

# The Moderating Role of Entrepreneur Orientation in the Relationship between Knowledge Management, Transformational Leadership and Performance of Higher Education Institutes in Thailand

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The main focus of the current study is in examining the moderating role of entrepreneur orientation in the relationship between knowledge management, transformational Leadership and performance of higher education institutes in Thailand. The present study attempts to examine the relationship between organizational excellence and transformational leadership or knowledge management. The study also analysed the impact of entrepreneurial orientation upon these relationships as a moderator. A response bias analysis was performed which was found to have a small effect on the analysis. This study analysed the internal structure of transformational leadership, organizational excellence, entrepreneurial orientation, and knowledge management. Internal consistency was checked by performing principal component analysis. A survey method was used in this research. The instrument for collection of data used was a questionnaire. The sample targeted for the study included finance and operational managers working in the higher education sector. This study is among the pioneering studies on the issues. SEM-PLS is used as statistical tool to answer the research questions raised in this study and research objectives envisaged in the current study. The findings of the current study have provided support to the hypothesized results.

**Key words:** *Entrepreneur Orientation, Knowledge management, Transformational Leadership, Thailand.*

## Introduction

In the field of management theory and practice, there has been a shift in the perception of excellence in the last three decades. While discussing the survival of Polish universities, the author insistently argued that the future of Polish universities could only be based on a sound foundation of excellence. Thailand as a country, and the higher education institutions operating in it, have been affected by this search for excellence. To be able to achieve the goals generated by the shift in attention towards World class performance, and for higher education institutions to manage the challenges of this change, Lomas (2004) argued that higher education institutions require transformational leaders rather than transactional leaders. He further asserted that transformational leadership will not only engender innovation and originality, it will also provide guidance for, and earning of, commitment from staff of higher education institutions.

It has been found that transformational leadership could provide, not only the necessary conducive environment for knowledge management orientation, but also the implementation of any change proposed in knowledge management, because of its strong antecedent in public service organisations. Lomas (2004) further argued that higher education institutions should turn to learning organisations in their efforts to improving performance (i.e. knowledge management is a necessary ingredient in excellence in higher education institutions). Campbell and Dealtry (2003) submitted that knowledge management was a vital requirement for achieving the goals of the new generation of corporate universities (Nobanee, 2018; Mujtaba et al, 2018).

According to Hassim, Asmat-Nizam, and Bakar (2011) it has been proven that organizational participants, particularly organisation leaders, are required to exhibit entrepreneurial orientation when the institutional goals and orientations were optimally attained. Thus, this encouraged organisational interest in entrepreneurial orientation. Studies have been conducted on the link between entrepreneurial orientation and performance (Gupta, Niranjana, & Markin, 2019), the effect on effective and efficient management of education institutions, and the moderating effect of impact of knowledge management on innovation. Scholars work has dealt with the interactive effect of entrepreneurship, management, governance and leadership in Japanese and UK universities. This research showed how entrepreneurial orientations affected organisational excellence. It also showed how transformational leadership and knowledge management also affected excellence (Hartinah, Suharso, Umam,

Syazali, Lestari, Roslina, & Jermsttiparsert, 2020). These findings have impacted the desire for excellence in higher education institutions worldwide.

## **Hypothesis development**

### ***Transformational Leadership and Organisational Excellence***

Several researchers have attempted to study how transformational leadership affects public and private organizations (Jermsttiparsert, Sriyakul, Pamornmast, Rodboonsong, Boonprong, Sangperm, Pakvichai, Vipaporn, & Maneechote, 2016; Netithanakul, 2017; Sangperm & Chienwattanasook, 2019). The impact of leadership varies based on several dimensions, the subsequent effects of leadership have been reported by previous studies that observed the nature of transformational leadership. Spreitzer, Perttula, and Xin (2005) found a significant association between leadership effectiveness and transformational leadership dimensions. Despite the minimal significance of individual support, this study confirmed the relationship between leadership effectiveness and transformational leadership. Transformational leadership is assumed to have a positive influence on training and development needs, subordinates, and successive planning. An organizations' human resource management can be improved by developing an understanding of, and applying, transformational leadership (Rafferty & Griffin, 2004; Tripopsakul, 2018).

Transformational leadership also guarantees employees' loyalty. Encouraging followers through intellectual leadership creates an emotional attachment towards organizational activities, thus, driving employee emotional attachment towards organizational fate. A sense of loyalty and job security should be balanced to avoid a reduction in followers' productivity in positively contributing to organizational activities (Aluwihare-Samaranayake, Gellatly, Cummings, & Ogilvie, 2018; Rafferty & Griffin, 2004). Transformational leadership through senior management commitments has been found to have a positive effect on the operational performance of organisations. Prabhu and Robson (2000) confirmed that the internal impact of leadership on operational performance could be easily seen in an organisation. Although varied, the external impacts were as positive as the internal impact on operational performances of organisations.

For sustainable quality in higher education institutions, transformational leadership has been found to be a necessity. It has also be found that there is a need to adopt deliberate effective communication between leadership and followership on the vision of institutions, whilst simultaneously empowering staff (individualized consideration and intellectual stimulation) to achieve best practice and superior results. This serves as a way of standing up to the challenges of dwindling fund allocation and scarcity of teaching and research facilities (Osseo-Asare, Longbottom, & Murphy, 2005; Setamanit, 2018).

The motivational impact of transformational leadership has been documented. It has been found that followers of transformational leaders often set higher work purposes for themselves, were more committed, were more involved and performed beyond social expectations (Jones, 2019; Sparks & Schenk, 2001). Thus, by motivating followers to willingly and enthusiastically strive for higher levels of performance beyond ordinary expectations, transformational leadership can make an extra-ordinary man out of an ordinary man. These are, by no means, the only impacts transformational leadership has on an organisation. The depth and extent of the impact of transformational leadership varied from one form of institution to another (civil service/military, academic and non-academic institutions, business and political leaders, health care and labour leaders, etc). For a firm to become a high or world class performer, it is important for them to exercise transformation leadership within the organization. Almost all organizational excellence frameworks consider leadership as the driving force in excellence programmes. Previous research has shown the positive influence of leadership on the organisation's excellence achievement. For every type of organisation, whether academic, public service, banking or manufacturing, transformational leadership positively influences the stakeholders' interest in achieving organizational goals and objectives (Jermisittiparsert & Srihirun, 2019). Therefore, the tentative association between organizational excellence and transformational leadership has been stated in hypothesis I as follows:

**Hypothesis I:** Transformational Leadership has significant impact on the organisational Excellence

### ***Organisational Excellence and Knowledge Management***

Studies such as Nonaka and Takeuchi (1995), have vested considerable interest among academicians, consultants, and researchers in the area of knowledge management. These groups of people were primarily concerned about the nature, capabilities, and essence of knowledge management. Such increased interest in knowledge management has been witnessed in a number of books, conferences, articles, journals, and job titles (Serenko, Bontis, Booker, Sadeddin, & Hardie, 2010; Zainudin, Ibrahim, Hussain & Hadi, 2017).

This section presents the significance of knowledge management for achieving organizational excellence. Knowledge management is assumed to be vital for organizational innovation. A study regarding knowledge management analysis incorporated the knowledge processes variables to investigate their impact on organizational innovation, and reported a positive influence of knowledge processes variables on organizational innovation (Andreeva & Kianto, 2011). Innovation has also been discovered to be largely affected by knowledge creation, which in turn mediates the influence of knowledge acquisition, documentation, and knowledge sharing on organizational innovation. Besides knowledge creation, innovation has

also found to be affected by other knowledge management processes. Another study by Darroch & McNaughton (2002) discovered the association between innovation (radical and incremental innovation), with knowledge management practices, such as, responsiveness and knowledge acquisition. Less importance has been given to knowledge dissemination. However, certain organizational innovations were found to be affected by certain parts of knowledge management strategies. Tseng, Chang Pai, and Hung (2011) found a positive impact of knowledge absorptive capacity and knowledge input on the innovative performance of organisations. Thus, all these studies have exhibited the influence of knowledge management on organizational innovation.

The impact of knowledge management on organisational performance has been well documented. Moustaghfir (2008) discovered that knowledge management enabled a generation of new knowledge. This invariably led to the development of better organisational routines, which in turn conditioned the efficiency and the effectiveness of not only business processes, but also the value of a firm's products and services. Researchers used a partial least square method to discover knowledge management infrastructure as being relevant to organisational performance. From this, knowledge management was found to be a necessity for organisational performance. There was also a positive impact of knowledge management strategy on organizational successful leadership transitions. Organisational leadership transitions referred to the succession ability of an organisation. Knowledge sharing and documentation were versatile tools in ensuring replacement of knowledge loss due to retirement, mutation or ageing. Knowledge exchange approaches have been used successfully by Airbus, and other aerospace industries, in more than 100 cases of leadership transition for aging workers (Haarmann, Kahlert, Langenberg, & Muller-Prothmann). Thus, for an organisation to be able to retain the tacit knowledge of retiring or ageing workers, it must vigorously pursue and implement knowledge management strategies especially for scarce talents.

Scholars have reported that organizational generativity improves with the implementation of knowledge management strategies. Organizational generativity is the conscious understanding of the underlying values, purpose, capacities and resources, where these resources provide facilitation of aliveness, coherence, energy, and individual growth. Knowledge management has assisted in identifying key knowledge during the period of leadership transition. This is done to retrieve and document such know-how so as to minimize the negative effect of the loss of such when the leaders were no longer available in the organisation. Furthermore, knowledge management has been used by organisations for sustained competitive advantages. Adams and Lamont (2003) posited that an organisation developing a competitive advantage in a specific functional area does not necessarily ensure that this competitive advantage would be stable over time. They emphasized the need for an

organisation to continuously manage knowledge for a sustained competitive advantage, especially, in a hypercompetitive environment.

The impacts of knowledge management on organisational excellence have made it an indispensable factor in an organization's quest for excellence. The facts presented above led to the statement of the second hypothetical relationship in this study, which is in relation to knowledge management and organisational excellence. The results from previous studies above, suggest that knowledge management has a positive impact on the achievement of excellence in organisations. For every type of organisation, whether academic, public service, banking or manufacturing, transformational leadership positively influences the stakeholders' interest in achieving organizational goals and objectives. Therefore, the tentative association among organizational excellence and knowledge management has been stated in hypothesis II as follows:

**Hypothesis II:** Organisational Excellence is in a significant relationship with knowledge Management

### ***Entrepreneurial Orientation and Organisational Excellence***

Organizational excellence is affected by entrepreneurial orientation in several ways. The impact of knowledge management on organizational innovation has found to be improved through entrepreneurial orientation. Organizational excellence is the continual process of product and strategy innovation. Entrepreneurial orientation has been discovered to be an organizational climate that facilitates not just the sharing of knowledge and organizational implication, but also organizational innovativeness.

Entrepreneurial orientation has helped social entrepreneurs provide social amenities which governments have been unable or unwilling to provide, but which are necessary social capitals. Thompson's (2002) work on social entrepreneurs has shown their effect and necessity on issues like job creation, organised help for the disadvantaged, community feel good activities etc. Furthermore, imbining social entrepreneurial orientation by managers and organisations has helped improve social capital and social responsibility. The impact of entrepreneurial orientation on subordinates (an internal stakeholder) was recorded by Pearce II, Kramer, and Robbins (1997). They discovered that managers with corporate entrepreneurial orientations have positive impact on employees' satisfaction, especially between supervisors and other employees in the organisation. Corporate entrepreneurial orientation has also helped progress troubled bureaucratic organisations to more responsive meritocracies. Thus, better performances from subordinates have been witnessed by managers of corporations that were entrepreneurially oriented. Satisfaction of subordinates, who were internal stakeholders, has led to improved performances that other stakeholders.

In the areas of performance in raising funds, responding to industry demands, changes in market and challenges in the economy, educational institutions have exploited the opportunities provided by entrepreneurial orientation. Scholarly work which covered Japanese and UK universities (two universities from each country totalling four), was expositional of the entrepreneurial orientation and its impact in solving identified problems in higher education institutions. This study reported a convergent trend i.e. an entrepreneurial orientation between four universities. Regardless of the significant differences in the strategies adopted by these universities, every university exhibited different levels of entrepreneurial orientation to achieve organizational excellence. In addition, organizational performance was enhanced with ethnic entrepreneurial orientation and this established a connection through network building among the available opportunities and organisations, particularly in underserved markets.

Organisations have been able to enter into untapped markets through well-thought out ethnic entrepreneurial orientations, which enables them to show their prominence in ethnically-dominated markets, make use of ethnic social capital, and offer diversified products to improve their organizational performance. For ethnic groups, entrepreneurial orientation has been found to motivate individual or organizational entrepreneurial disposition (Selvarajah & Masli, 2011).

**Hypothesis III:** Organisational Excellence is in a significant relationship with entrepreneurial orientation

### ***Entrepreneurial Orientation as a moderator***

A study has investigated the role of entrepreneurial orientation as a moderator between performance and cultural diversity. The study collected samples from around 700 banks, with each having total assets in the following categories, i.e. \$100 million or less; \$100 million - \$499 million; and \$500 million or more. The association between management and diversity in management was identified to be highly affected by innovativeness. Furthermore, the relationship between performance and racial diversity, affected by risk taking, was also marginally supported by this study.

Lee and Sukoco (2011) analysed risk-taking and its influence on the reflexivity of performance. An email based questionnaire was delivered to 600 new product development team leaders in Taiwan. The study concluded that risk-taking was found to moderate the relationship between product innovation and reflexivity. This is consistent with Lumpkin and Dess's (1996) study which suggested that although new product development involves some risks, without risk-taking, no product will make it to market. A positive relationship was

discovered between autonomy of role-perception (a dimension of entrepreneurial orientation) and relationship outcome. A reliable study was conducted by Morris and Snyder (1979), which was in regard to the impact of the need for autonomy and the need for achievement as moderators. This study also identified the moderating effect of need for autonomy on two variables; the relation of role-performance-outcomes in the conflict between personal and inter-sender role.

Scholars examined the moderating role played by entrepreneurial orientation on the knowledge management innovation process. Initially fifteen companies were surveyed in a pilot study, afterwards 850 Chinese firms were surveyed with the finalized questionnaire. The study concluded that for intra-firm knowledge sharing and application-innovation, entrepreneurial orientation is a significant complementary asset. The study also recommended that this complementary asset must be taken as a mediating variable for the knowledge application-innovation relation and knowledge sharing.

Individual self-efficacy as an entrepreneurial orientation was analysed as it is assumed to influence entrepreneurial intention. A study employed 600 business undergraduate and graduate students from Finland, China, the USA, and Russia, aged between 17-27 years. The study confirmed the role of self-efficacy, lifestyle, and high entrepreneurial intention as moderators, on the basis of the results obtained from structural equation modelling. Other than that, the study also confirmed that the relationship between performance and market orientation strengthens with entrepreneurial orientation (Liñán & Chen, 2009).

A survey conducted in 1000 hospitals in USA showed that the effectiveness of market orientation is high if the entrepreneurship orientation is preserved at a moderate level. Entrepreneurial orientation, such as organizational capabilities and values, must be closely monitored as they significantly influence the processes and activities of organisations. Studies that have examined the mediating role of entrepreneurial orientation have been discussed above. In order to make conclusions about this phenomena, a few researchers have incorporated entrepreneurial orientation with higher-order dimension, while other studies have incorporated entrepreneurial orientation in their analysis to jump to a conclusion. Hence, entrepreneurial orientation has been found to mediate the relationship between dependent and independent variables.

Several researches have shown that entrepreneurship acts as a moderator in relationship between excellence achievement and transformational leadership, and the relationship between excellence achievement and knowledge management in organisations. Regardless of the nature of these organizations (academic, public service, banking, and manufacturing, etc.), previous studies have supported the role of entrepreneurial orientation in the relationship between excellence achievement and transformational leadership and in the

relationship between excellence achievement and knowledge management. Therefore, the tentative role of entrepreneurial orientation as moderator in the association between organizational excellence and knowledge management has been stated in hypothesis III and IV as follows:

**Hypothesis IV:** Entrepreneurial orientation moderates the relationship between knowledge management and business excellence;

**Hypothesis V:** Entrepreneurial orientation moderates the relationship between Transformational leadership and business excellence

## Methodology

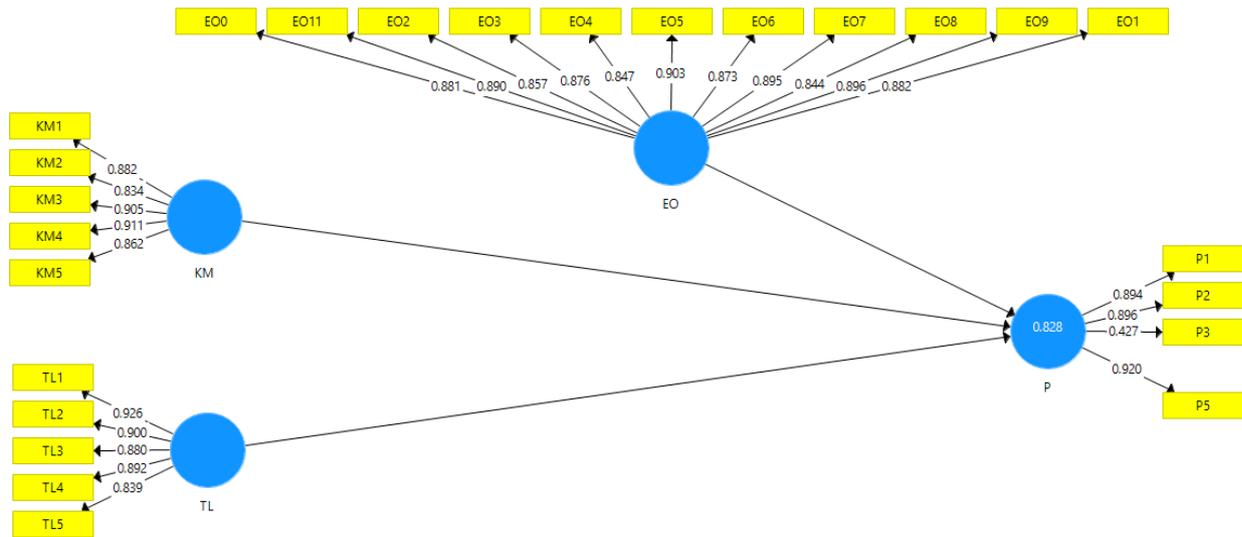
A survey method has been used in this research. The instrument for collection of data used was questionnaire. The sample targeted for the study included finance and operational managers working in the higher education sector. For collection of data, a questionnaire survey was conducted. There were four sections in the questionnaire, and it was in the English language. Within the period of four weeks, the questionnaires were returned. In section A, the background information of the respondents was obtained, questions were related to age, education, ethnicity, marital status, experience, job nature, salary, etc. Sections B, C, and D, were related to the instruments estimated in this research. The responses were measured based on the Likert Scale. From strongly disagree to strongly agree (1 to 5), the measurement scale was formulated i.e. 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. The questionnaires were distributed among 520 respondents. Out of 520 questionnaires, 339 questionnaires were return, the response rate was 69%. This leads to the acceptance of the sample size for evaluation. The average age of respondents was 47 years, 63% of total respondents belonged to operation departments and had been employed for over 15 years. Most of the respondents had higher education degrees. The response rate was greater than the standard value of 45-50 percent. 233 respondents were male and 64 were female. The work experience of respondents was 11 years on average.

## Results

The SEM approach has been used in this research because of several unique advantages it has over other techniques. It is equally effective as simple and multiple linear regression analysis that estimates variables without errors. Factor analysis and multiple regressions are involved in SEM. SEM effectively estimates instruments and can run multiple regression equations separately. Researchers adopt PLS-SEM approach because of several arguments (Urbach & Ahlemann, 2010). When the aim of the research is on use of structural modelling for obtaining construct forecasting results and explanations, PLS is effective (Hair, Hult, Ringle, & Sarstedt, 2016). It is assumed that PLS-SEM is relatively flexible in comparison to other

techniques. Moreover, a small sample size can be used in SEM and it can estimate multiple structural modelling. Formative and reflective constructs are involved in the model. The aim of the study is to make predictions among the constructs. PLS method is employed as it includes measurement and structural model (Hair et al., 2016).

**Figure 1.** Measurement Model



The relation between the observed and unobserved variables is reflected through the measurement model. All the items are exposed to changes in the estimation of the measurement model. A strong association among the variables is expected by the study, which collectively develops a construct. The validation of the measurement model is confirmed through CFA (Confirmatory Factor Analysis). This reflects the level of representation of constructs by the variables. The estimation of first and second order constructs is done through CFA. Through formative, reflective, and structural modelling, a separate analysis is done for all the elements.

**Table 1:** Reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
EO	0.970	0.971	0.973	0.769
KM	0.926	0.930	0.944	0.773
P	0.811	0.898	0.878	0.658
TL	0.933	0.935	0.949	0.789

The measurement of consistency results among similar test items is referred to as internal consistency. It is evaluated how well the similar scores are produced by the items proposed for construct measuring (Hair Jr, Claudia, Pieper, & Baldauf, 2013). Through CR examination, the reliability of internal consistency is measured. It is assumed by Cronbach's alpha that there is equal indicator construct loading. However, this is not assumed in CR (Hair Jr et al., 2013). The range of CR is from 0 to 1. However, the benchmark value is equal to or greater than 0.60 (Henseler, Ringle, & Sinkovics, 2009). When the value is equal to or greater than 0.70, it is considered sufficient. In a similar way, if the range of CR is from 0.6 to 0.7, this then shows that the internal consistency is average. However, when the value is between 0.70 and 0.90, this is considered appropriate (Nunnally & Bernstein, 1994).

The next step in the research methodology is to estimate convergent validity. Convergent validity is the level of association among similar construct measures, which are not related in theoretical perspective (Henseler et al., 2009). The degree of association between the same construct measures is reflected by this (Hair Jr et al., 2013). The benchmark value of 0.50 or greater, is used in AVE for convergence element identification (Henseler et al., 2009). When the AVE value is 0.50, this shows that convergent validity is ensured. The unobserved construct makes about half of the variations in the related constructs, which shows a sufficient value of convergent validity (Hair Jr et al., 2013).

**Table 2:** Validity

	EO	KM	P	TL
EO	0.877			
KM	0.937	0.879		
P	0.647	0.694	0.811	
TL	0.691	0.696	0.900	0.888

A strong estimation technique adopted by researcher is the discriminant validity criterion of Fornell and Larcker (1981). The degree of relation among the variables and related constructs is measured through discriminant validity. The variables in the model are operationalized through it. This measure has been used as a standard for the estimation of discriminant validity. For reliability, values are expected to be 0.70 or greater. Similar values result for cross loadings and outer loadings. The existence of association between the constructs is analysed through discriminant validity. This research has determined discriminant validity among the constructs and variables. The results are depicted in Table 2.

The last step was the criterion of outer factor loadings, which are crucial for estimating the contribution of indicators to related constructs. The standard value of 0.50 and greater is used in the estimation of outer loadings. It has been emphasized by Hair Jr et al. (2013) that a

Careful analysis should be done for outer loadings in the range of 0.4 – 0.7. Eliminations should be made when the values of AVE and CR increase.

**Table 3:** Outer loadings

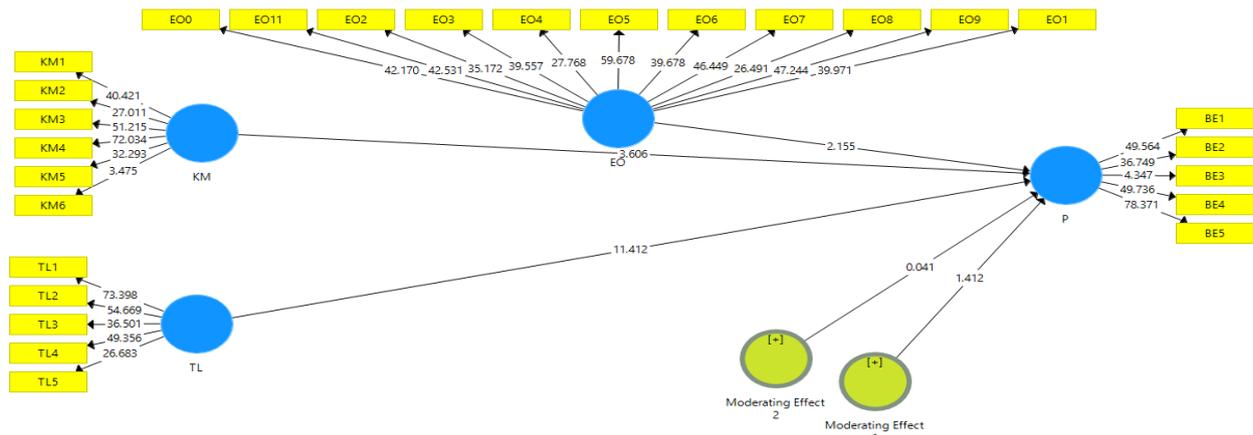
	EO	KM	P	TL
EO0	0.881			
EO11	0.890			
EO2	0.857			
EO3	0.876			
EO4	0.847			
EO5	0.903			
EO6	0.873			
EO7	0.895			
EO8	0.844			
EO9	0.896			
KM1		0.882		
KM2		0.834		
KM3		0.905		
KM4		0.911		
KM5		0.862		
P1			0.894	
P2			0.896	
P3			0.896	
P5			0.920	
TL1				0.926
TL2				0.900
TL3				0.880
TL4				0.892
TL5				0.839
EO1	0.882			

When it is identified that there is no problem of collinearity, the structural model is estimated. The basic standards in the estimation of the structural model through PLS-SEM include: the effect size ( $f^2$ ), significance of path coefficients, coefficient of determination ( $R^2$ ) and predictive relevance ( $Q^2$ ).

The use of bootstrapping is also involved in the methodology. Path model estimation has been done for the direction association between the dependent and exogenous variables, excluding the mediator factor. The t-values and path coefficients used the method of PLS-

SEM and bootstrapping process, respectively (Hair Jr et al., 2013). Afterwards, the mediator variable is included in the model and estimated for influence on the dependent and independent variables. The mediating effect is not just evaluated through this, however, this step is important to carry out. For evaluation of the indirect effect of significance, the product of both path coefficients is divided by the product's standard error.

**Figure 2.** Structural Model



To detail to the results, all processes are carried out in a systematic way. The direct association between the dependent and exogenous variables is examined in the inner model evaluation.

PLS-SEM has been used for identifying path coefficient significance through the bootstrapping method. The software used is SmartPLS 3.0. and the similar number of cases has been used as an original (5000) (Hair Jr et al., 2013; Henseler et al., 2009). The direct association between the dependent and exogenous variable is analysed in the first model for the first four hypotheses. The second model analyses the relationship between dependent and exogenous variable through use of mediator for H1 to H3. The association between the moderator and dependent variable has been analysed in this research.

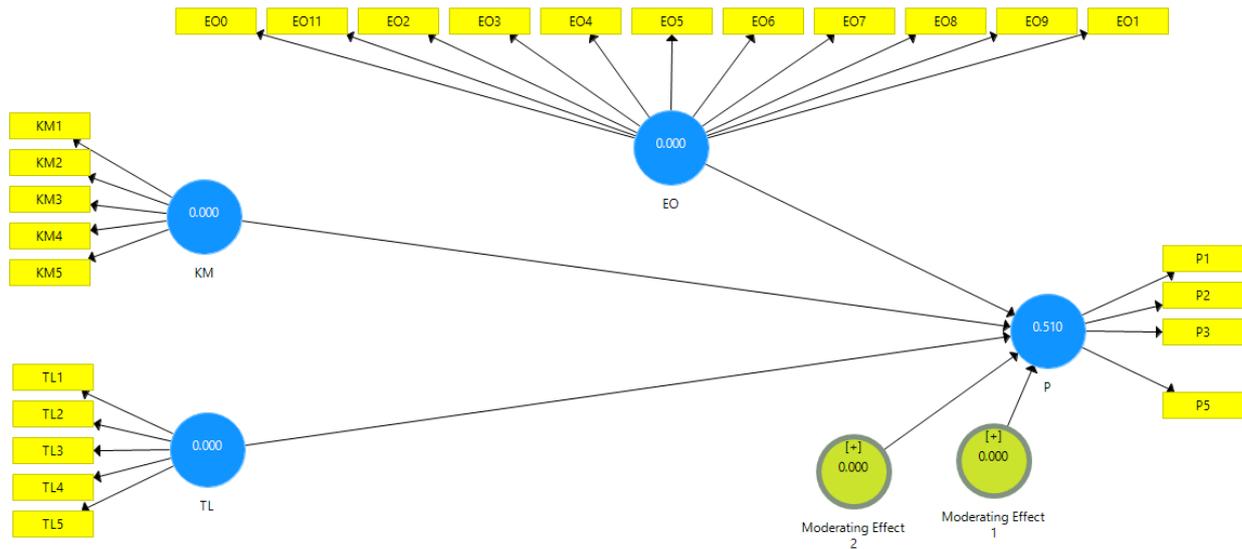
**Table 4:** Structural results

	(O)	(M)	(STDEV)	( O/STDEV )	P Values
EO -> P	0.292	-0.286	0.116	2.524	0.012
KM -> P	0.412	0.428	0.132	3.135	0.002
Moderating Effect 1 -> P	0.027	0.033	0.045	3.596	0.000
Moderating Effect 2 -> P	0.012	0.017	0.040	1.302	0.320
TL -> P	0.821	0.800	0.069	3.875	0.000

Another evaluation of the structural model is predictive relevance and it can be evaluated through the criterion of Stone-Geisser, which is based on the assumption that prediction

evidence is provided by the estimates of latent constructs (Henseler et al., 2009). Therefore, predictive relevance can be estimated through Stone-Geisser’s Q2 test through the procedure of blindfolding (Hair Jr et al., 2013; Henseler et al., 2009). In this study, this test has been used to estimate Q2 using a blindfolding procedure. The measure of cross-validated redundancy for independent latent constructs has been measured (Hair Jr et al., 2013).

**Figure 3.** Predictive Relevance



**Table 5:** Q<sup>2</sup> (=1-SSE/SSO)

	Q <sup>2</sup> (=1-SSE/SSO)
P	0.510

### Discussion, Conclusions and Implications

The present study attempted to examine the relationship between organizational excellence and transformational leadership as well as knowledge management. The study also analysed the impact of entrepreneurial orientation as a moderator upon these relationships. In addition, a response bias analysis was performed which was found to have a small effect on the analysis. The study also analysed the internal structure of transformational leadership, organizational excellence, entrepreneurial orientation, and knowledge management. The internal consistency was checked by performing principal component analysis. Factor analysis confirmed the internal consistency of the variables by omitting some items using one component extraction. Furthermore, Cronbach alpha was also used to examine the internal consistency of scales and Cronbach alpha coefficients were obtained, these ranged from 0.922- 9.955. This finding confirmed the reliability of the scales to proceed to further statistical analysis.

The results suggested a strong positive relationship between transformational leadership and organisational excellence. This is not surprising because leadership plays an important role in providing direction to the achievement of organisational goals. A transformational leader would be able to get relatively difficult jobs done because of their ability to stimulate subordinates whereas a non-transformational leader would not be able to do so. Furthermore, a transformational leader would ensure minimal resistance to change, as envisaged in the new future for higher education institutions. A leader who enjoys the confidence and cooperation of their followers would be more able to get changes implemented than a non-transformational leader. This is important, especially in higher education institutions, which do not have a strict command structure like the army or parts of the private sector.

The second objective of this study was to determine the significant relationship between knowledge management and organisational excellence in higher education institutions. This was explained through the testing of the second hypothesis, which stated that there is a relationship between knowledge management and organisational excellence. The result in Table 4.21b suggest that for every unit increase in knowledge management, there was an expected increase of .604 in organisational excellence. This showed a significant positive relationship between knowledge management and organisational excellence. The findings of this research are confirmed by the findings of Crossman & Clarke (2010). They used stakeholders' perception to investigate the link between internationalisation of knowledge experience and its impact on the achievement of excellence of graduates in universities. The results obtained suggested that for every unit increase in the interaction of entrepreneurial orientations with transformational leadership, there was an expected increase of .941 in organisational excellence.

This finding indicates that entrepreneurial orientation and transformational leadership have a significant positive impact on organizational excellence. For achieving organizational excellence, higher education leadership was found to exhibit higher entrepreneurial orientation (Bosetti & Walker, 2010). Higher educational institutions achieved this through entrepreneurial leadership, revising administrative and financial structures, and regeneration of communities. In order to improve institutional visibility among national, regional, and international communities, higher education institutions tend to assimilate competitive aggressiveness.

To ensure their survival, Higher education institutions' competitive aggressiveness need to continue to expand. Furthermore, the absorptive capacity of these institutions in community practices and internalization of knowledge, determine their excellence in achievement of goals. The ability of these institutions to take risks, by venturing into new areas of knowledge and practice, has an impact on the achievement of excellence. Risk-taking in new areas



provided institutions with a prime-mover advantage to ensure patenting and world class advantages.

### **Implications**

The importance of transformational leadership, knowledge management and entrepreneurial orientation in the management of higher education institutions towards achieving excellence, exists in many areas.

This study shows that if higher education institutions were entrepreneurially oriented with transformational leaders and knowledge management, they are enabled to satisfy their customers, who in this case, were primarily students. Apart from that, this study showed that public higher education institutions could improve the amount of funds available for running their institutions without necessarily heavily depending on government subventions. This was possible through collaboration in the conduct of ground-breaking research that usually attracts funding from the private sector, funding agencies and non-governmental organisations. Coupled with the above, higher education institutions could achieve people's results by motivating their staff to show high level of initiative, identify work problems and provide solutions to them. Staff opinion could be sought in decision making, while staff training and development could be used to achieve excellent performance in higher education institutions.

## REFERENCES

- Adams, G. L., & Lamont, B. T. (2003). Knowledge management systems and developing sustainable competitive advantage. *Journal of knowledge management*, 7(2), 142-154.
- Aluwihare-Samaranayake, D., Gellatly, I., Cummings, G., & Ogilvie, E. L. (2018). A contextual work-life experiences model to understand nurse commitment and turnover. *Journal of advanced nursing*, 74(9), 2053-2063.
- Andreeva, T., & Kianto, A. (2011). Knowledge processes, knowledge-intensity and innovation: a moderated mediation analysis. *Journal of knowledge management*, 15(6), 1016-1034.
- Bosetti, L., & Walker, K. (2010). Perspectives of UK Vice-Chancellors on Leading Universities in a Knowledge-Based Economy. *Higher Education Quarterly*, 64(1), 4-21.
- Campbell, I., & Dealtry, R. (2003). The new generation of corporate universities—co-creating sustainable enterprise and business development solutions. *Journal of Workplace Learning*, 15(7/8), 368-381.
- Crossman, J. E., & Clarke, M. (2010). International experience and graduate employability: Stakeholder perceptions on the connection. *Higher education*, 59(5), 599-613.
- Darroch, J., & McNaughton, R. (2002). Examining the link between knowledge management practices and types of innovation. *Journal of intellectual capital*, 3(3), 210-222.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics: SAGE Publications Sage CA: Los Angeles, CA.
- Gupta, V. K., Niranjana, S., & Markin, E. (2019). Entrepreneurial orientation and firm performance: the mediating role of generative and acquisitive learning through customer relationships. *Review of Managerial Science*, 1-25.
- Haarmann, J., Kahlert, T., Langenberg, L., & Muller-Prothmann, T. K. (2009). A Systematic Approach to Knowledge Transfer of the Aging Workforce, 27-40.
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*: Sage publications.
- Hair Jr, B., Claudia, J. F., Pieper, T. M., & Baldauf, A. (2013). Exploring the effect of distinct family firm reputation on consumers' preferences. *Journal of Family Business Strategy*, 4(1), 3-11.
- Hassim, A. A., Asmat-Nizam, A.-T., & Bakar, A. R. A. (2011). The effects of entrepreneurial orientation on firm organisational innovation and market orientation towards firm

- business performance. *International on Sociality ND Economics Development. IPEDR, 10*, 280-284.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing *New challenges to international marketing* (pp. 277-319): Emerald Group Publishing Limited.
- Jermstittiparsert, K., Sriyakul, T., Pamornmast, C., Rodboonsong, S., Boonprong, W., Sangperm, N., Pakvichai, V., Vipaporn, T., & Maneechote, K. (2016). A Comparative Study of the Administration of Primary Education between the Provincial Administration Organisation and the Office of the Basic Education Commission in Thailand. *The Social Sciences 11*(21), 5104-5110.
- Jones, D. (2019). Relationship Between Transformational Leadership and Perceived Meaning in Work.
- Lee, L. T. S., & Sukoco, B. M. (2011). Reflexivity, stress, and unlearning in the new product development team: the moderating effect of procedural justice. *R&D Management, 41*(4), 410-423.
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and practice, 33*(3), 593-617.
- Lomas, L. (2004). Embedding quality: the challenges for higher education. *Quality Assurance in Education, 12*(4), 157-165.
- Lumpkin, & Dess. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of management review, 21*(1), 135-172.
- Morris, J. H., & Snyder, R. A. (1979). A second look at need for achievement and need for autonomy as moderators of role perception-outcome relationships. *Journal of Applied psychology, 64*(2), 173.
- Moustaghfir, K. (2008). The dynamics of knowledge assets and their link with firm performance. *Measuring Business Excellence, 12*(2), 10-24.
- Mujtaba, M., Jamal, S., & Shaikh, Y. (2018). Development without Human Resource Development (HRD): Analysis of HRD Policy of Pakistan. *Asian Themes in Social Sciences Research, 2*(1), 9-15.
- Netithanakul, A. (2017). The Impact of Transformational Leadership on Learning Organization: A Case Study of Saraburi Provincial Non-Formal and Informal Education Centre. *RSU International Journal of College of Government 4*(1), 68-73.



- Nobanee, H. (2018). Efficiency of working capital management and profitability of UAE construction companies: size and crisis effects. *Polish Journal of Management Studies*, 18 (2), 209-215.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*: Oxford university press.
- Nunnally, J. C., & Bernstein, I. H. (1994). Psychological theory. *New York, NY: MacGraw-Hill*, 131-147.
- Osseo-Asare, A. E., Longbottom, D., & Murphy, W. D. (2005). Leadership best practices for sustaining quality in UK higher education from the perspective of the EFQM Excellence Model. *Quality Assurance in Education*, 13(2), 148-170.
- Pearce II, J. A., Kramer, T. R., & Robbins, D. K. (1997). Effects of managers' entrepreneurial behavior on subordinates. *Journal of business venturing*, 12(2), 147-160.
- Prabhu, V. B., & Robson, A. (2000). Achieving service excellence—measuring the impact of leadership and senior management commitment. *Managing Service Quality: An International Journal*, 10(5), 307-317.
- Rafferty, A. E., & Griffin, M. A. (2004). Dimensions of transformational leadership: Conceptual and empirical extensions. *The Leadership Quarterly*, 15(3), 329-354.
- Sangperm, N. & Chienwattanasook, K. (2019). Roles of Transformational Leadership That Encourage Employees to Have the Innovation Work Behavior. *Asian Administration and Management Review* 2(1), 33-41.
- Selvarajah, C., & Masli, E. K. (2011). Ethnic entrepreneurial business cluster development: Chinatowns in Melbourne. *Journal of Asia Business Studies*, 5(1), 42-60.
- Serenko, A., Bontis, N., Booker, L., Sadeddin, K., & Hardie, T. (2010). A scientometric analysis of knowledge management and intellectual capital academic literature (1994-2008). *Journal of knowledge management*, 14(1), 3-23.
- Setamanit, S. (2018). Evaluation of outsourcing transportation contract using simulation and design of experiment. *Polish Journal of Management Studies*, 18 (2), 300-310.
- Sparks, J. R., & Schenk, J. A. (2001). Explaining the effects of transformational leadership: an investigation of the effects of higher-order motives in multilevel marketing organizations. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 22(8), 849-869.
- Spreitzer, G. M., Perttula, K. H., & Xin, K. (2005). Traditionality matters: An examination of the effectiveness of transformational leadership in the United States and Taiwan.



*Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 26(3), 205-227.

- Thompson, B. (2002). What future quantitative social science research could look like: Confidence intervals for effect sizes. *Educational Researcher*, 31(3), 25-32.
- Tripopsakul, S. (2018). Social media adoption as a business platform: an integrated TAM-TOE framework. *Polish Journal of Management Studies*, 18(2), 350-362.
- Tseng, C.-Y., Chang Pai, D., & Hung, C.-H. (2011). Knowledge absorptive capacity and innovation performance in KIBS. *Journal of knowledge management*, 15(6), 971-983.
- Urbach, N., & Ahlemann, F. (2010). Structural equation modeling in information systems research using partial least squares. *Journal of Information technology theory and application*, 11(2), 5-40.
- Zainudin, Z., Ibrahim, I., Hussain, H. I. & Hadi, A.R.A (2017) Debt and Financial Performance of REITs in Malaysia: An Optimal Debt Threshold Analysis, *Jurnal Ekonomi Malaysia (Malaysian Journal of Economics)*, 51, (2), 63 – 74.