

The role of strategic agility towards competitiveness with mediating effect of knowledge management**Asma Abuanzeh^a, Alaa Alnawayseh^a, Ghadeer Qtaishat^b and Muhammad Alshurideh^{c,d*}**^aDepartment of Public Administration, College of Business, Mutah University, Jordan^bAdministrative employee, Creativity and Innovation Center, Al-Balqa Applied University, Jordan^cDepartment of Marketing, School of Business, The University of Jordan, Amman 11942, Jordan, Jordan^dDepartment of Management, College of Business, University of Sharjah, Sharjah 27272, United Arab Emirates**ABSTRACT***Article history:*

Received March 20, 2022

Received in revised format April 20, 2022

Accepted June 6 2022

Available online

June 6 2022

Keywords:

Agility

Strategic agility

Competitive advantage

Knowledge management

Jordan

Higher education

This study aims to examine the role of strategic agility to achieve competitiveness by analyzing the mediating effect of knowledge management construct in Jordanian's public higher education institutions. The study reviewed the existing literature addressing the knowledge management and strategic features of the organizations. The resource-based view theory is the lens of linking the knowledge management with strategic outcomes of the organizations. The hypothesized theoretical model was tested using a quantitative research method through questionnaire. A PLS-SEM approach was utilized to conduct the key analytical procedure and test the proposed research hypotheses. The results found a significant and positive effect of both strategic agility and knowledge management on achieving competitiveness. On the contrary, knowledge management showed no effect on competitiveness. But it had a mediation effect of the strategic agility on achieving competitiveness. Future research suggestions provided resulting from the research implications to provide different research methods and models.

© 2022 Growing Science Ltd. All rights reserved.

1. Introduction

Today's organizations have been involved and stuck with many challenges resulting from the sudden rapid uncertainties as well as fluctuating changes within the workplace environment (Sohrabi et al., 2014). The triggers behind the emerging changes come from the huge changes in the technologies' development, customer's preferences, globalization, crisis management, businesses innovation and creativity (Sherehly & Karwowski, 2014). The organizations have realized the need to be adaptive and cope with the emerging changes in order to increase their competitiveness and survive effectively among the intense marketplace competition (Qin & Nembhard, 2015). The concept of agility has appeared during the effects of swift changes occurred within the workplace environments, and consequently, the organizations require to review and redesign the key goals, aims, strategies and policies to respond sufficiently with adequate levels of flexibility to meet the different business environment requirements (Al-Romeedy, 2019; Shakhour et al., 2021). This will support the need for "strategic agility". The term of strategic agility has become one of the new temporary key factors that play a role in achieving long term success and sustainability for all organizations operating in either private or public (Trinh et al., 2012), also it pursues the efforts towards organizational excellence and job development, which in turn lead to outstanding competitive advantage (Idris & Al-Rubaie, 2013). Currently, the organizations strive to create a value for the various stakeholders e.g., customers more effectively and quickly than their traditional competitors.

The agile organizations are those who innovate new and effective methods and ways to respond to the changes once they occurred by developing the organizational strategies and policies through using the available resources and exploit the capacity and capabilities of the organization to control the changes (Hosein & Yousefi, 2012), the agility indicates to a quick meet of the changes in the customers' preferences and needs, with flexibility of creating quick and strategic alliances to offer

* Corresponding author

E-mail address m.alshurideh@ju.edu.jo (M. Alshurideh)

new services and mitigate the negative consequences resulting from the changes (Oyedijo, 2012), and this enable the organization to make great competitive advantage with the possible opportunities and reduce the risks come from the changing in the workplace environment. The findings of the literature revealed a positive effect of the capabilities of the knowledge management on the organizational agility as well the overall performance (AlMehrez et al., 2020 a, b; Rafi et al., 2021). Moreover, the direct effect of the knowledge management towards the organizational agility and performance related outcomes trigger the new studies to propose an integrative model to examine this relationship (Haider & Kayani, 2020). The trends concerned with discussing the relationship between knowledge management with various dimensions like knowledge infrastructure and organizational agility have supported this relationship and provide critical insights in this area, and they look to organizational agility as an important requirement of the knowledge management and organizational performance. In the education field, the competitiveness resulting from knowledge management is not noted in Jordan, especially in the higher education institutions. Moreover, a suggestion for contemporary management from these institutions to apply knowledge management is needed to produce more innovation and effectiveness in the education process of Jordanian public sector. Thus, the current research examines the role of strategic agility to make great possible competitiveness in the public universities of Jordan by investigating the mediating effect of knowledge management over this issue.

2. Background and Hypotheses Development

The concepts and applications of strategic agility are involved among the ability of the organizations to respond to the changes that suddenly occur and dramatically influence the key operations of the organizations (Halalmeh, 2021). Consequently, these practices of the ability also reflect the capabilities of the organization to turn the difficulties and tough situations into helpful opportunities through swift response to the changes in the business market (Abu-Radi, 2013). The first use of this term was traced in 1991 and it has been associated with quick decisions with flexible responding to the emerging changes in the business (Kharabe, 2012; Lee et al., 2022a&b). While others (Sherehiy & Karwowski, 2014) stated that the agility concept has the organizations' capabilities to be flexible and rapid response to the changes in the business environments in order to exploit the available opportunities. Hence, the strategic agility indicates how the companies can adjust continuously as well adapt its strategic directions of the core business and the strategic ambitions within the changing situations and provide new innovative products or services by creative business methods and models in order to add value for the company products or services (Vecchiato, 2015).

Some evidence of the literature revealed that the strategic agility associated with the available capabilities and ability of the organizations in terms of producing new and valued products at the right time with reasonable price (Shin et al., 2015) supports the significance of the strategic agility as a source of the sustainable competitive advantage. Since the current business environments are characterized by quick changes and highly intensive competition (Young, 2013; Alshurideh, 2022), this encourages the modern organizations to develop their capacity in order to guarantee business survival against the traditional rivals through establishing talent and skilled workforces that have strong capabilities enable them to handle the continuous changes (Idris & Al Rubaie, 2013; Tariq et al., 2022a&b). On the same vein, Young (2013) indicate the strategic agility is the effective approach that can help the organizations to strive within the marketplace, and the agile organizations are easily adapt with the unexpected changes in the business environment (Abu-Salma, 2019), particularly in the current global market competition which provide a variety of services with innovation and change management.

Ojha (2008) provided some important dimensions of the strategic agility which have been addressed over many studies (e.g Khoshnood & Nematizadeh, 2017) which measure the customers and competitors' knowledge to reflect the market competency in the higher sensitivity situations which can use to achieve the strategic agility. The respective dimensions of this factor are namely vision clarity, capabilities understanding, strategic objectives selection, shared responsibility, and taking actions represent the strategic agility. Vision clarity and capabilities understanding of the key fundamentals will provide an essential combination of accelerating the strategic agility with needed stability for the organizations (Abu-Radi, 2013). The lack of understanding organizational basic capabilities influence its pursuits of the opportunities and means not well prepared to make competitive advantage (Alzoubi et al., 2021; Kabrilyants et al., 2021). The ability of the organization to identify and select its strategic objectives mainly enable them to modify and enhance the core strategic capabilities and coordinate the existing and emerging opportunities (Onyeaghala et al., 2019; Shamout et al., 2022). The shared responsibility measures the organization relationships with the customers to help create a value for them (Alshurideh, 2014&16; Alshurideh et al., 2021). So, the current research has adapted and adopted the dimensions provided by Ojha (2008) to reflect the variable of strategic agility due to the variety of these dimensions and their well representation of this variable. Therefore, the study states the main research hypothesis as follow:

H₁. *There is a positive significant effect of strategic agility (vision clarity, capabilities understanding, strategic objectives selection, shared responsibility, and taking actions) on achieving competitiveness.*

The relationship between strategic agility through some measures and factors like dynamic capabilities and knowledge management have also been widely addressed and they are commonly utilized in order to deliberate the methods used by the management for the key activities within an organization in the volatile and irregular environments (Gyemang & Emeagwali, 2020). The core of knowledge management is providing good solutions for top management executives and helping them to retain and transfer various types of knowledge within their organizations (Su, 2011; Al Mehrez et al., 2020b). Knowledge

management is quickly infiltrating business management systems with problem-solving and process-optimization methodologies after realizing huge gains could be made if the tools of knowledge management were applied (Aljazzazen & Schmuck, 2021). The relevant literature found that the resources of knowledge management lead to great strategic capabilities of the organizations which in turn enhance the different management and business activities (Ferraris et al., 2019). They stated a more applied knowledge management, better strategic capacity and agility can note. The association between knowledge management and competitive performance is also noted as a vital organizational asset, it enables management and exploit greater implementation of the knowledge which has become necessary for organization development and success (Wijaya & Suasih, 2020). Knowledge management also helps to reconfigure the essential management activities and can gain better performance than before (Alameeri et al., 2021; Al-Marouf et al., 2021). The studies have suggested that creating knowledge over various units in the organizations will result in a superior competitive advantage, and the competitiveness of the organization depends on the knowledge management. The knowledge is fundamentally claimed as a strategic source and asset for organizations and helps to create and use knowledge and provide new opportunities for the organizations to develop desirable competitive positions (Suknunan & Maharaj, 2019). Therefore, the study hypothesizes the research hypotheses as follow:

H₂. *There is a positive significant effect of strategic agility on knowledge management.*

It looks that the term of knowledge management associated with the management practices and philosophy as well the organizational new activity has largely taken wide concern in the business field. The reasons behind this concern come from the growing penetration of the knowledge management activity in the modern managerial practices (Mantje & Rambe, 2021). Moreover, the underlying assumptions that the management of knowledge can create a key difference to the organization's bottom line (Delshab et al., 2021). However, the examinations in the relevant academic literature of this concept fail to address the relative lack of empirical research demonstrating the important role of knowledge management on creating greater organizational outcomes such as desirable competitiveness (Lin et al., 2005). The shortage of these studies to discuss the potential benefits for the organizations suggest the modern scholarly works to involve in new studies focus on examining the knowledge management relationship with other factors (Martins et al., 2019). The literature has confirmed the role of knowledge management to support the organizational objective through enhancing the quality of marketplace competitiveness (Rezaei et al., 2021), they also demonstrate this issue as the best of soft useful discipline to improve the corporate performance. Indeed, the literature for a long time address the knowledge management-performance relationship through proposed theoretical models and theories to test a proposed hypothetical relationship of knowledge management and various organizational outcomes such as performance (Chawla et al., 2021), and many case studies have been conducted with high successful implementations of the knowledge management (Velásquez & Lara, 2021). Further, the current situations have changed and empirically the studies assess the effects of knowledge management on business outcomes over different larger contexts of companies (Arqawi et al., 2018). The conclusions of these studies have been derived from the relevant literature and empirical studies is that knowledge management has influence on organizational development and competitiveness, although no clear agreement of this effect is directly influenced or there are other factors intermediate competitiveness indicators.

Although there is increasing evidence of the contribution of knowledge management to the organizational outcomes, still some debatable and critical issues have not been clearly assessed over the current relevant research studies. Firstly, the competitiveness has been discussed and measured over many different settings, ranking from sales levels (López Salazar et al., 2012) and market performance (Vlachvei et al., 2016). Only little research studies have tested the financial outcomes. Second, most of the studies discussed knowledge processing rather than the knowledge management as a key management practice. Even though knowledge processing can stimulate the management practices, they also exist in all organizations regardless of the management activities and efforts. Thus, the studies focus on the knowledge processing which can't provide the management with great suggestions and solutions that might enhance their organizations' outcomes by better knowledge management practices. With this consideration, the arguments about the emerging knowledge approach concentrate on the lack of modern studies among the public institutions from the perspective of knowledge management and this trigger to call for more studies in this area (Lin & Tseng, 2005; Sadi-Nezhad, 2021).

Therefore, the study postulates the research hypothesis as follow:

H₃. *There is a positive significant effect of knowledge management on achieving competitiveness.*

Through the construct of knowledge management, it has been accumulated by some close interaction that can diffuse throughout the organizations and convert into common contacts that can be shared by the individuals and teams within the organization (Moon & Lee, 2014). When the knowledge is disseminated and shared quickly and widely, the organization's management is more interested to transfer and share knowledge to achieve competitive performance through producing new products and enhance the effectiveness and efficiency for further strategic achievements (Ugwu, 2019). Accordingly, the current research argues that knowledge management has a mediating effect in the relationship between independent variables of strategic agility and dependent variables of competitiveness. The direct effect of strategic agility on competitiveness may increase while considering the indirect effect of knowledge management on competitiveness. Therefore, the study postulates the research hypothesis as follow:

H₄. *There is a mediating effect of knowledge management on the role of strategic agility on achieving competitiveness.*

Accordingly, the proposed conceptual research framework draws the relationship between all research constructs, this framework is illustrated in Fig. 1.

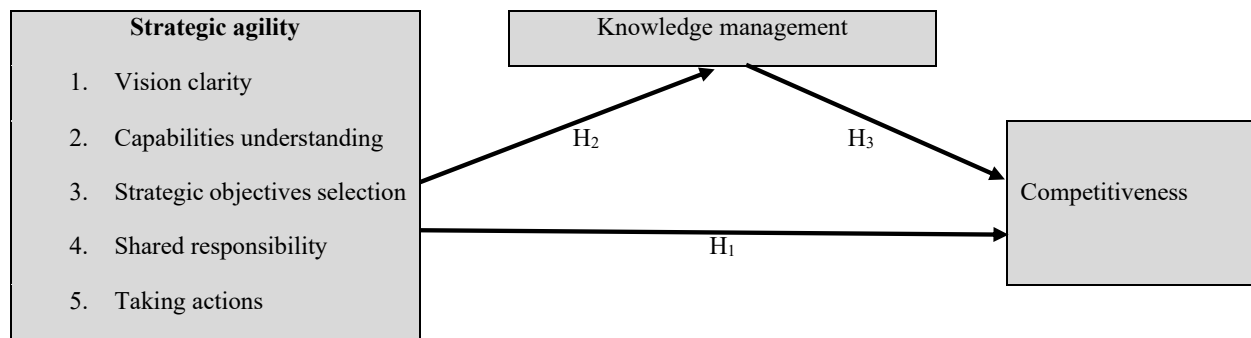


Fig. 1. Conceptual Framework

2. Data and Methodology

A research quantitative based approach is adopted to conduct this work and collect the required data from the target population of academics who are working in public higher education institutions in Jordan. This group has some perceptions towards the importance of knowledge management and the strategic practices of the organizations to achieve greater achievements for their organizations. Further, the cooperation with this sample also encourages the researcher to collect the data, they involve with academic works that can enhance the status quo of their organization and help to provide new untraditional solutions for the challenging situation encountered by their organization. On other hand, the contribution of public higher education through the universities increases the significance of this sector and enables more understanding of the factors influencing the sector development. The research has used an online survey questionnaire to measure the interesting constructs involved in this study by using the previous relevant and valid measurements to help to measure the variables being examined in the current research. They are also assessed on their content and structure validity to ensure better understanding of the sample, and this can gain valid results with little ambiguity or confusion. A panel of experts in this topic was involved to do this purpose and some amendments have been conducted for further development of the research instrument such as some editing for some measuring statements to fit the context of public higher education in Jordan.

Achieving the research objectives suggests the study to propose a model which presents the effect of strategic agility on achieving competitiveness through knowledge management. The statistical analyses procedures include the sample characteristics and hypothesis testing by using SPSS and Smart PLS3 which aims to examine what extent Jordanian higher education institutions are attributed as agile organizations, and the effect of the strategic agility as the independent construct through (vision clarity, capabilities understanding, strategic objectives selection, shared responsibility, and taking actions) on achieving competitiveness as dependent variable with examining the mediating effect of knowledge management. The study population has been distributed over the kingdom which it has divided into homogenous groups, shared location attributes called north, middle and south region which is used by the researchers to typically evaluate the data gained from different subgroups, and it allows them to best represent the entire population being examined. After defining the ratio numbers of the target sample to proportionally representative of the total population based on the numbers of academic staff working in the respective region, the study has randomly selected the participants from each group, and they are fit with the numbers of academic staff. The justification of using this sampling technique comes from the awareness of the study with the sub-groups within the target population which should be accounted for in the research (Singh and Masuku, 2013).

Secondary information sources were screened to address the interesting variables of this study through scanning the academic databases such as Google scholar cited works and Scopus to ensure highly indexed articles that benefit the current study to discuss the variables relationships. The researcher has used these databases for a better view of the research gaps in this field and establishing research instruments that were used for data collection purposes. The research has applied a scale with five-point to measure the responses regarding the statements of the questionnaire and ranked from 1 that indicates strongly disagree to 5 that indicates strongly agree. The measurements of these variables have been adopted and customized from previous studies for example strategic agility has five dimensions with four items for each have been adapted from (Oyedijo, 2012; Arteta & Giachetti, 2004; Fartash, 2012). And the construct of competitiveness measuring items were five adapted from (Fakunmoju, Arokodare & Makinde, 2020), and knowledge management measuring items were also five adapted from (Chen & Mohamed, 2010; Darroch & McNaughton, 2002). A total of 263 valid and fully completed questionnaires were returned of 350 distributed questionnaires which represent around (75% responses rate), and only 241 responses were

considered for the final analysis after removing missing statement questionnaires. Therefore, this sample size is considered adequate to conduct the Structural Equation Modeling SEM analysis approach (Raykov & Widaman, 1995).

3. Results and Discussion

The research has used the approach of Partial Least Squares (PLS-SEM) to conduct data analysis procedures due to some justifications. Firstly, as stated by Sarstedt et al. (2016), PLS-SEM has the ability to handle the complicated suggested research models with many different latent constructs that measure directly the respective variables. Secondly, the technique of PLS-SEM can also work with data with no normal distribution. Thirdly, this approach can be utilized in order to test several regression models (Hair et al., 2019). Furthermore, the method of PLS aims to examine the suggested conceptual frameworks, and it handles some issues associated with the data normality (Usakli & Kucukergin, 2018). The findings gain from SmartPLS 3 software enable the current study to evaluate two types of models namely measurement and structural model, the first one employed to evaluate the validity of the constructs and their respective indicators, meanwhile the second model for hypothesis testing.

Measurement model assessment

The measurement model of the proposed conceptual model of the current study was assessed through some tests as suggested by Hair et al. (2019), they are the factor loadings of the indicators of the latent constructs, construct reliability through two main types of validity called Average Variance Extracted AVE and Composite Reliability CR. These criteria should be assessed in order to judge and evaluate the identified measurement model. The most required and important features of the validity evaluation are the construct reliability which is sometimes called internal consistency, and the convergent validity (Hair et al., 2016).

Table 1
Descriptive Statistics, Validity, & Reliability

Constructs	Items	Mean	SD	FL	VIF	CR	Alpha	AVE
Vision clarity	VC1	3.90	0.824	0.705	3.11	0.806	0.682	0.514
	VC2	4.15	0.850	0.564	1.23			
	VC3	4.14	0.762	0.834	2.32			
	VC4	4.13	0.735	0.739	2.27			
Capabilities understanding	UC1	3.91	0.869	0.782	2.42	0.817	0.699	0.528
	UC2	4.06	0.814	0.762	2.10			
	UC3	4.00	0.847	0.731	1.76			
	UC4	3.89	0.804	0.622	2.92			
Strategic objective selection	SO1	3.97	0.896	0.658	2.89	0.837	0.740	0.564
	SO2	4.03	0.738	0.815	1.86			
	SO3	4.24	0.751	0.770	2.42			
	SO4	3.97	0.755	0.750	2.21			
Shared responsibility	SR1	4.05	0.822	0.801	2.26	0.860	0.780	0.609
	SR2	4.12	0.781	0.850	2.75			
	SR3	4.06	0.788	0.817	2.39			
	SR4	3.98	0.701	0.636	2.21			
Taking actions	TA1	3.84	0.780	0.799	1.56	0.855	0.775	0.597
	TA2	4.06	0.693	0.756	1.98			
	TA3	3.93	0.818	0.773	1.94			
	TA4	4.20	0.691	0.762	2.00			
Competitiveness	COM1	4.05	0.709	0.707	1.56	0.891	0.847	0.621
	COM2	4.09	0.722	0.831	1.99			
	COM3	3.86	0.814	0.847	2.43			
	COM4	3.78	0.884	0.833	2.33			
	COM5	4.02	0.683	0.711	1.54			
Knowledge management	KM1	4.00	0.783	0.700	1.38	0.885	0.836	0.609
	KM2	4.11	0.775	0.807	2.07			
	KM3	4.11	0.791	0.840	2.53			
	KM4	4.14	0.760	0.866	2.64			
	KM5	3.95	0.843	0.670	1.36			

Note: CR: Composite reliability; AVE: Average Variance Extracted. FL: Factor loading; SD: Standard deviation; VIF: Variance inflation factor

The study has evaluated and conducted all these important aspects of the analysis and run the required suggested procedures by Fornell and Larcker (1981), alongside with evaluating the measurements' reliability used in this research study by using one of the most common tests called Cronbach alpha. On the other hand, the approach of PLS-SEM offers other critical tests in this setting such as Composite Reliability (CR) (Hair et al., 2016). The findings of these tests are illustrated in Table 1 which indicates the values of these tests which mostly exceed the threshold acceptable minimum values (Ali et al., 2018). For example, the values of Average Variance Extracted (AVE) and Composite Reliability (CR) are checked in order to evaluate the convergent validity of the measurement model, which they should exceed the cut-off level of 0.50 and 0.60 respectively (Fornell & Larcker, 1981). Therefore, the measurement model of this study has achieved satisfactory levels

related to both of constructs' reliability and validity. Although a few of indicators (VC2, UC4, SO1, SR4, and KM5) have lower factor loadings (< 0.70), the convergent validity through AVE and CR still has greater results, thus the study retains them without skipping.

The study has assessed another type of validity and discriminant validity. Henseler et al. (2015) recommended assessing the cross-loadings to test this validity, and both of Fornell-Larcker criterion as well as Heterotrait-Monotrait (HTMT) ratios for correlations among all research constructs as given in Table 2. The findings revealed that the values of this validity which are calculated by square root the AVE and they represent in the bold off-diagonal cells are more than the constructed correlations as given in the respective columns and rows (Fornell & Larcker, 1981). Hence, the measurement model confirmed greater and acceptable results of the discriminant validity. The study also has used another procedure to evaluate the discriminant validity by using the HTMT approach as recommended by (Henseler et al., 2015). The outputs presented in Table 2 showed that the findings of HTMT got a good cut-off (≤ 0.90). This finding meets the procedure of $HTMT \leq 0.90$ (Kline, 2015), however this achieves satisfactory results of the discriminant validity for all variables involved in this research.

Table 2
Discriminant Validity Results

Constructs	Fornell-Lacker Criterion							
	1	2	3	4	5	6	7	8
1. Competitiveness	0.788							
2. Knowledge management	0.429	0.780						
3. Shared responsibility	0.498	0.604	0.780					
4. Strategic agility	0.585	0.677	0.727	0.606				
5. Strategic objectives	0.352	0.540	0.613	0.547	0.751			
6. Taking actions	0.694	0.488	0.657	0.554	0.443	0.773		
7. Understanding capabilities	0.464	0.571	0.545	0.430	0.676	0.503	0.727	
8. Vision clarity	0.343	0.531	0.479	0.492	0.709	0.421	0.663	0.717

Constructs	Heterotrait-Monotrait (HTMT) Ratio							
	1	2	3	4	5	6	7	8
1. Competitiveness								
2. Knowledge management	0.498							
3. Shared responsibility	0.605	0.750						
4. Strategic agility	0.660	0.775	0.870					
5. Strategic objectives	0.434	0.677	0.794	0.896				
6. Taking actions	0.849	0.607	0.852	0.860	0.569			
7. Understanding capabilities	0.597	0.749	0.730	0.824	0.547	0.674		
8. Vision clarity	0.444	0.692	0.631	0.832	0.683	0.538	0.768	

Structural model assessment

After testing the overall measurement model, the next step of PLS-SEM is evaluation of the structural model which is used to test the hypothesized model. As stated by Hair et al. (2019), there are some important aspects and outputs should be checked to assess the structural model such as path estimate, the corresponding t-values and p-values, as well testing the proposed mediation effect by using an approach in this analysis called complete bootstrapping as illustrate in Fig. 2. The results presented in Table 3 indicated that strategic agility had a positive and significant effect on achieving competitiveness ($\beta = 0.545, t = 7.907, p < 0.000$). Thus, this result supports H1. The results also indicated that strategic agility has a positive and significant effect on knowledge management ($\beta = 0.677, t = 17.816, p < 0.000$). Therefore, this result supports H2. Differently, the results indicated that knowledge management has no significant effect on achieving competitiveness ($\beta = 0.060, t = 0.809, p < 0.419$), thereby this result doesn't support H3.

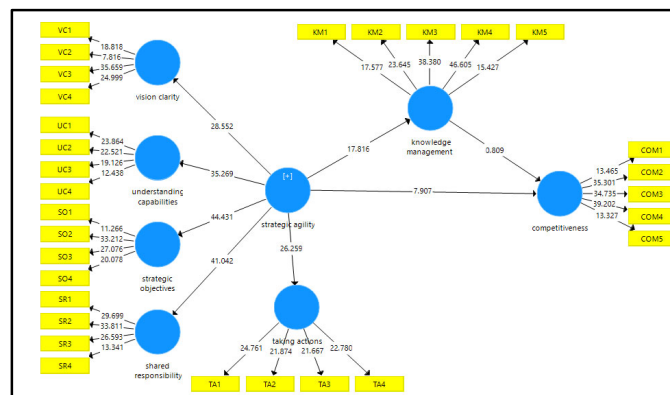


Fig. 2 Structural model assessment

Further, Hair et al. (2019) suggested that the coefficient of determination (R^2) and cross-validated redundancy (Q^2) should be assessed for the model quality of prediction. The result of this model explained 45.8% and 34.5% of the variance in knowledge management and competitiveness respectively. Because of these results which are ranged from 0 to 1, the data suggests the model has a good explanatory power (Shmueli et al., 2019). Also, when the values of Q^2 for the particular endogenous construct are more than zero, this confirms a model predictability (Geisser, 1974). As given in Table 3, the value of Q^2 of this research has got more than zero criteria which confirm the model predictability. Also, the effect size F^2 of the constructs has been tested to check the influence of the endogenous constructs on the exogenous construct. The results given in Table 3 also revealed small and medium effect size values, as stated by (Cohen, 1988) they indicated small and medium effect sizes respectively, since the results of the effect size F^2 values in this research ranged from 0.056 to 0.178.

Mediation effect

The results of the mediation effect of the mediator of this study (knowledge management). The research has adopted the suggested bootstrapping and path estimate method which is widely used in this type of studies that are interested in analyzing the mediation effects in the conceptualized models. Accordingly, the findings given in Table 3 assessed the mediation effect of the knowledge management. Thus, the indirect effect of strategic agility on achieving competitiveness through knowledge management was significant and positive ($\beta = 0.481$, $p < 0.000$). This means that knowledge management mediates the strategic agility-achieving competitiveness relationship, and this result supports H4.

Table 3
Structural Model & Hypotheses Testing

	Hypotheses	Beta	T-value	P-value	Result
H1	Strategic agility → competitiveness	0.545	7.907	0.000	Supported
H2	Strategic agility → knowledge management	0.677	17.816	0.000	Supported
H3	knowledge management → competitiveness	0.060	0.809	0.419	Not supported
H4	Strategic agility → knowledge management → competitiveness	0.481	6.800	0.000	Supported
	R^2 for knowledge management			0.458	
	R^2 for competitiveness			0.345	
	Q^2 for knowledge management			0.269	
	Q^2 for competitiveness			0.207	
	F^2 for knowledge management			0.178	
	F^2 for competitiveness			0.056	

The key aim of this research is investigating the mediating effect of knowledge management on the role of strategic agility on achieving competitiveness within the public higher education institutions in Jordan. The relevant literature has some evidence that examines these constructs widely in different contextual settings without together. The paucity of the studies particularly in the developing context that addressed these variables and investigated the interrelation effects between them trigger the current study to conduct this study for research gaps fulfillment. The study has provided some new insights through the critical results that gained from the analytical procedures which confirm similar assumptions and provide new findings. Both practical and theoretical implications are addressed and stated in this work that could be helpful for future studies revenues and give clear research paths for interested scholars in this area. Firstly, the results have provided empirical investigations which confirmed that the strategic agility can achieve and predict positively and significantly competitiveness in the Jordanian public higher education sector. This result means that public higher education institutions with strategic agility aspects and practices significantly contribute to achieve the competitiveness in this industry which reflect on other key performance indicators such as reputation and image, and this result in line with many studies which supported this positive relationship between these variables (e.g Abu-Radi, 2013; Abu-Salma, 2019). This finding is linked with the research study contributions which indicate the assumption of the strategic capabilities and capacity are the key resources that support the organizational strategic aims such as competitive advantage. Furthermore, the research findings also found that strategic agility had a positive and significant effect on knowledge management. This result indicated that while strategic agility influences knowledge management positively and hence it increases the concern of these organizations to give more attention to the knowledge related practices like training and technological integrations in the various organization activities. It can be noted that the strategic agility encourages and increases the practices that focus on improving the knowledge and skills of the staff for long term and sustainable competitive advantage. This finding is in line with the results of (Gyemang & Emeagwali, 2020). Stated that the public education sector is lower competitive is in general attributed to the high intensive competition in the peer private sector in this industry and the performance of public institutions in this way make this business sector have some challenging factors. The empirical studies that supported the non-significant effect of knowledge management on achieving competitiveness and performance outcomes are few. As this research study found no effect of the knowledge management on achieving competitiveness, the results found that the knowledge management is less crucial for these public higher educations in terms of the organisational performance, hence the results contribute to the current understanding of the role of the knowledge management to increase the positive organizational outcomes like competitive advantage (Martins et al., 2019). Furthermore, the findings demonstrated that knowledge management had a mediating role in the effect of strategic agility on achieving competitiveness, which indicates that knowledge management indirectly influences this relationship.

This finding suggests that public higher education institution staff who believe with the effect of knowledge management practices and activities will increase competitiveness levels. Therefore, this might lead to greater innovation and creativity to encounter the challenges that significantly influence the sector performance and competitive advantage. As the requirement of the public education industry are high including continuous training and development with strategic core capacity to handle with the issues and dramatic situations in this industry, the results confirm the importance for these organizations to focus on knowledge integration while running the key operations to ensure greater outcomes (Oyedijo, 2012). Accordingly, the given finding pinpoints the lack of knowledge management practices in the contemporary public education institutions which this implies escalation for the traditional methods during leading the organizations in the dramatic changes of organizations managing. This result also stands with previous studies e.g Vlachvei et al (2016) which studied the factors that affect business competitiveness and performance in the modern business world. But the limited knowledge with the respective relevant results incorporating new other factors were not involved and addressed together in a single conceptual framework in a developing context can enrich the theoretical contributions of this field and support the existing research gaps.

The current modern economy is characterized with knowledge-based economy which has become reality, although the considerable and general less trust that enclose the knowledge management measurements, the organizations are forging forward to knowledge management as an emerging and significant organizational challenge. This increases the pressure for the emergence of the knowledge economy to recognize the issue of knowledge management as a key driver that makes effective management and identifies the priorities of the organizational strategies. The findings correspond to the notion that the business globalization still continues to accelerate and this creates a direct effect on the states' economy and the capacity of the entities to improve as well maintain the competitive posture across the business. This also offers better understanding that knowledge management has become one of the main success factors for all organizations.

4. Conclusions

Theoretical implications of this study, the findings provided different insights and contributions to the existing body of the relevant literature through examining the mediation effect of knowledge management in the respective relationship. Furthermore, the current research also might contribute in better understanding the different factors influencing the competitiveness in the public sector in Jordan. The theoretical model has been established based on the conceptualization of the resources-view theory that implies the motivations of the organizational outcomes and performance. The results extend this research with the previous studies which addressed similar concepts involved in this study and confirmed a positive effect between them. Contextualizing a unique model involving critical suggested relationships and exploring the role of knowledge management within the public higher education in a developing context is considered a novel contribution of this study. This might also lead to an increase in the role of knowledge management for greater organizational outcomes that this study supported. The managerial implications of this study finding also provided significant practical implications which suggest universities management to focus more to diversify their strategic capacity through practicing clear strategic features associated with the business desirable outcomes to improve their core competence and resilience. Certainly, the academic education sector demands knowledge management practices in order to achieve a sustainable competitive advantage and strategic practices influence the work performance aspects positively. As the results suggest knowledge management does not directly affect competitiveness, it confirmed the indirect effect which this recommends managers to focus on the mediating factors would increase the competitive advantage through dynamic work environments and involve all organizational units in strategy formulation to feel more valued and this help in the innovation sights. The expected valued contribution of this research is grounded on the target population and sample which include different geographical regions in Jordan to right representation of the entire population and gain more perceptions towards the variables involved in this work.

The study limitations and directions for future studies have suggested launching new directions for future research by considering the existing evidence and empirical results and models to provide new perspectives and insights in this field. As a limitation, the study has been conducted in the public higher education institutions in Jordan, the findings might vary in the private sector because of some variations in the strategic practices and management activities. The future research might also address different industries with various features and factors (e.g., leadership capabilities and practices). Further, the method of sampling approach used in this work was stratified sampling of the homogenous groups which distributed into three different geographical groups, the results also might be limited to the generalizability aspect. The scope of the current study also did not identify how these variables (strategic agility, knowledge management, and competitiveness) impact other different constructs like employee performance and job satisfaction. Therefore, future research is needed to explore how these variables influence employees' performance or satisfaction and conceptualize a new suggested conceptual framework aimed to address critical contemporary organizational issues across different economic sectors. Future studies also can run different methodological approaches such as multi-group analysis to examine groups differences based on certain demographic factors e.g. gender or education levels which may provide new implications to help to understand hidden issues across this research area. Lastly, this research has focused on investigating academic staff's views towards the mediating effect of knowledge management on the effect of strategic agility on achieving competitiveness without discussing the employees' attitudes and opinions about these concepts, thus future research would be recommended to propose multi-level model in order to explore the thoughts of different managerial levels. Besides, the future works should suggest different

interesting control variables such as professional experience in a proposed new research framework, and this could increase the concerns about knowledge-performance and competitive advantage interrelationship.

References

- Abu-Radi, S. (2013) *Strategic Agility and Its Impact on the Operations Competitive Capabilities in Jordanian Private Hospitals*. Unpublished Master Thesis, Faculty of Business, Middle East University, Amman, Jordan.
- Abu-Salma, A. J. (2019). The Degree of Strategic Agility and its Relationship with the Competitive Advantage in the Private Hospitals in Jordan. *Transylvanian Review*, 27(39).
- Alameeri, K. A., Alshurideh, M. T., & Al Kurdi, B. (2021). The Effect of Covid-19 Pandemic on Business Systems' Innovation and Entrepreneurship and How to Cope with It: A Theatrical View. *The Effect of Coronavirus Disease (COVID-19) on Business Intelligence*, 334, 275-288.
- Ali, F., Rasoolimanesh, S. M., Sarstedt, M., Ringle, C. M., & Ryu, K. (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research. *International Journal of Contemporary Hospitality Management*, 30(1), 514-538.
- Aljazzazen, S., & Schmuck, R. (2021). The Impact of Knowledge Management Practice on Lean Six Sigma Implementation: The Moderating Role of Human Capital in Health Service Organisations. *International Journal of Operations and Quantitative Management*, 27(3), 267-285.
- Al-Marouf, R., Ayoubi, K., Alhumaid, K., Aburayya, A., Alshurideh, M., Alfaisal, R., & Salloum, S. (2021). The acceptance of social media video for knowledge acquisition, sharing and application: A comparative study among YouTube users and TikTok users' for medical purposes. *International Journal of Data and Network Science*, 5(3), 197-214.
- AlMehrz, A., Alshurideh, M., & Al Kurdi, B. (2020a). Investigation of the key internal factors influencing knowledge management, employment, and organisational performance: a qualitative study of the UAE hospitality sector. *International Journal of Innovation Creation Chang*, 14(1), 1369-1394.
- Al Mehrez, A. A., Alshurideh, M., Al Kurdi, B., & Salloum, S. A. (2020b). Internal factors affect knowledge management and firm performance: a systematic review. *In International Conference on Advanced Intelligent Systems and Informatics (pp. 632-643)*. Springer, Cham.
- Al-Romeedy, B. S. (2019). Strategic agility as a competitive advantage in airlines—case study: Egypt air. *Journal of the Faculty of Tourism and Hotels-University of Sadat City*, 3(1), 1-15.
- Alshurideh, M. T. (2014). A qualitative analysis of customer repeat purchase behaviour in the UK mobile phone market. *Journal of Management Research*, 6(1), 109-125.
- Alshurideh, M. (2016). Scope of customer retention problem in the mobile phone sector: a theoretical perspective. *Journal of Marketing and Consumer Research*, 20(2), 64-69.
- Alshurideh, M. (2022). Does electronic customer relationship management (E-CRM) affect service quality at private hospitals in Jordan?. *Uncertain Supply Chain Management*, 10(2), 325-332.
- Alshurideh, M. T., Al Kurdi, B., & Salloum, S. A. (2021). The moderation effect of gender on accepting electronic payment technology: a study on United Arab Emirates consumers. *Review of International Business and Strategy*, 31(3), 375-396.
- Alzoubi, H., Alshurideh, M., Akour, I., Al Shraah, A., & Ahmed, G. (2021) Impact of information systems capabilities and total quality management on the cost of quality. *Journal of Legal, Ethical and Regulatory Issues*, 24(Special Issue 6), 1-11.
- Arteta, B. M., & Giachetti, R. E. (2004). A measure of agility as the complexity of the enterprise system. *Robotics and computer-integrated manufacturing*, 20(6), 495-503.
- Chawla, A. S., Kundu, S. C., Kumar, S., Gahlawat, N., & Kundu, H. (2021). The effect of knowledge management capacity on firm performance through sequential mediations of strategic HRM, administrative and technical innovations. *Journal of Asia Business Studies*. Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JABS-12-2020-0479>
- Chen, L., & Mohamed, S. (2010). The strategic importance of tacit knowledge management activities in construction. *Construction innovation*, 10(2), 138-163.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. 2nd ed., Hillsdale, NJ: Lawrence Erlbaum Associates.
- Darroch, J., & McNaughton, R. (2002). Examining the link between knowledge management practices and types of innovation. *Journal of intellectual capital*, 3(3), 210-222.
- Delshab, V., Pyun, D. Y., Kerwin, S., & Cegarra-Navarro, J. G. (2021). The impact of unlearning context on organizational performance through knowledge management: A case of community sport clubs in Iran. *Sport Management Review*, 24(1), 156-178.
- Fakunmoju, S., Arokodare, M., & Makinde, G. (2020). Strategic agility and competitive advantage of oil and gas marketing companies: the moderating effect of information technology capability and strategic foresight. *The Journal of Accounting and Management*, 10(3), 97-113.
- Ferraris, A., Mazzoleni, A., Devalle, A., & Couturier, J. (2019). Big data analytics capabilities and knowledge management: impact on firm performance. *Management Decision*, 57(8), 1923-1936.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388.
- Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika*, 61(1), 101-107.

- Gyemang, M., & Emeagwali, O. (2020). The roles of dynamic capabilities, innovation, organizational agility and knowledge management on competitive performance in telecommunication industr. *Management Science Letters*, *10*(7), 1533-1542.
- Haider, S. A., & Kayani, U. N. (2020). The impact of customer knowledge management capability on project performance- mediating role of strategic agility. *Journal of Knowledge Management*, *25*(2), 298-312.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications, London.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2-24.
- Halalmeh, M. (2021). The impact of strategic agility on employees' performance in commercial banks in Jordan. *Management Science Letters*, *11*(5), 1521-1526.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115-135.
- Hosein, Z., & yousefi, A. (2012) The Role of Emotional Intelligence on Workforce Agility in the Workplace, *International Journal of Psychological Studies*, *4*(3), 48-61.
- Idris, W., & AL-Rubaie, M. (2013) Examining the Impact of Strategic Learning on Strategic Agility, *Journal of Management and Strategy*, *4*(2), 70-77.
- Kabrilyants, R., Obeidat, B., Alshurideh, M., & Masadeh, R. (2021). The role of organizational capabilities on e-business successful implementation. *International Journal of Data and Network Science*, *5*(3), 417-432.
- Kharabe, A. (2012). *Organizational Agility and Complex Enterprise System Innovations: A Mixed Methods Study of the Effects of Enterprise Systems on Organizational Agility*. Unpublished Doctoral Thesis, Weatherhead School of Management, Case Western Reserve University.
- Khoshnood, N. T., & Nematizadeh, S. (2017). Strategic agility and its impact on the competitive capabilities in Iranian private banks. *International Journal of Business and Management*, *12*(2), 220-229.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. 4th ed., Guilford publications, New York, London.
- Lee, K., Azmi, N., Hanaysha, J., Alshurideh, M., & Alzoubi, H. (2022a) The effect of digital supply chain on organizational performance: An empirical study in Malaysia manufacturing industry. *Uncertain Supply Chain Management*, *10*(2), 1-16.
- Lee, K., Ramiz, P., Hanaysha, J., Alzoubi, H., Alshurideh, M. (2022b) Investigating the impact of benefits and challenges of IOT adoption on supply chain performance and organizational performance: An empirical study in Malaysia. *Uncertain Supply Chain Management*, *10*(2), 1-14.
- Lin, C., & Tseng, S. M. (2005). Bridging the implementation gaps in the knowledge management system for enhancing corporate performance. *Expert Systems with Applications*, *29*(1), 163-173.
- Lin, C., Yeh, J. M., & Tseng, S. M. (2005). Case study on knowledge-management gaps. *Journal of knowledge management*. *9*(3), 36-50.
- López Salazar, A., Contreras Soto, R., & Espinosa Mosqueda, R. (2012). The impact of financial decisions and strategy on small business competitiveness. *Global Journal of business research*, *6*(2), 93-103.
- Mantje, M., & Rambe, P. (2021, September). The Effects of Knowledge Management on SMME Competitiveness: An Emerging Economy Context view. In *European Conference on Knowledge Management* (pp. 534-XXII). Academic Conferences International Limited.
- Martins, V. W. B., Rampasso, I. S., Anholon, R., Quelhas, O. L. G., & Leal Filho, W. (2019). Knowledge management in the context of sustainability: Literature review and opportunities for future research. *Journal of cleaner production*, *229*, 489-500.
- Moon, H., & Lee, C. (2014). The mediating effect of knowledge-sharing processes on organizational cultural factors and knowledge management effectiveness. *Performance Improvement Quarterly*, *26*(4), 25-52.
- Ojha, D. (2008). *Impact of strategic agility on capabilities and financial performance*. Unpublished doctoral dissertation. School of Clemson University, South Carolina, United States.
- Onyeaghala, O. H., Philip, U. U., & Mngutswen, I. H. (2019). Strategic Agility and Organizational Competitiveness: The Case of Consumable Goods Producing Companies in Nigeria. *Journal of Management and Interdisciplinary Studies*, *1*(1), 229-224.
- Oyedijo, A. (2012). Strategic Agility and Competitive Performance in the Nigerian Telecommunication Industry: An Empirical Investigation, *American International Journal of Contemporary Research*, *2*(3), 227-237.
- Puong, T.T., Molla, A., & Peszynski, K. (2012). Enterprise system-enabled organizational agility capability: A construct and measurement instrument. In *Proceedings of the 16th Pacific Asia Conference on Information Systems (PACIS) 2012*. RMIT University. 1-16.
- Qin, R., & Nembhard, D. (2015). Workforce Agility in Operations Management. *Surveys in Operations Research and Management Science*, *20*(2), 55-69.
- Rafi, N., Ahmed, A., Shafique, I., & Kalyar, M. N. (2021). Knowledge management capabilities and organizational agility as liaisons of business performance. *South Asian Journal of Business Studies*. Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/SAJBS-05-2020-0145>
- Raykov, T., & Widaman, K. F. (1995). Issues in applied structural equation modeling research. *Structural Equation Modeling: A Multidisciplinary Journal*, *2*(4), 289-318.

- Rezaei, F., Khalilzadeh, M., & Soleimani, P. (2021). Factors affecting knowledge management and its effect on organizational performance: mediating the role of human capital. *Advances in Human-Computer Interaction*, Volume 2021, 1-16. Article ID 8857572, <https://doi.org/10.1155/2021/8857572>
- Sadi-Nezhad, S. (2021). A survey on the effect of supply chain disruption on Canadian economy. *Journal of Future Sustainability*, 1(1), 17-20.
- Sarstedt, M., Hair, J. F., Ringle, C. M., Thiele, K. O., & Gudergan, S. P. (2016). Estimation issues with PLS and CBSEM: where the bias lies! *Journal of Business Research*, 69(10), 3998-4010.
- Shakhour, R., Obeidat, B., Jaradat, M., Alshurideh, M., & Masa'deh, R. (2021) Agile-minded Organizational Excellence: Empirical investigation. *Academy of Strategic Management Journal*, 20(Special Issue 6), 1-25.
- Shamout, M., Elayan, M., Rawashdeh, A., Kurdi, B., & Alshurideh, M. (2022). E-HRM practices and sustainable competitive advantage from HR practitioner's perspective: A mediated moderation analysis. *International Journal of Data and Network Science*, 6(1), 165-178.
- Sherehiy, B., & Karwowski, W. (2014). The Relationship between Work Organization and Workforce Agility in Small Manufacturing Enterprises, *International Journal of Industrial Ergonomics*, 44(3), 466-473.
- Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: guidelines for using PLSpredict. *European Journal of Marketing*, 53(11), 2322-2347.
- Singh, A.S., & Masuku, M.B. (2013). Fundamentals of applied research and sampling techniques. *International journal of medical and applied sciences*, 2(4), 124-132.
- Sohrabi, R., Asari, M., & Hozoori, M. (2014) Relationship between Workforce Agility and Organizational Intelligence (Case Study: The Companies of "Iran High Council of Informatics"), *Asian Social Science*, 10(4), 279-287.
- Su, G. (2011). Exploring requirements of agility for knowledge management. In *6th Conference on Professional Knowledge Management—From Knowledge to Action*. Gesellschaft für Informatik eV. 371-381.
- Suknunan, S., & Maharaj, M. (2019). The role of knowledge management in institutional strategy development and competitiveness at leading African universities. *Knowledge and Performance Management*, 3(1), 19-30.
- Tariq, E., Alshurideh, M., Akour, I., & Al-Hawary, S. (2022a). The effect of digital marketing capabilities on organizational ambidexterity of the information technology sector. *International Journal of Data and Network Science*, 6(2), 401-408.
- Tariq, E., Alshurideh, M., Akour, E., Al-Hawary, S. and Al Kurdi, B. (2022b) The Role of Digital Marketing, CSR Policy and Green Marketing in Brand Development at UK. *International Journal of Data and Network Science*, 6(3), 1-10.
- Ugwu, C. I. (2019). Mediation effect of knowledge management on the relationship between transformational leadership and job performance of librarians in university libraries in Nigeria. *Journal of Librarianship and Information Science*, 51(4), 1052-1066.
- Usakli, A., & Kucukergin, K. G. (2018). Using partial least squares structural equation modeling in hospitality and tourism: do researchers follow practical guidelines? *International Journal of Contemporary Hospitality Management*, 30(11), 3462-3512.
- Vecchiato, R. (2015). Creating Value through Foresight: First Mover Advantages and Strategic Agility, *Technological Forecasting & Social Change*, 101, 25-36.
- Velásquez, R. M. A., & Lara, J. V. M. (2021). Knowledge management in two universities before and during the COVID-19 effect in Peru. *Technology in Society*, 64, 101479.
- Vlachvei, A., Notta, O., Karantininis, K., & Tsounis, N. (Eds.). (2016). *Factors affecting firm competitiveness and performance in the modern business world*. IGI Global, United States. America.
- Wijaya, P. Y., & Suasih, N. N. R. (2020). The effect of knowledge management on competitive advantage and business performance: A study of silver craft SMEs. *Entrepreneurial Business and Economics Review*, 8(4), 105-121.
- Young, A. (2013). *Identifying the Impact of Leadership Practices on Organizational Agility*. Unpublished Master Thesis, School of Business and Management, Faculty of the George L. Graziadio, Pepperdine University.



© 2022 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).