

Knowledge Management as a Pathway from Entrepreneurial Orientation to Enhanced Firm Performance

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Abstract

This paper examines the influence of entrepreneurial orientation (EO) on firm performance (FP), and also explores the mediating relationship between knowledge management (KM). In particular, it focuses on the impact that KM has on the effects of the major EO dimensions (risk-taking, innovativeness, proactiveness) on the performance of the organization. Through a quantitative research method, the research uses SEM to test data from 160 Pakistani furniture manufacturing companies. The findings show that KM has a moderating influence on the relationship between innovativeness and performance of firms. In general, the review proves that all the investigated variables (risk-taking, innovativeness, proactiveness, and knowledge management) have a positive effect on performance. The research offers innovative findings on the impact of knowledge management on the performance implications of entrepreneurial orientation since it centers on a low-technology sector and uses complementary methods of analysis.

Keywords: Knowledge Management, Entrepreneurial Orientation, Firm Performance, Furniture, SEM.

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1. Introduction

The relation between entrepreneurial orientation (EO) and Firm performance (PERF) has been a subject of research on entrepreneurship over the decades and yet, there is empirical evidence that is opaque and contradictory over the last 20 years (Cheng et al., 2025). Trying to solve these contradictions, scholars have moved beyond linear models and investigated curvilinear effects and integrated mediating mechanisms in their modelling (Adam et al., 2022). These methodologies indicate a higher degree of awareness of the fact that the linkage between EO and PERF is complicated and relies on other organizational and contextual variables. Increasingly, knowledge-related dimensions are becoming important explanatory variables, whereas stakeholder pressure and social capital have already received attention (Adam et al., 2022). Specifically, organizational learning processes (Al-Kahtani and Al-Mekhlafi, 2024) and knowledge management (KM) systems (Rifqi Almahdani Rahmat et al., 2023) would be essential in the context of comprehending the impact of entrepreneurial behavior on performance. The acquisition, transformation, and application of knowledge can boost or stabilize the variability in performance related to EO (Berndt et al., 2024). Regardless of the theoretical applicability, the mediating role of KM in the EO-PERF interaction process has not been investigated in detail, thus this study presents a critical research gap.

This classic work of Miller (1983) describes the entrepreneurial organizations as creative, enterprising and risk-taking (RT). Competitive aggressiveness and autonomy were also included in this paradigm as the addition to the study conducted by EO(Cho & Lee, 2018). The application of EO is comprehensive in explaining the entrepreneurial behavior of firms, which is related to strategic position and decision-making. The predisposition of an organization to freedom of operation, innovativeness, cautious risk-taking, and response to market opportunities is referred to as EO(Marei et al., 2024). According to (Al-Najjar et al., 2024), EO is a set of primary concepts and practices that drive strategic aspirations of the corporations. The paper looks at the impact of RT, IN, and PR on the businesses performance, in the conceptualization of EO by Miller (1983).

The earlier studies indicate that the EO-PERF relationship is unsound and situational (Masa'deh et al., 2018). A significant amount of research demonstrates a positive correlation between EO and performance ((Pinho et al., 2024; Sarbhai, 2025a), yet meta-analytic data points to the fact that the correlation is only moderately strong and differs according to the operationalisations and cultures. According to researchers, EO dimensions do not have an individual or combined impact on performance (Arabeche et al., 2022). There are also strategic human capital and the stages of the firm lifecycle that affect the performance effects of EO (Alleimoun et al., 2022). There are weak, negligible or even negative relationships between EO and performance. Such mediators as external financing (Cheng et al., 2025) and EO characteristics as innovativeness and proactiveness influence performance outcome in SMEs. KM is a potential mediation variable to the effect of EO on the performance of companies, although these inconclusive results imply further addition(Barroso-Martinez et al., 2016).

KM has come into the limelight in the last few decades in information systems and management studies as a result of the transition into a knowledge-based economy, where knowledge serves as a major competitive edge (Fareed Hussain, Caro Lucas, 2004). This has increased the pace of developing knowledge management system (KMS) to generate, store and disseminate knowledge. Knowledge management assists the companies in innovating and surpassing the competition (Cho & Lee, 2018). The production and the dissemination of

macro-level knowledge facilitate economic and technological improvement. Exchanging formal and informal experiential knowledge is one practice of knowledge management. The rapid innovation and digital technology have enhanced the organizational attention on data gathering and production of insights to enhance products and services. Knowledge management Tacit knowledge management enhances the quality of service and the management of human resources.

Entrepreneurship and creativity are also connected with KM. It is considered that innovation is a reaction to the competitive forces, and its social and economic impacts, including the challenges of sustainability or job displacement, are still a question of debate (Wan and Du, 2022). The involvement of KM and intellectual capital in the innovation strategy by firms is necessary in order to overcome these challenges. Organizational knowledge assists companies to find and take advantage in new markets that are volatile, which is essential to entrepreneurial success. As research indicates, KM capabilities enhance entrepreneurial creativity, ambidexterity, and intensity of innovation, enhancing performance of a business(Adam et al., 2022) . Entrepreneurial knowledge enhances the entrepreneurial ambitions whereas KM orientation enhances ambidextrous innovation and performance in dynamic organizations.

The recent literature highlights the strategic significance of KM in the digital transformation and the evolving organizational ecosystem (Mattarollo et al., 2023). Innovation capabilities and performance are influenced by the market-oriented cultures and leadership practices through mediation (Siamakani et al., 2022). Talent management and sustainable human resource management put knowledge and skills as the major organizational assets (Purnawan et al., 2025). Knowledge-intensive and entrepreneurial organizations that need to be competitive must incorporate EO with KM activities where one acquires, applies, converts, and protects knowledge. Family businesses are the same as strategic KM and EO make firms successful (Arabeche et al., 2022). These observations are not enough to explain the correlations between EO, KM, and performance of company. The existing studies on their interactions are partial and at times contradictory. Part of the studies indicate that knowledge-influenced issues influence the EO-PERF connection (Barroso-Martinez et al., 2016), whereas some studies reveal that EO mediates or alters the KM-performance relationship. Additional evidence indicates that the quality of innovation and customer KM can alter performance results in the case of various competitive environments (Siamakani et al., 2022). Such a conflict highlights the importance of combined empirical research that directly focuses on KM as an intervening variable between the attributes of EO and the business performance.

In order to address these gaps, this paper analyses the role of KM in mediating between EO and business performance, with respect to risk-taking, innovativeness, and proactiveness. This data of 160 Polish small furniture manufacturers is analyzed with PLS-SEM. The proposed quantitative method research aims at broadening the body of literature regarding entrepreneurship and KM by uncovering the role of KM mechanisms in converting entrepreneurial orientation into performance results, especially in small manufacturing firms. The results are expected to contribute to the arguments of EO-PERF and underline the strategic importance of KM to entrepreneurial and innovation-driven performance.

2. Theoretical Background and Hypotheses Development

Entrepreneurial orientation (EO) is broadly considered to be one of the primary performance sources of firms (PERF); nonetheless, the impact of this concept is not that simple. Though entrepreneurial actions can produce better results under certain conditions, they can

negatively affect performance or produce suboptimal outcomes in other cases, and thus create ambiguity on the performance impacts (Maharani et al., 2024). The previous studies show that EO is more likely to enhance the diversity of firm performance than to ensure consistently positive results (Berndt et al., 2024). Furthermore, EO is a construct, that is multidimensional, and its separate dimensions can have unique and even conflicting impacts on performance. In line with this the current research breaks down EO into three dimensions, which are risk-taking (RT), innovativeness (IN), and proactiveness (PR) and their respective effects. The available literature also indicates that the effects of EO and its dimensions vary in the context of the performance outcome in question, i.e. financial performance, the growth of a firm, or its competitiveness, which supports the importance of subtle analysis.

2.1 Performance and Dimensions of Entrepreneurial Orientation

Risk-taking is an inherent aspect of EO, which involves the readiness of a firm to work on risky and potentially expensive ventures instead of following a cautious or conservative approach. RT evidences the perceived likelihood of loss or failure as well as a behavioral disposition, which influences the attitudes and decision-making of entrepreneurs (Pinho et al., 2024). Now that the vast majority of strategic and financial decisions are fundamentally related to uncertainty, risk taking is considered to be an inevitable aspect of the work of an entrepreneur (Al-Kahtani and Al-Mekhlafi, 2024). The general indication of the previous research is that RT has a positive effect on entrepreneurial intention (Berndt et al., 2024), however, some conflicting results indicate that risk propensity does not necessarily lead to entrepreneurial behavior. The competitive motivations, including the need to beat the competitors, have also been found to be motivation to risk-taking behavior.

RT has been studied in a wide variety of settings, such as entrepreneurial education (Marei et al., 2024), and dynamic markets, where fluctuating circumstances motivate entrepreneurs to take more risks. In established organizations, RT is said to play a critical role in the survival and performance in the long-term although its strength is different through various stages of organizational life cycles, with a more significant role during a period of introduction and decline compared with growth and maturity. Empirical evidence regarding the RT-PERF relationship is inconclusive even after enormous studies have been done on the same. Some studies show that there is a positive relationship between them (Arabeche et al., 2022), whereas others note that the relationship depends on contextual moderators (including the type of industry, the environment of institutions, and innovativeness) (Alleimoun et al., 2022; Purnawan et al., 2025). On the other hand, (Masa'deh et al., 2018) find a low or context-dependent effects, and indicate that RT does not have a consistent effect on performance. On the basis of these ambivalent yet, in general, favourable arguments, the next hypothesis is offered:

H1. The effect of taking risks is positive on the performance of firms.

2.2 Innovativeness and firm Performance

Another key EO dimension is innovativeness that describes the predisposition towards adopting or implementing new ideas, products, processes, or technologies (Elshaer & Sobaih, 2022). Innovation may be conceptualized as the ability to transform knowledge into something more valuable by introducing new or better products and systems. The innovation is commonly defined as the degree and frequency of introducing new ideas or adopting new solutions in firms through which such is measured by such indicators as first-to-market operations, creative programs, and the introduction of new procedures (Hashim et al., 2025). There is an extensive literature on innovation as a decisive factor of competitive advantage and performance of firms (Mamun, 2026). Innovation capability is commonly viewed as a key

to the existence and prosperity of organisations in the long term (Rifqi Almahdani Rahmat et al., 2023). What empirical data also reveals is that innovativeness is positively associated with buyer production performance (Khan et al., 2024) and corporate sustainability consequences. This has also been associated with an improvement in sustainability performance due to the opportunity to exploit the innovation (Sampene et al., 2024). Nonetheless, the study of the relationship between innovation and performance is not ambiguous. Although typically the environmental innovations will enhance firm performance, social innovations have both positive and negative impacts (Moslehpoour et al., 2023), and time delays between the adoption of innovations and financial gains might block performance improvements. In addition, there are still discussions about the role of innovation in the financial success or the fact that financially robust companies are in a better place to invest in innovation (Abbas and Sagsan, 2019). Considering this, the hypothesis is as follows:

H2. Innovativeness has a positive influence on performance of the firm.

2.3. Proactiveness and firm Performance

The third popular dimension of EO is proactiveness and is an indicator of the forward-looking orientation of firms, their tendency to seek opportunities and their readiness to predict and influence the future market needs (Goldsby et al., 2018). According to (Din et al., 2024), PR plays the key role in EO because it is the foundation of future-oriented decision-making and exploratory strategies. The conceptualization of proactiveness by (Salih et al., 2024) regards proactiveness as the opposite of passivity, which focused on the taking of initiatives and responsiveness in competitiveness. Earlier research is always inclined to find out a positive association of PR and firm performance, even in SMEs. PR can have a rather profound impact in comparison with other EO aspects in low-technology SMEs (Rifqi Almahdani Rahmat et al., 2023).

However, the success of proactive solutions can be determined by the conditions of the environment. According to (Astrini et al., 2020), in hostile or resource-constrained environments, proactive and risk-taking behaviors may have to be restrained by small firms. Conversely, the data related to the hospitality and tourism industries have shown that proactive companies can more effectively respond to the needs of customers and introduce a new product (Elshaer & Sobaih, 2022). Based on this literature, the hypothesis stated below is proposed:

H3. Proactiveness has a positive influence on the performance of a firm.

2.3 Knowledge Management and Dimensions of Entrepreneurial Orientation

To stay engaged in proactive behavior, entrepreneurial firms are in constant need of new knowledge to detect opportunities, increase the value of their customers, and remain active (Maharani et al., 2024). EO promotes the systematic search of information, which facilitates the innovation and strategic rejuvenation (Cho and Lee, 2018). In addition to performance outcomes, EO and its dimensions have other organizational capabilities. To illustrate, EO has been found to positively influence the digitalization of firms. Equally, empirical research records a positive correlation between EO and knowledge management (KM), and information that EO has a direct positive impact on KM practices (Al-Kahtani and Al-Mekhlafi, 2024; Astrini et al., 2020).

Further breakdowns indicate that the success of the family firms is dependent on how effective the strategic knowledge management (SKM) capabilities are coupled with the EO (Al-Kahtani and Al-Mekhlafi, 2024). It is also argued that research shows that RT and PR have a considerable relationship with KM processes, and the connection between innovativeness and KM might be less strong or context-dependent (Marei et al., 2024). It has

also been determined that EO enhances the connection between knowledge application and performance, serves as a modulation factor (Ha et al., 2021). Based on these arguments, the next hypotheses are propounded:

H4. Risk-taking is a good influence in knowledge management.

H5. Knowledge management is affected positively by innovativeness.

H6. Being proactive has a positive influence on knowledge management.

2.3 Knowledge Management and Performance

KM is important in the acquisition, transformation, application, and protection of organizational knowledge that forms a basis of value creation. There is empirical evidence that some important dimensions of KM, including the knowledge acquisition dimension, the knowledge conversion dimension, and the knowledge protection dimension, are positively correlated with the firm performance (Sarbhai, 2025b). The research in the manufacturing setting supports the beneficial role of KM in organizations performance further (Arabeche et al., 2022). Since an innovation improves performance, the company that is able to utilize knowledge well to develop innovative outputs stands a better chance of performing better (Alleimoun et al., 2022). In particular, knowledge acquisition has been demonstrated to promote product innovation (Presutti et al., 2022), whereas good KM processes will be able to counter lower intellectual capital levels and optimize the performance in innovation (Masa'deh et al., 2018).

The performance impacts of KM are also enhanced with the development of information technologies. An example would be big data analytics that can be used to integrate the knowledge and improve performance outcomes (Barroso-Martinez et al., 2016). In other situations, KM may have an indirect impact on performance, which may work via such mechanisms as strategic human resource management and administrative or technical innovation (Cheng et al., 2025). It has been indicated that performance can be best explained by knowledge application regardless of the size of the firm (Purnawan et al., 2025). SMEs are also the target audience of KM since it is applicable to enhance productivity, ability to be innovative, and performance (Alleimoun et al., 2022; Al-Najjar et al., 2024). The knowledge obtained outside the organization also facilitates the identification and exploitation of opportunities. Based on these arguments, the hypothesis below is put forward:

H7. Knowledge management is beneficial to the performance of a firm.

2.4 Entrepreneurial Orientation, Knowledge Management, and FP

The lack of consistency of the results concerning the EO-PERF relationship implies that there are mediating mechanisms. KM is also a viable mediator, because it does not only have a direct impact on performance, but is also affected by EO. According to past research, KM has the potential to mediate between leadership and talent management and the outcomes of organisations (Adam et al., 2022). It has also been demonstrated that KM processes mediate the influence of high-performance work systems on intrapreneurial behavior to some extent (Astrini et al., 2020; Fareed Hussain, Caro Lucas, 2004). Besides, certain dimensions of KM, including knowledge application, have been pointed out to mediate the relationship between knowledge sharing and innovation.

Nevertheless, the mediating effect of KM might be more or less at different dimensions of EO. Indicatively, research of Indonesian SMEs shows that KM mediates the impact of RT and PR, and not innovativeness, on e-commerce adoption. Other studies show that EO-related qualities, including autonomy and competitive aggressiveness, have a positive relationship with customer KM competencies (Rifqi Almahdani Rahmat et al., 2023) as well as KM processes, overall. These results confirm the hypotheses below:

H8. Knowledge management mediates the difference between risk-taking and a firm's performance.

H9. The mediating factor between innovativeness and firm performance is knowledge management.

H10. Knowledge management is an intermediary between the effects of proactiveness on the performance of firms.

Figure 1 shows the proposed hypotheses and conceptual relationships.

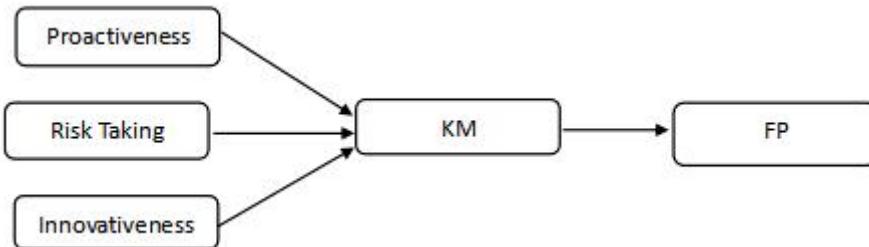


Figure 1: Conceptual Framework

3. Sample and Data Collection Procedure

The study will utilize survey data, where the researcher will use a questionnaire to collect data and organize it on a computer. This paper utilizes research data collected from small furniture production companies in Pakistan. The sample was selected as the population frame, which is found within the four cities: Peshawar, Rawalpindi, Faisalabad, and Lahore. The questionnaire was face-validated before the main survey, and the data would be collected in the period between May and June 2025. The respondents were senior managers or owners and made informed strategic-level responses. A total of 160 questionnaires were used and analyzed. The statistical power of 0.986, obtained through a post hoc analysis with G*Power 3.1.9.7, exceeds the recommended level of 0.80 and confirms that the sample size is adequate (Champlay, 2020).

Table 1: Demographic Analysis

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	128	80.0
	Female	32	20.0
Age (years)	Below 30	18	11.3
	31-40	56	35.0
	41-50	52	32.5
	Above 50	34	21.2
	Intermediate or below	22	13.8
Education Level	Bachelor's	78	48.8
	Master's	46	28.7
	MS/PhD	14	8.7
	Below 5	26	16.3
Firm Age (years)	5-10	54	33.7
	Above 10	80	50.0
	< 50	94	58.8
Firm Size (Employees)	50-100	42	26.2
	> 100	24	15.0

3.1. Variables

The independent variables in the study are the risk-taking (RT), innovativeness (IN), proactiveness (PR), and knowledge management (KM) variables. The RT, IN, and PR scales

used measurement scales were borrowed by other effective studies of entrepreneurship (Prakash et al., 2015). Conversely, the KM construct is novel in this paper, and the conceptualization of the research was informed by the existing literature on information management (Goldsby et al., 2018) and knowledge management practices (Wan and Du, 2022). The dependent variable is the performance of firms (PERF) realized as a second-order variable according to the suggestions of Cho & Lee (2018). Particularly, PERF includes three complementary dimensions, namely financial capacity (FC), firm growth (FG), and financial performance (FP). These dimensions have been used extensively in previous studies of entrepreneurship and SMEs performance, such as FC (Arabeche et al., 2022; Maharani et al., 2024; Sarbhai, 2025b), and FP (Masa'deh et al., 2018). Each of the constructs was measured on a seven-point Likert scale, with the first point (strongly disagree) to the seventh point (strongly agree). Table 2 includes the description of the study variables, such as the count of measurement items and the major descriptive statistics.

Table 2: CR, AVE, and Cronbach Alpha

Construct	Items	Factor loading	CR	AVE	Cronbach's Alpha
Risk-Taking (RT)	4	0.817-0.890	0.81	0.52	0.68
Innovativeness (IN)	4	0.79-0.894	0.86	0.60	0.79
Proactiveness (PR)	4	0.82-0.892	0.88	0.65	0.82
Knowledge Management (KM)	5	0.85-0.91	0.90	0.64	0.85
Firm Performance (PERF)	9	0.88-0.94	0.91	0.59	0.88

3.2. Data Analysis

The proposed relationships were analyzed using structural equation modelling (SEM) in this study. The two methods have gained prominence in the business research of recent years because of their capability of identifying intricate causal processes (Adam et al., 2022; Shaheen et al., 2023), and their methodology progresses still (J. F. Hair et al., 2017).

The use of SEM is especially appropriate in testing hypotheses that contain complex relationships between latent constructs. It is a combination of factor analysis and multiple regression, where measurement models and structural paths can be studied simultaneously. The presented research uses the partial least squares form of SEM (PLS-SEM), which represents a predictive and not a strictly confirmatory logic (J. Hair and Alamer, 2022). PLS-SEM aims at maximizing explained variance between the endogenous variables which in turn increases the predictive ability of the model (Gefen et al., 2011). PLS-SEM does not have the covariance-based SEM limitations in terms of sample size and measurement scale characteristics. In addition, it is highly appropriate where mediating relationships and higher-order constructs are factored in the models. The reason was that the research was exploratory in nature, identification of key explanatory variables was to be emphasized on, and the sample size was relatively small which made the use of PLS-SEM a suitable method of analysis.

4. Results

The analysis was performed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis. The analysis of SEM in this research has been done in accordance with the two-stage process suggested by Hair et al. (2022). The measurement model was assessed in the first stage to determine the suitability of the constructs and the level of fit between the model and the data. The second stage involved the testing of the research hypotheses by testing the structural model. Each of the independent variables (risk-taking (RT), innovativeness (IN), proactivity (PR), and knowledge management (KM)) was considered as a

reflective construct and firm performance (PERF) was modeled as the second-order construct. Analysis was done using SmartPLS 4.0.9.3 software.

4.1. Assessment of the Measurement Model

Evaluation measurement model included doing the indicator loading, collinearity, reliability, convergent, and discriminant validity (Prakash et al., 2015). All indicators had outer loadings that were higher than the recommended value of 0.5 (Hair et al., 2022) and the values of variance inflation factor were less than 3, which indicated the absence of collinearity. Internal consistency was evaluated by determining Cronbach alpha and composite reliability (CR) and all of them were over 0.7 except RT which had a slightly lower alpha and acceptable CR. The convergent validity was checked through average variance extracted (AVE) and all the constructs passed the 0.5 mark (Fornell and Larcker, 1981). Discriminant validity was determined in terms of the Fornell-Larcker criterion as well as using the heterotrait-monotrait ratio (HTMT) and all constructs met the requirements. The SRMR value of 0.072, which is less than the recommended 0.08, also supported the model fit (Hu and Bentler, 1999).

R^2 and f^2 were used to test the explanatory power and effect sizes. Three EO dimensions combined, expounded around 29% of the variance in KM, but with KM, the jointly explained more than 46% of the variance in the PERF, which is moderate in social science research (Hair et al., 2022). The analysis of the effect sizes showed that RT did not have significant impact on KM ($f^2 < 0.02$), but IN and PR had small but significant impact ($0.02 < f^2 < 0.15$). In the case of PERF, the influence of all predictors was small but significant, with KM having the greatest impact ($f^2 = 0.103$).

Table Correlations Analysis

Constructs	RT	IN	PR	KM	PERF
RT	0.72				
IN	0.34	0.77			
PR	0.29	0.41	0.81		
KM	0.18	0.46	0.44	0.80	
PERF	0.31	0.49	0.47	0.53	0.77

Table Direct Effects

Hypothesis	Path	β	t-value	p-value	Decision
H ₁	RT → PERF	0.161	2.11	0.035	Supported
H ₂	IN → PERF	0.220	3.18	0.002	Supported
H ₃	PR → PERF	0.229	3.45	0.001	Supported
H ₄	RT → KM	0.062	0.89	0.374	Not Supported
H ₅	IN → KM	0.270	3.96	<0.001	Supported
H ₆	PR → KM	0.263	3.82	<0.001	Supported
H ₇	KM → PERF	0.279	4.41	<0.001	Supported

4.3. Hypothesis Testing and Structural Model

A 5,000-bootstrapping procedure at 5% significance level was used in the testing of hypotheses. The findings show that the three EO dimensions have a positive impact on PERF, with IN ($b = 0.220$) and PR ($b = 0.229$) affixing more than RT ($b = 0.161$). KM recorded the best impact on the positive effect on PERF ($b = 0.279$, $p < 0.001$), which validated hypotheses H₁, H₂, H₃, and H₇ of the direct effects.

As to the impact of IN ($b = 0.270$) and PR ($b = 0.263$) on KM, at least we did not reject any of the hypotheses; H₅ and H₆ were confirmed, whereas H₄ was rejected. The mediation analysis

showed that the effect of IN on PERF was partially mediated by KM ($b = 0.075$, $p = 0.026$, H9 was accepted). RT (H8 rejected) mediation and PR (H10 not confirmed) were not significant, even though PR had a significant direct impact on KM and PERF.

All these findings indicate that even though all EO dimensions play a positive role in the performance of firms, KM is an important mediator, in particular to innovation, meaning that it can convert the entrepreneurial behaviors into performance outcomes.

Table Mediation Analysis

Hypothesis	Indirect Path	β	t-value	p-value	Result
H8	RT → KM → PERF	0.017	0.76	0.447	Not Supported
H9	IN → KM → PERF	0.075	2.23	0.026	Supported
H10	PR → KM → PERF	0.073	1.61	0.108	Not Supported

5. Discussion

The research has made some valuable contributions to knowledge management (KM), entrepreneurial orientation (EO), and firm performance (PERF) literature. First, as the previous literature has already revealed (Adam et al., 2022; Masa'deh et al., 2018), Our findings support the positive effect of KM on PERF, which can be applied to small and medium-sized furniture manufacturing companies. Noteworthy, the examination of KM as a mediator between the EO dimensions (risk-taking [RT], innovativeness [IN], and proactivity [PR]) and PERF provides a complex image. Out of EO dimensions, the path IN - KM - PERF was the only significant dimension indicating that knowledge management is especially important in translating innovation to better performance. This is in line with previous results which note the mediating effect of the variables concerning knowledge (Cheng et al., 2025) and the mediating effect of KM in the relationship between EO and performance outcomes (Barroso-Martinez et al., 2016). This conclusion was supported by the results as it was demonstrated that KM + IN results in high PERF whereas the lack of KM and IN or RT results in low performance. This shows that the systematic KM processes play a critical role in the creation of performance based on innovation and less important role in risk-taking and proactivity.

Second, the research demonstrates that IN and PR have a positive impact on KM, but RT does not. It is to some extent an affirmation of previous studies (Cheng et al., 2025) in which RT and PR were associated with KM. It could be that the primary reason is that internal KM processes are not directly influenced by risk-taking due to the fact that knowledge application can alleviate risk even without being contingent on it (Purnawan et al., 2025). The result of this investigation prompts the idea of a new study of the multifaceted interaction between RT and KM and especially in the context of SMEs.

Third, the paper proves the affirmative direct impacts of EO dimensions on PERF, which is in tandem with previous findings in both low and high-tech sectors (Al-Najjar et al., 2024). Particularly, the positive effect of IN on the second-order construct of PERF (financial performance, growth, and firm competitiveness) underscores the significance of a high level of innovation in achieving overall firm performance (Sarbhai, 2025b) Likewise, the positive effect of PR reflects the similar effect in SMEs especially in low-technology contexts (Sarbhai, 2025b).

The conclusions made in the study underline the theoretical and practical importance of KM and EO in performance impetus. KM comes out as a crucial tool in converting innovative actions into actual performance benefits especially in SMEs in the conventional sectors such as furniture production. Entrepreneurial behaviors (RT, IN, PR) also have a

positive effect on performance, yet only in the situation of innovation, KM plays an important mediating role. Managers are thus advised to focus on the establishment of KM systems as well as the capability to innovate in order to achieve better performance results.

5.1. Theoretical Implications

To start with, this research contributes to the body of knowledge about entrepreneurship through the empirical validation of the knowledge management (KM) as a partial mediator between the innovation (an EO dimension) and the firm performance, overcoming the inconsistencies in the EO-performance literature found so far, and proving the necessity of studying EO dimensions separately but not as a compound entity. Secondly, it helps to achieve theoretical granularity showing that not every EO dimension has the same impact on KM: whereas innovativeness and proactiveness have a strong and positive impact on KM, risk-taking does not, which also questions the assumption of dimensional symmetry in EO and favors the idea of disaggregated analysis of EO elements. Thirdly, the study contributes to the overall generalizability of EO theory in high tech or dynamic industries by offering strong evidence on low-technology SMEs in the furniture manufacturing sector in Pakistan, a setting that has been traditionally underrepresented in EO research, thereby adding value to the cross-contextual theoretical knowledge. Fourthly, it supports the theoretical understanding of firm performance as a second-order construct (multidimensional) (financial capacity, firm growth, and financial performance), which is consistent with the changes in the modern theoretical landscape that do not support the use of the single unidimensional measures of performance but embrace the concept of the holistic assessment systems. Fifthly, the study fills the gap between two major literatures, the entrepreneurship and knowledge management ones, by not only establishing KM as a complementary capability but also a strategic channel through which entrepreneurial intent (particularly, innovation) is converted into quantifiable results, thus integrating theories in the management subfields.

5.2. Practical Implications

To begin with, SME managers, particularly in the conventional manufacturing areas are advised to combine formal KM (e.g., knowledge capture systems, sharing systems, documentation systems) in their innovation efforts because KM is needed in order to turn innovative ideas into a tangible performance improvement. Secondly, business executives need to focus on developing innovativeness and proactiveness rather than generic risk-taking, as only the former two dimensions greatly empower internal KM capabilities and, by extension, improve performance that implies a more specific attitude toward entrepreneurial culture-building. Thirdly, business owners and entrepreneurs should also understand that taking of risks by itself will not result in efforts to improve performance unless accompanied with systematic knowledge processes; therefore, decision making concerning risk should be complemented by knowledge-based analysis to ensure maximum payoff and minimum losses avoidable. Fourth, policymakers (such as Pakistan) and associations in the industry must develop capacity-building initiatives that integrate EO development with KM training among SMEs, to provide workshops, digital solutions, and best practice principles to enhance the innovation-knowledge-performance channel. Fifthly, since KM only mediates the association between innovativeness and performance, those companies that are interested in using EO to gain a competitive advantage need to align their strategic investments: they need to allocate resources to both idea generation (innovation) and the creation of knowledge infrastructure that can facilitate the retention, diffusion, and application of the new knowledge throughout the organization.

5.3. Limitation and Future Direction

Nevertheless, there are a number of limitations that should be considered. The sample consisted of 160 companies in one industry and nation (Pakistan), which limits the ability to generalize. Also, there was an analysis of only a chosen set of EO dimensions and KM constructs, which did not allow exploring the rest of the potentially relevant factors. Future studies need to experiment with such models in other industries, countries, and larger samples, as well as alternative operationalizations of KM, EO, and PERF. Irrespective of these constraints, the study has provided important information about the relationship between KM and EO in improving the performance of firms, and the significance of innovation-based knowledge processes to SMEs.

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