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Linking Knowledge Management Practices, Innovative Behavior and SMEs' Performance: An Insight from Malaysian Service Sector

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Abstract

Purpose: Looking through the lens of Resource-Based View with the extended theories of Knowledge-Based View and Resource Orchestration Theory, this study examines the relationship between the organizational knowledge that comprises of knowledge management, towards the SMEs' performance through the role of innovative behavior in SMEs of Malaysia.

Design/methodology/approach: This research applies a positivist paradigm where a quantitative approach was selected to gather the information from the respondents based on the established sample size through G-POWER software. By applying the non-probability sampling technique, the study seeks answers from the respondents through judgement sampling, where 144 completed responses were collected and analyzed using the PLS- SEM approach through the software of SmartPLS 3.3.3 to conclude the findings as desired by the research objectives.

Findings: The findings suggested that there is a significant relationship between knowledge management, innovative behavior and SMEs' performance. The study confirms that knowledge management fully mediates the relationship between innovative behavior and SMEs' performance.

Research limitations/implications: This study has only focused on the SMEs that are under the service industry, and therefore could not be generalized to the other contexts. Nonetheless, more research is needed to understand SMEs behaviors, especially in terms of their knowledge perceptiveness behavior due to their dynamic business settings. Also, since the data was collected at one point in time, this might not permit the data to represent the long-term organizational knowledge behaviors of the SMEs in the service industry.

Practical implications: This study offers a number of important theoretical, practical and/or managerial implications. It has developed and tested the integrated model that examines how

knowledge management and the orchestration of knowledge via innovative behavior can influence organizational performance, which refers to the SMEs' performance.
Originality/value: The research model is valid in explaining the factors that have contributed to SMEs' performance. In this light, understanding these critical factors will provide valuable insights into the SMEs' context of this study. These would also benefit the related government agencies, SMEs' owners or the managers, and the researchers.

Keywords: Knowledge Management, Innovative Behaviour, SMEs Performance, Malaysian Service Sector

Introduction

Regardless of the organisations' sizes, the ultimate aim for most organisations is the achievable high-level performance, which highly competitive organisations usually resemble (Eidizadeh, Salehzadeh, & Chitsaz Esfahani, 2017; Jyoti & Rani, 2017). The organisational performance is always associated with the organisation's capability to ensure the effective usages of its internal resources, usually in tangible and intangible forms (Hayaeian, Hesarzadeh, & Abbaszadeh, 2021). Looking through the lens of Resource-Based View (RBV), the theory suggests that the ability of an organisation to establish a unique business model assures the organisation attain a competitive advantage compared to its counterparts (Grant, 1991). The encouragement also motivated small and medium enterprises (SMEs). SMEs have been known as one of the major contributors to economic growth in many developing and developed countries (Hock, Clauss, Kraus, & Cheng, 2021). SMEs provide employment opportunities, stimulate local economic chains, and provide added value for the country's economic development (SME Insights, 2020).

With their mass presence, SMEs play an important role in ensuring economic sustainability remains while navigating and steering those small blocks of businesses (SME Insights, 2020). However, the recent development of SMEs has triggered an interesting way for the researcher to understand how SMEs perceive and value their internal resources (Expósito & Sanchis, 2019). Several credible international and local reports reported that due to the COVID-19, many SMEs were jeopardised by the unpleasant effects of this pandemic (Pedauga, Sáez, & Delgado, 2021). It shows that the inner strength of SMEs is not well developed and practised by these industry players, causing them to be dragged by the issues of this pandemic (Shen, Fu, Pan, Yu, & Chen, 2020). For example, many SMEs were unable to survive due to their inability to instantly shift their current business models that used to be effective before COVID-19 hit their ecosystem (Buffington, Dennis, Dinlersoz, Foster, & Klimek, 2020). Lack of proper standard operation procedure, unorganised documentation, inability to properly store the organisational knowledge and failure to utilise the organisational resources have halted these SMEs from recovering or learning how to adjust their current business settings (Juergensen, Guimón, & Narula, 2020).

A plethora of literature has suggested that the organisations' ability to manage their knowledge will help them achieve a competitive advantage (Asiaei, Rezaee, Bontis, Barani, & Sapiei, 2021). Such managerial capability is known as knowledge management practices. The previous literature has established knowledge management practices that are considered significant predictors of organisational performance (Paoloni, Coluccia, Fontana, & Solimene, 2020; Pflugfelder, 2021). Knowledge management practices are known by many names, such as knowledge management or knowledge management process. In larger organisations with sufficient procedures and infrastructure to support the knowledge management practices, the reality is different in SMEs (Massaro, Handley, Bagnoli, & Dumay, 2016). Lee and Wong (2015) suggested that only three main dimensions for SMEs: knowledge acquisition,

knowledge sharing, and knowledge application. The complex business challenges nowadays have urged organisations to be more resilient against the fluid markets, especially when too much relevant knowledge is incorporated to build strong business foundations, which needs to be addressed properly, especially in SMEs.

By integrating the values of knowledge management practices, the organisations are expected to acknowledge only the relevant knowledge for the way forward. For example, the ability of the organisations to practice knowledge acquisition will help organisations only to acquire significant knowledge (Hagemeister & Rodríguez, 2019). The same applies to knowledge sharing, where socialisation frequently happens in a simple SME organisational structure model that triggers the knowledge sharing values (Oliveira, Curado, Balle, & Kianto, 2020). However, the acquired and shared knowledge remains a stock of knowledge without proper execution. Here is when knowledge acquisition matters. Following the linear framework of knowledge management practices, the application for the knowledge stocks should be happening at the end for SMEs to benefit from it.

Nevertheless, the RBV ignores the fact that an abundance of resources will not achieve organisational performance if the management does not mobilise those resources effectively and efficiently (Sirmon, Hitt, Ireland, & Gilbert, 2011). Sirmon et al. (2011) have extended RBV into resource orchestration theory (ROT), where it focuses on the firm's strategic ability in ensuring the resources are being utilised effectively to gain sustainable competitive advantage and superior performance. The strategies are essential in improving the firm's ability to enhance its economic rent's values (Grant, 1991). Based on ROT, the organisations will only realise their full potential when the resources are structured, bundled, and managed effectively (Sirmon et al., 2011). One of the main challenges is identifying a proper mechanism to mobilise and structure resources based on the literature. The current study inspires that innovative behaviour might be one of the best mechanisms that help management foster knowledge assets through managers (Andersén & Ljungkvist, 2021). Recent literature also suggests that innovative behaviour is associated with performance (Hughes, Rigtering, Covin, Bouncken, & Kraus, 2018; Xerri & Reid, 2018). More precisely, this study introduces innovative behaviour as the mediating process through which an organisation's capability, e.g., knowledge management practices, can be mobilised more effectively. Therefore, this study underlines the importance of innovative behaviour as one of the managerial practices and styles that elucidates for the greater knowledge stocks exploitation in achieving greater performance, especially in the service sector of SMEs in a developing country of Malaysia.

Literature Review and Hypotheses Development

The resource-based view, knowledge-based view, and resource orchestration theory underpin this research. The aim is to develop the theoretical framework where the purpose is to delve into the managerial roles of SMEs through the innovative behaviour practices in leveraging the knowledge stocks of knowledge management practices that could contribute to SME performance. The study offers a theoretical framework adapted from the previous studies (Asiaei et al., 2021; Rehman, Bresciani, Ashfaq, & Alam, 2021) to address the remaining gaps.

Knowledge Management Practices and SME Performance

Many studies have explored the role of knowledge management as one of the predictors or attributes to organisational performance (Audretsch & Belitski, 2021; Hock et al., 2021; Paoloni et al., 2020). Knowledge is considered a powerful fuel in accelerating organisational growth (Zhao, Jiang, & Wang, 2019). Theoretically, an organisation works as a learning organisation where a bundle of knowledge stocks is accumulated, shared and exploited based on the main organisational objectives. According to Nonaka and Takeuchi (1995), knowledge

is defined as justified true belief. The same author also introduced a model that shows how the spiral of knowledge works in nurturing the knowledge values in organisations. The process begins with socialisation, externalisation, combination and ends with internalisation (Nonaka & Takeuchi, 1995). Knowledge management is acknowledged as the managerial capability of the organisation to manage its internal knowledge.

The literature recognises knowledge management in many ways. Some studies incorporated knowledge acquisition, knowledge sharing, knowledge conversion, and knowledge application in their models (Iqbal, Latif, Marimon, Sahibzada Umar, & Hussain, 2019; Mahdi, Nassar, & Almsafir, 2019). However, by considering the simple structure of the SMEs, guided by the previous literature, this research opted for three main dimensions for knowledge management: knowledge acquisition, knowledge sharing, and knowledge application (Lee & Wong, 2015).

Hypothesis 1: There is a significant positive relationship between knowledge management practices and SME performance

Innovative Behaviour and SME Performance

In today's business environment, innovation is no longer a particular factor that helps organisations survive today's challenges (Pradana, Pérez, & Fuentes, 2020). The recent findings have proved the role of innovation in expediting a company's growth because the organisations can respond to the upcoming challenges faster and exploit current market demands that can be translated into new products and services (Li, Gagliardi, & Miles, 2019). However, despite the numerous researches in innovation literature that explains how many types of innovation, such as incremental innovation, speed innovation and radical innovation with the ability to influence organisational performance, there is a dearth of knowledge about how the behavioural types of innovation, such as innovative behaviour, influence organisational performance, especially in the context of SMEs' performance (Sharma, 2017). As Janssen (2000) defined, innovative behaviour indicates the intentional creation, introduction, and application of new ideas within a work role, group or organisation, to benefit the group's performance or the organisation. Unlike the larger organisations with plenty of human capital resources that can contribute to the company's performance, the different narratives happen for SMEs (Massaro et al., 2016). With a lack of human capital values, effective managerial roles in SMEs are essential for their substantial growth since, in SMEs, where most of the nature of knowledge is humanly embedded and united under a similar domain of individual governance (Jordão & Novas, 2017). Therefore, SMEs are urged to focus on their management's capability through innovative behaviour practices to ensure that they acquire sufficient expertise in managing the stocks of resources. In this study, the following hypothesis is narrated to be true.

Hypothesis 2: There is a significant positive relationship between innovative behaviour and SME performance

Knowledge Management Practices and Innovative Behaviour

Linking the concept of knowledge management practices and innovative behaviour, the RBV and ROT explain well the connection between organisational resources and the mobilisation of those resources. Theoretically, innovation emerges when the organisation has sufficient materials and capabilities to exploit whatever resources the company has to turn or change into products or services that support its way forward (YuSheng & Ibrahim, 2020). Knowledge management practices via knowledge acquisition, for example, can help organisations specifically obtain knowledge about the current market behaviours or customer demands in

line with the company's objectives (Hagemeister & Rodríguez, 2019). The same event can be applied to knowledge sharing in organisations, especially in SMEs, where team members constantly communicate and share ideas to improve their business framework, strategies, products or services (Ali, Musawir Ata, & Ali, 2018). With the managerial's capability to ensure those implanted intangible knowledge resources are fully utilised, innovative behaviour plays an important role in supporting the management to align with the company's existing core or roots (Sanz & Jiménez, 2018). Therefore, this study posits the following hypothesis to be true.

Hypothesis 3: There is a significant positive relationship between knowledge management practices and innovative behaviour

The Mediating Role of Innovative Behaviour

Knowledge management practices are considered one of the main factors that can enhance a company's performance (Asiaei et al., 2021). Many empirical studies conducted in different contexts such as healthcare, human resources management, public sector and education also supported the notion (Balasubramanian, Al-Ahbabi, & Sreejith, 2019; Heisig et al., 2016; Mahdi et al., 2019; Pflugfelder, 2021). Nevertheless, the evidence for the direct effects of knowledge management practices on SMEs' performance is still limited because researchers disagree that SMEs can be linked with larger organisations (Vayryen, Helander, & Vasell, 2017). Moreover, recent findings also showed a mixed relationship between the manifests of knowledge management practices, such as knowledge acquisition, knowledge sharing and knowledge application, towards the SMEs' performance (Ngah & Wong, 2020; Wijaya & Suasih, 2020). Moreover, numerous researches have significantly proved that knowledge management practices' direct effects on organisational performance are no longer sufficient to boost performance values (Obeso, Hernández, López, & Serrano, 2020). Therefore, this study calls for further research by adding a behavioural type of innovative behaviour to address the remaining gap further.

Hypothesis 4: Innovative behaviour significantly mediates the relationship between knowledge management practices and SME performance

Method

Scale Development

The current study comprises three main variables: knowledge management practices, innovative behaviour, and SME performance. The items were adopted from the previous studies, especially those closely related to SMEs' contexts. Knowledge management practices are measured through three main dimensions of knowledge acquisition, knowledge sharing, and knowledge application, adopted from Lee and Wong (2015). Meanwhile, innovative behaviour is a unidimensional construct measured by the adopted scale of Omri (2015). Finally, SME performance is conceptualised in this study that is made up from five main dimensions (job satisfaction, customer satisfaction, relational efficiency, operational efficiency, and innovation) through sixteen items adapted from previous studies (Lee, Tae, & Choi, 2012; Lyver & Lu, 2018; O'Cass & Viet, 2011). Usually, two main approaches are commonly used in the literature for the performance measures, namely objective and subjective measures (Sok, Snell, Lee, & Sok, 2017). For SME performance, past studies have asserted that subjective measures are more appropriate due to the SME's simple structure (Irwin et al., 2018). Their ability to give factual information about their organisations is insufficient compared to the larger organisations with proper audit and reporting processes. Finally, all the scales were based

on a five-point Likert scale where the respondents needed to select the best value to evaluate the level of each construct in their organisations.

Population and Sampling

The target population for this study encompasses any sectors from the service industry under the category of small and medium enterprises (SMEs) in Malaysia. Several past studies have asserted that collecting data from a multi-industry sample approach could facilitate the analysis for the inter-industry effects that can broaden the study's generalisation (Bontis, 1998). Based on SME Insights (2020), for the service sector, SMEs are defined as firms with less than 75 full-time employees or a turnover of less than RM20 million, where they were aimed for the main criteria in selecting the potential respondents for this study.

In ensuring the reliability of the variable, a pre-test was conducted before the real questionnaires were distributed to the research respondents. It is also to make sure the questionnaire content is understandable, valid and clear for the research target to answer (Sekaran & Bougie, 2019). A total of five experts were nominated, where three of them were academicians and two of them with industry experience. After the pre-test was done, the pilot test was undertaken to ensure that the reliability was good enough before the real questionnaires were distributed. For this study, the sample size was determined using a statistical software of GPOWER that yields the total sample size needed for this study is 85 to achieve a minimum effect size of 0.15, assuming a significance level of 5% and a statistical power of 80% (Cohen, 1988). Provided that the response rate in Malaysia, by average, is 20% (Ho, Sambasivan, & Liew, 2013), this research, through purposive sampling, decided to distribute 425 questionnaires to the targeted respondents.

To ensure only the best responses were recorded, only the manager, owner or an equivalent position was targeted as the key informants via a field survey approach for this study. The demographic profiles for the respondents are as shown in Table 1. They are targeted since these people have such a specific status in the organisations and can give the best evaluations for the questionnaire based on their experience (Frank & Obloj, 2014). Meanwhile, Table 2 shows the data for the population of the service sector, where professional services represent the largest respondents.

Table 1: Demographic Profiles of the Respondents

Item		Frequency	Percentage	Total
Gender	Male	72	50.00	50.00
	Female	72	50.00	100.00
Age	24 and below	26	18.06	18.06
	25 - 34	66	45.83	63.89
	35 - 44	32	22.22	86.12
	45 - 54	11	7.64	93.75
	55 and above	9	6.25	100.00
Education	PhD	4	2.78	2.78
	Master	12	8.33	11.11
	Undergraduate	89	61.81	72.92
	Diploma	24	16.67	89.58
	Others	15	10.42	100.00
Number of years in the company	Less than 1 year	34	23.61	23.61
	1-5 years	70	48.61	72.22
	6-10 years	22	15.28	87.50
	11-15 years	8	5.56	93.06
	More than 15 years	10	6.94	100.00
Current designation	Assistant Manager	25	17.36	17.36
	Senior Manager/HOD	11	7.64	25.00
	Managing Director/Owner	79	54.86	79.86
	Others	29	20.14	100.00

Findings

This study utilises partial least square structural equation modelling (PLS-SEM) analysis to determine the validity of the research model and the research findings (Ringle, Wende, & Becker, 2015). There are a few justifications for the selection of the PLS-SEM. For example, PLS-SEM runs regression analysis better with mediation in the research model (Preacher & Hayes, 2004). Furthermore, the measurement errors can be calculated using PLS-SEM, thus accurately estimating the research model's mediation effects (Chin, 1998). PLS-SEM also does not require the data to be under the data normality and appropriate with simple and complex model frameworks (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Moreover, the use of PLS-SEM is highly accepted in knowledge management studies (Asiaei et al., 2021; Hanifah, Abd Halim, Vafaei-Zadeh, & Nawaser, 2021). This study included three reflective constructs, with knowledge management practices were analysed for the first order and second-order reflective models (Sarstedt, Hair, Cheah, Becker, & Ringle, 2019). Using PLS-SEM, the analysis covers the measurement model. The measurement model needs to pass a few assessment criteria before the analysis can proceed to examine the structural model with a few assessment criteria before the hypothesis can be proven in this study (Hair, Risher, Sarstedt, & Ringle, 2019).

Table 2: Population of the Service Sectors

Profile	Frequency	Percentage	Total
Type of Industry			
Service Industry	144	100.00	100.00
Types of Service Industry the Company Operates			
Accommodation Services	3	2.08	2.08
Education Services	16	11.11	13.19
Financial Services	2	1.39	14.58
Food and Beverage Services	31	21.53	36.11
Healthcare Services	14	9.72	45.83
Information and Communication Services	15	10.42	56.25
Professional Services	35	24.31	80.56
Real Estate Services	1	0.69	81.25
Transportation & Storage Services	4	2.78	84.03
Wholesale & Retail Trade	22	15.28	99.31
Other	1	0.69	100.00
Sales Turnover			
Less than RM300,000	96	66.67	66.67
More than RM300,000 less than RM3 million	18	12.50	79.17
More than RM3 million but less than RM20 million	30	20.83	100.00
No of Employee			
Less than 5	67	46.53	46.53
More than 5 but less than 30	48	33.33	79.86
More than 30 but less than 75	29	20.14	100.00
Age of Company			
Less than 5 years	73	50.69	50.69
6-10 years	34	23.61	74.31
11-15 years	10	6.94	81.25
More than 15 years	27	18.75	100.00
Realisation for the Importance of Knowledge			
Less than 5 years	101	70.14	70.14
6-10 years	24	16.67	86.81
11-15 years	3	2.08	88.89
More than 15 years	16	11.11	100.00

Measurement Model Assessment

First-order reflective constructs

Figure 1 shows the SmartPLS analysis, while Table 3 shows the reliability, internal consistency reliability, convergent validity and discriminant validity, which are part of the measurement model. It also shows that the lowest loading value is 0.587, and the highest loading value is 0.916, higher than the suggested standardised value, which is 0.50 (Hair et al., 2014). The composite reliability (CR) and Cronbach's alpha were determined from the internal consistency

reliability in this study. The researchers discovered that CR is better suited for PLS-SEM (Hair, Matthews, Matthews, & Sarstedt, 2017). The CR value and Cronbach's alpha for all first-order constructs in Table 3 are greater than 0.70, indicating that the measurement model was internally consistent and reliable. The reflecting measurement model's variable validity was determined through convergent and discriminant validity. Convergent validity means the degree to which a visible variable item measures the same variable (Rehman, Kraus, Shah, Khanin, & Mahto, 2021).

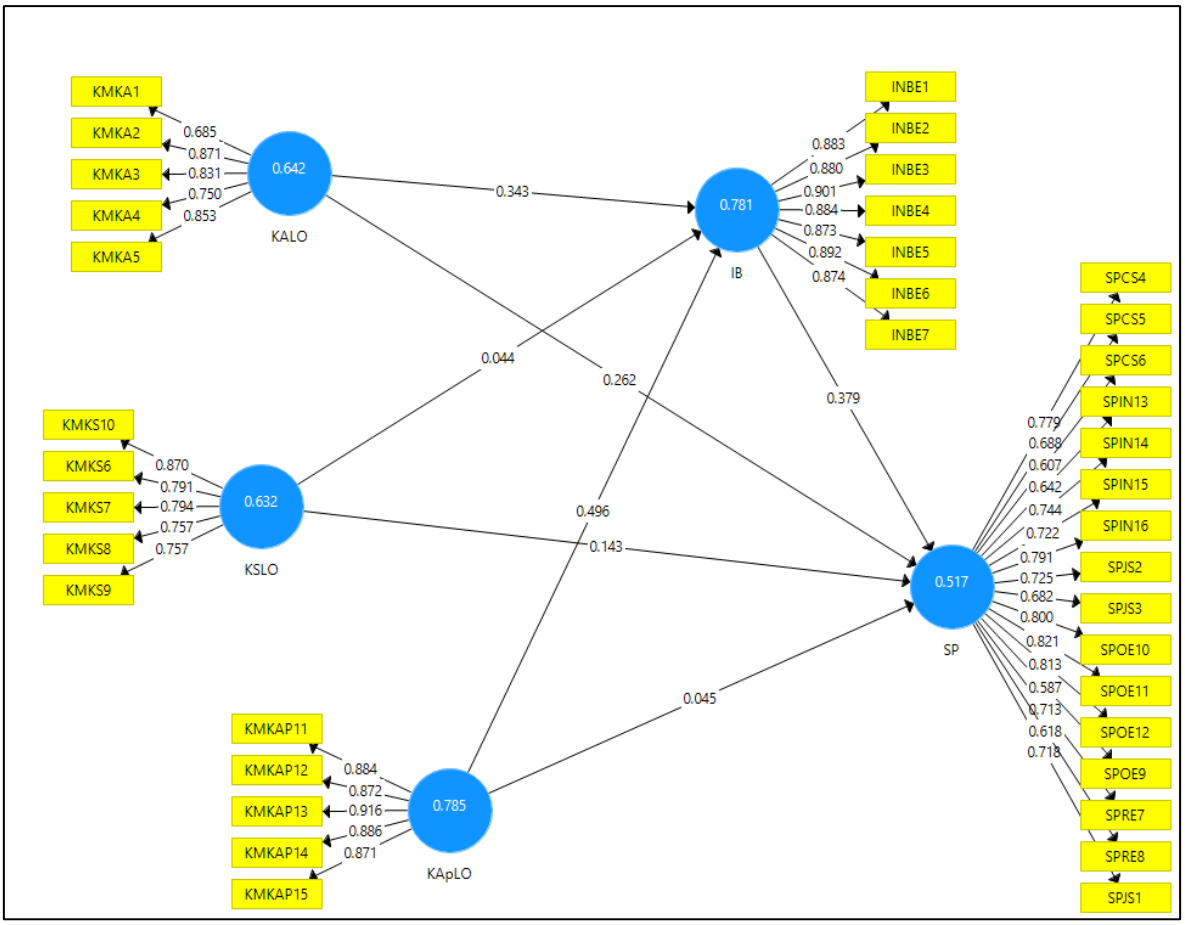

Figure 1: First Order Measurement Model Assessment

According to the literature, convergent validity is calculated using average variance extracted (AVE), and the AVE value of all the related constructs must be equal to or greater than 0.50 (Hair et al., 2014). The AVE value of all the constructs is more than the standardised value, as shown in Table 3.

Table 3: First-order indicator's factor loading and constructs' reliability

Constructs	Items	Factor Loadings	Composite Reliability	AVE	R^2	Cronbach's alpha
Knowledge Acquisition	KMKA1	0.685	0.899	0.642		0.859
	KMKA2	0.871				
	KMKA3	0.831				
	KMKA4	0.750				
	KMKA5	0.853				
Knowledge Sharing	KMKS10	0.870	0.895	0.632		0.853
	KMKS6	0.791				
	KMKS7	0.794				
	KMKS8	0.757				
	KMKS9	0.757				
Knowledge Application	KMKAP11	0.884	0.948	0.785		0.931
	KMKAP12	0.872				
	KMKAP13	0.916				
	KMKAP14	0.886				
	KMKAP15	0.871				
Innovative Behaviour	INBE1	0.883	0.962	0.781	0.698	0.953
	INBE2	0.880				
	INBE3	0.901				
	INBE4	0.884				
	INBE5	0.873				
	INBE6	0.892				
	INBE7	0.874				
SME Performance	SPCS4	0.779	0.944	0.517	0.582	0.937
	SPCS5	0.688				
	SPCS6	0.607				
	SPIN13	0.642				
	SPIN14	0.744				
	SPIN15	0.722				
	SPIN16	0.791				
	SPJS2	0.725				
	SPJS3	0.682				
	SPOE10	0.800				
	SPOE11	0.821				
	SPOE12	0.813				
	SPOE9	0.587				
	SPRE7	0.713				
	SPRE8	0.618				
	SPJS1	0.718				

Discriminant validity refers to how each construct differs statistically from another construct (Rehman, Usman, & Asghar, 2013). Several decades ago, Fornell and Larcker (1981) proposed typical methods for measuring discriminant validity. This method is no longer prevalent, so researchers introduced a new method for calculating discriminant validity called heterotrait-monotrait (HTMT) (Henseler, Ringle, & Sarstedt, 2015). Furthermore, Henseler et al. (2015) claimed that HTMT is suitable for small loading differences. HTMT is 0.90 for constructs with the same concept and 0.85 for constructs with distinct concepts. Table 4 shows that all constructs have values less than 0.90 in the first order, except for the KSLO, which shows a

value higher than 0.90. However, it is expected that the value for first-order knowledge sharing to be higher since the dimensions are closely related.

Table 4: First-order discriminant validity

	IB	KALO	KApLO	KSLO	SP
IB					
KALO	0.847				
KApLO	0.856	0.894			
KSLO	0.797	0.899	0.930		
SP	0.753	0.766	0.721	0.728	

Therefore, to overcome this issue, Henseler et al. (2015) introduced a more stringent method to assess discriminant validity, namely $HTMT_{inference}$. By looking at the confidence bias interval corrected through bootstrapping, the result shown in Table 5 indicates that discriminant validity is achieved since the confidence interval does not show a value of 1 on any of the constructs (Henseler et al., 2015). Therefore, discriminant validity is not an issue for the first-order constructs of the study.

Table 5: First-order extended discriminant validity (HTMT Confidence Bias Interval Corrected)

	Original Sample (O)	Sample Mean (M)	Bias	0.050	0.950
KALO -> IB	0.847	0.843	-0.004	0.772	0.911
KApLO -> IB	0.856	0.853	-0.004	0.770	0.916
KApLO -> KALO	0.894	0.892	-0.002	0.814	0.946
KSLO -> IB	0.797	0.789	-0.008	0.691	0.881
KSLO -> KALO	0.899	0.895	-0.005	0.770	0.972
KSLO -> KApLO	0.930	0.926	-0.003	0.868	0.977
SP -> IB	0.753	0.739	-0.014	0.634	0.849
SP -> KALO	0.766	0.757	-0.009	0.657	0.850
SP -> KApLO	0.721	0.709	-0.012	0.599	0.824
SP -> KSLO	0.728	0.713	-0.015	0.605	0.832

Second-order reflective constructs

The second step investigated the measurement model to create second-order knowledge management factors. Knowledge acquisition, knowledge sharing, and knowledge application are manifestations of knowledge management practices' reflective constructs. For second-order constructs, a two-stage technique was used in the current study. As a result, the measurement model was tested using one second-order construct (knowledge management practices) and two first-order constructs: innovative behaviour and SME performance. Reflective-reflective Type II is the final type of measurement model in this study. Kock (2015) proposed that the value of full collinearity, or VIF, must be less than five for all variables for the second-order measurement model to be valid. Figure 2 shows the analysis for the second-order measurement constructs for this study.

Table 6: Collinearity of the constructs

	IB	KMHO	SP
IB			3.14
KMHO	1.00		3.14
SP			

Meanwhile, Table 6 shows that all constructs with full-collinearity less than 5 meet the earlier condition. Tables 7 also satisfies the criterion of the measurement model at second-order constructs. For example, Hair et al. (2014) advise that the factor loading of all items are needed to be > 0.50, and the AVE value of all constructs is > 0.50. Furthermore, the CR value of all constructs structures exceeds 0.70, indicating that the measurement model was internally consistent and reliable. Table 8 demonstrates that the HTMT value of all constructs is less than 0.90 in the second-order, indicating that the discriminant validity condition is met (Henseler et al., 2015).

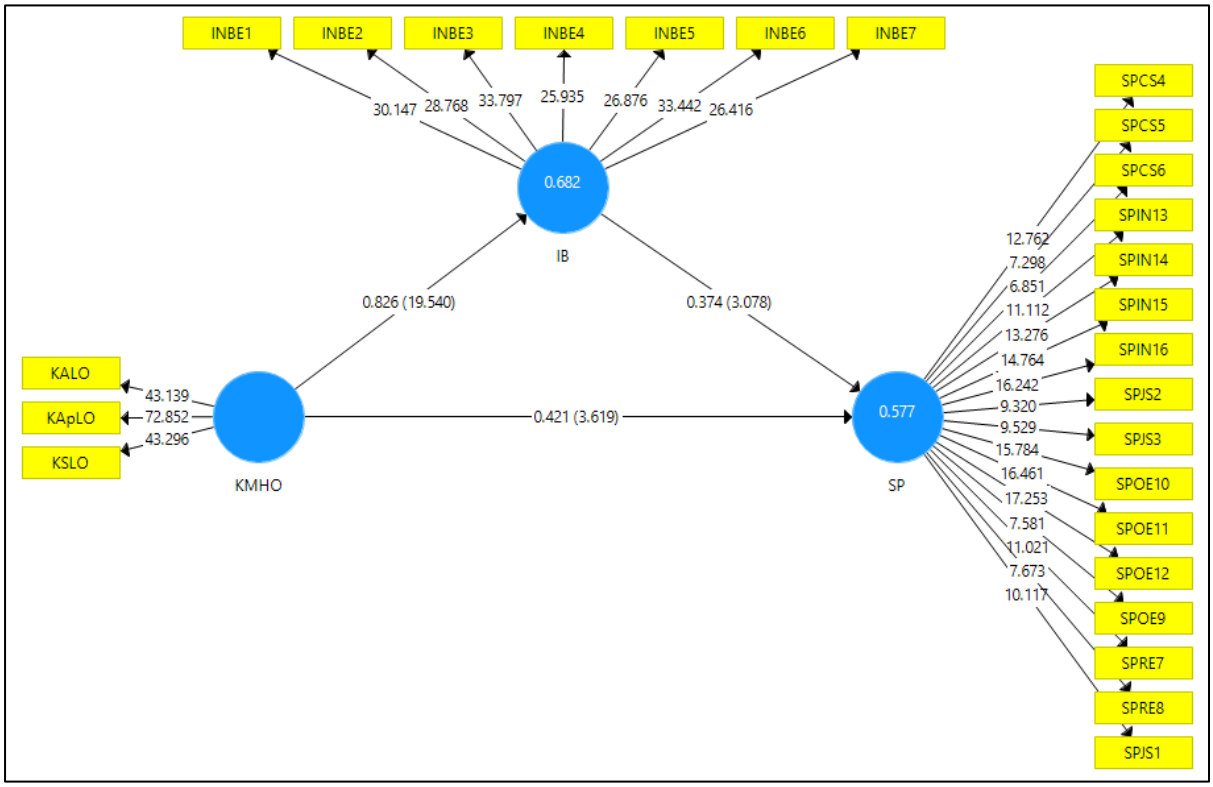

Figure 2: Second-order measurement model assessment

Table 7: Second-order indicator's factor loading and constructs' reliability

First-Order	Second-Order	Items	Factor Loadings	Composite Reliability	AVE
	Knowledge Management Practices	KALO	0.924	0.952	0.869
		KSLO	0.928		
		KApLO	0.944		
Innovative Behaviour		INBE1	0.883	0.962	0.781
		INBE2	0.880		
		INBE3	0.901		
		INBE4	0.884		
		INBE5	0.873		
		INBE6	0.892		
		INBE7	0.874		
SME Performance		SPCS4	0.779	0.944	0.517
		SPCS5	0.688		
		SPCS6	0.607		
		SPIN13	0.642		
		SPIN14	0.744		
		SPIN15	0.722		
		SPIN16	0.791		
		SPJS2	0.725		
		SPJS3	0.682		
		SPOE10	0.800		
		SPOE11	0.821		
		SPOE12	0.813		
		SPOE9	0.587		
		SPRE7	0.713		
		SPRE8	0.618		
		SPJS1	0.718		

Table 8: HTMT for the second-order

	IB	KMHO	SP
IB			
KMHO	0.877		
SP	0.753	0.777	

Structural model assessment

This section outlines a structural model for testing research hypotheses with SmartPLS, where the bootstrapping analysis was performed with 5,000 subsamples. Table 9 summarises the findings of both direct and indirect hypotheses after the bootstrapping was completed. For hypothesis testing, the p-value and t-value are used. If the p-value is less than 0.05 and the t-value is more than 1.96, hypotheses are accepted, and vice versa (Hair et al., 2014). Knowledge management practices significantly impacted SME performance ($p<0.000$ and $T=3.619$) and accepted H1. The findings are consistent with Giampaoli, Ciambotti, and Bontis (2017), who discovered that knowledge management infrastructure has a critical influence in improving a firm's performance in Italian firms.

Furthermore, knowledge management practices are strongly connected to innovative behaviour ($p<0.000$ and $T=19.540$) and supported H2. The finding is consistent with Yasir, Majid, Yousaf, Nassani, and Haffar (2021) that one of the knowledge management practices,

knowledge sharing, positively influences the innovative behaviour in SMEs in Pakistan. The H3 was also supported in this study, where the relationship between innovative behaviour and SMEs' performance was significant (p<0.002, T=3.078). This is similar to the study by Shanker, Bhanugopan, Heijden, and Farrell (2017) that shows the companies in Malaysia suggest that innovative behaviour affects organisational performance.

Table 9: Results for the PLS-SEM estimations (direct and indirect paths)

H	Paths	Beta Value	Std. Error	T-values	p-values	BCI LL	BCI UL	f^2	Results
H1	KMHO -> SP	0.421	0.116	3.619	0.000	0.337	0.498	0.134	Significant
H2	KMHO -> IB	0.826	0.042	19.540	0.000	0.790	0.849	2.142	Significant
H3	IB -> SP	0.374	0.121	3.078	0.002	0.285	0.449	0.105	Significant
H4	KMHO -> IB -> SP	0.309	0.107	2.874	0.004	0.230	0.374	-	Significant

Innovative behaviour (p<0.004 and T=2.874) was also found to mediate the relationship between knowledge management and SME performance, thus accepting H4. Furthermore, the Variance Accounted For (VAF) explored the role of innovative behaviour in mediating the relationship between knowledge management practices and SME performance. If the VAF number is less than 20%, between 20% and 80%, or greater than 80%, no mediation, partial mediation, or complete mediation is considered (Hair, Sarstedt, Ringle, & Gudergan, 2017). Table 10 demonstrates that the VAF of the mediating effect is 42.33%, indicating that innovative behaviour's mediating role falls under partial mediation.

Table 10: VAF of the mediating construct for SME Performance

Independent Variable	Dependent Variable	Mediating Variable	Indirect Effect	Total Effect	VAF (%)
Knowledge Management Practices	SME Performance	Innovative Behaviour	0.4233	0.421	42.33%

Table 11 depicts further main relationships of the constructs in this study. The f^2 shows whether an exogenous construct influences an endogenous construct (Hair et al., 2019). Cohen (1992) classified the f^2 value as small ($f^2 = 0.02$), medium ($f^2 = 0.15$), and large ($f^2 = 0.35$). According to Table 11, knowledge management practices has a large effect on innovative behaviour at the value of 2.142. Meanwhile, both knowledge management on SME performance and innovative behaviour on SME performance recorded a small effect at the value of 0.105 and 0.134, respectively.

According to the literature, R^2 was determined to define the study framework's explanatory power (Hair et al., 2019). It can be viewed as the combined effects of all exogenous variables on the endogenous variable. It also can be interpreted such as R^2 presents the amount of variance in the endogenous construct explained by all exogenous constructs linked to it (Hair et al., 2019). The effects values range from 0 to 1, where closer to 1 means higher predictive accuracy. There are three different rules of thumb for acceptable R^2. Cohen (1992) outlined predictive accuracies such as 0.26, 0.13, and 0.02 as substantial, moderate and small. Meanwhile, Chin (1998) introduced 0.67, 0.33, and 0.19 as substantial, moderate and weak. Last but not least, Hair, Ringle, and Sarstedt (2013) pioneered 0.75, 0.50, and 0.25 as

substantial, moderate and weak. R^2 should be high enough to achieve a minimum level of explanatory power to explain the model (Hair et al., 2019). However, a minimum of 0.10 is deemed sufficient for the variance explained of a particular endogenous construct (Falk & Miller, 1992). According to this study, the R^2 value of creative behaviour is 0.682, and the R^2 value of SME performance is 0.577.

Furthermore, researchers proposed a unique calculation approach for the predictive relevance of the study model, which was specifically created for the PLS-SEM prediction-oriented nature (Hair et al., 2019). If the prediction is closed to the original values (i.e., there are small prediction errors), the path model has high predictive accuracy. It can be done through the blindfolding procedure in PLS-SEM. If the Q^2 value is larger than 0, it shows that the exogenous constructs have predictive relevance for the examined endogenous construct (Hair, Sarstedt, et al., 2017). Likewise, this study concedes that Q^2 of innovative behaviour is 0.513 and SME performance is 0.217, both of which are greater than zero, and it displays superior predictive power at the construct level. Table 12 shows the summary for the R^2 and Q^2.

Table 11: The effect size

	IB	**KMHO**	**SP**
IB			0.105
KMHO	2.142		0.134
SP			

Table 12: Coefficient of Determination and Predictive Relevance

	Assessment	
Constructs	R^2	Q^2
Knowledge Management Practices		
Innovative Behaviour	0.682	0.513
SME Performance	0.577	0.271

Discussion and Conclusion

This study aims to contribute to the emerging literature of research orchestration perspectives (Sirmon et al., 2011) by integrating the ROT in the knowledge management practices towards the SME performance. The study also examines a research model in which innovative behaviour is the mediator between the relationship of knowledge management practices and SME performance. It is believed that through the proposed model which the effective and efficient usage of knowledge stocks embedded within the knowledge management practices helps the organisations, particularly the SMEs, improve their performance. Based on the research findings, the knowledge management practices significantly help in contributing to the SMEs' performance and accepted H1. It shows that the manifestation of the total attributes of knowledge management practices via knowledge acquisition, knowledge sharing, and knowledge application contributed to Malaysia's SME performance. The outcome is similar to the study by Ngah and Wong (2020).

The finding also found a significant relationship between knowledge management practices and innovative behaviour and accepted the H2. The H3 was also accepted similarly since the empirical results proved a significant relationship between innovative behaviour and SME performance. Last but not least, the study shows that innovative behaviour mediates the relationship between knowledge management practices and SME performance partially and accepted H4. In addition, ROT supports the notion of the relationship between knowledge management practices and innovative behaviour that helps SMEs use the available knowledge resources within the organisations. It is similar to the recent findings by Vandavasi,

McConville, Uen, and Yepuru (2020) that asserted the role of knowledge management practices and how innovative behaviour was related.

Theoretical Implications

In the prevalent literature, the effects of knowledge management practices, innovative behaviour and SMEs' performance had rarely been reviewed together. The current research identifies the significant role of innovative behaviour in explaining the association between knowledge management practices and SMEs' performance. Consequently, it builds a theoretical model based on the RBV, KBV and ROT, filling a research gap on the interactions between knowledge management practices and innovative behaviour to predict SMEs' performance. The highlighted research model also provides attractive insights into the role of knowledge management practices in determining the managerial role of innovative behaviour or predicting SMEs' performance. This study also shows that knowledge management practices strongly affect SMEs' performance when it supports innovative behaviour. Thus, SMEs, particularly in a developing country like Malaysia, cannot use the full benefits of knowledge management practices should they not focus on innovative behaviour practices within their organisations. The current study also extends the first-order constructs to second-order knowledge management practices to validate the total effects of manifest roles of knowledge acquisition, knowledge sharing, and application. Moreover, this study offers another attractive theoretical view of ROT instead of RBV, especially in a similar study context, i.e., organisational performance. Last but not least, this study also provides an integrated view of the knowledge management literature from an Asian country to complement other studies conducted in Western countries and, as recommended recently by Alzghoul, Elrehail, Emeagwali, and AlShboul (2018).

Practical Implications

Practically, the findings of this study are crucial for the top management to design or incept a new framework in managing their abundance stock of intangible assets, i.e., knowledge assets, especially in SMEs due to their limited access for the external knowledge, owing to the lack of organisations' ability to outsource for new knowledge. The SMEs organisations must utilise their experience or knowledge since it is embedded within their territory and ready to be used. The results also offer multiple ways for the top management to use the proper way to handle knowledge management practices and innovative behaviour in their organisations. The top management of SMEs can use knowledge management practices (knowledge acquisition, knowledge sharing, and knowledge application) as an initial source for stock of knowledge to help the managers make proactive decisions. On the other hand, should the Malaysian SMEs fail to address the use of proper knowledge management practices, it will halt a decision-making process by the management. The centric leadership culture in SMEs, i.e., most of the decisions are made by the same or similar individual due to lack of human capital, which the failure to address the importance of knowledge management practices, will lead the performance of the organisations to suffer. On top of that, SMEs should concern about the managerial posts in their company since the inability of the managers to practice innovative behaviour in ensuring the effective and efficient use of the ready knowledge will not be able to move the company forward. The findings also suggest that the role of managers or owners in SMEs is to make sure the company can sustain itself financially, ensure that the organisations' knowledge corners are used properly, and address any issues to prevent the company from being stagnant.

Limitation and Future Research

This study, just like the other similar studies, also has some limitations that may offer directions for future research. First, this current research used a cross-sectional approach where the data is only collected at a single point in time, which has ignored the fact that these SMEs may not have the lasting ability to support such knowledge management practices, including the role of innovative behaviour. The longitudinal approach might offer another interesting finding compared to the current one. Moreover, future research might also add another interesting variable, such as intellectual capital and absorptive capacity, as predictors since intellectual capital and absorptive capacity are also considered intangible assets for the organisations. It might contribute to addressing any remaining gaps to see how the innovative behaviour is affected by the role of the former knowledge assets. Last but not least, this study was conducted in Malaysian SMEs' settings, particularly in the service sector that is only relevant to certain kinds of culture, especially when this research theorised that the service sector highly focused on the knowledge aspect owing to their nature that provides more services compared to products. Therefore, a similar theoretical framework could be used in developed or developing countries to weigh against the results.

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