

# The Relationship between Knowledge Management and Organizational Performance of Malaysian Private Colleges: A Mediating Role of Managing Talent Practices

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**Abstract** Knowledge management plays a vital role in sustaining organizational performance of private academic institutions over time. Nonetheless the linkage between knowledge management, managing talent practices and organizational performance is not adequately addressed. This study therefore is aimed to investigate the relationship between knowledge management and organizational performance of Malaysian private colleges and whether managing talent practices, namely managing talent development and talent retention mediate the relationship between knowledge management and organizational performance of Malaysian private colleges. PLS-SEM technique is deployed to test the hypothesized relationships in the model. Data to all variables of interest studied is collected through a survey using structured questionnaires. A total of 785 sets of questionnaires was distributed to academic and non-academic staff above the executive level from 157 selected private colleges in Malaysia, out of which 243 (31%) of them were valid and useable to this study. Empirical findings in this study highlight that knowledge management has a significant positive relationship with organizational performance of private colleges. Managing talent development rather than talent retention is found to have a significant direct positive influence on organizational performance of private colleges. In addition, knowledge management is predicted to have a significance positive influence on talent development and talent retention respectively. The mediation effects of talent development is statistically significant and in this regard, talent development is shown to have partially mediated the relationship between knowledge management and organizational performance of Malaysian private colleges. Both limitations and managerial implications are also highlighted in this paper.

**Keywords** Knowledge Management, Talent Development, Talent Retention, Organizational

Performance, PLS-SEM

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## 1. Introduction

As Malaysia is making a transition from its production-based economy to a knowledge-based economy, the initiative of knowledge management among the Malaysian higher learning institutions is critically important to their organizational success (Nasiruzzaman, Qudaih & Dahlan [1]; Nawaz & Gomes [2]). In particular, several past studies (Mohamad, Manning & Tatnall [3]; Attallah et al. [4]) have suggested that knowledge management has largely been accepted by the Malaysian public institutions of higher learning as a way to achieve better organizational outcomes. As the popularity of knowledge management within the country's higher educational organizations increases, they are further reported to have encountered barriers to managing their organizational knowledge-base in today's knowledge-intensive environment that essentially allows these learning organizations to realize competitive advantage in delivering a sustainable organizational performance (Norulkamar & Hatamleh [5]; Aziz, Lotfi & Dahlan [6]). However in the study of Yusoff, Mahmood and Jaafar [7], the practice of managing organizational knowledge-related activities in determining the business success of academic institutions in Malaysia still appears to be at its early stage.

A study by Demchig[8] has further suggested that higher educational institutions tend to neglect knowledge at the organizational level. From the business perspective, a systematic way of managing organizational knowledge among private colleges in Malaysia is paramount in fostering management and technical competencies to

continuously thrive in this challenging economic environment. Other scholars such as Yeh [9] has indicated that while academic knowledge served the primary purpose of the institutions of higher learning, organizational knowledge is nonetheless crucial to the overall business success of the educational organizations. In this regard, private enterprise colleges in the country that are not able to keep pace with changes in knowledge are likely to have difficulties in sustaining their business success in the longer term.

In the effort to managing organizational knowledge resource, these local private colleges similar to other business organizations are assumed to drive the managing practices of developing and retaining its talented workforce deemed as intellectual assets to foster a competitive advantage for the betterment of their organizational performance. Past studies like Schroevers and Hendriks [10] claims such interconnection seems plausible since knowledge and human talent are closely related entities to firms performance and that by managing knowledge systematically induces these key employees to keep up and stay relevant with the growth of the organizations over time. The knowledge-base related activities within the organizations are managed in such a manner that enables key employees to make use of the knowledge to develop and build up their core competencies in executing the organizational tasks. It is also posited that a well-managed organizational knowledge-base allows the existing talented employees access the organizational knowledge repository for valuable information to ease the process of business decision-making and thereby, promoting the retention of key talents that further contribute to better business results of the organization.

Therefore, this paper is aimed to investigate the organizational performance of private colleges in Malaysia in association with knowledge management and to evaluate the mediating role of managing talent development and talent retention respectively on the relationship between knowledge management and organizational performance of private colleges. The next section of this paper discusses the research context which leads to hypotheses developed in accordance to the literatures reviewed on knowledge management and organizational performance. This is followed by an explanation of the research method used and the assessment of measurement and structural models by employing the PLS-SEM technique using SmartPLS 2.0 M3 software. Limitations of the study and managerial implications are also highlighted in this paper before it ends with some concluding remarks.

## 2. Literatures Review and Hypotheses

According to Chilton and Bloodgood [11], knowledge management is primarily aimed at protecting organizational knowledge from the use by competitors to exploit a competitive advantage for the organization.

Following the emergence of a knowledge-based economy in the advent of globalization, Anand et al. [12] has thus regarded knowledge management as of utmost importance to create and add value to the business. Other past studies (Whelan & Carcary [13]; Kianto et al. [14]) have however, argued that knowledge management is a business practice that still remains in development despite of it being an effective tool to generate competitive advantage that benefits organizational performance. As knowledge management plays a prominent role within the local public higher education institutions in recent years, there is still a lack of empirical evidence on the relationship between knowledge management and organizational performance among private colleges in the context of Malaysian higher education business sector. This paper therefore hypothesizes that:

H1: There is a significant positive relationship between knowledge management and organizational performance of private colleges.

From the knowledge-based perspective, the initiative of managing knowledge that has a positive influence on the business performance of organizations has clearly been documented by numerous past studies (Turner & Minnone [15]; Liao [16]; Andreeva & Kianto [17]; Kianto et al. [18]; Inkinen, Kianto & Vanhala [19]; Salami & Mercy [20]). However, those studies in the past did not pay sufficient attention to the domain of knowledge management that links the practices of managing talent within a knowledge-intensive setting that in turn positively influences organizational performance. While organizational knowledge facilitates the way to which talents can be managed in the organization, it follows that our present study has identified management of talent as a strategic practice of managing attraction and recruitment, development and retention of talented employees as a source of competitive advantage that is critical to the business success of educational organizations. As such, the researchers have regarded that private academic institutions that maintain a well-managed organizational knowledge-base will exert a more profound effect on how the existing talents can be further developed and retained, albeit when they are recruited for longer-term organizational success. Nonetheless, the links between knowledge management with managing talent practices, namely talent development and talent retention towards organizational performance are still not adequately examined.

In order to address this gap, managing talent development and talent retention in this study are regarded as mediators on the relationship between knowledge management and organizational performance of private colleges. The mediating variables used are uniquely distinct, whereby talent development according to Dass, Muthaly and Annakis [21] is the practice of developing incumbents through the processes such as coaching, mentoring, feedback, training and development and

challenging employees to perform their tasks and functions with competence and on the other hand, talent retention is the practice of retaining high-potential employees for a maximum period of time with the aim of maintaining a competitive organizational workforce (Oladapo [22]). Therefore, this paper hypothesizes that:

H2: Knowledge management has a significant direct positive influence on talent development among private colleges.

H3: Knowledge management has a significant direct positive influence on talent retention among private colleges.

H4: Managing talent development has a significant direct positive influence on organizational performance of private colleges.

H5: Managing talent retention has a significant direct positive influence on organizational performance of private colleges.

H6: The direct relationship between knowledge management and organizational performance of private colleges is mediated by talent development.

H7: The direct relationship between knowledge management and organizational performance of private colleges is mediated by talent retention.

### 3. Methodology

A survey method using structured questionnaires as a tool to collect quantitative data for the variables of interest studied. All measurement items in this study are adapted from previously validated scales. Knowledge management comprises 14 items measuring on a 5-point Likert scale are adapted from Zack, McKeen and Singh [23] while the latent variables of managing talent development and talent retention have 6 items each that are adapted from Oehley [24] and all are measured on a 5-point Likert scale, from which 1 (*strongly disagree*), 2 (*disagree*), 3 (*neither agree nor disagree*), 4 (*agree*) and 5 (*strongly agree*). Meanwhile, the perceived organizational performance of private colleges is measured using 10 items on a 7-point Likert scale that are adapted from Slavkovic and Babic [25], with which 1 (*strongly disagree*), 2 (*disagree*), 3 (*somewhat disagree*), 4 (*neither agree nor disagree*), 5 (*somewhat agree*), 6 (*agree*) and 7 (*strongly agree*). The sampling frame is identified from the Malaysian Qualifications Register (MQR), a national list of private colleges maintained by the Malaysian Qualifications Agency (MQA). Unit of analysis is at individual level. A total of 785 sets of questionnaires were sent out to academic and non-academic staff above the executive level from 157 selected private colleges in Malaysia. The selection of these private colleges was based on a probability sampling approach to simple random sampling and a calculation of minimum sample size for this study using the technique introduced by Luck, Taylor and Robin [26], in which 157

institutions out of 390 registered private colleges with the 2017 Malaysian Qualifications Register [27] were chosen. The targeted respondents participating in this survey were comprised of senior management, departmental managers, senior executives, senior lecturers and heads of programs (HoPs) employed by these private colleges. Of the 785 questionnaires distributed, 243 were deemed valid and usable which provided the sample size to this study. A response rate of 31% was achieved. Of the 243 respondents, 40.7% of them were only involved in non-academics whereas 35.8% dealt with academic affairs and the remaining 23.5% of them were involved in both academic and non-academic tasks of the private colleges. Moreover, nearly half of the respondents (44.4%) had 3 to 5 years of working experience in private colleges with slightly more than one-third (35%) had worked for 6 to 10 years while the remaining 20.6% of them had been working for more than 10 years.

PLS-SEM technique using SmartPLS (M2) is deployed to analyze the data collected. In particular, the variance-based approach to PLS-SEM is used in our study to predict/explain the key target construct of organizational performance in addition to estimating path models with latent variables and their hypothesized relationships. Two stages are essentially involved in the evaluation of PLS path-models – Stage 1 addresses the assessment of measurement model, in which case a reflective measurement model for this study. If the evaluation results meet the criteria for measurement quality, researchers then proceed to the structural model evaluation in Stage 2 that involves testing the proposed hypotheses and determining the relationships among the latent variables.

### 4. Results of Measurement and Structural Models

This study begins with testing the common method variance bias using Harman's single factor test since the data was collected from a single source of information through a single questionnaire. According to Podsakoff, MacKenzie and Lee [28], common method variance bias becomes problematic when a single latent factor accounted for the majority of the variance explained. The un-rotated factor analysis has shown that the first factor is only accounted for 17% of the total 66.5% variance. This shows a latent variable is not accounted for the majority of the total variance explained. The results from the principal component analysis (PCA) have further revealed 6 factors with eigenvalues greater than 1, which suggests that the variables studied are clearly factorizable, as is indicated by KMO Measures of Sampling Adequacy is 0.927 (larger than 0.6) with a significant Barlett's Test of Sphericity result (Sig. = 0.000). Therefore, the results have shown that common method variance bias is not a serious problem in our study.

The PLS algorithm is run to evaluate reliability and validity of the reflective measurement model using four main criteria, which are internal consistency reliability, indicator reliability, convergent validity and discriminant validity. Referring to the following Table 1, one of the criteria to be initially assessed is internal consistency reliability using the measure of composite reliability (CR). The results show that the values of composite reliability ranged from 0.8841 to 0.9347 which are above the recommended threshold value of 0.8. This has indicated the measures used to represent the constructs have achieved internal consistency reliability. The use of Cronbach's alpha as mentioned by Hair et al. [29], tends to underestimate the internal consistency reliability because it

assumes all indicators loadings are equal, despite that the values of Cronbach's alpha ranging from 0.8366 to 0.9199 are acceptable.

The measurement model has also demonstrated adequate indicator reliability when each indicator's outer loading exceeds 0.708 and is statistically significant at 0.05 level. The item KM9 with loadings less than 0.708 is retained because the removal of this item will not significantly increase the value of CR. Next is convergent validity of the measurement model which is established when all the latent variables have average variance extracted (AVE) values ranging from 0.5659 to 0.6862 and all are above the critical value of 0.5.

**Table 1.** Results of the Measurement Model

Construct	Items	Loadings	AVE	Composite Reliability	T-statistics	Cronbach's Alpha				
Knowledge Management	KM5	0.7425	0.5659	0.9286	24.043	0.9151				
	KM6	0.7878			22.047					
	KM7	0.7118			15.864					
	KM8	0.7183			14.872					
	KM9	0.6998			15.522					
	KM10	0.7806			23.455					
	KM11	0.7599			25.222					
	KM12	0.7424			16.975					
	KM13	0.7707			25.682					
	KM14	0.8017			32.319					
	Talent Development	TD1			0.8198		0.6862	0.9291	31.689	0.9085
		TD2			0.8394				39.281	
		TD3			0.7870				23.836	
		TD4			0.8515				39.087	
TD5		0.8310	35.172							
TD6		0.8400	32.013							
Talent Retention	TR1	0.8253	0.6049	0.8841	36.594	0.8366				
	TR2	0.7198			17.517					
	TR3	0.7291			16.634					
	TR4	0.7817			21.545					
	TR6	0.8263			29.687					
	Organizational Performance of Private Colleges	OP3			0.7145		0.6428	0.9347	14.881	0.9199
OP4		0.7090	13.784							
OP5		0.8554	40.210							
OP6		0.8682	41.232							
OP7		0.8552	40.405							
OP8		0.7985	23.896							
OP9		0.8079	24.288							
OP10		0.7888	23.972							

In addition, discriminant validity of the constructs is evaluated using two measures which are i) Cross-Factor Loadings and ii) Fornell-Larcker's Criterion. The measurement model exhibits discriminant validity when i) the indicator's loadings on the respective construct are highest compared to all of its loadings on other constructs and ii) the square root of each construct's AVE exceeds the correlations between the construct and all other constructs in the model. The results

of all the constructs discriminant validity are presented in the following Table 2 and Table 3 respectively.

**Table 2.** Output of Cross-Factor Loadings

	Knowledge Management	Org Perf Prvt Colleges	Talent Development	Talent Retention	T-Statistics
KM10	<b>0.7806</b>	0.5143	0.5385	0.5017	23.455
KM11	<b>0.7599</b>	0.5632	0.5311	0.4525	25.222
KM12	<b>0.7424</b>	0.5673	0.5840	0.5043	16.975
KM13	<b>0.7707</b>	0.5101	0.6222	0.4969	25.682
KM14	<b>0.8017</b>	0.5962	0.6039	0.5518	32.319
KM5	<b>0.7425</b>	0.4288	0.5830	0.5409	24.043
KM6	<b>0.7878</b>	0.5538	0.5293	0.4847	22.047
KM7	<b>0.7118</b>	0.4252	0.3741	0.3501	15.864
KM8	<b>0.7183</b>	0.4387	0.3712	0.3926	14.872
KM9	<b>0.6998</b>	0.4481	0.4015	0.4135	15.522
OP10	0.5478	<b>0.7888</b>	0.5063	0.4660	23.972
OP3	0.4431	<b>0.7145</b>	0.3136	0.2988	14.881
OP4	0.4832	<b>0.7090</b>	0.4177	0.3355	13.784
OP5	0.5894	<b>0.8554</b>	0.5399	0.4983	40.210
OP6	0.5875	<b>0.8682</b>	0.5710	0.5384	41.232
OP7	0.5698	<b>0.8552</b>	0.5172	0.5028	40.405
OP8	0.5329	<b>0.7985</b>	0.5168	0.4478	23.896
OP9	0.5660	<b>0.8079</b>	0.4700	0.4245	24.288
TD1	0.5911	0.5326	<b>0.8198</b>	0.5996	31.689
TD2	0.5889	0.4597	<b>0.8394</b>	0.6226	39.281
TD3	0.5299	0.4628	<b>0.7870</b>	0.5543	23.836
TD4	0.6119	0.5825	<b>0.8515</b>	0.6414	39.087
TD5	0.5373	0.4544	<b>0.8310</b>	0.5674	35.172
TD6	0.5911	0.5154	<b>0.8400</b>	0.6349	32.013
TR1	0.5849	0.5286	0.6385	<b>0.8253</b>	36.594
TR2	0.3705	0.3759	0.4081	<b>0.7198</b>	17.517
TR3	0.4544	0.3827	0.5219	<b>0.7291</b>	16.634
TR4	0.4895	0.3772	0.6161	<b>0.7817</b>	21.545
TR6	0.5203	0.4680	0.6199	<b>0.8263</b>	29.687

**Table 3.** Fornell-Larcker's Criterion

	Knowledge Management	Org Perf Prvt Colleges	Talent Development	Talent Retention
Knowledge Management	<b>0.7523</b>			
Org Perf Prvt Colleges	0.6768	<b>0.8018</b>		
Talent Development	0.6959	0.6082	<b>0.8284</b>	
Talent Retention	0.6310	0.5557	0.7301	<b>0.7778</b>

Having examined the measurement model, this paper proceeds to evaluate the structural model when reliability, convergent validity and discriminant validity of the measurement scales are satisfactorily achieved. In assessing the structural model of this study, a variance-based PLS-SEM method is used to predict the endogenous latent constructs and to test the hypothesized relationships between latent constructs. The structural model is then evaluated using the coefficients of determination ( $R^2$ ), the level and significance of the path-model coefficients. As recommended by Hair et al. [30], 5000 bootstrap samples from 243 observed cases originally used with a 'no sign change option' to estimate the path-model coefficients and their significance. The diagram below illustrates the structural model evaluation with the path-model coefficients shown for this study.

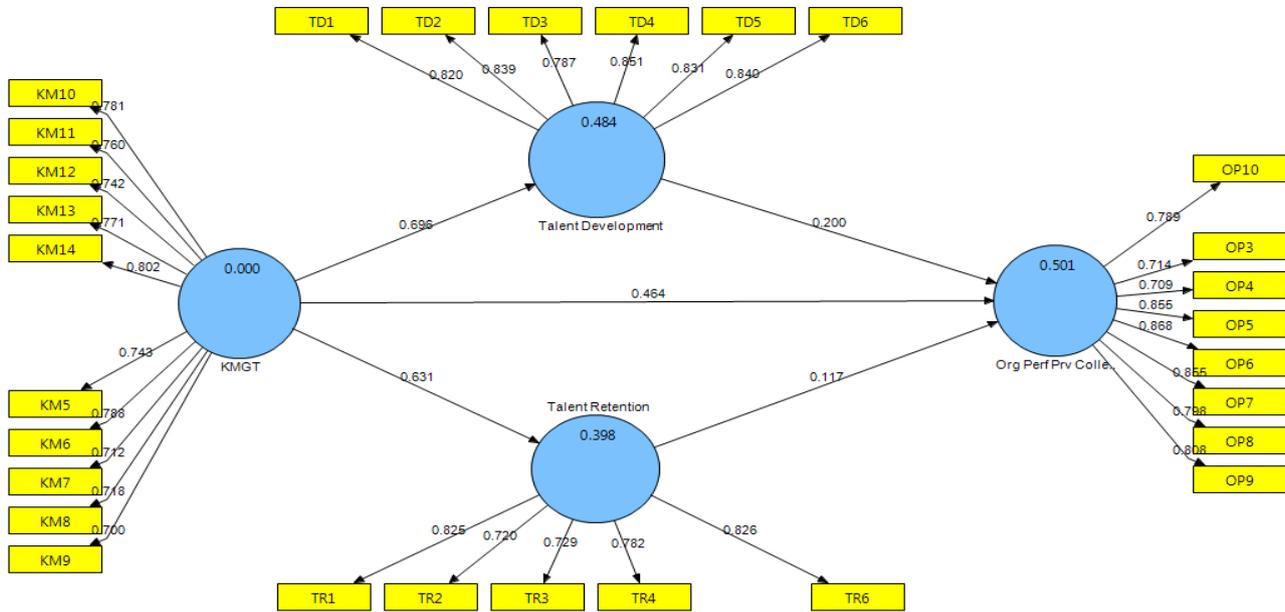


Figure 1. PLS Path-Model Evaluation

In determining the  $R^2$  values of the endogenous latent variables, the model above shows that 48.4% ( $R^2 = 0.484$ ) of the amount of variance of talent development and that 39.8% ( $R^2 = 0.398$ ) of talent retention are influenced by knowledge management while 50.1% ( $R^2 = 0.501$ ) of the amount of variance of organizational performance of private colleges is explained by the model. Hence, the model provides a moderately strong predictive power. With the use of omission distance,  $D=7$  and 243 cases observed in our study, a subsequent run on the blindfolding procedure in SmartPLS 2 further reveals the resulting cross-validated redundancy  $Q^2$  values that are above zero for all endogenous constructs and thus, providing support for the model’s predictive accuracy.

To further investigate the hypothesized relationships between latent constructs within the structural model, Table 4 below highlights the results of hypotheses testing in which the proposed hypotheses H1, H2, H3 and H4 are supported, all of which indicate the expected positive sign direction with their path-coefficient estimates ( $\beta$ ) ranging from 0.2001 to 0.6959. Overall, knowledge management and talent development are significant predictors contributing to organizational performance of private colleges. In addition, knowledge management is shown to have predicted a significant positive influence on talent development and talent retention respectively. However, managing talent retention is found to have not significantly related to organizational performance of private colleges and hence, the proposed hypothesis H5 is not supported.

Table 4. Significance testing results of the structural model path coefficients

Hypothesis	Hypothesized Relationship	Path Coefficient, $\beta$	Standard Error (SE)	t-value	Decision
H1	KMGT -> Org Perf Prvt Colleges	0.4638	0.0736	6.298**	Supported
H2	KMGT -> Talent Development	0.6959	0.0430	16.183**	Supported
H3	KMGT -> Talent Retention	0.6310	0.0542	11.633**	Supported
H4	Talent Development -> Org Perf Prvt Colleges	0.2001	0.0932	2.147*	Supported
H5	Talent Retention -> Org Perf Prvt Colleges	0.1170	0.0880	1.330	Not Supported

Note: \*\* $p < 0.01$ , \* $p < 0.05$

### 5. Evaluation of the Mediation Relationship in PLS Path-model

Within the PLS path-model, mediation is a situation in which a mediator variable to some extent absorbs the effect of an exogenous on an endogenous latent variable. In conducting mediation analysis therefore, this paper follows Preacher and Hayes [31] to bootstrap the sampling distribution of the indirect effect. Bootstrapping as stated by Hair et al. [32] is a non-parametric resampling procedure for testing mediation effects that makes no assumptions of normality of the sampling distribution and is applicable to small sample sizes with more confidence. The significance of the indirect effect is tested using a bootstrapping routine with 243 observed cases, 5000 subsamples and a ‘no sign change option’ in SmartPLS 2.

The empirical results of this study shown in Table 5 below have highlighted the role of talent development (TD) in significantly mediating the relationship between knowledge management (KMGT) and organizational performance of private colleges. Therefore, the proposed hypothesis H6 is supported. On the other hand, talent retention (TR) is found to have not significantly mediated the relationship between knowledge management (KMGT) and organizational performance of private colleges. Hence, the proposed hypothesis H7 is not supported.

**Table 5.** Significant testing results of the mediation relationship

Hypothesis	Hypothesized Relationship	Path Coefficient, $\beta$	Standard Error (SE)	t-value	Decision
H6	KMGT -> TD -> Org Perf Prvt Colleges	0.1392	0.0668	2.084*	Supported
H7	KMGT -> TR -> Org Perf Prvt Colleges	0.0738	0.0565	1.306	Not Supported

Note: \* $p < 0.05$

Based on Preacher and Hayes [33], the following Table 6 highlights the indirect effects 95% Boot CI: [LL=0.0083, UL=0.2701] does not fall in between a zero within the confidence interval at the given significance level of 5% and thus, statistically confirming the mediation effects of talent development (TD). This indicates talent development, TD as a mediator variable absorbs some of the direct effects of knowledge management on organizational performance of private colleges. The empirical findings have nevertheless revealed no mediation that occurs on the effect of talent retention in mediating the relationship between knowledge management and organizational performance of private colleges.

**Table 6.** Bootstrapped confidence interval

Relationship	Indirect Effect	Standard Error (SE)	Lower Limit (LL)	Upper Limit (UL)	95% Bootstrapped Confidence Interval
KMGT -> TD -> Org Perf Prvt Colleges	0.1392	0.0668	0.0083	0.2701	[LL = 0.0083, UL = 0.2701]
KMGT -> TR -> Org Perf Prvt Colleges	0.0738	0.0565	-0.0369	0.1845	[LL = -0.0369, UL = 0.1845]

In determining the strength of mediation, the Variance Accounted For (VAF) assessment by Hair et al. [34] is then used whereby VAF is equal to the indirect effect divided by the total effect (i.e. direct effect + indirect effect). This value is ranged between 0 and 1 or 0% to 100% which indicates a stronger mediation occurs when the results are higher. According to Hair et al. further, it is assumed partial mediation when the assessment of VAF is larger than 20% but less than 80% (i.e.  $20\% < VAF < 80\%$ ) and with VAF in this study is equal to 0.231 (0.1392/0.6030) or 23.1% and as such, we conclude that talent development (TD) as the mediator variable partially mediates the relationship between knowledge management and organizational performance of private colleges.

## 6. Limitations

This present study is not without any limitations. A wider sample that covers both public and private universities in Malaysia with multiple responses from individuals and management levels could be included in future study to be more generalized to the higher education industry in the country. The same research study can also be carried out by using other mediating or even moderating variables such as the use of innovative technology and government support to understand better the organizational performance of private colleges in relation with knowledge management.

## 7. Managerial Implications

This study benefits both researchers and business practitioners by highlighting the importance of knowledge management in private colleges within the Malaysian higher education industry. The higher the level of activities and practices in managing knowledge, the better outcome will be to the organizational performance of private colleges in Malaysia. When these private academic institutions manage their organizational-related knowledge base well, they are better able to develop and retain talented employees in meeting current and future business needs. Since the findings further reveal that talent development mediates the relationship between knowledge management and organizational performance of private colleges, it is therefore in the interest of the Malaysian private colleges to invest adequate resources in establishing a well-functioning knowledge management mechanism such as the setting up of network multimedia and e-learning facilities to drive the development of talented workforce in enhancing their knowledge and skills competencies that in turn contributing to the long-term business success.

## 8. Conclusions

This present study adds to the literature of knowledge management in relation to managing talent practices and organizational performance. It fills the gap by addressing organizational performance that is linked with knowledge management mediated by managing talent practices,

namely talent development and talent retention respectively. In light of this, empirical findings of this study have highlighted that knowledge management and talent development are influential to the organizational performance of private colleges. Interestingly, talent development rather than talent retention is ultimately linked to knowledge management that has exerted a significant positive influence over organizational performance of Malaysian private colleges. Hence, talent development is identified as the potential linkage that transmits the effects of managing knowledge towards organizational performance of private colleges over time. Towards this end, the development of talented employees that is built upon knowledge management within the institution becomes imperative in delivering a sustainable organizational performance of Malaysian private colleges.

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