THE IMPACT OF ENTREPRENEURIAL ORIENTATION ON KNOWLEDGE MANAGEMENT

Ady Purnama[1*]
Management Departement, BINUS Business School Undergraduate Program
Bina Nusantara University
ady.purnama@binus.ac.id / apurnama@binus.edu

Jefta Harlianto[2]
Management Departement, BINUS Business School Undergraduate Program
Bina Nusantara University
jefta@binus.edu

Maria Grace Herlina[3]
Management Departement, BINUS Business School Undergraduate Program
Bina Nusantara University
herlina01@binus.edu
(*Corresponding Author)

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Abstract - The growing competitive global business environment has increasingly identified Knowledge Management (KM) as a crucial strategic approach. The connection between Entrepreneurial Orientation (EO) and KM has not been thoroughly investigated, and there are only a few empirical studies on this subject. The primary goal of this study is to examine, through empirical means, the substantial influence of entrepreneurial orientation (EO) on knowledge management (KM). Using a quantitative approach, information was gathered via surveys from 133 staff members at a college or university and then assessed using Smart PLS. The findings reveal that innovation, risk-taking, and proactiveness are key elements of entrepreneurial orientation (EO) and significantly impact knowledge management (KM). The findings emphasize the critical importance of EO in improving KM operations within companies. This study provides new insights into the relationship between entrepreneurship and knowledge management by presenting empirical evidence, showing the vital role of entrepreneurial orientation in driving knowledge management. The study adds to the current body of knowledge and offers significant insights for professionals, academics, and business owners regarding the significance of combining entrepreneurial orientation and knowledge management to gain competitive benefits.

Keywords: Entrepreneurial Orientation; Knowledge Management; Innovation; Risk-taking; Proactiveness

1. INTRODUCTION

1.1. Research Background

In today's dynamic business environment, effectively leveraging knowledge is crucial for making well-informed decisions and enhancing organizational processes. Extensive literature highlights the benefits of Knowledge Management (KM) practices, emphasizing their strong alignment with competitive strategies and their pivotal role in fostering innovation within

organizations (Trivedi & Srivastava, 2022; Areed et al., 2021). This study aims to explore the relationship between Entrepreneurial Orientation (EO) and Knowledge Management (KM). EO is recognized as a strategic asset encompassing creativity, willingness to take risks, and proactive actions as fundamental elements that drive entrepreneurial pursuits and confer competitive advantages (Martens et al., 2018).

The impact of EO on KM processes has not been thoroughly investigated despite extensive research on KM. Prior studies have primarily focused on methodological approaches to knowledge generation rather than empirically assessing the influence of EO on KM (Jiang et al., 2019). Farooq and Vij (2020) have highlighted the absence of definitive findings on which factors facilitating knowledge management significantly affect entrepreneurial orientation. This underscores a notable gap in empirical research that this study aims to address.

This study seeks to collect robust empirical evidence on the substantial influence of entrepreneurial orientation (EO) on knowledge management (KM). The emphasis is on EO elements such as innovation, risk-taking, and proactiveness, intending to clarify their impact on the efficacy of KM processes. The anticipated outcomes are expected to improve understanding of how entrepreneurial approaches can be smoothly integrated with KM to foster organizational growth and innovation.

In this study, we aim to fill a crucial gap in the literature by thoroughly investigating the connection between EO and KM using a comprehensive empirical approach. The findings provide useful perspectives for practitioners, researchers, and business owners, emphasizing the significance of harnessing EO to enhance KM strategies and attain a lasting competitive advantage.

1.2. Literature Review

1.2.1 Entrepreneurial Orientation

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1.2.2 Knowledge Management

In general, knowledge management implies the availability of information and data in an organization. It would benefit the company when the knowledge is developed and performed for various operations. Previous studies stated that there is no standard definition of knowledge management processes. In order to gain a deeper understanding of Knowledge Management topics, it is important to consider the connection between knowledge management, the enablers of knowledge management, and the knowledge management process (KMP). (Nasution et al., 2021). Knowledge management processes consist of four main KM activities (sharing, creating, acquiring, and storing knowledge) (Trivedi & Srivastava, 2022).

Prior research indicated that knowledge management involves the management procedures and actions that a company implements to enhance the efficiency of generating and preserving the intellectual assets within companies. (Ramadan et al., 2017). Another study stated that the advancement of new processes and products requires broad and rigorous knowledge activities (Nasution et al., 2021). A recent study has identified some enablers of Knowledge management, that are entrepreneurial orientation (EO) and leadership focused on knowledge (Latif et al., 2021). This study also concentrates on utilizing knowledge management, which is presumed to be connected to EO, one of the elements of KM enablers.

Another study revealed that knowledge management operations are explained as knowledge creation, knowledge sharing, and knowledge utilization. The process of knowledge creation involves generating new knowledge, sharing knowledge involves contributing and accumulating knowledge between units, and knowledge utilization refers to implementing or applying knowledge (Shujahat et al., 2019). This literature will be referred to in this study.

1.2.3 Entrepreneurial Orientation and Knowledge Management

Previous study results propose that companies should implement Entrepreneurial Orientation (EO) as an element of their strategy by recognizing and developing opportunities using knowledge-based systems (Farooq & Vij, 2020). Another study found that entrepreneurial orientation (both proactiveness and risk-taking) is significantly correlated to the knowledge management process (Nasution et al., 2021). Further evidence suggests that taking an entrepreneurial approach has a beneficial impact on Knowledge Management (Sabrinah et al., 2018).

A recent survey considered knowledge-oriented leadership and EO as two enablers of KM (Latif et al., 2021). Another study found that an EO appears essential in helping companies generate new organizational knowledge (Jiang et al., 2019). A new study shows that entrepreneurial leadership has a significant impact on employees' emotional dedication and their willingness to share tacit knowledge. (Pu et al., 2022). One literatur provides comprehensive results regarding the connection between the aspects of knowledge management and entrepreneurial orientation. (proactiveness, innovativeness, and risk-taking) (Farooq & Vij, 2020). Another study also found that EO has a considerable impact on KM procedures (Latif et al., 2021). There is a relationship between innovativeness and KM (including its dimensions, e.g., knowledge Sharing (KSO), information technology orientation (ITO), and learning orientation (LO)

1.3 Hypothesis development

The relationship between innovativeness and LO shows that learning organizations are essential in establishing a good company culture. The relationship between innovativeness and KSO indicates that companies encourage employees to distribute tacit knowledge, which is also critical in making inventions. The relationship between innovativeness and ITO suggests that companies that are great at overseeing and classifying knowledge will generate a good influence on innovation (Farooq & Vij, 2020). For these reasons, our proposed hypotheses are:
H1: Innovation of entrepreneurial orientation has a significant effect on knowledge management.

The relationship between risk-taking and LO suggests that companies take more risks in building a good learning organization and accomplishing organizational performance. The relationship between risk-taking and KSO implies that the absence of a chance to take risks may lead to the failure of valuable knowledge if employees are not encouraged and persuaded to distribute their knowledge. The relationship between risk-taking and ITO implies that knowledge-based companies are more avoid risks because they spend in knowledge-based systems to keep the knowledge in achieving a competitive benefit (Farooq & Vij, 2020). For these reasons, our proposed hypotheses are:
H2: Risk-taking of entrepreneurial orientation has significant effect on knowledge management.

The relationship between proactiveness and LO implies that organizations that are more farsighted in making a reasonable learning ability will find it easier to perform well. The relationship between proactiveness and KSO recommends that the company’s proactiveness in making knowledge-sharing abilities can be significantly helpful in developing valuable knowledge to enhance its competitiveness. The relationship between proactiveness and ITO shows that companies that are more proactive in spending on the IT infrastructure will find it easier to classify the knowledge to achieve competitive advantage (Farooq & Vij, 2020). For these reasons, our proposed hypotheses are:

H3: Proactiveness of entrepreneurial orientation has significant effect on knowledge management.

2 RESEARCH METHODOLOGY

2.2 Research Design

This study employs a quantitative research design to examine EO's significant effect on KM empirically. The research adopts a descriptive and associative approach:

a. Descriptive Research: This approach details the participants' characteristics and responses, providing a comprehensive understanding of the data collected.
b. Associative Research: This approach explores the causal relationships between variables, specifically the impact of EO on KM.

2.3 Research Model

Figure 1 illustrates the research framework. The model posits that EO, which encompasses innovation, risk-taking, and proactiveness, influences KM processes within organizations.

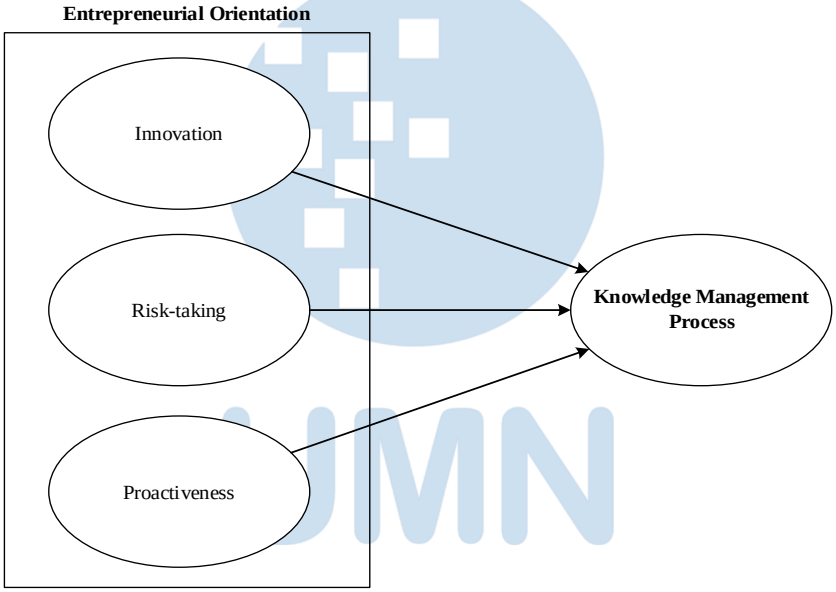

Figure 1. Research Model

2.4 Research Methodology

This research was designed to take a quantitative approach. Structural Equation Modeling-Partial Least Squares (SEM-PLS) was used to analyze causal relationships among variables. Two types of variables were utilized: the latent (construct) variable, which is also known as the unobserved variable, and the indicator variable, which is also known as an observed variable of each latent variable. The latent variable is divided into the exogenous latent variable and the endogenous latent variable. In this research, the exogenous latent variable represents the Innovation, Risk-taking, and Proactiveness of entrepreneurial orientation, while the endogenous latent variable is characterized by knowledge management. The hypothetical model is depicted in Figure 1.

This study will be carried out in multiple phases, which include: (1) development of a survey instrument according to the study's framework, (2) identifying the sample of

participants, (3) conducting an online questionnaire, (4) analyzing the data using SMART-PLS software, and (5) interpreting and evaluating the data.

2.5 Sampling Method

The study targets staff members from a higher education institution. A purposive sampling method was employed to select participants directly involved in KM processes. The sample consists of 133 staff members, deemed adequate for achieving statistical significance in Structural Equation Modeling (SEM) analysis.

2.6 Data Collection

Data was collected through an online questionnaire that was distributed to selected participants. The questionnaire was constructed based on the research framework and existing literature, and it included a Likert Scale (1-5) to gauge the responses. The survey encompassed inquiries pertaining to the three dimensions of EO (innovation, risk-taking, and proactiveness) as well as KM processes.

2.7 Ethical Considerations

All participants were provided with information about the study's purpose, and their consent was acquired prior to their participation. The anonymity and confidentiality of the participants' responses were carefully maintained throughout the research process. This thorough and detailed explanation of the research methodology guarantees transparency and reproducibility, addressing the publisher's suggestions for enhancement.

3 RESULTS

In this section, the analysis results and insights derived from data processing are presented. The study employs Structural Equation Modeling-Partial Least Squares (SEM-PLS) to investigate the relationship between Innovation, Risk-taking, and Proactiveness in entrepreneurial orientation and their influence on knowledge management.

3.2 Evaluation of Measurement Model (Outer Model)

The assessment of the measurement model is outlined in this section. Convergent validity, discriminant validity, and composite reliability were analyzed to evaluate the measurement model.

Convergent validity is affirmed when the indicators of a construct demonstrate strong correlation. This is usually determined by the factor loading and AVE values. The outer loading factor should exceed 0.7 (Hair, Hult, Ringle & Sarstedt, 2017: 102), while the Average Variance Extracted (AVE) should be higher than 0.705 (Hair, Hult, Ringle & Sarstedt, 2017: 115). As shown in Table 1, these values indicate the level of convergent validity.

Discriminant validity seeks to determine whether a reflective indicator effectively measures its construct. It assumes that each indicator should be closely related to its specific construct only, and that measures of different constructs should not be closely related (Ghozali & Latan, 2015). The discriminant validity test in SmartPLS utilizes cross-loading values and the Fornell-Larcker Criterion to ascertain this (Henseler et al., 2015).

It is noted that if the square root of the average variance extracted (AVE) for each construct exceeds the correlation value between constructs and other constructs in the model, the model demonstrates excellent discriminant validity value (Fornell and Larker, 1981 in Wong, 2013). Moreover, cross-loading is determined based on the factor loading of all indicators within one latent variable being higher than those in other latent variables. This

information is presented in Tables 2 and 3, providing insights into the Fornell-Larcker criterion and cross-loading values.

The reliability of the reflective constructs is assessed by Composite Reliability. Composite Reliability should exceed 0.6, and Cronbach's Alpha should be higher than 0.7 (Ghozali & Latan, 2015). The values for Cronbach's Alpha and Composite Reliability are presented in Table 1.

Table 1. Outer Loading Factors, AVE, Cronbach's Alpha, and Composite Reliability

Latent Variable	Indicators	Outer Loading Factors	Average Variance Extracted (AVE)	Cronbach's Alpha	Composite Reliability
Innovation	Innovation_1	0.901	0.784	0.726	0.879
	Innovation_2	0.870			
KM	KM_C	0.877	0.769	0.850	0.909
	KM_S	0.864			
	KM_U	0.891			
Proactiveness	Proactiveness_1	0.770	0.551	0.733	0.831
	Proactiveness_2	0.706			
	Proactiveness_3	0.760			
	Proactiveness_4	0.732			
Risk-taking	Risk-taking_1	0.850	0.719	0.609	0.837
	Risk-taking_2	0.846			

Table 2. Fornel Lacker

Latent Variable	Innovation	KM	Proactiveness	Risk-taking
Innovation	0.885			
KM	0.482	0.877		
Proactiveness	0.621	0.516	0.742	
Risk-taking	0.428	0.496	0.496	0.848

Table 3. Cross Loading

Latent Variable	Innovation	KM	Proactiveness	Risk-taking
Innovation_1	0.901	0.453	0.552	0.413
Innovation_2	0.870	0.398	0.547	0.341
KM_C	0.406	0.877	0.451	0.428
KM_S	0.385	0.864	0.424	0.423
KM_U	0.474	0.891	0.479	0.453
Proactiveness_1	0.571	0.468	0.770	0.384
Proactiveness_2	0.417	0.396	0.706	0.354
Proactiveness_3	0.422	0.340	0.760	0.440
Proactiveness_4	0.388	0.277	0.732	0.277
Risk-taking_1	0.383	0.423	0.319	0.850
Risk-taking_2	0.344	0.419	0.523	0.846

3.3 Evaluation of Structural Model (Inner Model)

The structural model's assessment based on the hypothesis is used to forecast the causal connection between latent variables (Ghozali & Latan, 2014). The assessment involves

examining the R-square (R^2), Q-square (Q^2) test, and NFI values. The following outlines each step involved in evaluating the structural model and the standards for assessment.

3.4 R-Square

The R-squared (R^2) test evaluates the percentage of variances in exogenous variables accounted for by endogenous variables. In practical terms, an R-squared (R^2) value of 0.67 indicates a strong model, 0.33 suggests a moderate model, and 0.19 signifies a weak model (Chin, 1998 in Ghazali & Latan, 2014).

Table 4. R Square

	R Square	R Square Adjusted
KM Process	0.368	0.354

The combined impact of Innovation, Risk-taking, and Proactiveness of entrepreneurial orientation on knowledge management yields an R Square value of 0.368 and an adjusted R Square value of 0.354 (Table 4); it can be explained that all independent variables (Innovation, Risk-taking, and Proactiveness of entrepreneurial orientation) simultaneously effect knowledge management by 0.368 or 36.8%. As the Adjusted R Square 35.4% < 67%, the effect of Innovation, Risk-taking, and Proactiveness of entrepreneurial orientation on knowledge management is moderate.

3.5 T-Statistic (Bootstrapping)

The results from the bootstrapping analysis for direct effects in PLS SEM are detailed in Table 5:

Direct Effects of Innovation of entrepreneurial orientation on knowledge management

Based on calculations using Bootstrap, the test findings show that the estimated coefficient of innovation of entrepreneurial orientation against knowledge management bootstrap results is 0.208, with a T Statistics value of 2.410 and a standard deviation of 0.086. The P value is 0.016 < 0.05, leading us to accept H1 and indicating that the direct effect of innovation of entrepreneurial orientation on knowledge management is significant.

Direct Effects of Risk-taking of entrepreneurial orientation on knowledge management

According to Bootstrap computations, the test results indicate that the estimated coefficient for the impact of Risk-taking in entrepreneurial orientation on knowledge management is 0.245, with a T Statistics value of 2.810 and a standard deviation of 0.087. The P value of 0.005 < 0.05, leading us to accept H1, which suggests that the direct effect of Risk-taking in entrepreneurial orientation on knowledge management is indeed significant.

Direct Effects of Proactiveness of entrepreneurial orientation on knowledge management

According to the Bootstrap calculations, the test shows that the estimated coefficient of Proactiveness of entrepreneurial orientation against knowledge management is 0.285, with a T Statistics value of 4.882 and a standard deviation of 0.058. The P value is 0.000 < 0.05, indicating that we should accept H1 and concluding that the direct effect of the Proactiveness of entrepreneurial orientation on knowledge management is indeed significant.

Table 5. T-Statistic

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Innovation → KM	0.208	0.209	0.086	2.410	0.016
Proactiveness → KM	0.245	0.259	0.087	2.810	0.005
Risk-taking → KM	0.285	0.282	0.058	4.882	0.000

Based on the results of the SEM-PLS analysis, the following conclusions can be drawn regarding the hypotheses:

- H1: Accepted. The data support the hypothesis that **innovation** in entrepreneurial orientation significantly affects KM.
- H2: Accepted. The data support the hypothesis that **risk-taking** in entrepreneurial orientation significantly affects KM.
- H3: Accepted. The data support the hypothesis that **proactiveness** in entrepreneurial orientation significantly affects KM.

3.6 Predictive Relevance

During Q-Square (Q^2) testing, the objective is to assess how effectively the estimated model and parameter generate the observed values. A Q-square value greater than 0 indicates strong predictive relevance, while a value less than 0 suggests a lack of predictive relevancy. The computed Q-Square (Q^2) value for this model is 0.272, which demonstrates excellent predictive relevance as it surpasses the threshold of 0 (zero).

Table 6. Predictive relevance

	SSO	SSE	Q^2 (=1-SSE/SSO)
Innovation	266.000	266.000	
KM	399.000	290.502	0.272
Proactiveness	532.000	532.000	
Risk-taking	266.000	266.000	

3.7 Model Fit

The NFI value is used to assess the quality of the research model. A good NFI value is close to 1 on a scale of 0 to 1. Based on the NFI calculations, the value obtained is 0.663, which is close to 1. This suggests that the research model effectively estimates the impact of Innovation, Risk-taking, and Proactiveness of entrepreneurial orientation on knowledge management.

Table 7. Model fit

	Saturated Model	Estimated Model
SRMR	0.087	0.087
d_ULS	0.500	0.500
d_G	0.234	0.234
Chi-Square	192.466	192.466
NFI	0.663	0.663

According to this result, the author considers the research model suitable and believes it can be utilized for hypothesis testing (see Figure 2).

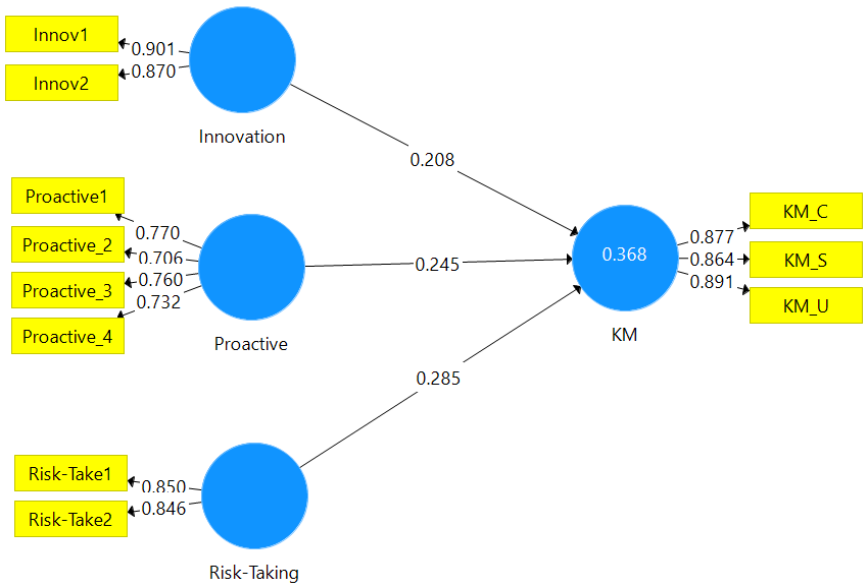

Figure 2. Hypothesis Model Result

4 DISCUSSION

The research determined the connection between knowledge management and entrepreneurial orientation. The study also evaluated the impact of entrepreneurial orientation (consisting of innovation, risk-taking, and proactiveness) on knowledge management.

4.1 Innovation and KM

The research discovered that there is a substantial influence of **innovation** of entrepreneurial orientation on knowledge management. The research outcomes are identical to the recent literature result, indicating the important influence of the general aspects of entrepreneurial orientation on KM processes (Latif et al., 2021). Another study also discovered the relationship between Innovation and knowledge management process dimensions (consisting of information technology orientation (ITO), learning orientation (LO), and knowledge sharing (KSO)). The connection between innovativeness and LO indicates that learning organizations play an essential part in establishing an excellent company culture. The relationship between innovativeness and KSO indicates that companies support employees to distribute tacit knowledge, which will be important in getting innovations. The relationship between innovativeness and ITO suggests that organizations that are great at classifying knowledge will nourish a good effect on innovation (Farooq & Vij, 2020).

4.2 Risk taking and KM

The research also confirmed that **risk-taking** associated with entrepreneurial mindset has a substantial influence on knowledge management. The result aligns with recent literature of Farooq & Vij (2020), it revealed the connection between risk-taking and knowledge-management process dimensions. The connection between risk-taking and learning orientation suggests that companies get riskier in conditions of creating a good learning organization and accomplishing organizational performance. The relationship between risk-taking and knowledge-sharing implies that the absence of a chance to take risk may result in the failure of valuable knowledge if workers are not being encouraged and persuaded to distribute their knowledge. The connection between risk-taking and information technology orientation

implies that knowledge-based companies are more refrain from risks, because they spend in knowledge-based systems to keep the knowledge in achieving a competitive benefit (Farooq & Vij, 2020). Another study also found that critical ingredients of EO in company initiatives, e.g., experimentation and risk-taking, have affected how knowledge is produced and shared (Stuetzer et al., 2018). One study also found that a company's system (from a knowledge management perspective) that encourages risk-taking and experimenting will enhance both learning and the creation and sharing of knowledge (Miles, 2012).

4.3 Proactiveness and KM

The study discovered that the influence of the **proactiveness** of entrepreneurial orientation on the knowledge management process was not significant. This is in line with the findings of Farooq & Vij (2020), it discovered the connection between proactiveness and knowledge management process dimensions. The connection between proactiveness and learning orientation indicates that organizations that are more proactive in creating a decent learning ability will find it easier to accomplish good performance. The relationship between proactiveness and knowledge-sharing recommends that the company's proactiveness in constructing knowledge-sharing skills can be very useful in developing valuable knowledge to enhance its competitiveness. The relationship between proactiveness and IT orientation shows that companies that are more proactive in spending in the IT infrastructure will be easier to classify the knowledge to achieve competitive advantage (Farooq & Vij, 2020). Other studies indicate that a strong entrepreneurial orientation, combined with a dynamic market, provides an ideal environment for employees to exchange and acquire knowledge within their organization. (Jiang et al., 2019).

The importance of knowledge management adoption in business world became growing nowadays. KM play important roles in company practices in improving the decision making, while entrepreneurial orientation (EO) methods also can achieve excellent performance in business. The result aligns with previous literature revealing that organizations should embrace the EO as a part of their game plan by recognizing and utilizing the opportunities using knowledge-based systems.

5 CONCLUSION, LIMITATION AND IMPLICATION

This study aims to expose the correlation between EO and KM. The research reinforces existing findings by investigating the connection between different aspects of entrepreneurial orientation (risk-taking, proactiveness, and innovativeness) and KM. The research discovered that EO has a significant effect on KM.

EO provides essential aspects for accomplishing benefits in the relationship with knowledge management. Innovativeness should be included in company culture that enables in creating new or improved knowledge, as they can also contribute in knowledge sharing sessions. While risk-taking play important roles for employee to be courageous to involved in creating and sharing their knowledge. This also enable in building a good learning organization and should return in accomplishing organization performance. other dimension that also crucial is proactiveness, it plays important part in establishing knowledge sharing abilities which can be very useful in creating the valuable knowledge that enhance company competitiveness.

While knowledge management can support entrepreneurial companies in collecting the knowledge to enhance their competitive advantages. By having rigorous knowledge activities and processes, it enables the company to develop and improve its products and services. This also involves workers' knowledge and skills as crucial contributions in the development process.

This study provides a new contribution to both study of the entrepreneurship and knowledge management by demonstrating through empirical evidence that entrepreneurial orientation (EO) plays a vital role in driving knowledge management within organizations. The association between knowledge management and entrepreneurial orientation (EO) indicates that companies should build a good knowledge-based system that can enhance entrepreneurial decision-making. This study recommends that companies should invest in knowledge management and entrepreneurial orientation (EO) to develop business accomplishment.

While this study provides valuable insights, it is not without limitations. The study was conducted within a single higher education institution, which may limit the generalizability of the findings. Future research should consider replicating this study in different organizational contexts and industries to validate the findings. The authors also recommend further investigation how EO and KM impact business performance.

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