications for organizational success [4]. EO, with its emphasis on innovation, proactiveness, risk-taking, and aggressiveness, has been closely associated with a firm's ability to adapt and thrive in today's dynamic and competitive business landscape [5]. Similarly, KM, encompassing the systematic processes of creating, storing, sharing, and utilizing knowledge within an organization, has emerged as a critical driver of improved decision-making, innovation, and operational efficiency [6]. However, despite the wealth of research dedicated to EO and KM individually, there has been a notable gap in the exploration of their interconnectedness. Specifically, there has been limited investigation into how the dimensions of entrepreneurial orientation influence the intricate practices of knowledge management. This gap in knowledge becomes particularly compelling when viewed through the lens of Yemeni banks.

Yemen, characterized by its distinctive socio-economic challenges and a banking sector in rapid flux, offers a captivating context to investigate the interplay between entrepreneurial orientation dimensions and knowledge management practices [7]. The nation's unique circumstances, marked by economic shifts and regional dynamics, create an environment where the alignment of EO with KM processes may hold significant implications for organizational success and resilience [8]. To sum up, this study is an attempt to fill the gap in literature by examining the relationship between EO dimensions and KM practices in the context of Yemeni banks.

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2. Literature review and Hypotheses Development

2.1. Entrepreneurial Orientation

In the realm of organizational research, Entrepreneurial Orientation (EO) has garnered extensive theoretical and empirical attention [9 -10]. It has emerged as a widely recognized construct at the firm level within the entrepreneurship literature and has become a central focus of entrepreneurship studies [11]. The consensus in much of the prior research is that EO should be primarily regarded as a phenomenon existing at the firm level [12-14]. EO is essentially viewed as a strategic tool employed by organizations to distinguish themselves from their competitors [15]. It exerts a significant influence on a firm's strategic behavior aimed at achieving a competitive advantage. This perspective enables comparative studies to assess firm-level outcomes across various industries and cultural contexts (Covin & Miller, 2014).

Drawing on a comprehensive review of the existing literature [16-17], EO can be understood as the mechanism through which owners or founders express their processes, habits, and decision-making styles to engage in entrepreneurial activities when managing their online businesses. These entrepreneurial activities encompass five crucial elements: innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy, all of which are equally pivotal for achieving favorable business performance [18]. In the context of this study, Entrepreneurial Orientation (EO) is defined in operational terms as the set of methods, practices, and decision-making approaches employed by bank owners or founders to engage in entrepreneurial actions. These actions encompass four key elements: innovativeness, proactiveness, risk-taking, and competitive aggressiveness when managing their banks.

2.2. Entrepreneurial Orientation as a driver of Knowledge management

According to the Knowledge-Based View (KBV), knowledge is the organization's pivotal strategic asset, facilitating value creation [19]. Knowledge Management (KM) enablers are mechanisms or factors within an institution that stimulate Knowledge Creation (KC), support Knowledge Dissemination (KD), and encourage the transfer of knowledge [20]. Recent scholarly attention has increasingly focused on examining the correlation between KM enablers and KM [21-23]. Furthermore, there has been growing call-in existing research to evaluate how KM enablers contribute to fostering KM processes [21; 24]. In the context of this study, one such KM enabler under consideration is Entrepreneurial Orientation (EO). EO represents the strategic intent of an organization and encompasses fundamental policies and practices geared towards fostering entrepreneurial actions that can confer a competitive advantage. In conceptual terms, EO is positioned as a strategic stance adopted by firms in relation to entrepreneurship.

2.3. Knowledge Management

According to Azan et al., the goal of knowledge management (KM) processes is to increase an organization's awareness of its knowledge at the individual and collective levels and utilize that knowledge to shape the organization and improve its business processes [25]. In their research study, Obeidat et al. discusses seven KM processes, namely identification, creation, collection, organizing, storage, dissemination, and application [26].

The process of knowledge identification (KI) involves an organization's steps to recognize the relevant and necessary knowledge that exists within its boundaries [26]. On the other hand, knowledge creation (KC) refers to an organization's ability to generate new knowledge within the organizational context and across all levels and incorporate the outcomes into the organization [27].

Knowledge acquisition (KL) is a process through which an organization obtains needed knowledge by consulting and acquiring it from external sources [28]. Knowledge organization (KO) involves the description, representation, filing, and organization of knowledge, bringing it together in a structured manner [29].

Knowledge storage (KS) is the ability of an organization to store newly acquired knowledge in its organizational memory, making it accessible and usable by others ([30]. Knowledge dissemination refers to the process of sharing knowledge among individuals, which includes the exchange of skills, knowledge, and experiences within the organization [31]. Finally, knowledge application (KA) is the process of utilizing available knowledge to achieve organizational goals [32].

In the context of this study, knowledge management is defined as the operational process undertaken by the staff of banks in Yemen. This process involves the creation, storage, sharing, and utilization of knowledge within the banks. The aim is to effectively manage and leverage the knowledge resources available to enhance organizational performance and decision-making within the banking sector in Yemen.

2.4. Entrepreneurial orientation and Knowledge Management

From a dimensional standpoint, Entrepreneurial Orientation (EO), encompassing aspects like innovativeness, risk-taking, and proactiveness, and competitive aggressiveness is observed to have a positive impact on Knowledge Management (KM) [33]. This relationship is evident as innovative businesses actively explore and exploit opportunities, proactive organizations employ knowledge scanning strategies to gain a deeper understanding of future environmental demands, and risk-takers are more inclined to experiment with novel concepts [34].

Furthermore, organizations imbued with an entrepreneurial orientation tend to heavily rely on the knowledge and expertise of their employees as critical components of the knowledge management process [35]. Ramadan et al., underscored that corporate entrepreneurship necessitates a high level of knowledge and expertise.[36] Consequently, there is a pressing need to govern knowledge due to its pivotal role in identifying emerging opportunities and fostering the development of innovative ideas. In light of these insights, the following hypotheses can be formulated:

- H1: Proactiveness has a positive relationship with KM.
- H2: Innovativeness has positive relationship with KM.
- H3: Risk-Taking has positive relationship with KM.
- H4: Competitive Aggressiveness has positive relationship with KM.

3. Conceptual Model

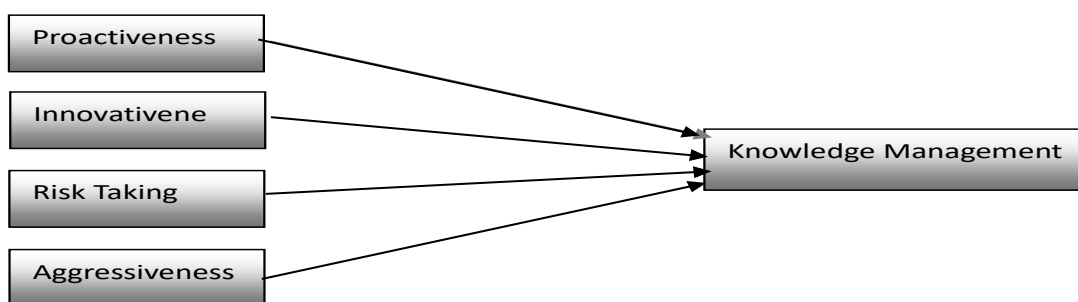


Fig. 1 Conceptual Model

4. Theoretical Lens

In this study, multiple theoretical lenses were employed to comprehensively investigate the relationship between entrepreneurial orientation dimensions and knowledge management in Yemeni banks. The Resource-Based View (RBV) lens allows us to view entrepreneurial orientation dimensions as valuable resources that impact knowledge management practices, potentially leading to a competitive advantage [37-38]). Within this RBV framework, the Entrepreneurial Orientation (EO) lens provides a more specific focus on how innovation, proactiveness, risk-taking, and opportunity-seeking behaviors influence knowledge Management [39]. Simultaneously, the Knowledge-Based View (KBV) perspective highlights the strategic role of knowledge as an asset, guiding our examination of knowledge management processes encompassing identification, creation, collection, organization, storage, dissemination, and application [39]. These theoretical lenses collectively shape our exploration, aiming to provide a comprehensive understanding of the interplay between entrepreneurial orientation dimensions and knowledge management practices in Yemeni banks, offering valuable insights for academia and practical implications for organizations in similar contexts globally.

5. Methodology

5.1. Design, Participants and Data collection

This study employs a cross-sectional research design to investigate the relationship between entrepreneurial orientation (EO) and knowledge management (KM) within the banking sector in Yemen. Cross-sectional study allows for the collection of data at a single point in time, enabling the examination of relationships between variables at a specific moment. The target population consists of 1504 employees working in supervisory roles within banks operating in Yemen. A stratified random sampling technique is used to ensure representation from different banks. Stratification is based on bank size and location (e.g., large vs. small banks, urban vs. rural branches). This approach helps capture the diversity present within the banking

sector. Out of 1504 supervisory positions, 312 subjects were determined as the sample of the study. Primary data is collected through structured questionnaires distributed to employees across selected banks. The questionnaire is designed to gather information on entrepreneurial orientation, knowledge management practices, and relevant control variables. The instrument is adapted and modified from validated scales in the literature to suit the specific context of the Yemeni banking sector.

5.2. Measurement and Data Analysis

Knowledge Management (KM) is measured using a multi-item scale assessing the extent to which banks in Yemen engage in knowledge creation, knowledge sharing, Knowledge storing, and knowledge utilization practices. Each dimension is measured by five indicators Responses are collected on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). EO is measured using a multi-dimensional scale assessing the degree to which banks exhibit entrepreneurial behaviors, including innovativeness, risk-taking, proactiveness, and competitive aggressiveness. Each dimension is measured by five indicators. Responses are collected on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The data analysis in this study employs a rigorous approach, utilizing advanced statistical techniques to thoroughly investigate the intricate relationship between entrepreneurial orientation (EO) and knowledge management (KM). Notably, the analysis accounts for potential influences from relevant demographic and organizational variables, ensuring a comprehensive examination of the factors involved. To conduct this comprehensive analysis, two powerful statistical software tools, SPSS (Statistical Package for the Social Sciences) and AMOS 25 IBM, are utilized. The normality of the data is assessed to ensure that it meets the assumptions of the statistical tests employed. Descriptive statistics, including measures such as the mean and standard deviation, are computed. Structural Equation Modeling (SEM) is adopted as the primary analytical framework to examine the intricate relationship between EO and KM. Convergent Validity, Discriminant Validity, and Reliability: Within the SEM, convergent validity, discriminant validity, and reliability of the measurement model are assessed. These steps ensure that the measurement instruments used in the study are valid, distinct, and consistent in capturing the intended constructs. Fit Indexes Evaluation: fit indexes, including the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Chi-square statistic, are evaluated.

6. Study Findings:

6.1. Normality assessment

Table (1) presents skewness and kurtosis values for several constructs used to assess normality in Structural Equation Modeling (SEM). For SEM, skewness values should be below an absolute value of 2 and kurtosis values should be below an absolute value of 8 to consider the data distribution as approximately normal. The analysis indicates that most constructs have skewness and Kurtosis values within the acceptable range, meeting the normality criteria.

6.2. Descriptive statistics

Table (2) presents the means and standard deviations of dimensions within two constructs: "Entrepreneurial Ordination" and "Knowledge Management." In the construct of "Entrepreneurial Ordination," Proactiveness has a mean of 5.90 (SD = 0.78), indicating a relatively high average level with moderate variability. Innovativeness follows with a mean of 5.84 (SD = 0.79), suggesting a similar level of average response with slightly more variability. Risk Taking exhibits a mean of 4.99 (SD = 1.10)

Table 1 Normality assessment

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Proactiveness	282	-.966-	.145	1.422	.289
Innovativeness	282	-.694-	.145	.514	.289
Risk Taking	282	-.258-	.145	-.387-	.289
Competitive aggressiveness	282	-.690-	.145	.229	.289
Knowledge creation	282	-.732-	.145	.481	.289
Knowledge storing	282	-.564-	.145	-.099-	.289
Knowledge sharing	282	-1.017-	.145	2.036	.289
Knowledge Utilization	282	-.593-	.145	.091	.289

indicating a lower average level with considerable variability. Competitive Aggressiveness has a mean of 5.63 (SD = 0.83), signifying a moderate average level with moderate variability. In the "Knowledge Management" construct, Knowledge Creation demonstrates a mean of 5.80 (SD = 0.79), implying a relatively high average level with moderate variability. Knowledge Storing closely follows with a mean of 5.81 (SD = 0.78), suggesting a similar level of average response with slightly less variability. Knowledge Sharing displays a mean of 5.74 (SD = 0.85), indicating a moderately high average level with considerable variability. Lastly, Knowledge Utilization has a mean of 5.55 (SD = 0.93), reflecting a relatively lower average level with relatively high variability.

Table 2 Descriptive statistics

Construct	Dimensions	Mean	SD
Entrepreneurial ordination	Proactiveness	5.90	0.78
	Innovativeness	5.84	0.79
	Risk Taking	4.99	1.10
	Competitive aggressiveness	5.63	0.83
Knowledge Management	Knowledge creation	5.80	0.79
	Knowledge storing	5.81	0.78
	Knowledge sharing	5.74	0.85
	Knowledge Utilization	5.55	0.93

6.3. Reliability and Convergent Validity

Table (3) displays loading values for each construct's indicators, alongside reliability and convergent validity criteria. Indicators with loadings exceeding 0.600 are deemed acceptable.

Table 3 Reliability and Convergent validity

Dimension	Indictor	Loading	Cronbach Alpha	CR	AVE
		>0.600	>0.700	>0.700	>0.500
Knowledge Storing	KST1	0.848	0.911	0.897	0.685
	KST2	0.876			
	KST3	0.792			
	KST4	0.791			
Knowledge creation	KC1	0.824	0.893	0.861	0.607
	KC2	0.741			
	KC4	0.755			
	KC5	0.793			
Knowledge Utilization	KA1	0.862	0.933	0.934	0.738
	KA2	0.836			
	KA3	0.864			
	KA4	0.889			
	KA5	0.845			

Knowledge sharing	KSH1	0.833	0.904	0.891	0.674
	KSH2	0.865			
	KSH3	0.862			
	KSH5	0.714			
Proactiveness	PRO5	0.839	0.881	0.877	0.642
	PRO4	0.817			
	PRO3	0.833			
	PRO2	0.708			
Innovativeness	INNO5	0.817	0.889	0.857	0.601
	INNO3	0.809			
	INNO2	0.776			
	INNO1	0.693			
Risk Taking	RT4	0.64	0.841	0.87	0.63
	RT3	0.754			
	RT2	0.874			
	RT1	0.883			
Competitive aggressiveness	AGR4	0.784	0.841	0.835	0.505
	AGR3	0.672			
	AGR2	0.737			
	AGR1	0.72			
	AGR5	0.629			

The assessment for each construct is as follows: Knowledge Storing (KS) has satisfactory loading values and surpasses Cronbach's alpha (0.911), CR (0.897), and AVE (0.685) thresholds; Knowledge Creation (KC) demonstrates fitting loadings, meeting Cronbach's alpha (0.893), CR (0.861), and AVE (0.607) requirements; Knowledge Utilization (KA) displays loadings above 0.600, and comfortably exceeds Cronbach's alpha (0.933), CR (0.934), and AVE (0.738) benchmarks; Knowledge Sharing (KSH) showcases loadings surpassing 0.600 and notably exceeds Cronbach's alpha (0.904), CR (0.891), and AVE (0.674) guidelines; Proactiveness (PRO) has loadings above 0.600 and meets Cronbach's alpha (0.881), CR (0.877), and AVE (0.642) criteria; Innovativeness (INNO) displays generally suitable loadings, along with Cronbach's alpha (0.889), CR (0.857), and AVE (0.601) meeting requirements; Risk Taking (RT) exhibits generally acceptable loadings, while surpassing Cronbach's alpha (0.841), CR (0.870), and AVE (0.630); Competitive Aggressiveness (AGR) presents loadings generally above 0.600, meeting Cronbach's alpha (0.841), CR (0.835), and AVE (0.505) criteria. In summary, the constructs all display acceptable loading values, reliability (Cronbach's alpha and CR), and convergent validity (AVE), suggesting their robustness in capturing the intended concepts.

6.4. Discriminant validity Using HTMT

The threshold of 0.900 is commonly used as a guideline for discriminant validity when using the Heterotrait-Monotrait (HTMT) ratio. If the HTMT value for a pair of constructs is below 0.900, it indicates that the constructs are likely distinct from each other and have sufficient discriminant validity. Since all the values in your table are smaller than this threshold, it suggests that the constructs are adequately different from each other in terms of the underlying concepts they represent.

Table 4 Discriminant validity Using HTMT

K_S	K_C	K_U	K_Sh	PRO	Innov	R_T	C_Ag
-----	-----	-----	------	-----	-------	-----	------

K_S							
K_C	0.764						
K_U	0.842	0.818					
K_Sh	0.727	0.835	0.839				
PRO	0.631	0.754	0.655	0.629			
Innov	0.643	0.86	0.735	0.711	0.872		
R_T	0.403	0.39	0.41	0.317	0.39	0.361	
C_Ag	0.694	0.844	0.715	0.693	0.758	0.806	0.532

Note: KS=Knowledge Storing; K_C=Knowledge Creation; K_U=Knowledge Utilization ; K_SH =knowledge Sharing; PRO=Proactiveness; INNOV=Innovativeness; R_T=Risk Taking ; C_AG= Competitive Aggressiveness

6.5. Model Fit indexes

The most commonly fit indexes used in literature are CFI, TLI, RMSEA and CMIN [40]. As shown in table (5), the provided fit indices represent various measures for evaluating the model fit of a statistical model. These indices include the Chi-Square (χ^2), Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), and P Close. As noticed , the χ^2 value of 1.692 falls between 1 and 3, indicating acceptable fit by testing the difference between observed and model-implied covariances; the CFI value of 0.951 surpasses 0.950, signifying a good fit and comparing the proposed model to a null model; the SRMR value of 0.051 is below 0.08, indicating a reasonable fit by measuring discrepancies between observed and predicted correlations; the RMSEA value of 0.050 is below 0.06, suggesting a good fit and estimating error per degree of freedom; the P Close value of 0.536 exceeds 0.05, implying that the model's χ^2 value is not statistically significant, potentially indicating a favorable data fit. In summary, these indices collectively suggest that the model demonstrates a good fit, yet a comprehensive evaluation should consider theoretical context and additional fit indices

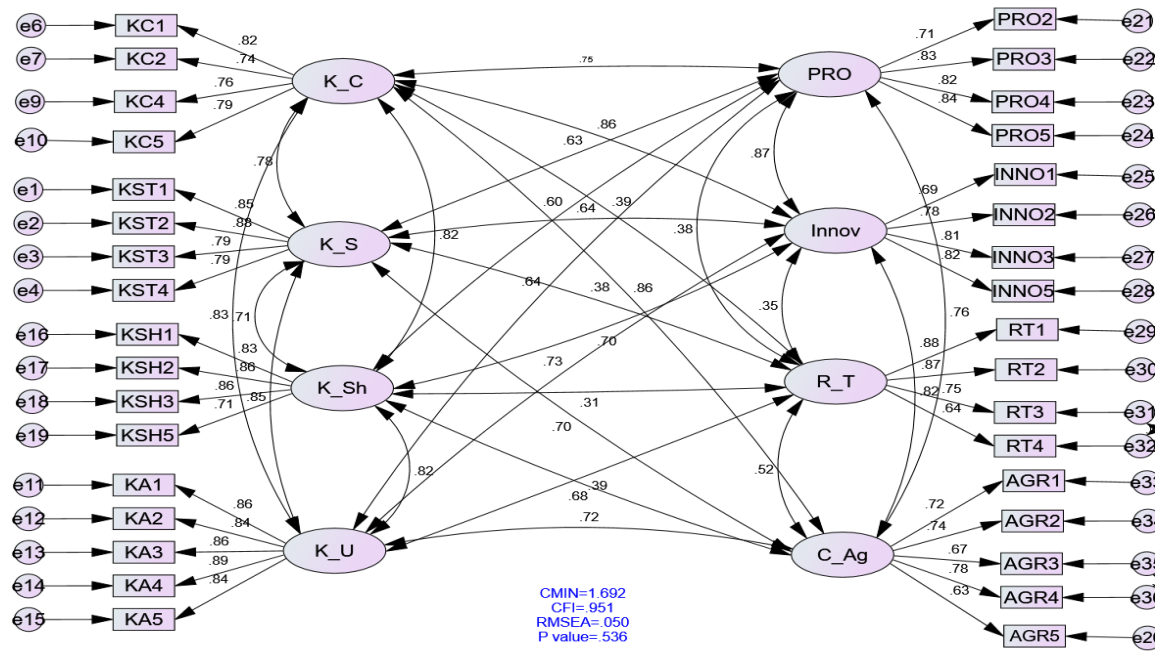


Figure 2 Measurement Model (AMOS output)

Note: KS=Knowledge Storing; K_C=Knowledge Creation; K_U=Knowledge Utilization; K_SH =knowledge Sharing; PRO=Proactiveness; INNOV=Innovativeness; R_T=Risk Taking; C_AG= Competitive Aggressiveness.

Table 5 Fit indexes of the model

χ^2	CFI	SRMR	RMSEA	P	Close
between 1 and 3	>0.950	<0.08	<0.06	>0.05	
1.692	0.951	0.051	0.050	0.536	

6.6. Correlation Matrix

As presented in table (6), the correlations range from 0.307 to 0.873, with all of the correlations being statistically significant ($p < 0.05$). This indicates that there is a moderate to strong positive relationship between all of the variables. The analysis provided in table (7) shows the relationship between EO dimensions and KM. As shown in the table, the findings showed that R^2 (0.752) shows that 75.2% of the variance in KM is explained by EO dimensions. The effect of Proactiveness on Knowledge Management lacks statistical significance, as indicated by the small effect size ($B = -0.021$), a non-significant critical ratio ($CR = -0.225$), and a high p-value ($p = 0.822$). Conversely, Innovativeness significantly impacts Knowledge Management with a notable effect size ($B = 0.381$), a significant critical ratio ($CR = 3.024$), and a low p-value ($p = 0.002$). Risk Taking, however, shows no substantial impact on Knowledge Management, as evidenced by a modest effect size ($B = 0.013$), a non-significant critical ratio ($CR = 0.312$), and a high p-value ($p = 0.755$). Competitive Aggressiveness strongly influences Knowledge Management, as indicated by a robust effect size ($B = 0.400$), a substantial critical ratio ($CR = 4.093$), and a highly significant p-value ($p < 0.001$). These findings shed light on the intricate relationships within the model, suggesting that while Proactiveness and Risk Taking have limited effects, Innovativeness and Competitive Aggressiveness play substantial roles in shaping Knowledge Management. The VIF values indicate no multicollinearity among EO dimensions.

Table 6 Correlation Matrix

	K_S	K_C	K_U	K_SH	PRO	INNOV	R_T	C_AG
KS	1							
K_C	0.776*	1						
K_U	0.845*	0.828*	1					
K_SH	0.707*	0.824*	0.820*	1				
PRO	0.626*	0.752*	0.640*	0.601*	1			
INNOV	0.638*	0.855*	0.726*	0.699*	0.873*	1		
R_T	0.381*	0.391*	0.389*	0.307*	0.376*	0.347*	1	
C_AG	0.700*	0.858*	0.725*	0.681*	0.760*	0.819*	0.525*	1

KS=Knowledge Storing; K_C=Knowledge Creation; K_U=Knowledge Utilization; K_SH =knowledge Sharing; PRO=Proactiveness; INNOV=Innovativeness; R_T=Risk Taking; C_AG= Competitive Aggressiveness.

6.7. Hypothesis Testing

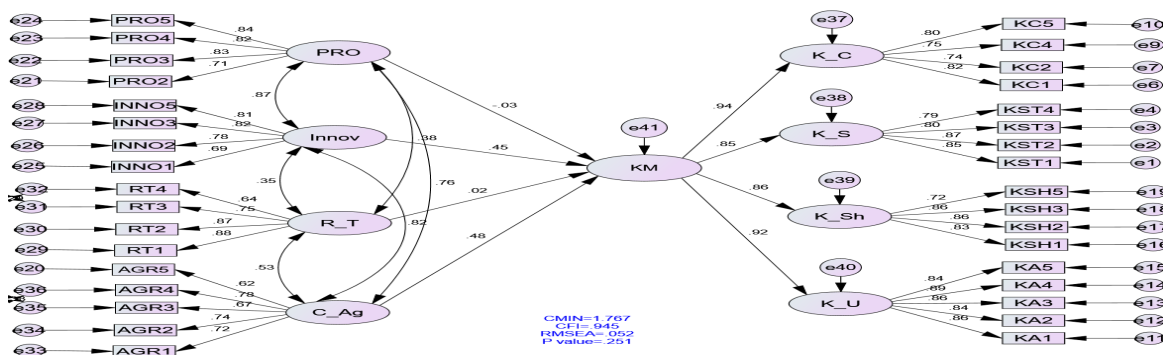


Fig. 3 structural model (AMOS 25 Output)

KS=Knowledge Storing; K_C=Knowledge Creation; K_U=Knowledge Utilization; K_SH =knowledge Sharing; PRO=Proactiveness; INNOV=Innovativeness; R_T=Risk Taking; C_AG= Competitive Aggressiveness

Table 7 The Regression Path Coefficients and its significance based on p-value < 0.05.

Path	R ²	β	S.E.	C.R.	P	VIF
Knowledge Management <--- Proactiveness	0.752	-.021	.095	-.225	.822	3.005
Knowledge Management <--- Innovativeness		.381	.126	3.024	.002	3.196
Knowledge Management <--- Risk Taking's		.013	.043	.312	.755	1.428
Knowledge Management <--- Competitive Aggressiveness		.400	.098	4.093	.000	2.374

The hypothesis statement for every path and its conclusion

Table 8 The hypothesis statement for every path and its conclusion

Hypothesis statement	Decision
Proactiveness has impact on Knowledge Management	unsupported
Innovativeness has impact on Knowledge Management	supported
Risk Taking's has impact on Knowledge Management	unsupported
Competitive Aggressiveness has impact on Knowledge Management	supported

7. Discussion:

This study aimed to explore the relationship between EO dimensions and KM in the context of Yemeni banks. The study's results provide strong evidence to support the idea that "innovativeness" has a positive relationship with knowledge management (KM) within Yemeni banks.

From the theoretical perspective of the Resource-Based View (RBV) and the Entrepreneurial Orientation (EO) framework, the finding that "innovativeness" has a positive relationship with knowledge management (KM) in Yemeni banks aligns with the core concepts of these theories [7]. RBV suggests that a firm's competitive advantage stems from its unique resources and capabilities ([37; 41]. In this context, "innovativeness" can be viewed as a valuable resource possessed by these banks. The positive relationship between innovativeness and KM indicates that innovative capabilities, considered as a resource, contribute to enhancing KM practices within the banks. It reinforces the RBV idea that firms should leverage their distinctive resources to gain a competitive edge, in this case, by promoting innovative thinking and practices to manage knowledge effectively [42]. This finding further supports (Matin et al and Nasution et al.) who confirmed that innovativeness positively impacts knowledge creation, storing, and sharing [43-44].

Conversely, the study findings indicate that the dimension of "risk-taking" within entrepreneurial orientation does not have a significant impact on knowledge management (KM) practices. This means that the willingness of Yemeni banks to take risks in their business operations does not seem to lead to a noticeable improvement in their knowledge management processes. This finding aligns with a study conducted by Bakr et al., which also observed that there was no substantial relationship between risk-taking behavior and knowledge management [45]. In other words, despite Yemeni banks and organizations in similar contexts possibly engaging in risk-taking activities, this behavior may not necessarily translate into more effective knowledge management practices or the enhanced utilization of knowledge resources within these institutions. In contrast, this finding is not in line with Fanaja et al., who found that risk-taking is a driver of Knowledge management [46]. This could be explained by the difference of the context. Fanaga et al. studied women entrepreneurship business while the current study targeting banking sector.

Similarly, the study findings indicate that the dimension of "proactiveness" within entrepreneurial orientation does not have a statistically significant impact on knowledge management. This finding aligns with a study conducted by Bakr et al. (2022),[45] which also observed that there was no established relationship between proactiveness and knowledge management. In simpler terms, the tendency of organizations, particularly in the context of Yemeni banks, to be proactive in seeking opportunities and taking initiatives does not appear to result in a significant improvement in their knowledge

management practices. This means that being proactive in itself may not necessarily lead to more effective knowledge creation, sharing, or utilization within these banks. This finding suggests that other factors or dimensions may play a more critical role in influencing knowledge management practices within Yemeni banks. It underscores the complexity of the relationship between proactiveness and knowledge management and the need for further exploration to identify the specific conditions or contexts where proactiveness might have a more pronounced impact.

Finally, the study findings showed that the competitive aggressiveness has a significant impact on KM. From an RBV perspective, organizations can develop a competitive advantage by leveraging their unique resources and capabilities. In this context, "competitive aggressiveness" can be seen as a distinctive capability that certain Yemeni banks possess. This finding supports Abu-Baka and Mamat, who confirmed that competitive aggressiveness is key role in enhancing Knowledge management [47]. The significant impact of competitive aggressiveness on KM suggests that banks that adopt an aggressive approach in their competitive strategies also excel in managing knowledge effectively. Similar finding was reached by Okręglicka, who asserted that Aggressiveness is an important determinant of Knowledge based resources in any organization [48]. This supports the RBV concept that unique capabilities can drive superior performance, in this case, by enhancing KM practices and thereby potentially gaining a competitive edge in the Yemeni banking sector. Within the EO framework, which includes dimensions like innovation, proactiveness, risk-taking, and opportunity-seeking, "competitive aggressiveness" aligns with the proactive and aggressive mindset associated with entrepreneurship [49]. Banks that exhibit competitive aggressiveness are more likely to proactively seek, create, and utilize knowledge to gain an advantage over competitors.

8. Conclusion:

This study has uncovered critical insights into the relationship between entrepreneurial orientation (EO) dimensions and knowledge management (KM) within Yemeni banks. It highlights the significance of "innovativeness" as a key driver of effective KM, aligning with the Resource-Based View (RBV) and EO framework. However, "risk-taking" and "proactiveness" were found to have no substantial impact on KM, revealing the complexity of their relationship in this context. Notably, "competitive aggressiveness" significantly influences KM practices, emphasizing its role as a competitive advantage. These findings offer practical guidance for Yemeni banks and similar organizations, emphasizing innovation and competitive aggressiveness as vital components of effective knowledge management to enhance their competitiveness in the banking sector.

9. Theoretical and Practical Implications:

This study offers several noteworthy contributions to the fields of entrepreneurship, knowledge management, and organizational theory. Firstly, it enriches our understanding of Entrepreneurial Orientation (EO) by revealing the varying impacts of its dimensions on Knowledge Management (KM) within Yemeni banks. This nuanced perspective emphasizes that not all EO dimensions equally contribute to enhancing KM, underscoring the context-specific nature of these relationships and potentially refining EO frameworks. Secondly, the findings encourage theoretical integration, particularly between Resource-Based Theory (RBT) and Knowledge-Based View (KBV). While Innovativeness and Competitive Aggressiveness align with RBT as valuable resources, the study highlights how KBV's focus on knowledge as a strategic asset complements these dimensions. This theoretical synthesis enhances our comprehension of how entrepreneurial behavior influences knowledge management. Lastly, the study underscores the importance of contextual sensitivity, emphasizing that the significance of EO dimensions may vary across regions and industries. This calls for future research to explore how contextual factors influence the EO-KM dynamics.

Practically, Yemeni banks aiming to enhance their Knowledge Management (KM) should strategically prioritize Innovativeness as a means to foster a culture of continuous innovation. Additionally, cultivating a competitive spirit through Competitive Aggressiveness can drive active knowledge seeking and application. A balanced entrepreneurial approach that incorporates Proactiveness and Risk Taking, alongside a focus on Innovativeness and Competitive Aggressiveness, can create a well-rounded strategy. Implementing KM strategies that leverage these strengths, such as knowledge-sharing platforms and incentives for innovative thinking, is advisable. Finally, recognizing the potential evolution of the impact of EO dimensions over time, banks should engage in continuous learning and adaptation to remain responsive to changing conditions.

10. Limitations and Future Research Directions:

The study has several limitations. Firstly, its findings are specific to Yemeni banks, limiting their direct applicability to organizations in different regions and industries. Secondly, the cross-sectional design used provides only a snapshot of the EO-KM relationship, necessitating future longitudinal studies. Thirdly, reliance on self-reported data introduces potential biases, and survey-based measurements may not fully capture the complexity of EO and KM constructs. The study's limited generalizability beyond Yemen's banking sector emphasizes the need for caution in applying these findings elsewhere.

Additionally, mediating or moderating factors impacting the EO-KM relationship were not explored. Data collection challenges in Yemen's context may have affected responses. Causality between EO dimensions and KM practices was not established, and external validation through industry benchmarks was limited. The study primarily used survey data, and employing multiple data collection methods could provide a more comprehensive perspective. Future research in Yemeni banks should explore moderating factors, examine performance outcomes of effective KM practices, analyze the impact of the external environment, employ longitudinal designs, and use multiple data collection methods. Establishing causality and comparing findings with different industries and larger, diverse samples can enhance the study's validity and generalizability.

Conflicts of Interest Statement

The authors certify that they have NO affiliations with or involvement in any organization or entity with any financial interest.

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