

# Unleashing Banking Excellence: The Impact of Human Capital and Knowledge Management through Organisational Learning

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*Abstract:* - This research aimed to investigate the effect of human capital (HC) and knowledge management (KM) on organizational performance (OP) with the mediating role of organizational learning culture (OLC) applied to the banking sector in Indonesia. A quantitative method was used in the investigation, and data were collected through questionnaires distributed to 144 respondents. Furthermore, Partial Least Squares Structural Equation Modeling (PLS-SEM) was used as the data analysis method, and hypothesis testing was carried out using the SmartPLS version 4.0 application. The results showed that HC and KM both possessed a positive and significant effect on OP through OLC mediation. This research further served as a reference for organization management aiming to achieve competitive and sustainable advantages through effective HC management and KM implementation, supported by the application of OLC. Additionally, the analysis emphasized the role of OLC in optimizing the contributions of HC and KM to OP and productivity. OLC further played a crucial role in internalizing a learning culture among employees, fostering unique capabilities and advantages that helped management create and promote new knowledge, eventually converting it into a competitive advantage.

*Key-Words:* - human capital, knowledge management, organizational learning culture, human resource management, organization performance, innovation.

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## 1 Introduction

The era of globalization and the industrial revolution in the rapidly changing global competitive environment poses a challenge for organizations striving to stay competitive in the market. One of the most critical factors for achieving this competitiveness is excellence in human resources. Unlike structural or financial capital, which can be easily replicated, human resources serve as the most significant source of competitive advantage because of their unique and non-imitable nature, [1], [2]. This advantage is

closely linked to knowledge management (KM), which leverages intellectual capacity to foster creativity, boost productivity, drive business innovation, and develop more efficient and advanced production methods, [3].

Human capital (HC) recognizes that people in an organization are invaluable assets contributing to development and growth, similar to physical assets like machinery and resources. The collective attitudes, skills, and abilities of employees play a crucial role in improving organizational performance (OP) and productivity, [4], [5]. Several

publications, including those in [6], [7], [8], outlined the importance of treating human resources as assets. These publications emphasized that organizations should continuously develop individual capacities through sustainable KM practices, significantly enhancing HC and OP. Key elements such as knowledge, experience, skills, innovation, and employee morale all have statistically significant and varying levels of positive impact on performance.

OP is inherently tied to the strategic role of knowledge, which serves as a crucial resource for maintaining and enhancing competitive advantage. Managers can leverage knowledge as a central asset to empower employees in creating innovative solutions, ensuring the organization's performance remains effective and competitive, [9]. Additionally, KM has attracted significant attention for the potential to improve OP and strengthen the organization's competitive positioning, [10], [11], [12]. Effective KM processes, which include the evaluation of individual employee data such as seniority, skills, and performance, enable the organization to project and improve OP comprehensively, [13]. KM also fosters the creation, sharing, storage, and application of knowledge by stimulating innovation and driving improved results, [14].

This research aimed to provide empirical evidence on the role of HC and KM in contributing to OP. Although previous publications, including, [15], [16], [17], have explored the effects of HC and KM on OP, gaps remain in understanding how KM is internalized among employees. The analysis addresses these gaps by examining the role of organizational learning culture (OLC) as a mediating factor between HC, KM, and OP. Insufficient implementation of KM often leads to inaccessible organizational knowledge, which hinders improvements in OP, [18], [19], [20]. OLC is one aspect of concern in the success of improving OP practiced through behaviors, attitudes, and competencies that ensure learning is valued and promoted, [21], [22]. It ensures that employees continually acquire and enhance their knowledge, eventually driving the success of the organization, [23].

## 2 Literature Review

### 2.1 Human Capital and Organizational Learning Culture

HC was often viewed individually because each employee possessed specific abilities, skills, and knowledge that companies required, impacting the development of OLC, [24]. Based on the HC concept, OLC depended on the type of employees in the organization, particularly the unique knowledge and skills, suggesting an interrelationship between HC and OLC. This research concluded that HC could be considered a strategic asset when it increased valuable expertise and provided a competitive advantage. Consequently, companies retained such employees because they generated substantial benefits for human resources, [24]. These results correlated with OLC, which established various flexible choices for companies in creating, disseminating, institutionalizing, and internalizing knowledge in human resources management processes by creating uniqueness and specific characteristics not possessed by other companies, [25]. Additionally, [26], stated that employees with unique knowledge and value contributed more to promoting OLC.

Based on the results, the uniqueness and value of knowledge, along with individual skills and qualities, were positively related to OLC. HC with greater competitive value and uniqueness had the potential to explore and discover new ways of working that eventually became new habits or cultures in the organization. Furthermore, this type of HC was able to produce a learning culture, which was essential because knowledge added value and needed to be internalized in the organization to create various competency developments. Based on the theoretical explanation and previous research, the following hypothesis was proposed.

H1. Human capital had a positive and significant effect on organizational learning culture.

### 2.2 Human Capital and Organizational Performance

Human resources were fundamental variables for every organization in determining success. In various companies, human resources represented necessary capital consisting of a combination of knowledge, skills, competence, innovation, and individual or employee expertise that drove organizational growth, [27], [28]. HC was further observed as a valuable asset in ensuring organizational productivity. In this context, a human-oriented management system requires training, management, and retention of HC to ensure employees contribute effectively to the organization, [29], [30]. Companies could apply instruments to measure HC capacity, including the measurement of

HC components relevant to employee duties and responsibilities with a direct contribution to OP, [31].

HC, which included the collective knowledge, skills, capacities, and work experiences of individuals in the organization, significantly impacted OP, [32]. HC gaining increased knowledge through individual cognitive enhancement could simultaneously impact the effectiveness of the individual and OP. Theoretically, organizational productivity and performance were significantly influenced by individual abilities, expertise, and skills. This was further supported by the importance of hiring the right human resources to improve and foster positive attitudes of competence and intellectual capacity, [33], [34]. HC conceptually had a complex and unique configuration, comprising intellectual capacity, skills, and a combination of individual expertise, which provided a distinct competitive advantage, [35]. This concept possessed a basic principle emphasizing the contribution and participation of individuals in the process of increasing capacity through education, which led to the effectiveness and efficiency of organizational performance, [36], [37]. Based on the theoretical review and previous research on the effect of HC on organizational performance, the following hypothesis was proposed.

H2. Human capital had a positive and significant effect on organizational performance.

### **2.3 Knowledge Management and Organizational Learning Culture**

KM from the organization's perspective showed the existence of a knowledge-based resource that produced competencies not easily imitated by competitors, [38], [39]. This knowledge was a process by which an organization created, maintained, and enhanced its competitive advantage. KM was also inseparable from the role of OLC, which influenced the effectiveness of internalizing new knowledge produced. At a more complex level, this knowledge became a coordinated organizational routine comprising many individuals efficiently integrated with policies and flexibility that determined the ability of knowledge to be converted into a competitive advantage, [40].

In previous research, implementing good KM, creating a learning culture, and increasing investment in human resources contributed to significant returns on investment, improving OP, determining market positioning, and generating competitive advantage over competitors, [41], [42],

[43]. This point began by describing and developing the role of KM in the organization. KM was related to creating, managing, transferring, and using knowledge in the organization, [27]. Organization in the business context perceived knowledge as independent of a particular group, where knowledge was stored in repositories, policies, and routines, [44]. The successful implementation of OLC in an organization required individual knowledge to be transformed into information that could be disseminated and used by other employees, [45], [46]. When associated with the concept of KM, this process was implemented by the organization to assess and translate information into learning, forming a culture that produced knowledge. Based on previous research and the arguments, the following hypothesis was proposed.

H3. Knowledge management had a positive and significant effect on organizational learning culture.

### **2.4 Knowledge Management and Organizational Performance**

KM as a process indicated that an organization's ability to process, store, change, disseminate, and internalize knowledge into the organization was necessary to use infrastructure capabilities, [10]. The knowledge acquisition process relied on the organization's ability to identify, obtain, and accumulate valuable internal and external knowledge to support its business operations. Business companies often faced dynamic and rapid changes where knowledge represented one of the strategic assets for maintaining existence and competitive advantage for organizational success, [47]. Effective knowledge resource management depended significantly on the organization's success in implementing the KM process, leading to OP, [48]. For instance, the acquisition, dissemination, sharing, and use of knowledge not only impacted the increase in collective learning but also influenced decision-making processes, thereby enhancing organizational performance and profile through innovations, [49]. Recent publications found a significant and positive relationship between KM and OP in business companies, [47], [49], [50]. Based on the arguments, the following hypothesis was proposed.

H4. Knowledge management had a positive and significant effect on organizational performance.

## 2.5 Organizational Learning Culture and Organizational Performance

OLC was based on processes of creating, managing, storing, and disseminating new knowledge in an organization, which significantly affected behavior and created a work culture. It also played an essential role in ensuring that companies of all types achieved sustainability and maintained their existence in markets with tight and competitive conditions, [51]. OLC combined dynamic processes to create, build, acquire, and integrate knowledge that was internalized into beliefs, shared values, norms, behaviors, and organizational characteristics. These processes aimed to develop organizational resources and capabilities for achieving superior performance, [52]. Additionally, OLC played a role in companies growing in uncertain and dynamic environments by improving performance through learning environments and the internalization of knowledge by employees, [53]. It was considered a crucial factor in companies for determining performance and explaining performance achievements, [54]. Previous research on OLC, such as [51], [55], stated a significant effect of OLC on OP. Based on the arguments and results of previous research, the following hypothesis was proposed.

H5. Organizational learning culture had a positive and significant effect on organizational performance.

## 2.6 The Mediating Role of Organizational Learning Culture

OLC played an essential role in the success of KM implementation because the practices fostered and developed a new type of culture that motivated the creation and dissemination of knowledge to employees in producing new competitive values for the organization, [14], [56], [57]. KM was a new knowledge-learning process that included continuous and team learning, investigation, empowerment, and promotion of knowledge. These aspects were often considered insufficient to improve the productivity of OP, [58]. Specific research supported the results that KM implementation was still insufficient to create sustainable OP, as stated in [58], [59]. Therefore, the roles of managers were crucial in KM implementation, which was realized through the internalization of knowledge to employees in the daily work, ensuring new knowledge became embedded as employee values and references by fostering a culture of continuous learning, [52]. This

research assumed the need for OLC to optimize the impact of the relationship between KM and OP.

Strategic management of human resources system design created organizational characteristics correlated with the environment, facilitating organizational capabilities to achieve desired performance, [60]. From a strategic perspective, this produced ideas at the managerial level, including core competencies such as knowledge, intellectual competencies, and unique skills, which generated organizational competitive advantages. These were achieved by combining individual employee learning abilities with collective performance, which contributed to the success of OP, [61]. The process included creating and improving competencies for employees that were unique, distinctive, and not easily imitated. Therefore, business companies were advised to invest in human resources, particularly in enhancing individual capacity through education and training, which positively impacted intellectual capacity and superior employee capabilities, [25]. Publications showing a relationship between HC and OP have been reported in [19], [37], [62]. This research aimed to bridge the relationship between HC and OP through the role of OLC. Implementing OLC helped create knowledge internalization during the environmental uncertainties faced by the organization, [53]. Based on the arguments and results of previous research, the following hypotheses were proposed. The research framework model based on the description was depicted in Figure 1.

H6. Knowledge management had a positive and significant effect on organizational performance through organizational learning culture.

H7. Human capital had a positive and significant effect on organizational performance through organizational learning culture.

Therefore, human resources are regarded as one of the most valuable and strategic assets within organizations. Nonetheless, achieving and sustaining competitive advantage cannot be based solely on the availability of existing personnel. Hence, it is crucial to strengthen capabilities, skills, and knowledge through the application of knowledge management (KM) practices. It can be explained in Figure 1.

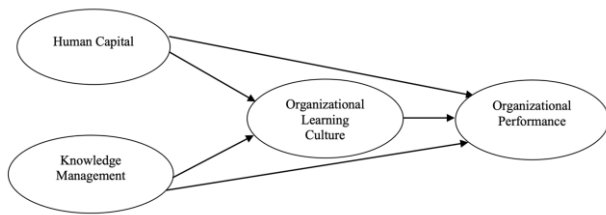


Fig. 1: Research Framework  
 Source: created by the authors

This conceptual framework was developed based on the concept of knowledge-based view theory. This theory explains that knowledge is a crucial strategic resource and needs support from all resources in the company. The learning organization can also be formed from this theory with supporting assets strategies which has a capability of human resources that creates value for improving the organization's performance.

### 3 Methodology

#### 3.1 Research Design

This research used a quantitative analysis method and a hypothesis test using Partial Least Squares Structural Equation Modeling (PLS-SEM). The tool used to measure and analyze data was the SmartPLS version 4.0 application. PLS-SEM further served as a method for conducting convergent and discriminant validity tests to evaluate structural models. The aim was to explain the relationship between constructs while interpreting the value of these relationships, [63], [64]. PLS-SEM analysis method operated through the evaluation of outer and inner models, [65]. The outer model was carried out in two stages, namely validity and reliability tests aimed at assessing the relationship between constructs. Validity test was divided into two steps, namely the convergent based on the loading factor value and the discriminant referring to the average variance extracted (AVE) value, [63], [65]. The second stage of the outer model included a reliability test based on the measurements of Composite Reliability (CR) and Cronbach's Alpha (CA) values, [63]. The inner model measured the structural model based on R<sup>2</sup>, Q<sup>2</sup>, and GFI values, as well as hypothesis testing using the path coefficient, [63], [66]. A hypothesis test aimed to examine the effect of independent variables on the dependent variable. The significance value of the research model was determined by referring to the t-statistic and P-value values, while the direction of the effect (positive or negative) was identified based on the original sample value (O), [63], [67].

Additionally, the Sobel Test was conducted to compare the values of direct effects and mediating effects and to identify the mediating effect with the most significant influence, [68].

#### 3.2 Data Collection and Respondents

The research population comprised 215 branch office heads from 20 of the largest banking companies in Indonesia, each of which had more than one million customers. Based on this population, the sample size required for data collection was determined. The sample size was calculated using the random sampling method, following the guidelines provided by [63]. This method required multiplying the number of indicators by five. In this research with 24 indicators, the minimum sample size was calculated as 120 individuals with (Cohen  $f^2 = 0.05$ ),  $\alpha = 0.05$ , power = 0.80. A total of 150 questionnaires were distributed electronically to all respondents, accompanied by a cover letter explaining the purpose of the research and informed consent to each respondent. From this population, 150 participants were selected using a simple random sampling technique. Specifically, we obtained a complete list of eligible respondents. A random number generator (Microsoft Excel RAND function) was then used to select participants until the target sample size was achieved.

The cover letter emphasized that participation was voluntary without any form of coercion and assured respondents of the confidentiality of their responses. In addition, each research respondent was asked for written consent and was informed of the purpose of filling out the questionnaire. Informed consent has been obtained from each respondent who has been willing to participate in the study. There was no strict deadline for completing the questionnaire. Data collection took place over 2 months from September to October 2024. Among the 150 questionnaires distributed, 144 were completed in full, representing a 96% response rate. The remaining 4% could not be used due to incomplete answers. Therefore, the final sample size for the research consisted of 144 respondents. Detailed demographic information about respondents is further provided in Table 1.

#### 3.3 Instrument and Measurement

All items in each construct were measured using a 5-point Likert scale, where one corresponded to "strongly disagree" and 5 to "strongly agree." The indicators used were derived from various relevant sources and tailored to fit the research objectives. The research instrument was measured by 24

question items from four research variables. HC variable was measured using six items based on previous publications, such as [24], [69]. Furthermore, six items were used to measure the KM variable, [10], [39]. The OLC variable was measured using four items, [43]. The OP variable was further measured through 8 items, [41], [70].

### 3.4 Ethical Consideration

This research had been approved by the Institutional Research Board (IRB) Universitas Esa Unggul with No 0415-10. 021 DPKE-KEP/Final-ea/UEU/VIII/2024. All respondents who are willing to participate in this study are required to sign the informed consent.

## 4 Results

### 4.1 Respondents' Profile

The data collected from 144 respondents met the criteria for processing and analysis. The demographic information of respondents included four categories, namely age, education level, gender, and work experience. The most significant proportion of respondents fell in the age range of 31-40 years (36.81%), followed by those aged 41-50 years (28.47%), 21-30 years (22.92%), and over 50 years (11.81%).

Table 1. Demographic Data of Respondents

Description	Frequency (Individuals)	Percentage (%)
<b>Age</b>		
21-30 years	33	22.92%
31-40 years	53	36.81%
41-50 years	41	28.47%
>50 years	17	11.81%
<b>Last education</b>		
Bachelor	118	81.94%
Master	21	14.58%
Doctoral	5	3.47%
<b>Gender</b>		
Male	70	48.61%
Female	74	51.39%
<b>Work period</b>		
5-10 years	63	43.75%
11-15 years	71	49.31%
>15 years	10	6.94%

n=144

Source: created by the authors

Regarding education level, 81.94% of respondents held a bachelor's degree, while 14.58% had a master's degree and 3.47% had a doctoral

degree. Gender distribution was nearly equal, with male respondents accounting for 48.61% and females making up 51.39%. Finally, respondents with 11-15 years of work experience formed the largest group (49.31%), followed by those with 5-10 years (43.75%) and over 15 years (6.94%). The demographic information of respondents was further explained in Table 1.

### 4.2 Measurement Model

The evaluation results of the outer model were used to determine the validity and reliability of each indicator and to assess the relationship between the constructs and the indicators. Validity test was considered valid when the loading factor value fulfilled the specified requirements, namely  $> 0.70$ , [63]. Reliability test referred to the values of CA and CR, with both required to exceed  $> 0.70$  to meet reliability criteria, [63]. Furthermore, the AVE value for each variable was considered valid when it exceeded  $> 0.5$  and was greater than the cross-loading values, which would indicate Convergent Validity (CV), [63], [65].

Based on the statistical data processing results in this research, validity values of all indicators were found to meet the required standards as reflected in the loading factor values  $> 0.07$ . Reliability values also satisfied the criteria, with both CA and CR values exceeding  $> 0.07$ . These results validated and confirmed the reliability of the research model. Furthermore, AVE values for all variables were greater than  $> 0.5$ , specifically 0.640 for HC, 0.733 for KM, 0.792 for OLC, and 0.573 for OP. The evaluation of the outer model further concluded that the research model was valid and reliable. The detailed outer model evaluation results were presented in Table 2 and Figure 2.

In addition, the determination of the  $R^2$  value followed the categorization proposed by [66]. A value of 0.75 indicated a strong model, while 0.50 suggested a moderate model, and 0.25 represented a weak model. The data processing results showed  $R^2$  values of 0.621 for OLC and 0.584 for OP, as shown in Table 3. These values suggested that HC and KM directly influenced 62.1% of OLC, while HC, KM, and OLC collectively accounted for 58.4% of the variance in OP.

Table 2. Validity and Reliability Test Results

Variable	Code	Outer Loading Value	CA	CR	AVE
Human Capital	HC1	0.795	0.886	0.890	0.640
	HC2	0.759			
	HC3	0.761			
	HC4	0.886			
	HC5	0.831			
	HC6	0.757			
Knowledge Management	KM1	0.877	0.927	0.930	0.733
	KM2	0.812			
	KM3	0.899			
	KM4	0.812			
	KM5	0.849			
	KM6	0.881			
Organizational Learning Culture	OLC1	0.904	0.912	0.912	0.792
	OLC2	0.922			
	OLC3	0.892			
	OLC4	0.839			
Organizational Performance	OP1	0.798	0.893	0.900	0.573
	OP2	0.808			
	OP3	0.713			
	OP4	0.810			
	OP5	0.717			
	OP6	0.721			
	OP7	0.766			
	OP8	0.714			

Source: data result from SmartPLS 4.0

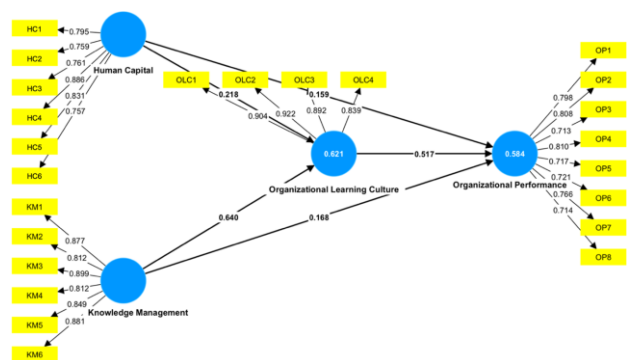


Fig. 2: Outer Model

Source: model result from SmartPLS 4.0

Based on R<sup>2</sup> value results, HC and KM directly influenced OLC by 62.1% categorizing it as a reasonably strong model (>0.50 and <0.75). Furthermore, the remaining 37.9% was explained by variables outside the scope of this research. The results also showed that HC and KM mediated by OLC affected OP by 58.4% falling into the moderate category (>0.50). The remaining 41.6% of OP was attributed to external variables not covered in this research. Understanding the descriptive explanation related to the R<sup>2</sup> value in this research, HC capacity and KM implementation as independent variables possessed a reasonably strong

effect on OLC. Additionally, the role of HC and KM mediated by OLC was also proven to affect OP with a moderate category. These results demonstrated that there was a reasonably strong relationship between the structural model proposed in the research.

Table 3. R<sup>2</sup> Value Results

Construct	R <sup>2</sup>
Organizational Learning Culture	0.621
Organizational Performance	0.584

Source: data result from SmartPLS 4.0

Furthermore, the inner model evaluation stage was carried out by finding the Q<sup>2</sup> value. The purpose of calculating the Q<sup>2</sup> value in the research was to examine whether the proposed model possessed a predictive relevance value fulfilling the requirements of having a good relevance when the Q<sup>2</sup> value > 0, [63]. The calculation of the Q<sup>2</sup> value was performed using the formulation of the Stone-Geisser Q<sup>2</sup> test, [71], as follows:

$$\begin{aligned}
 Q^2 &= 1 - ((1 - R_1^2)(1 - R_2^2)...(1 - R_x^2)) \\
 &= 1 - ((1 - 0.621^2)(1 - 0.584^2)) \\
 &= 0.595
 \end{aligned}$$

Q<sup>2</sup> value calculation results fulfilled the requirements of Q<sup>2</sup> value > 0, implying that the research model had a predictive relevance value with the observation value produced by the model, and the parameter estimate was found to be relevant/good. Q<sup>2</sup> value of 0.595 or 59.5% showed that the proposed research model could provide information contained in the data.

The final process of the inner model evaluation stage was observed by calculating the GFI value to perceive the feasibility of the proposed research model. GFI value requirements determined to observe the fit/feasible research model range from 0 to 1, [72]. The GFI calculation used was further calculated using the following formula:

$$\begin{aligned}
 \text{GoF Index} &= \sqrt{\text{AVE} \times R^2} \\
 &= \sqrt{((0.640+0.733+0.792+0.573)/4) \times ((0.621+0.584)/2)} \\
 &= 0.642
 \end{aligned}$$

Based on the calculation results, the GFI value in this research was found to be 0.642, or based on the model fit summary in Table 4, which means the SRMR value of 0.067 suggests a relatively good fit, as a lower SRMR indicates minimal differences between observed and expected correlations. This

showed that the research model could be considered fit/feasible following the specified requirements.

Table 4. Model Fitness Analysis

	Estimated model
SRMR	0,067
d_ULS	1,331
d_G	0,789
Chi-square	731,866
NFI	0,782

Source: data result from SmartPLS 4.0

### 4.3 Hypothesis Test

A hypothesis test aimed to determine and confirm the effects of the independent variables HC and KM on the dependent variables OLC and OP, both directly and indirectly, with OLC as a mediator. Hypothesis test results were presented in Table 5, and the inner model was depicted in Figure 3.

Table 5. Hypothesis Test Results

Hypothesis	Original Sample (O)	T Statistics ( O/STDEV )	P Values
HC -> OLC	0.218	3.627	0.000
HC -> OP	0.159	2.110	0.035
KM -> OLC	0.640	10.263	0.000
KM -> OP	0.168	1.833	0.067
OLC -> OP	0.517	5.792	0.000
KM -> OLC -> OP	0.331	4.729	0.000
HC -> OLC -> OP	0.113	3.195	0.001

t-Table=1.977; P-values <0.05

Source: data result from SmartPLS 4.0

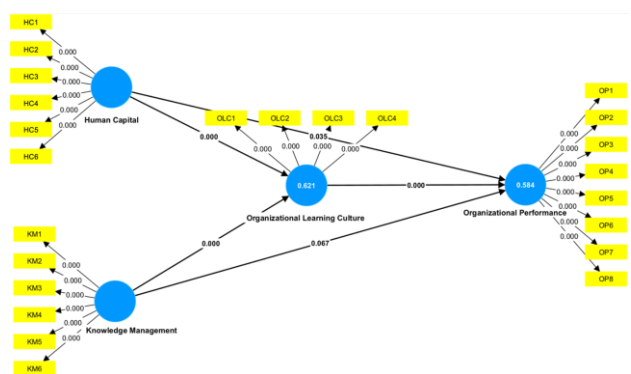


Fig. 3: Inner Model

Source: model result from SmartPLS 4.0

The test results for the first hypothesis, which examined the direct effect of HC on OLC, showed a t-statistic value greater than the t-table (3.627 > 1.977). Furthermore, the P-value was less than 0.05, confirming that the hypothesis was accepted. The

path coefficient value (Original Sample) was +0.218. The second hypothesis examined the direct effect of HC on OP. The results showed a t-statistic value greater than the t-Table (2.110 > 1.977) and a P-value of 0.035, which was less than 0.05. Therefore, the hypothesis was accepted with a path coefficient value of +0.159. The third hypothesis tested the direct effect of KM on OLC, showing a t-statistic value greater than the t-Table (10.263 > 1.977) and a P-value of 0.000, which was less than 0.05. The path coefficient value was +0.640.

The fourth hypothesis examined the direct effect of KM on OP. The results showed a t-statistic value less than the t-Table (1.833 < 1.977) and a P-value of 0.067, which was greater than 0.05, prompting the hypothesis to be rejected. The path coefficient value was +0.168, indicating that KM had a positive but not significant effect on OP. The fifth hypothesis tested the direct impact of OLC on OP. The results showed a t-statistic value greater than the t-Table (5.792 > 1.977) and a P-value of 0.000, which was less than 0.05. The path coefficient value was +0.517.

Furthermore, the sixth hypothesis examined the effect of KM on OP through OLC as a mediator. The results showed that the t-statistic value > t-Table of 4.729 > 1.977 and the P-value < 0.005 of 0.000, implying the hypothesis was accepted. The path coefficient value (Sample O) was +0.331. Finally, the seventh hypothesis examined the effect of HC on OP through OLC as a mediator. The results showed that the t-statistic value was greater than the t-Table (3.195 > 1.977), and the P-values of 0.001 prompted the hypothesis to be accepted. Meanwhile, the path coefficient value (Simple O) was +0.113.

The research model's contribution, including both direct and mediating effects, was verified using the Sobel Test, [68]. This method compared the magnitude of direct and mediating effects to identify the mediating value with the most substantial contribution.

#### Sobel Test Formulation:

$$(\text{Effect Value of } X_n \rightarrow Y_2)^2 : (\text{Value of } X_n \rightarrow Y_1 \times \text{Value of } Y_1 \rightarrow Y_2)$$

#### Calculation:

$$\begin{aligned} \text{HC} \rightarrow \text{OP} : \text{HC} \rightarrow \text{OLC} \rightarrow \text{OP} \\ &= (2,110)^2 : (3,627 \times 5,792) \\ &= 4,452 : 21,008 \end{aligned}$$

$$\begin{aligned} \text{KM} \rightarrow \text{OP} : \text{KM} \rightarrow \text{OLC} \rightarrow \text{OP} \\ &= (1,833)^2 : (10,263 \times 5,792) \\ &= 3,360 : 59,443 \end{aligned}$$

Based on the Sobel Test calculations, the mediating effect values were greater than the direct effects. The most significant mediating impact was observed in the model of KM effect on OP mediated by OLC, with a value of 59.443. These results were consistent with Table 5, which showed that the mediating effect of OLC on KM and OP was 4.279, surpassing the mediating impact of OLC on HC and OP.

## 5 Discussion

Currently, human resources are considered valuable and strategic assets of companies, [27]. However, organizational efforts to improve and maintain competitive advantage cannot rely solely on the availability of existing human resources. Therefore, it becomes essential to enhance capacity, expertise, and knowledge through the implementation of KM in an organization, [2]. Building and internalizing KM in employees and the organization requires the ability to foster growth, as well as develop attitudes and values that correlate with organizational culture. OLC serves as a medium for cultivating a learning culture, enabling organizations to achieve superior value that competitors cannot easily replicate, [23]. This research aims to explore the extent to which an organization can maintain its superior value through a theoretical framework by examining the effect of HC and KM on OP with OLC as a mediator. The mediating effect of OLC is the primary focus of this research to bridge and strengthen the impact of HC and KM on OP. The detailed results are discussed as follows.

First, the results showed that HC had a positive and significant effect on OLC. HC contributes to the quality of human resources in an organization where employee capacity determines whether the organization can enhance its competitiveness, thereby achieving uniqueness and distinctiveness in terms of employee abilities. OLC cannot thrive without employees who are capable of adapting quickly and possess adequate intellectual capacity. These results correlate with previous research, which outlines the role of HC in shaping OLC in an organization, [73]. HC also contributes to organizational sustainability by fostering growth-oriented behaviors, raising awareness of performance contributions, and promoting a work environment centered on continuous learning, [7].

Second, the results indicated that HC had a positive and significant effect on OP. HC serves as a reference point for assessing organizational competitiveness, particularly in optimizing human resources through experience, learning, training,

creativity, and employee skills, [74]. HC distinguishes OP by leveraging employee competencies that emphasize effective and efficient performance, [75]. These results are consistent with previous publications that outline a significant relationship between HC and OP, [8], [33], [34], [36].

Third, this research found that KM had a positive and significant effect on OLC. KM has been shown to have benefits in using knowledge in an organization to facilitate effective and innovative decision-making. This use fosters a learning culture by promoting attitudes, values, and behaviors that motivate continuous individual learning, [76]. Additionally, KM contributes to the establishment of systems that enhance organizational learning habits through knowledge storage, dissemination, and application, [77]. Individual socialization processes, which integrate knowledge into new tasks and activities, further support the development of OLC as a component of KM, [78]. These results imply that strong KM implementation leads to the successful embedding of OLC. To ensure effective KM, it is crucial to develop an OLC based on shared values.

Fourth, the study suggested a positive but insignificant effect of KM on OP. The results correlated with several previous publications as [79], [80]. That KM, consisting of technology components, information, organizational elements, and knowledge, exerted a positive but limited impact on OP. The limited effect may originate from the incomplete transfer of information technology in KM to employees, particularly in the ability to quickly adopt and use new technologies, thereby reducing its immediate impact on performance. KM did not directly affect OP, as elements such as technology, learning culture, and knowledge conversion contributed indirectly, [81]. This shows explicitly that the ability of individual resources collectively can determine the KM process as the main factor supporting OP. However, not every individual resource is directly related to OP, as there needs to be an effect from other factors that connect KM with OP.

Fifth, this research showed a direct positive and significant effect of OLC on OP. This result supports previous publications as [82], emphasizing that organizational sustainability relies on attributes, behaviors, habits, beliefs, and systems enabling the organization to create, acquire, disseminate, and sustain skills and knowledge. OLC intensifies individual adaptation to new ideas, enhancing the organization's competitive advantage by fostering

learning opportunities and collaborative group learning.

Sixth, the results outlined a positive and significant effect of KM on OP, mediated by OLC. This mediating relationship has the greatest impact as OLC strengthens the connection between KM and OP. The results address the earlier observation that the direct effect of KM on OP is insignificant. OLC plays a critical role in embedding a culture of swift and precise KM, resulting in significant organizational impact, [14], [56]. Through OLC, knowledge is internalized and converted into habitual practices, enhancing individual performance and contributing to overall OP.

Finally, this research confirmed a positive and significant effect of HC on OP, mediated by OLC. HC contributes to OP through the availability of human resources with the necessary capacity, expertise, and creativity to create competitive advantages for the organization, [60]. OLC further facilitates the development of a continuous learning culture that supports employee growth and capacity enhancement, [53]. HC-oriented organization fosters long-term sustainability by consistently building employee capabilities and promoting a learning culture rooted in individual strengths with collective benefits.

## 6 Conclusion

In conclusion, the paradigm of managing human resources as a strategic asset requires organizations to develop superior human resources. This included academic, intellectual, and knowledge capacities, as well as skills and innovation. Furthermore, the organization needed to implement KM to form, improve, and develop competitive advantages. The unique and superior individual capacities of employees supported this process. Both aspects consistently enhanced organizational productivity and performance by fostering the creation of values, attitudes, skills, and expertise that promoted new knowledge, thereby increasing organizational value and competitiveness. This research found that the concept of HC, based on employees' competitive and superior capacities, facilitated the management, creation, and improvement of knowledge derived from the implementation of KM by organizational management. The role of company management was significant in creating values, attitudes, and organizational culture oriented toward learning, referred to as OLC. This orientation eased the internalization of KM and contributed to creating competitive value, eventually improving OP. This research also provided a reference for the

effectiveness of KM implementation through OLC and its subsequent impact on OP.

## 7 Practical Implications

This research aimed to examine and provide empirical evidence regarding the relationship and effect of HC and KM on OP, with OLC acting as a mediator. The research also had practical implications, outlining the critical role of leaders and management in creating a work environment oriented toward a learning culture. This orientation fostered the internalization of KM into employees' daily tasks, contributing to the development of innovative values, attitudes, and behaviors that supported competitive advantages.

The results provided a reference for stakeholders in managing talented employees by ensuring transparency and clarity regarding duties and responsibilities. Companies could achieve the objective by optimizing digital information systems to provide open access to performance metrics, including division performance, individual goals, and measures of success. Furthermore, companies were motivated to implement flexible policies that allowed employees to contribute by sharing new knowledge or innovative work methods. The importance of internalizing OLC remained a priority, supported by leadership models that promoted learning. The impact of OLC on OP enhanced the organization's competitiveness and created a unique value attracting talented employees. Moreover, this method increased customer satisfaction through innovative products, services, and programs developed in the OLC framework.

## 8 Limitations and Future Research Directions

This research focused on the banking sector in a single country, which limited the generalizability of the results. Data collection was conducted at a single point in time using cross-sectional analysis, which may not fully capture the long-term processes and impacts of KM and OLC implementation. To address these limitations, future research should adopt panel examinations to measure and continuously identify the effects and consequences of OLC. Additionally, the reliance on quantitative data constrained the depth of information obtained. Despite the limitations, this research contributed to the scientific literature by showing the mediating effect of OLC on the relationship between HC, KM,

and OP. Future research on company performance measurement could consider expanding to include government-owned banks to increase sample diversity and generalizability. Finally, further publications are recommended to replicate this research on a larger scale, comprising multiple countries or comparative publications across different industries. This method would broaden the perspective and provide more comprehensive insights into the role of OLC in improving OP.

### Declaration of Generative AI and AI-assisted Technologies in the Writing Process

The authors wrote, reviewed and edited the content as needed and verifies that none utilised artificial intelligence (AI) tools were used. The authors take full responsibility for the content of the publication.

### References:

- [1] A. Serenko, A. M. Abubakar, and N. Bontis, "Understanding the drivers of organizational business performance from the human capital perspective," *Knowl Process Manag.*, vol. 31, no. 1, pp. 48–59, Jan. 2024, doi: 10.1002/kpm.1763.
- [2] X. Song, J. Li, and X. Xia, "Exploitative training versus explorative training: the effect of strategic human capital investment on organizational performance," *IJM*, vol. 45, no. 8, pp. 1516–1539, Sep. 2024, doi: 10.1108/IJM-11-2023-0665.
- [3] K. Hang Chan, "Impact of intellectual capital on organisational performance: An empirical study of companies in the Hang Seng Index (Part 1)," *The Learning Organization*, vol. 16, no. 1, pp. 4–21, Jan. 2009, doi: 10.1108/09696470910927641.
- [4] M. Gharsallah and S. Trabelsi, "The effect of human capital on the trade-growth nexus: A dynamic panel threshold analysis," *Research in Economics*, vol. 78, no. 4, p. 100988, Dec. 2024, doi: 10.1016/j.rie.2024.100988.
- [5] A. Sudolska and K. Zawadzki, *Human Capital Management in the Contemporary Workplace: Enhancing Organisation Sustainability*, 1st ed. New York: Routledge, 2024. doi: 10.4324/9781032678719.
- [6] M. Khalilzadeh, S. A. Banihashemi, and A. Bahari, "Investigation of the Effects of Knowledge Management on Organizational Performance Through Human Resource Management as Mediator," *Business Perspectives and Research*, vol. 12, no. 4, pp. 579–598, Oct. 2024, doi: 10.1177/22785337221148567.
- [7] M. J. Mohua and W. F. Wan Yusoff, "'Our most valuable knowledge-based assets': Leveraging the role of human capital for organizational sustainability," presented at the Proceedings of the Society 5.0 Conference 2022 - Integrating Digital World and Real World to Resolve Challenges in Business and Society, 2022, pp. 72–57. doi: 10.29007/pk48.
- [8] A. Abdul-Ghani Saif Almekhlafi, "Human capital impact on organizational performance of commercial banks operating in Yemen," *Banks and Bank Systems*, vol. 17, no. 2, pp. 178–188, Jul. 2022, doi: 10.21511/bbs.17(2).2022.15.
- [9] J. M. Bloodgood, "Knowledge acquisition and firm competitiveness: the role of complements and knowledge source," *JKM*, vol. 23, no. 1, pp. 46–66, Jan. 2019, doi: 10.1108/JKM-09-2017-0430.
- [10] A. H. Gold, A. Malhotra, and A. H. Segars, "Knowledge Management: An Organizational Capabilities Perspective," *Journal of Management Information Systems*, vol. 18, no. 1, pp. 185–214, May 2001, doi: 10.1080/07421222.2001.11045669.
- [11] M. Ipe, "Knowledge Sharing in Organizations: A Conceptual Framework," *Human Resource Development Review*, vol. 2, no. 4, pp. 337–359, Dec. 2003, doi: 10.1177/1534484303257985.
- [12] R. Kuo and G. Lee, "KMS adoption: the effects of information quality," *Management Decision*, vol. 47, no. 10, pp. 1633–1651, Nov. 2009, doi: 10.1108/00251740911004727.
- [13] S. S. Nicolaescu *et al.*, "Human capital evaluation in knowledge-based organizations based on big data analytics," *Future Generation Computer Systems*, vol. 111, pp. 654–667, Oct. 2020, doi: 10.1016/j.future.2019.09.048.
- [14] K. Wongmahesak, N. Wongsuwan, B. Akkaya, and M. Palazzo, "Impact of Knowledge Management Process on Organizational Performance: The Mediating Role of Technological Innovation," *Knowl Process Manag.*, p. kpm.1795, Dec. 2024, doi: 10.1002/kpm.1795.
- [15] A. Cabrera and E. F. Cabrera, "Knowledge-Sharing Dilemmas," *Organization Studies*, vol. 23, no. 5, pp. 687–710, Sep. 2002, doi: 10.1177/0170840602235001.

- [16] M. Del Giudice, M. R. Della Peruta, and V. Maggioni, "Collective Knowledge and Organizational Routines within Academic Communities of Practice: an Empirical Research on Science–Entrepreneurs," *J Knowl Econ*, vol. 4, no. 3, pp. 260–278, Sep. 2013, doi: 10.1007/s13132-013-0158-3.
- [17] R. Valio Dominguez Gonzalez and M. Fernando Martins, "Mapping the organizational factors that support knowledge management in the Brazilian automotive industry," *Journal of Knowledge Management*, vol. 18, no. 1, pp. 152–176, Feb. 2014, doi: 10.1108/JKM-08-2013-0300.
- [18] I.-C. Hsu, "Enhancing employee tendencies to share knowledge—Case studies of nine companies in Taiwan," *International Journal of Information Management*, vol. 26, no. 4, pp. 326–338, Aug. 2006, doi: 10.1016/j.ijinfomgt.2006.03.001.
- [19] I.-C. Hsu, "Knowledge sharing practices as a facilitating factor for improving organizational performance through human capital: A preliminary test," *Expert Systems with Applications*, vol. 35, no. 3, pp. 1316–1326, Oct. 2008, doi: 10.1016/j.eswa.2007.08.012.
- [20] K. Husted and S. Michailova, "Diagnosing and Fighting Knowledge-Sharing Hostility," *Organizational Dynamics*, vol. 31, no. 1, pp. 60–73, Aug. 2002, doi: 10.1016/S0090-2616(02)00072-4.
- [21] D. Kandemir and G. T. M. Hult, "A conceptualization of an organizational learning culture in international joint ventures," *Industrial Marketing Management*, vol. 34, no. 5, pp. 430–439, Jul. 2005, doi: 10.1016/j.indmarman.2004.10.002.
- [22] D. Vera and M. Crossan, "Strategic Leadership and Organizational Learning," *The Academy of Management Review*, vol. 29, no. 2, p. 222, Apr. 2004, doi: 10.2307/20159030.
- [23] J.-G. Cegarra-Navarro, D. Jimenez-Jimenez, and A. Garcia-Perez, "An Integrative View of Knowledge Processes and a Learning Culture for Ambidexterity: Toward Improved Organizational Performance in the Banking Sector," *IEEE Trans. Eng. Manage.*, vol. 68, no. 2, pp. 408–417, Apr. 2021, doi: 10.1109/TEM.2019.2917430.
- [24] M. Subramaniam and M. A. Youndt, "The Influence of Intellectual Capital on the Types of Innovative Capabilities," *AMJ*, vol. 48, no. 3, pp. 450–463, Jun. 2005, doi: 10.5465/amj.2005.17407911.
- [25] G. Papageorgiou, A. Ioannides, G. Demetriou, and A. Maimaris, "Developing a System for Effective Organizational Learning and Human Resource Development," in *Proceedings of the 2018 International Conference on Education Technology Management*, Barcelona Spain: ACM, Dec. 2018, pp. 77–81. doi: 10.1145/3300942.3300958.
- [26] C. J. Collins and K. G. Smith, "Knowledge Exchange and Combination: The Role of Human Resource Practices in the Performance of High-Technology Firms," *AMJ*, vol. 49, no. 3, pp. 544–560, Jun. 2006, doi: 10.5465/amj.2006.21794671.
- [27] B. Gerhart and J. Feng, "The Resource-Based View of the Firm, Human Resources, and Human Capital: Progress and Prospects," *Journal of Management*, vol. 47, no. 7, pp. 1796–1819, Sep. 2021, doi: 10.1177/0149206320978799.
- [28] R. Imran and T. M. S. Atiya, "The role of high-performance work system and human capital in enhancing job performance," *WJEMSD*, vol. 16, no. 3, pp. 195–206, Apr. 2020, doi: 10.1108/WJEMSD-09-2019-0074.
- [29] A. Kucharčíková, E. Tokarčíková, and M. Blašková, "Human Capital Management – Aspect of the Human Capital Efficiency in University Education," *Procedia - Social and Behavioral Sciences*, vol. 177, pp. 48–60, Apr. 2015, doi: 10.1016/j.sbspro.2015.02.332.
- [30] A. Kucharcikova, "The Importance of Identification and Analysis of Educational Needs for Investment in Human Capital," *Komunikácie*, vol. 16, no. 3, pp. 86–92, Jul. 2014, doi: 10.26552/com.C.2014.3.86-92.
- [31] R. Gamerschlag, "Value relevance of human capital information," *Journal of Intellectual Capital*, vol. 14, no. 2, pp. 325–345, Apr. 2013, doi: 10.1108/14691931311323913.
- [32] M. Pasban and S. H. Nojedeh, "A Review of the Role of Human Capital in the Organization," *Procedia - Social and Behavioral Sciences*, vol. 230, pp. 249–253, Sep. 2016, doi: 10.1016/j.sbspro.2016.09.032.
- [33] M. Holborow, "Language skills as human capital? Challenging the neoliberal frame," *Language and Intercultural Communication*, vol. 18, no. 5, pp. 520–532, Sep. 2018, doi: 10.1080/14708477.2018.1501846.
- [34] T. Wang and C. D. Zatzick, "Human Capital Acquisition and Organizational Innovation: A Temporal Perspective," *AMJ*, vol. 62, no. 1, pp. 99–116, Feb. 2019, doi: 10.5465/amj.2017.0114.

- [35] S. (Sam) Huang, Z. Yu, Y. Shao, M. Yu, and Z. Li, "Relative effects of human capital, social capital and psychological capital on hotel employees' job performance," *IJCHM*, vol. 33, no. 2, pp. 490–512, Mar. 2021, doi: 10.1108/IJCHM-07-2020-0650.
- [36] C. Kottaridi, K. Louloudi, and S. Karkalakos, "Human capital, skills and competencies: Varying effects on inward FDI in the EU context," *International Business Review*, vol. 28, no. 2, pp. 375–390, Apr. 2019, doi: 10.1016/j.ibusrev.2018.10.008.
- [37] H. Lenihan, H. McGuirk, and K. R. Murphy, "Driving innovation: Public policy and human capital," *Research Policy*, vol. 48, no. 9, p. 103791, Nov. 2019, doi: 10.1016/j.respol.2019.04.015.
- [38] J. Barney, "Firm Resources and Sustained Competitive Advantage," *Journal of Management*, vol. 17, no. 1, pp. 99–120, Mar. 1991, doi: 10.1177/014920639101700108.
- [39] T. S. Kiessling, R. G. Richey, J. Meng, and M. Dabic, "Exploring knowledge management to organizational performance outcomes in a transitional economy," *Journal of World Business*, vol. 44, no. 4, pp. 421–433, Oct. 2009, doi: 10.1016/j.jwb.2008.11.006.
- [40] R. M. Grant, "The knowledge-based view of the firm: Implications for management practice," *Long Range Planning*, vol. 30, no. 3, pp. 450–454, Jun. 1997, doi: 10.1016/S0024-6301(97)00025-3.
- [41] A. L. Cooper, J. R. Huscroft, R. E. Overstreet, and B. T. Hazen, "Knowledge management for logistics service providers: the role of learning culture," *Industrial Management & Data Systems*, vol. 116, no. 3, pp. 584–602, Apr. 2016, doi: 10.1108/IMDS-06-2015-0262.
- [42] K. Moustaghfir and G. Schiuma, "Knowledge, learning, and innovation: research and perspectives," *Journal of Knowledge Management*, vol. 17, no. 4, pp. 495–510, Jul. 2013, doi: 10.1108/JKM-04-2013-0141.
- [43] A. Pantouvakis and N. Bouranta, "The link between organizational learning culture and customer satisfaction: Confirming relationship and exploring moderating effect," *The Learning Organization*, vol. 20, no. 1, pp. 48–64, Jan. 2013, doi: 10.1108/09696471311288528.
- [44] R. Bates and S. Khasawneh, "Organizational learning culture, learning transfer climate and perceived innovation in Jordanian organizations," *Int J Training & Development*, vol. 9, no. 2, pp. 96–109, Jun. 2005, doi: 10.1111/j.1468-2419.2005.00224.x.
- [45] P. E. Jensen, "A contextual theory of learning and the learning organization," *Knowl Process Manag*, vol. 12, no. 1, pp. 53–64, Jan. 2005, doi: 10.1002/kpm.217.
- [46] R. Lin, R. Che, and C. Ting, "Turning knowledge management into innovation in the high-tech industry," *Industr Mngmnt & Data Systems*, vol. 112, no. 1, pp. 42–63, Jan. 2012, doi: 10.1108/02635571211193635.
- [47] A. Iqbal, F. Latif, F. Marimon, U. F. Sahibzada, and S. Hussain, "From knowledge management to organizational performance: Modelling the mediating role of innovation and intellectual capital in higher education," *JEIM*, vol. 32, no. 1, pp. 36–59, Feb. 2019, doi: 10.1108/JEIM-04-2018-0083.
- [48] M. Mahdavi Mazdeh and R. Hesamamiri, "Knowledge management reliability and its impact on organizational performance: An empirical study," *Program*, vol. 48, no. 2, pp. 102–126, Apr. 2014, doi: 10.1108/PROG-01-2013-0001.
- [49] C.-N. Chiu and H.-H. Chen, "The study of knowledge management capability and organizational effectiveness in Taiwanese public utility: the mediator role of organizational commitment," *SpringerPlus*, vol. 5, no. 1, p. 1520, Dec. 2016, doi: 10.1186/s40064-016-3173-6.
- [50] I. Becerra-Fernandez and R. Sabherwal, "Organizational Knowledge Management: A Contingency Perspective," *Journal of Management Information Systems*, vol. 18, no. 1, pp. 23–55, May 2015, doi: 10.1080/07421222.2001.11045676.
- [51] S. Ur Rehman, A. Bhatti, and N. I. Chaudhry, "Mediating effect of innovative culture and organizational learning between leadership styles at third-order and organizational performance in Malaysian SMEs," *J Glob Entrepr Res*, vol. 9, no. 1, p. 36, Dec. 2019, doi: 10.1186/s40497-019-0159-1.
- [52] M. J. Sanzo, M. L. Santos, N. García, and J. A. Trespalacios, "Trust as a moderator of the relationship between organizational learning and marketing capabilities: Evidence from Spanish SMEs," *International Small Business Journal: Researching Entrepreneurship*, vol. 30, no. 6, pp. 700–726, Sep. 2012, doi: 10.1177/0266242611418907.
- [53] M. Megheirkouni, "Leadership styles and organizational learning in UK for-profit and

- non-profit sports organizations,” *IJOA*, vol. 25, no. 4, pp. 596–612, Sep. 2017, doi: 10.1108/IJOA-07-2016-1042.
- [54] K. Kim, K. E. Watkins, and Z. (Laura) Lu, “The impact of a learning organization on performance: Focusing on knowledge performance and financial performance,” *EJTD*, vol. 41, no. 2, pp. 177–193, Feb. 2017, doi: 10.1108/EJTD-01-2016-0003.
- [55] J. Gochhayat, V. N. Giri, and D. Suar, “Influence of Organizational Culture on Organizational Effectiveness: The Mediating Role of Organizational Communication,” *Global Business Review*, vol. 18, no. 3, pp. 691–702, Jun. 2017, doi: 10.1177/0972150917692185.
- [56] T. M. Rebelo and A. Duarte Gomes, “Conditioning factors of an organizational learning culture,” *Journal of Workplace Learning*, vol. 23, no. 3, pp. 173–194, Apr. 2011, doi: 10.1108/13665621111117215.
- [57] K. Yew Wong, “Critical success factors for implementing knowledge management in small and medium enterprises,” *Industrial Management & Data Systems*, vol. 105, no. 3, pp. 261–279, Apr. 2005, doi: 10.1108/02635570510590101.
- [58] V. J. Marsick and K. E. Watkins, “Demonstrating the Value of an Organization’s Learning Culture: The Dimensions of the Learning Organization Questionnaire,” *Advances in Developing Human Resources*, vol. 5, no. 2, pp. 132–151, May 2003, doi: 10.1177/1523422303005002002.
- [59] M. Hernandez, “Assessing Tacit Knowledge Transfer and Dimensions of a Learning Environment in Colombian Businesses,” *Advances in Developing Human Resources*, vol. 5, no. 2, pp. 215–221, May 2003, doi: 10.1177/1523422303005002009.
- [60] M. L. Lengnick-Hall, C. A. Lengnick-Hall, and C. M. Rigsbee, “Strategic human resource management and supply chain orientation,” *Human Resource Management Review*, vol. 23, no. 4, pp. 366–377, Dec. 2013, doi: 10.1016/j.hrmr.2012.07.002.
- [61] J. Barnes and Y. Liao, “The effect of individual, network, and collaborative competencies on the supply chain management system,” *International Journal of Production Economics*, vol. 140, no. 2, pp. 888–899, Dec. 2012, doi: 10.1016/j.ijpe.2012.07.010.
- [62] N. W. Hatch and J. H. Dyer, “Human capital and learning as a source of sustainable competitive advantage,” *Strategic Management Journal*, vol. 25, no. 12, pp. 1155–1178, Dec. 2004, doi: 10.1002/smj.421.
- [63] J. F. Hair, C. M. Ringle, S. P. Gudergan, A. Fischer, C. Nitzl, and C. Menictas, “Partial least squares structural equation modeling-based discrete choice modeling: an illustration in modeling retailer choice,” *Bus Res*, vol. 12, no. 1, pp. 115–142, Apr. 2019, doi: 10.1007/s40685-018-0072-4.
- [64] A. Leguina, “A primer on partial least squares structural equation modeling (PLS-SEM),” *International Journal of Research & Method in Education*, vol. 38, no. 2, pp. 220–221, Apr. 2015, doi: 10.1080/1743727X.2015.1005806.
- [65] C. M. Ringle, M. Sarstedt, R. Mitchell, and S. P. Gudergan, “Partial least squares structural equation modeling in HRM research,” *The International Journal of Human Resource Management*, vol. 31, no. 12, pp. 1617–1643, Jul. 2020, doi: 10.1080/09585192.2017.1416655.
- [66] J. Henseler, C. M. Ringle, and M. Sarstedt, “Testing measurement invariance of composites using partial least squares,” *International Marketing Review*, vol. 33, no. 3, pp. 405–431, May 2016, doi: 10.1108/IMR-09-2014-0304.
- [67] S. Kwak, “Are Only  $p$ -Values Less Than 0.05 Significant? A  $p$ -Value Greater Than 0.05 Is Also Significant!,” *J Lipid Atheroscler*, vol. 12, no. 2, p. 89, 2023, doi: 10.12997/jla.2023.12.2.89.
- [68] C. E. Lance and R. J. Vandenberg, Eds., *More statistical and methodological myths and urban legends*. New York: Routledge, 2015. doi: 10.4324/9780203775851.
- [69] R. K. Singh, S. Agrawal, and S. Modgil, “Developing human capital 4.0 in emerging economies: an industry 4.0 perspective,” *IJM*, vol. 43, no. 2, pp. 286–309, May 2022, doi: 10.1108/IJM-03-2021-0159.
- [70] J. T. Delaney and M. A. Huselid, “THE IMPACT OF HUMAN RESOURCE MANAGEMENT PRACTICES ON PERCEPTIONS OF ORGANIZATIONAL PERFORMANCE,” *Academy of Management Journal*, vol. 39, no. 4, pp. 949–969, Aug. 1996, doi: 10.2307/256718.
- [71] W. W. Chin, B. L. Marcolin, and P. R. Newsted, “A Partial Least Squares Latent Variable Modeling Approach for Measuring

- Interaction Effects: Results from a Monte Carlo Simulation Study and an Electronic-Mail Emotion/Adoption Study,” *Information Systems Research*, vol. 14, no. 2, pp. 189–217, Jun. 2003, doi: 10.1287/isre.14.2.189.16018.
- [72] R. Ho, *Handbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS*, 0 ed. Chapman and Hall/CRC, 2006. doi: 10.1201/9781420011111.
- [73] M. A. Shahab, “The model of human capital and knowledge sharing towards sustainable competitive advantages,” *Problems and Perspectives in Management*, vol. 13, no. 4, 2015.
- [74] G. Assaker, R. Hallak, and P. O’Connor, “Examining heterogeneity through response-based unit segmentation in PLS-SEM: a study of human capital and firm performance in upscale restaurants,” *Current Issues in Tourism*, vol. 23, no. 2, pp. 137–152, Jan. 2020, doi: 10.1080/13683500.2018.1490253.
- [75] J. Elias and H. Scarbrough, “Evaluating human capital: an exploratory study of management practice,” *Human Res Mgmt Journal*, vol. 14, no. 4, pp. 21–40, Nov. 2004, doi: 10.1111/j.1748-8583.2004.tb00131.x.
- [76] R. Du, S. Ai, and Y. Ren, “Relationship between knowledge sharing and performance: A survey in Xi’an, China,” *Expert Systems with Applications*, vol. 32, no. 1, pp. 38–46, Jan. 2007, doi: 10.1016/j.eswa.2005.11.001.
- [77] S. Schmitz, T. Rebelo, F. J. Gracia, and I. Tomás, “Learning culture and knowledge management processes: To what extent are they effectively related?,” *Revista de Psicología del Trabajo y de las Organizaciones*, vol. 30, no. 3, pp. 113–121, Sep. 2014, doi: 10.1016/j.rpto.2014.11.003.
- [78] R. Chiva and J. Alegre, “Organizational Learning and Organizational Knowledge: Towards the Integration of Two Approaches,” *Management Learning*, vol. 36, no. 1, pp. 49–68, Mar. 2005, doi: 10.1177/1350507605049906.
- [79] C. Valmohammadi and M. Ahmadi, “The impact of knowledge management practices on organizational performance: A balanced scorecard approach,” *Journal of Enterprise Information Management*, vol. 28, no. 1, pp. 131–159, Feb. 2015, doi: 10.1108/JEIM-09-2013-0066.
- [80] Wahda, “Mediating effect of knowledge management on organizational learning culture in the context of organizational performance,” *JMD*, vol. 36, no. 7, pp. 846–858, Aug. 2017, doi: 10.1108/JMD-11-2016-0252.
- [81] S. Fattahiyan and R. Hoveida, “The relationship between Knowledge Management Enablers, Processes resources and organizational Performance in Universities (Case Study: selected Universities of the Isfahan Province),” vol. 1, 2013.
- [82] A. Tripathi, “Organizational Learning Culture and Firm Performance: The Mediating Role of Learning Agility,” *Vikalpa: The Journal for Decision Makers*, vol. 49, no. 2, pp. 129–142, Jun. 2024, doi: 10.1177/02560909241254996.

#### **Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)**

The authors equally contributed in the present research, at all stages from the formulation of the problem to the final findings and solution.

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#### **Conflict of Interest**

The authors have no conflicts of interest to declare that are relevant to the content of this article.

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