ISSN: 1816-949X

© Medwell Journals, 2020

Re-Engineering University Performance: Antecedents and Mediating Variables

¹Bandar Abdulla F.H. Alharthi, ²Gamal S.A. Khalifa, ³Abuelhassan E. Abuelhassan,

¹Osama Isaac and ¹Ahmed H. Al-Shibami

¹Department of Management, Faculty of Business and Accountancy,

²Department of Hospitality Management, Faculty of Hospitality and Tourism,

Lincoln University College, Selangor, Malaysia

³Department of Hotel Management, Institute of Tourism and Hotels,

Ministry of Higher Education, Qena, Egypt

Abstract: The aim of the study is to re-engineer the relationship among Strategic Planning (SP), Innovation (INN), Employee Strategic Alignment (ESA) and University Operational Performance (UOP). Survey-based procedures and the self-administrative questionnaire have used to collect data from the university academic staff. The questionnaire was used in five points Likert scale. About 500 questionnaires distributed were 309 valid returned. The findings of the study have investigated the relationship between strategic planning and university operational performance through innovation and employee strategic alignment. The proposed hypothesis have supported in order to consist of all the variables relationships. This study has an essential influence of UAE universities that imply the actual theory of strategic planning for university perspectives that increase the operational performance in the university future familiarity and standard operation. The data were gathered from single respondents which might result in possible response bias sometimes that indicates the limitation. This study outcome has preferred or suggested for implementation for the managerial thinking for future bitterness of the organization.

Key words: Strategic planning, employee strategic alignment, innovation, university performance, UAE, familiarity

INTRODUCTION

The new higher education systems have developed speedily with the standard and worldwide quality. Latorre-Medina and Blanco-Encomienda (2013) argued that throughout the previous decade the educational systems have endured long reformation and transformation processes from an old fashioned educational management model that deeply seated in the past to astrategic model (Agwa et al., 2018; Hussein et al., 2013). To analyze educational operations, the model fundamentally connects the service provided by the university to the resources consumed in providing a common view of university educational operations. According to the researcher's knowledge, there were not many current studies focused on UAE higher education and handled the area of university operational performance (Albadry, 2015).

In addition (Borman and Motowidlo, 1993; Tangen, 2003) have explained regarding interrelationships in their model of the classical approach to operational performance. It indicates a number of multi-faceted

appropriations between six performance criteria: effectiveness, efficiency, quality, productivity, innovation and profitability (Mohamed et al., 2018; Rolstadas, 1998). It is an essential issue in learning and management fields. It is through participation and commitment you will get good feedback from the employees (Adi and Pulos, 1980). Therefore, it is necessary to achieve the best operational performance among employees which will be achieved only by providing a good working environment and selection process, continuous planning, training and development and physical and moral motivation either through financial rewards or through promotion (Johnes, 1996; Williams, 1988). This study has stated about the university operational performance as a dependent variable that indicates the services of the students and academic-related administrative tasks. Most significantly, this type of performance tires the institutional reputation and global familiarity (Qoura and Khalifa, 2016).

Strategic planning depends on the idea that the need for planning is necessary or not and whether external or environmental conditions influence the output of the strategy (Radomska, 2014). Accordingly, strategic planning is remarkable importance in terms of new service strategies because of any new service depends on how the organization establishes and implements its own rational plan (Borrego and Henderson, 2014; Kruss *et al.*, 2015; Leigh and Blakely, 2016). This study focuses on strategic planning in order to adopt the institutional strategies that direct the road map of getting future achievements.

Furthermore, the innovation includes the organization conditions and process related to the basic work activities by integrating social and technical new concepts and ideas (Drucker, 2014). It indicates all about the organizational systematic, technological and advanced ideas that create more innovative in the competitive market (Abd-Elaziz et al., 2015; Abou-Shouk and Khalifa, 2017; Shamsi et al., 2018; Khalifa and Fawzy, 2017; Khalifa and Hewedi, 2016; Khalifa and Mewad, 2017). Specifically, in the university context, the innovation implies on creating a new program, a system for enrolment, current student verification, program development using access and technology (Prager and Omenn, 1980; Conway and Steward, 2009). Moreover, employees should be more conscious to achieve greater steadiness and alignment in organizational strategies (Abou-Shouk et al., 2014; Abou-Shouk and Khalifa, 2017; Henderson and Venkatraman, 1999; Khadem, 2008). Organizations are trying to increase their competitiveness, adopt employee alignment as a large-scale strategic tool (Gagnon and Judd, 2003). The process of transferring objectives to employees, the participation of mid-level managers in the strategic planning process, the acquisition of strategic knowledge are examples of employee's alignment (Beehr et al., 2009). The current study aims to investigate the casual relationship between SP and UOP via. employee strategic alignment and innovation.

Literature review

Strategic planning: Strategic planning requires explicit action to set specific long-term objectives and generate alternative strategies, requiring rigorous implementation and a system of results control (Kezar et al., 2015). It identifies the objectives of an organization, highlights the threats and competitive opportunities that it may face, controls and implements the procedures, assists in strategically important organizational decision-making which ultimately strengthens the performance of that organization (Ackoff, 1970; Menon et al., 1999). According to the various studies that have addressed the development of new strategies that adopting certain planning steps by companies reflected positively on their product development cycles as they have become faster (Hult et al., 2006; Montoya-Weiss and Calantone, 1994).

Brown and Eisenhardt (1995), Jimenez-Jimenez and Sanz-Valle (2011) stated that the planning provides the official plan carefully designed in all its details and tactics to ensure the successful implementation of the strategy. It helps in solving organizational disputes and leads to provide a clear vision which works to accelerate the mission development on the one hand and enhance the performance of the organization (Kettunen, 2006; Mohamed et al., 2019; Montoya-Weiss and Calantone (1994). Peterson et al. (2011) have mentioned that providing the distinctive features of effective strategic management and enhancing strategic planning in terms of quality, speed and productivity results from the adoption of planning based on sound market research followed by implementation and formalization consistent with that plan (Bason, 2018; Khalifa and Abou-Shouk, 2014). In this study, the strategic planning influences in direct and indirect effect (innovation and strategic alignment) on university operational performance. Basically, university operational learning consists of the services and operation related to the student's service and employee administrative tasks. Consequently, the strategic planning depends on the future plan of the chart that going to be achieved for the organization. In order to direct effect of strategic planning on university operational performance indicates that strategic planning can increase the operational performance of the university (Shrader et al., 1984). The mediating roles of innovation and strategic alignments between strategic planning and university operational performance imply the strong relationship between both variables in terms of enhancing the administrative performance of the university. To the best of researchers knowledge, the mediation of two variables between strategic planning and university operational performance is the first attempt to investigate the indirect relationship. According to the above discussion and research-based view, the researcher comes to these hypothesis:

- H₁: SP has a positive effect on UOP in UAE
- H₂: SP has a positive effect on innovation in UAE universities

Employee strategic alignment: Many researchers pointed out that the improvement of internal communication in organizations can be due to strategic alignment process (Bason, 2018; Shrader *et al.*, 1984). Spee and Jarzabkowski (2011) have emphasized the strategic alignment process seeking to strengthen communication within organizations. Langly (1988) added that creating an information network that promotes communication and discussion of strategic questions is one of the key roles of the strategic alignment process. Accordingly, employees should be given more attention

to achieve greater consistency and alignment with their organization and its strategies as it is considered the main source of its organizational success (Barney, 1991). In the area of strategic management, the alignment of staff is an important concept as it is the key that achieves the organizational goals and leads to the strategic success (O'Reilly *et al.*, 2010). In addition, employees understanding of the organization's strategy and the role they have to play in doing so, partly affects employee compliance with the organizational strategy (Boswell and Boudreau, 2001).

Further, employee agreement and understanding of their organization's strategy is one of the challenges facing employee alignment (Khadem, 2008). Beehr et al. (2009) emphasized that the good employee's understanding of the strategy of their organization will help them to take appropriate actions and behaviors that are in line with the interests and needs of the organization in order to achieve strategy which will eventually transform organizational objectives into tangible results (Boswell and Boudreau, 2001). Accordingly, achieving full acceptance of the staff and true alignment with the organizational strategy emerges as a result of the convergence of organizational and individual objectives. Allowing intermediate managers to participate in the strategy process helps to bring the goals closer and facilitates the implementation of the strategy at the same time (Ketokivi and Castaner, 2004; Wooldridge and Floyd, 1990). Moreover, the employee strategic alignment has a direct influence on university operational performance that makes a sense of employee internal individual and grouped communication. There are little studies has been mentioned this relationship in the literature but the mediating role of it plays a unique connection between strategic planning and university operational performance. Depending on the above considerations with regard to the role of strategic alignment to improve the three precedents of university operational performance, the study assumes the following hypothesis:

- H₃: SP has a positive impact on ESA
- H₄: ESA has a positive impact on UOP
- H_6 : ESA have mediating influence between SP and UOP

Innovation: The Resource-Based Theory (RBT) has been used by many theoretical studies as a theoretical mean to demonstrate the competitive value of innovation in terms of performance (Prajogo, 2016; Saunila *et al.*, 2014). According to his point of view, Saunila *et al.* (2014) considered innovation as an important factor in the company's performance (Mohamed *et al.*, 2019; Qoura and Khalifa, 2016). Prajogo (2016) emphasized

that organizational performance can be improved through the different types of innovation as technical, managerial, etc. because innovation is one of the most effective competitive strategies used in business markets that helps create competitive advantage and ensures its sustainability (Chen and Huang, 2010; Shamsi *et al.*, 2018).

Meanwhile, it has been identified at a various levels such as micro, macro and project level. In some disciplines explain innovation such as productivity based, service-based, activities based and technologybased (Berry and Berry, 2007). In this study we combining the service, activities and technology-based innovation in the organization (Acemoglu et al., 2018). Consequently, the broad definition as activities that involve substantial novelty for the adopting administration but it's not required to the new world. Accordingly, it indicates the new approach to designing, ideas implementing, marketing goods that provides to the innovator or his organization and generation of new thinking into a new process and services (Badran and Khalifa, 2016; Dodgson, 2018; Khalefa, 2015; Urabe et al., 2018). Lusch and Nambisan (2015) defined that innovation is the newly assimilated knowledge of employment which can be simplified and explained by various considerations (Woodside and Biemans, 2005) that concern in sense of commercialization and developing systemize technological facilities (Adams et al., 2006). In addition, innovation has a direct influence on university operational performance which indicates that increasing innovation operational performance will be increased. There are several studies have investigated related to innovation and performance but specifically for the university operational performance conduct very little studies in the literature. Furthermore, the mediation effect plays an important role for both of variables relationships. As a result, managers should identify and manage innovations in order to enhance their operational performance because the overall performance of the organization is positively related to established innovations. Thus, the following proposed hypothesis is based on the previous literature:

- H₅: innovation has a positive impact on UAE universities' UOP
- \bullet H_7 : innovation has a mediating effect on the relationship between SP and UOP

University operational performance: A necessity to any organization for running or sustain in the market would be operational performance (Shamsi *et al.*, 2018; Feng *et al.*, 2018; Isaac *et al.*, 2016; Nusari *et al.*, 2018) and it should maintain appropriately. This occurs because it plays a significant role in ensuring all policies and procedures within the organization with its objectives

and goals (Shamsi et al., 2018; Mohamed et al., 2018). Through a well-defined and functional operations management system, an organization has more of an advantage to better meet their needs while also meeting their own goals and objectives (Croom et al., 2018; Valdez, 2017). In addition, operational performance comes with many benefits that a university can use to its advantage. It has been used to refer to internal quality results and external quality results, respectively (Khalifa and Abou-Shouk, 2014; Uluskan et al., 2017). Utilizing the various tools with this and also contributes to the ability to properly encourage, implement and monitor performance (Alkhateri et al., 2018; Khalefa, 2015). Understanding how technology and other services are necessary to see results with operational performance (Inman et al., 2011; Khalifa and Mewad, 2017).

Furthermore, performance is measured at the organizational level to see whether objective methods or subjective methods should be adopted (Celine et al., 2009). On the one hand, the most common objective methods used to gain vital such as profit levels of organizations (Lannelongue et al., 2015) but subjective approaches define operational performance depending on organizational attitudes. Antony and Bhattacharyya, (2010) stated the productivity is an aspect of operational performance (Mohamed et al., 2018, 2019). However, university operational performance plays an essential role in this study as of dependent variable in order to interrelate with strategic planning. Accordingly, employee strategic alignment and innovation also mediates between strategic planning and university operational performance (Isaac et al., 2016; Jansen et al., 2006; Luo and Park, 2001). The overall model of the study its self is a theoretical contribution and relationship based-variables also indicates contributions to university operational performance. To the best of researchers knowledge, this study has not investigated in the literature unless some of the relations clarified according to contextual consideration.

MATERIALS AND METHODS

Research design and measurements: This study is followed the quantitative approach that collections out the quantify data in order to use statistics for analyzing data set (Malhotra *et al.*, 2004). Moreover, this research approach has successfully been used in the context of operational performance studies, especially in the universities background (Bowen and Shoemaker, 2003). Information about respondent's beliefs, motives and attitudes provides by an effective survey design in the study field in the case of research, measure the perceptions of universities staffs. Therefore, this study needs a self-administrative questionnaire for assuming

the responsibility of employee reading and responding to the questions. The researcher can distribute numerous questionnaires to different respondents in different places simultaneously by using a self-administrated questionnaire. This study's constructs have adapted for the previous literature and used five-point Likert scale following strongly disagree (1) strongly agree (5). Therefore, the construct strategic planning has adapted form (Albadry, 2016; Galbreath, 2010), innovation from (Aragon-Correa et al., 2007; Garcia-Morales et al., 2012), employee strategic alignment from (Ouakouak and Ouedraogo, 2013) and university operational performance from (Garcia-Morales et al., 2012). For this study, the hypothesized variables and their relationships in the model have been derived from the available literature of the models and theories that have been prescribed in the literature mentioned above. The proposed model can be in Fig. 1. While examining the proposed model.

Data collection and sampling: Data for this study were collected from a self-administered survey that was circulated in UAE universities. A survey instrument was developed to explore the impact of UOP and SP, I and ESA. The questionnaire was pre-tested several times to ensure that wording, format and sequencing of questions were appropriate. This research applies a survey-based methodology for gathering data which has many advantages that mainly suitable for this study. Kleinberg et al. (1999) explained that survey-based methods give advantages for assembling a large amount of data about an individual respondent at one time and its flexible for collecting data. Accordingly, in the quantitative research approach of study survey-based methods can collect a large number of data sample quickly and efficiently (Hair et al., 2006). This study sample size is decided in consideration of the following researcher connection. Flynn and Pearcy (2001) mentioned that an acceptable sample size with no simple and definitive rule an accurate sample size which considerable debate in the research field. The questionnaire was distributed among the university academic staffs within the organization and 500 questionnaires distributed were 309 valid questionnaires collected. The procedures of collecting data were contacted to the top management to collect data and conduct survey with the academic staff. For the analysis of the research model using PLS (Partial Least Square) in order to input data in SPSS. It needs a large sample which is less stable for estimation purpose, some researchers believe that PLS may use for sample size as small as 50 and large 5000 (Hulland, 1999). This study was used PLS for analysis technique in order to get the result for path, estimation and supported the hypothesis.

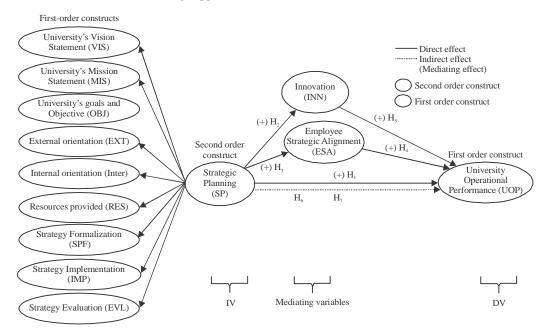


Fig. 1: The conceptual model

RESULTS AND DISCUSSION

Descriptive analysis: The researcher distributed 500 questioners to the Academic staff in UAE's educational institutions, the valid questionnaires were received by the researcher are 309 questionnaires by responding rate is 61.8%. The responding sample (n = 309) consisted of 62.5% male and 37.5% female employees. Most of the participants were aged between 30-39 years this accounted for 41.7% of the responses followed by the age range of <30 years at 30.7% of total responses. With regards to the academic positions of selected participants, 54.4 of participants were assistant professors, 26.5% were associate professors and all other categories had nearly the same number of participants. Close to 25.3% of the respondent's working experience were <5 years followed by the experience range of 11-15 years at 23.6% of total responses. A total of 71, accounting for 22.98% of the respondents were workers in public universities whilst the remaining worked in private institutions.

Measurement model assessment: Schumacker and Lomax (2004), Hair *et al.* (2010) indicate that the two steps assessment procedure which includes measurement model and structural model has an advantage over the one step assessment procedure. According to Hair *et al.* (2017) measurement model specifies how each construct is measured while structural model specifies how the variables are related to each other in the structural model. The main reasons for choosing PLS as a statistical

method for this study that for both measurement and structural model PLS offer simultaneous analysis which leads to more accurate estimates (Barclay *et al.*, 1995).

The assessment of measurement model was done through construct reliability as well as validity (including convergent and discriminant validity). For construct reliability, this study tested the individual Cronbach's alpha coefficients to measure the reliability of each of the core variables in the measurement model. The results indicate that all the individual Cronbach's alpha coefficients ranging from 0.787-0.977 were higher than the suggested value of 0.7 (Kannan and Tan, 2005). Additionally, for testing construct reliability all the Composite Reliability (CR) values ranging from 0.899-0.978 were higher than 0.7 (Werts et al., 1974; Kline, 2010; Gefen et al., 2000) which adequately indicates that construct reliability is fulfilled as shown in Table 1. Therefore, the achieved Cronbach's alpha and CR for all constructs were considered to be sufficiently error-free.

Factor loading was used to test indicator reliability. High loadings on a construct indicate that the associated indicators seem to have much in common which is captured by the construct (Hair *et al.*, 2017). Factor loadings >0.50 were considered to be very significant (Hair *et al.*, 2010). The loadings for all items exceeded the recommended value of 0.5 as shown in Table 2. The loading for all items in the model has therefore fulfilled all the requirements.

Table 1: Summary of demographic profile of respondents

Variables	Frequency	Valid (%)	
Genders			
Male	193	62.50	
Female	116	37.50	
Age			
<30	95	30.70	
30-39	129	41.70	
40-49	66	21.40	
50-59	15	4.90	
60 and above	4	1.30	
Experience			
<5 years	78	25.30	
5-10	56	18.10	
11-15	73	23.60	
16-20	54	17.50	
More than 20	48	15.50	
Academic position			
Teaching assistant	26	8.40	
Lecturer	82	26.50	
Assistant professor	168	54.40	
Associate professor	20	6.50	
Professor	13	4.20	
University			
Public	71	22.98	
Private	238	77.02	
Total	309.00		

For testing convergent validity (the extent to which a measure correlates positively with alternative measures of the same construct, this study used the Average Variance Extracted (AVE) and it indicated that all AVE values were higher than the suggested value of 0.50 (Hair *et al.*, 2010) ranging from 0.640-0.824. The convergent validity for all constructs has been successfully fulfilled and adequate convergent validity exhibited as Table 2 shows.

The discriminant validity (the degree to which items differentiate among constructs or measure distinct concepts) of the measurement model was checked using three criteria, namely cross-loadings, Fornell-Larcker and the Heterotrait-Monotrait ratio (HTMT). According to (Hair *et al.*, 2017), the cross-loadings are typically the first approach to assess discriminant validity of the indicators. As shown in Table 3 the cross loading criterion fulfills the requirements because the indicators outer loadings on a construct were higher than all its cross-loadings with other constructs (bold values).

The results of discriminant validity by using the Fornell-Larcker criterion is shown in Table 4 where the square root of the AVEs on the diagonals as represented by the bolded values are higher than the correlations between constructs (corresponding row and column values). This indicates that the constructs are strongly related to their respective indicators compared to other constructs of the model (Fornell and Larcker, 1981; Chin, 1998a, b), thus, suggesting a good discriminant validity

(Hair *et al.*, 2017). In addition, the correlation between exogenous constructs is <0.85 (Awang, 2014). Hence, the discriminant validity of all constructs is fulfilled.

There has been some criticism of the Fornell-Larcker criterion, Henseler *et al.* (2015) mentioned that it does not accurately reveal the lack of discriminant validity in common research situations. They have proposed an alternative technique which is the Heterotrait-Monotrait ratio (HTMT) of correlations based on the multitrait multimethod matrix. This study assesses discriminant validity through HTMT. While the discriminant validity has a problem when the HTMT value is greater than HTMT 0.90 value of 0.90 (Gold *et al.*, 2001) or the HTMT 0.85 value of 0.85 (Kline, 2010), all values as Table 5 shows were lower than the recommended value of 0.85 indicating that discriminant validity has been ascertained.

Structural model assessment: Hair *et al.* (2017) suggested assessing the structural model by looking at the beta (β), R² and the corresponding t-values via. a bootstrapping procedure with a resample of 5, 000. Moreover, they recommend reporting the effect sizes (f²) as well as the predictive relevance (Q²). As (Sullivan and Feinn, 2012) argue that the p-value determine whether the effect exists but it does not reveal the size of the effect.

Hypothesis tests: The structural model assessment as shown in Fig. 2 and Table 6 provides the indication of the hypothesis tests with 5 out of the 5 hypothesis are supported. SL significantly predicts OUP, INN and ESA. Hence, H_1 , H_2 and H_3 are accepted with ($\beta = 0.605$, $\tau = 8.984$, p<0.001), $\beta = 0.765$, $\tau = 27.776$, p<0.001 and $\beta = 0.751$, $\tau = 25.822$, p<0.001, respectively. In addition ESA and INN significantly predicts OUP. Hence, H₄ and H_5 are accepted with ($\beta = 0.159$, $\tau = 2.688$, p<0.01 and $\beta = 0.122$, $\tau = 0.034$, p<0.05), respectively. Note that the standardized path coefficient indicates the strengths of the relationship between exogenous and endogenous constructs, so the direct effects of SP on OUP are much stronger than the influence of other variables. SP, ESA and INN are explaining 68.5 % of the variance in OUP. The R² values achieved an acceptable level of explanatory power as recommended by Cohen (1988) and Chin (1998a, b) indicating a substantial model.

This study also assessed effect sizes (f²). Effect size f² determines whether an exogenous latent construct has a substantial, moderate or weak impact on an endogenous latent construct (Gefen and Rigdon, 2011). Hair *et al.* (2017) recommend to test the change in the R² value.

Table 2: Mean, standard deviation, loading, Cronbach's alpha, CR and AVE

Table 2: Mean, standard deviation Constructs	Items	Loading (>0.5)	M M	SD	α (>0.7)	CR (>0.7)	AVE (>0.5)
			IVI	SD	α (>0.7)	CR (>0.7)	AVE (>0.5)
Strategic planning (SL)	EVL1	0.851					
	EVL2	0.748					
	EVL3	0.893					
	EVL4	0.919					
	EXT1	0.815					
	EXT2	0.891					
	EXT3	0.887					
	EXT4	0.812					
	EXT5	0.801					
	IMPL1	0.840					
	IMPL2	0.881					
	IMPL3	0.862					
	IMPL4	0.841					
	IMPL5	0.776					
	INTR1	0.881					
	INTR2	0.902					
	INTR4	0.881					
	INTR5	0.817					
	INTR6	0.876					
	MISS1	0.767	4.22	1.377	0.977	0.978	0.674
	MISS2	0.855					
	MISS3	0.860					
	MISS4	0.860					
	OBJ1	0.877					
	OBJ2	0.895					
	OBJ3	0.909					
	RES1	0.856					
	RES2	0.905					
	RES3	0.902					
	RES4	0.857					
	RES5	0.880					
	SP1	0.811					
	SP2	0.866					
	SP3	0.862					
	SP4	0.808					
Innovation (INN)	VIS1	0.870					
, ,	VIS2	0.879					
	VIS3	0.874					
	VIS4	0.760					
	INN1	0.814					
	INN2	0.772					
	INN3	0.792	4.14	1.606	0.860	0.899	0.640
	INN4	0.814					
	INN5	0.809					
Employee Strategic	ESA1	0.913	4.12	1.661	0.787	0.904	0.824
Alignment (ESA)	ESA2	0.903	· ·=	. ~ ~ -			
University Operational	PERF1	0.679					
Performance (UOP)	PERF2	0.780					
	PERF3	0.870	4.33	1.594	0.857	0.903	0.701
	PERF4	0.878					2.,01
	PERF5	0.864					
	PERF6	0.784					
M. M CD. Ct dd D		-1-21-1- CD: C	i4- D-1i-1-	:1:4 A \$7E- A			

M: Mean; SD: Standard Deviation, α : Cronbach's alpha, CR: Composite Reliability, AVE: Average variance extracted the measurement used is seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree) all the factor loadings of the individual items are statistically significant (p<0.01)

Cohen (1988) suggested a guideline measure the magnitude of the f^2 which is 0.35 (large effects), 0.15 (medium effects) and 0.02 (small effects). The result of

 f^2 as Table 6 shows that three relationship with large effect sizes, two relationships with medium effect size and one relationship with small effect size.

Table 3: Results of discriminant validity by the cross loading

EVIL 0.459 0.424 0.589 0.851 EVIL3 0.392 0.536 0.597 0.748 EVIL3 0.532 0.486 0.648 0.893 EVIL4 0.563 0.538 0.638 0.919 EVIL4 0.563 0.528 0.638 0.638 0.919 EXTI 0.489 0.494 0.538 0.638 0.815 EXTI 0.490 0.537 0.537 0.831 EXTI 0.610 0.621 0.613 0.887 EXTI 0.410 0.625 0.545 0.812 EXTI 0.594 0.594 0.594 0.707 0.840 IMPL1 0.542 0.609 0.707 0.840 IMPL3 0.531 0.548 0.652 0.862 IMPL4 0.740 0.580 0.670 0.841 IMPL5 0.723 0.494 0.578 0.679 IMPL5 0.723 0.494 0.578 0.678 IMPL1 0.562 0.541 0.634 0.878 IMPL2 0.594 0.594 0.594 0.699 IMPL5 0.723 0.494 0.578 0.778 IMPL8 0.594 0.594 0.594 IMPL8 0.594 0.594 0.699 IMPL8 0.694 0.598 0.670 0.841 IMPL9 0.594 0.594 0.594 0.594 IMPL9 0.594 0.594 0.694 0.598 IMPL8 0.594 0.594 0.594 0.694 IMPL8 0.594 0.594 0.594 IMPL8 0.594 0.594 IMPL8 0.594 0.594 0.594 IMPL8 0.594 0.894 IMPL8 0.894 0.894 0.894 IMPL8 0.894 0	Table 3: Results of disc	criminant validity by the cross loadi			
EV12 0.392 0.536 0.597 0.748 EV13 0.532 0.486 0.648 0.893 EV14 0.563 0.528 0.638 0.919 EXT1 0.489 0.494 0.538 0.815 EXT1 0.490 0.537 0.537 0.537 0.831 EXT3 0.551 0.621 0.613 0.887 EXT4 0.410 0.6625 0.545 0.812 EXT5 0.358 0.510 0.471 0.801 IMPL1 0.542 0.609 0.707 0.840 IMPL2 0.594 0.549 0.716 0.881 IMPL3 0.531 0.531 0.548 0.652 0.862 IMPL4 0.740 0.580 0.670 0.841 IMPL5 0.733 0.494 0.758 0.670 0.841 IMPL5 0.733 0.494 0.758 0.670 0.841 IMPL5 0.520 0.541 0.634 0.634 IMPL5 0.752 0.563 0.606 IMPL8 0.562 0.541 0.634 0.881 IMTR2 0.516 0.577 0.608 0.902 IMTR8 0.542 0.563 0.606 0.881 IMTR5 0.495 0.514 0.504 0.818 IMTR5 0.495 0.514 0.504 0.818 IMTR6 0.511 0.440 0.548 0.876 IMS1 0.601 0.438 0.456 0.556 0.606 IMS1 0.404 0.548 0.876 IMS3 0.494 0.546 0.555 0.860 IMS4 0.478 0.635 0.600 0.860 IMS4 0.479 0.491 IMS5 0.496 0.558 0.595 0.540 0.877 IMS5 0.496 0.500 0.500 0.890 IMS6 0.490 0.443 0.443 0.493 IMS7 0.496 0.528 0.514 0.403 0.895 IMS7 0.470 0.474 0.443 0.443 0.466 IMS7 0.496 0.528 0.514 0.666 0.879 IMS7 0.496 0.528 0.514 0.606 0.879 IMS7 0.496 0.528 0.514 0.607 IMS7 0.496 0.528 0.514 0.606 0.879 IMS7 0.496 0.529 0.540 0.496 0.602 IMN4 0.412 0.481 0.607 0.496 0.601	Variables	ESA	INN	PERF	SP
EVL3	EVL1	0.459	0.424	0.589	0.851
EVL3	EVL2	0.392	0.536	0.597	0.748
EVLI 0.563 0.528 0.638 0.919 EXT1 0.489 0.494 0.538 0.815 EXT2 0.490 0.537 0.537 0.537 0.891 EXT3 0.551 0.621 0.613 0.837 EXT4 0.410 0.625 0.545 0.812 EXT5 0.358 0.510 0.471 0.801 IMPL1 0.542 0.609 0.707 0.840 IMPL2 0.594 0.549 0.716 0.881 IMPL3 0.531 0.548 0.652 0.862 IMPL4 0.740 0.588 0.510 0.670 0.841 IMPL5 0.723 0.494 0.578 0.676 INTR1 0.562 0.541 0.634 0.578 0.776 INTR1 0.562 0.541 0.634 0.831 INTR2 0.516 0.577 0.668 0.981 INTR2 0.516 0.577 0.668 0.981 INTR5 0.495 0.514 0.549 0.811 INTR5 0.495 0.514 0.544 0.881 INTR5 0.495 0.511 0.440 0.548 0.415 INTR6 0.511 0.440 0.548 0.487 INS3 0.494 0.546 0.565 0.860 INS4 0.478 0.635 0.600 0.860 INS4 0.478 0.635 0.600 0.860 INS4 0.479 0.489 0.902 INS5 0.410 0.568 0.571 0.905 INS3 0.524 0.6665 0.489 0.902 INS5 0.499 0.568 0.659 0.880 INS4 0.571 0.905 INS5 0.499 0.568 0.659 0.880 INS1 0.500 0.529 0.540 0.877 INS5 0.499 0.568 0.659 0.880 INS9 0.412 0.403 0.408 0.428 0.895 INS9 0.472 0.486 0.454 0.432 0.895 INS9 0.472 0.486 0.454 0.465 INS1 0.522 0.474 0.443 0.443 0.443 0.499 INS2 0.470 0.474 0.443 0.443 0.443 0.895 INS1 0.532 0.462 0.389 0.870 INS1 0.528 0.471 0.428 0.866 INS1 0.528 0.471 0.428 0.866 INS1 0.528 0.471 0.428 0.866 INS1 0.491 0.492 0.448 0.471 0.428 0.877 INS1 0.520 0.474 0.444 0.443 0.443 0.498 0.877 INS1 0.532 0.462 0.389 0.417 0.766 INS1 0.493 0.548 0.471 0.428 0.874 INN1 0.520 0.474 0.444 0.443 0.443 0.443 0.896 INN1 0.520 0.474 0.444 0.443 0.443 0.443 0.866 INN1 0.520 0.470 0.474 0.443 0.443 0.443 0.866 INN1 0.520 0.470 0.474 0.443 0.443 0.443 0.866 INN1 0.520 0.470 0.474 0.466 0.454 0.662 0.679 INN1 0.520 0.470 0.474 0.466 0.454 0.662 0.679 INN1 0.520 0.470 0.474 0.466 0.454 0.662 0.679 INN1 0.428 0.449 0.449 0.449 0.449 0.449 0.449 0.					0.893
EXTI					0.919
EXT2					
EXT3					
EXT4 0.410 0.625 0.545 0.545 0.512 EXT5 0.358 0.510 0.471 0.801 IMPL1 0.542 0.609 0.707 0.840 IMPL2 0.594 0.549 0.716 0.881 IMPL3 0.531 0.548 0.549 0.716 0.881 IMPL3 0.531 0.548 0.652 0.862 IMPL4 0.740 0.580 0.670 0.878 0.776 INTR 1 0.562 0.541 0.634 0.578 0.776 INTR 1 0.562 0.541 0.634 0.881 INTR 2 0.516 0.577 0.608 0.902 INTR 4 0.542 0.563 0.606 0.881 INTR 2 0.516 0.577 0.608 0.902 INTR 5 0.495 0.511 0.544 0.544 0.548 0.876 INTR 5 0.495 0.511 0.400 0.548 0.876 INTR 5 0.495 0.511 0.400 0.548 0.876 INTR 6 0.511 0.601 0.538 0.415 0.505 0.860 INTR 6 0.500 0.420 0.487 0.483 0.855 0.860 INTR 6 0.565 0.571 0.595 0.856 0.850 INTR 6 0.500 0.524 0.665 0.571 0.905 0.856 0.					
EXTS 0.358 0.510 0.471 0.801 IMPL1 0.542 0.609 0.707 0.840 IMPL2 0.594 0.549 0.716 0.881 IMPL3 0.531 0.548 0.652 0.862 IMPL4 0.740 0.580 0.670 0.841 IMPL5 0.723 0.494 0.588 0.652 0.862 IMPL5 0.723 0.494 0.578 0.776 IMPL4 0.578 0.776 0.841 0.881 IMPL5 0.562 0.541 0.634 0.881 IMPL5 0.562 0.541 0.634 0.881 IMPL5 0.516 0.577 0.608 0.902 IMTR4 0.542 0.563 0.606 0.881 INTR2 0.516 0.577 0.608 0.902 IMTR4 0.542 0.563 0.606 0.881 IMTR5 0.495 0.514 0.504 0.817 IMTR6 0.511 0.440 0.548 0.876 MIS1 0.601 0.438 0.415 0.707 MIS2 0.420 0.487 0.483 0.415 0.707 MIS2 0.420 0.487 0.483 0.855 MIS3 0.494 0.546 0.565 0.560 0.860 MIS4 0.478 0.635 0.600 0.860 RES1 0.601 0.587 0.595 0.866 MIS4 0.478 0.635 0.600 0.860 0.881 0.504 0.881 0.504 0.881 0.505 0.504 0.801 0.587 0.595 0.856 RES2 0.541 0.656 0.571 0.905 0.856 RES3 0.524 0.665 0.571 0.905 0.856 RES3 0.524 0.665 0.571 0.905 0.856 0.565 0.860					
MPL1					
MPL2					
IMPL3					
MPL4					
MPL5					
INTR 0.562					
INTR2					
INTR4					
INTR5					
INTR6					
MIS1 0.601 0.438 0.415 0.767 MIS2 0.420 0.487 0.483 0.885 MIS3 0.494 0.546 0.565 0.860 MIS4 0.478 0.635 0.600 0.860 RES1 0.601 0.587 0.595 0.856 RES2 0.541 0.656 0.571 0.905 RES3 0.524 0.665 0.489 0.902 RES4 0.514 0.578 0.646 0.857 RES5 0.499 0.568 0.659 0.880 OBJ1 0.500 0.529 0.540 0.877 OBJ2 0.403 0.408 0.428 0.885 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4					
MIS2 0.420 0.487 0.483 0.855 MIS3 0.494 0.546 0.565 0.860 MIS4 0.478 0.635 0.600 0.860 RES1 0.601 0.587 0.595 0.856 RES2 0.541 0.656 0.571 0.905 RES3 0.524 0.665 0.489 0.902 RES4 0.514 0.578 0.646 0.857 RES5 0.499 0.568 0.659 0.880 OBJ1 0.500 0.529 0.540 0.877 OBJ2 0.403 0.408 0.428 0.895 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.463 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532					
MIS3 0.494 0.546 0.565 0.860 MIS4 0.478 0.635 0.600 0.860 RES1 0.601 0.587 0.595 0.856 RES2 0.541 0.656 0.571 0.905 RES3 0.524 0.665 0.489 0.902 RES4 0.514 0.578 0.646 0.857 RES5 0.499 0.568 0.659 0.880 OBJ1 0.500 0.529 0.540 0.877 OBJ2 0.403 0.408 0.428 0.895 OBJ3 0.432 0.394 0.433 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.808 SP3 0.472 0.486 0.454 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 <td></td> <td></td> <td></td> <td></td> <td></td>					
MIS4 0.478 0.635 0.600 0.860 RES1 0.601 0.587 0.595 0.856 RES2 0.541 0.656 0.571 0.905 RES3 0.524 0.665 0.489 0.902 RES4 0.514 0.578 0.646 0.857 RES5 0.499 0.568 0.659 0.880 OBJ1 0.500 0.529 0.540 0.877 OBJ2 0.403 0.408 0.428 0.895 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.862 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532					
RES1 0.601 0.587 0.595 0.856 RES2 0.541 0.656 0.571 0.905 RES3 0.524 0.665 0.489 0.902 RES4 0.514 0.578 0.646 0.857 RES5 0.499 0.568 0.659 0.880 OBI1 0.500 0.529 0.540 0.877 OBJ2 0.403 0.408 0.428 0.859 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.804 VIS4 0.2428 <td></td> <td></td> <td></td> <td></td> <td></td>					
RES2 0.541 0.656 0.571 0.905 RES3 0.524 0.665 0.489 0.902 RES4 0.514 0.578 0.646 0.857 RES5 0.499 0.568 0.659 0.880 OBJ1 0.500 0.529 0.540 0.877 OBJ2 0.403 0.408 0.428 0.895 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA2 0.903					
RES3 0.524 0.665 0.489 0.902 RES4 0.514 0.578 0.646 0.857 RES5 0.499 0.568 0.659 0.880 OBI1 0.500 0.529 0.540 0.877 OBI2 0.403 0.408 0.428 0.895 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.862 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.622 0.651 INN1 0.520					
RES4 0.514 0.578 0.646 0.857 RES5 0.499 0.568 0.659 0.880 OBJ1 0.500 0.529 0.540 0.877 OBJ2 0.403 0.408 0.428 0.895 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374					
RES5 0.499 0.568 0.659 0.880 OBJ1 0.500 0.529 0.540 0.877 OBJ2 0.403 0.408 0.428 0.895 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA2 0.903 0.534 0.623 0.612 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506					
OBJ1 0.500 0.529 0.540 0.877 OBJ2 0.403 0.408 0.428 0.895 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506					
OBJ2 0.403 0.408 0.428 0.895 OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN5 0.539					
OBJ3 0.432 0.394 0.443 0.909 SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539					
SP1 0.493 0.508 0.479 0.811 SP2 0.474 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 <td></td> <td></td> <td></td> <td></td> <td></td>					
SP2 0.474 0.443 0.443 0.866 SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
SP3 0.472 0.486 0.454 0.862 SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
SP4 0.496 0.528 0.514 0.808 VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
VIS1 0.532 0.462 0.389 0.870 VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
VIS2 0.470 0.474 0.366 0.879 VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
VIS3 0.488 0.471 0.428 0.874 VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
VIS4 0.428 0.480 0.417 0.760 ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
ESA1 0.913 0.543 0.623 0.612 ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
ESA2 0.903 0.534 0.622 0.651 INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
INN1 0.520 0.814 0.617 0.662 INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
INN2 0.374 0.772 0.463 0.548 INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611					
INN3 0.506 0.792 0.496 0.602 INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611	INN1	0.520	0.814	0.617	0.662
INN4 0.412 0.814 0.502 0.597 INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611	INN2	0.374	0.772	0.463	0.548
INN5 0.539 0.809 0.612 0.638 PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611	INN3	0.506	0.792	0.496	0.602
PERF1 0.393 0.419 0.679 0.480 PERF2 0.554 0.534 0.780 0.611	INN4	0.412	0.814	0.502	0.597
PERF2 0.554 0.534 0.780 0.611	INN5	0.539	0.809		0.638
	PERF1	0.393	0.419	0.679	0.480
	PERF2	0.554	0.534	0.780	0.611
PERF3 0.648 0.621 0.870 0.745	PERF3	0.648	0.621	0.870	0.745
PERF4 0.597 0.590 0.878 0.721	PERF4	0.597	0.590		0.721
PERF5 0.607 0.575 0.864 0.725	PERF5	0.607	0.575	0.864	0.725
PERF6 0.502 0.539 0.784 0.656	PERF6	0.502	0.539	0.784	0.656

SP: Strategic Planning, ESA: Employee Strategic Alignment, IMPL: Strategy Implementation, SPF: Strategy Formalization, INTR: Internal Orientation, EXT: External Orientation, INN: Innovation, VIS: University Vision, MIS: University Mission, RES: Resources Provided, OBJ: Goals and Objectives, EVL: Strategic Planning Evaluation, PERF: University Operational Performance

Table 4: Results of discriminant validity by Fornell-Larcker criterion

Table 4: Results of disc	criminant validity by Fornell-Larcke	er criterion		
Variables	ESA	INN	PERF	SP
ESA	0.908			
INN	0.593	0.800		
PERF	0.685	0.678	0.812	
SP	0.551	0.565	0.617	0.880

Diagonals represent the square root of the average variance extracted while the other entries represent the correlations SP: Strategic Planning, ESA: Employee Strategic Alignment, INN: Innovation, PERF: University operational Performance

Table 5: Results of discriminant validity by HTMT

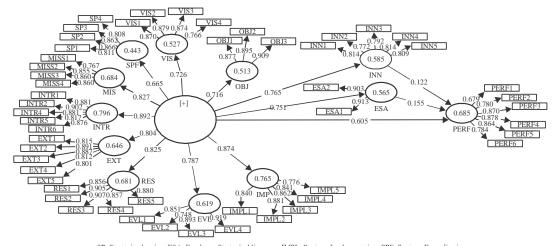
racio di racourto di dio	erminant vandity by rriver			
Variables	ESA	INN	PERF	SP
ESA				
INN	0.714			
PERF	0.808	0.761		
SP	0.711	0.832	0.649	-

SP: Strategic Planning, ESA: Emlpyee Strategic Alignment, INN: Innovation, PERF: University operational Performance

Table 6: Structural path analysis result

Hypothesis	Relationship	SD Beta	SE	t-values	p-values	Decision	\mathbb{R}^2	f^2	Q ²	VIF
H_1	SP->PERF	0.605	0.603	8.9840	0.000	Supported	0.685	0.323	0.419	2.666
H_2	SP->INN	0.765	0.764	27.7760	0.000	Supported	0.585	1.408	0.348	1.000
H_3	SP->ESA	0.751	0.750	25.8220	0.000	Supported	0.565	1.296	0.444	1.555
H_4	ESA->PERF	0.159	0.158	2.6880	0.007	Supported	0.685	0.035		
H ₅	INN->PERF	0.122	0.123	2.1280	0.034	Supported	0.685	0.020		

SP: Strategic Planning, ESA: Employee Strategic Alignment, INN: Innovation, PERF: University Operational Performance



SP: Strategic planning; ESA: Employee Strategic Alignment; IMPL: Strategy Implementation; SPF: Strategy Formalization INTR: Internal Orientation; EXT: External Orientation; INN: Innovation; VIS: University Vision; MIS: University Mission RES: Resources provided; OBJ: Goals and objectives; EVL: strategic planning evaluation PERF: University Operational Performance

Fig. 2: PLS algorithm results

Further, by using the blindfolding procedure this study examined the power of research proposed model regarding the predictive relevance. As recommended by Hair et al. (2017) the blindfolding procedure should use only on the endogenous constructs with a reflective measurement. If the value of Q²>0 then the predictive relevance of the proposed model exists for a certain endogenous construct (Fornell and Cha, 1994; Hair et al., 2017). As Table 6 shows that all the values of $Q^2>0$ indicate that there is an adequate predictive relevance for the proposed model. For the Q^2 values, Hair et al. (2017) suggested values of 0.35 (large), 0.15 (medium) and 0.02 (small) as a relative measure of predictive relevance and the result of this study shows that the exogenous have two large predictive relevance and one with medium predictive relevance.

An issue of the multicollinearity could exist in any study which is not desirable, it means that the variance exogenous constructs explain in the endogenous construct are overlapping with each other and thus not each explaining unique variance in the endogenous variable (O'Brien, 2007). To measure and assess the degree of multicollinearity, Variance Inflation Factor (VIF) widely used (O'Brien, 2007). There is cause for concern when the largest VIF is >10 (Bowerman and O'Connell, 1990; Myers, 1990). And according to Hair *et al.* (2017) a multicollinearity issue exists when the largest VIF is >5. Table 6 shows multicollinearity diagnostic through VIF which indicates that there is no evidence of significant multicollinearity among the study exogenous constructs because all VIF values are <5 ranging from 1.00-2.666. It means that the variance of exogenous constructs explains in the endogenous construct are not overlapping with each other.

Indirect hypothesis testing: According to the bootstrapping's analysis, there is a significant indirect impact in the relationship between SP and OUP via. ESA

Table 7: Bootstrapping the indirect effect of IM

Hypothesis	Constructs	B-values	SE	t-values	p-values	Decision
H_6	SP->ESA->PERF	0.119	0.119	2.679	0.008	Supported
H_7	SP->INN->PERF	0.093	0.094	2.126	0.034	Supported

SP: Strategic Planning, ESA: Employee Strategic Alignment, INN: Innovation, PERF: University Operational Performance (Preacher and Hayes, 2008)

Table 8: IPMA for UOP

Latent	Total effect of the construct	Index values
constructs	operational performance (importance)	(performance)
ESA	0.142	63.197
INN	0.119	58.664
SP	0.923	59.070

SP: Strategic Planning, ESA: Employee Strategic Alignment, INN: Innovation

with a t-value of 2.679 and p<0.01. as indicated by Preacher and Hayes (2008) that the mediation effect exist when the indirect impact of SP and OUP via. ESA with boot 95% C1: [LL = 0.031, UL = 0.206] doesn't straddle a zero in between. Hence, H_6 was supported. In addition the results showed there is a significant indirect impact in the relationship between SP and OUP via. INN with a t-value of 2.126 and p<0.05 as indicated by Preacher and Hayes (2008) that the mediation effect exist when the indirect impact of SP and OUP via. INN with boot 95% C1: [LL = 0.018, UL = 0.184] doesn't straddle a zero in between. Hence, H_7 was supported (Table 7).

Importance-Performance Map Analysis (IPMA):

This study ran an Importance-Performance Matrix Analysis (IPMA) as a post-hoc procedure in PLS using organizational performance as the outcome construct. The IPMA estimates the total effects represented by the importance of predecessor constructs in shaping the target construct (organizational performance) while their average latent variable scores represent their performance, the computation of the index values (performance scores) was accomplished by rescaling the latent constructs scores to a range of 100 (highest performance) down to 0 (lowest performance) (Hair et al., 2017). According to Ringle and Sarstedt (2016), IPMA enriches the PLS analysis results. Instead of only analyzing the path coefficients (i.e., the importance dimension), it also takes into consideration the average value of the latent constructs and their indicators (i.e., performance dimension). Table 8 shows the findings of importance (total effects) and performance (index values) used for the IPMA.

As shown in Fig. 3 this study plotted the total effects scores and index values in a priority map. It can be observed that SP is a very important factor in determining the UOP due to its relatively higher importance value compared to other constructs in the proposed model. Nevertheless, the performance of this Significant Factor (SP) lagged behind the INN and ESA. According to Hair *et al.* (2017) The goal of IPMA is to identify predecessors that have a relatively high importance for the

target construct (i.e., those that have a strong total effect) but also a relatively low performance (i.e., low average latent variable scores), the aspects underlying these constructs represent potential areas of improvement that may receive high attention. In sum, in order to improve the UOP, the managerial activities should focus on enhancing the performance of SP.

According to the hypotheses result, this study model points out the outcomes in a separate relationship. The model has shown that strategic planning has positively and significantly influence university operational performance. Thus, the results have shown above if the strategic plan has strong appropriate elements for a future plan, the operational performance will be increased. This relationship has pointed out in the literature that strategic planning significantly impacts on operational performance (Miller and Cardinal, 1994). The results also indicated the factors of strategic planning that articulated the entire mission, vision, internal and external formulation, implementation that impose to connect university operational performance. Furthermore, innovation plays an important role in finding a result that it mediates between strategic planning and university operational performance (Urgal et al., 2013). This mediating effect supported significantly has both variables relationship in order to place innovative consequences with the organization. Innovation or innovative behavior in the organization creates a situation for new ideas that conclude strategic plans are framed (Leal-Rodriguez et al., 2014). On the other hand, the findings have shown that the innovation significantly influences university operational performance. The findings suggested that the innovation of the organization, generally, practice or involve with the staff will directly engage in operational performance (Damanpour and Evan, 1984). In general, innovative approaches are very much needed to the higher education system or universities operations. Its common in the relationship between innovation and operational performance according to the findings and many studies are investigated in the literature but the university and UAE context it very new of linked for innovation and operational performance.

Moreover, employee strategic alignment also plays a mediating role of strategic planning and university operational learning. The above result has shown the mediating of both variables significantly influenced and supported the indirect hypothesis. Chan *et al.* (1997) have discussed the investigated their implications for the effectiveness and business performance. The

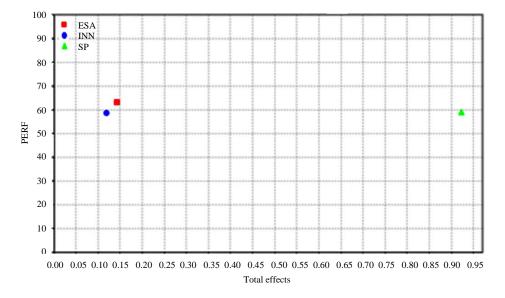


Fig. 3: IPMA (Priority Map) for employee performance, SP: Strategic Planning, ESA: Employee Strategic Alignment, INN: Innovation; PERF; University operational Performance

findings suggest the university with high strategic alignment are better performing in their operation. Although, the findings implied that there several ways to a win in order to state as no one strategic alignment and university operational performance was linked.

CONCLUSION

The findings were convinced to the point that we have developed in the practitioner-oriented version of the instruments to enable academic staff to assess and improve their operational performance as a direct influence.

IMPLICATIONS

This study has indicated two implications such as theoretical and managerial. Essentially, the study shows that the effects of SP and Innovation on UOP vary in local context. First, the theoretical implication that stands for relationships among the constructs which uttered for possible outcomes form the theoretical evidence. It indicates the result of the research that we identified of model constructs relationship-based contribution. There are an imposing variety of theoretical rationales to sustain the perspective that administrative settings provide a more fruitful venue for strategic planning relationships. Strategic planning implies the influence of operational performance in order to findings support we have outcomes form the results. This relationship theory supported in terms of the results of the mentioned hypothesis. Additionally, strategic planning significantly

influences on university operational performance which mentioned from the extracted result. This relationship usually has considered in multi-cluster comparative research in order to evaluate strategically planned behavior (Rudd *et al.*, 2008).

Moreover, strategic planning significantly influences on innovation that shows the positive relationship in terms of make the innovative culture of different employee appreciation. Consequently, innovation significantly influences university operational performance that criticized the common demonstration of being employee's innovation for better performance (Andersen, 2000). Besides, the indirect relationship or mediating influence between strategic planning and university operational performance also implement theoretical evidence to stand up this mediation effect. Luo and Park (2001) has considered the relationship of strategic alignment in groups within the organization. On the hand, strategic alignment influence on university operational performance. Furthermore, strategic alignment plays an important role between strategic planning and university operational performance in terms of interactions among their perception and conceptions regarding organizational performance. Therefore, the managerial implications comprise the observations made for making practical decisions to the organization. In this study, the theoretical implication observes the identifications to suggest for practical implantation and adapt to the strategies and workplace for future progression. Accordingly, relationship-based suggestions require providing indications such as strategic planning deploy the innovation and strategic alignment by increasing

strategic plan and internal communication-based quality. On the hand strategic planning enhance university operational performance in order to develop planned behavior of the strategic goal. So, these findings suggest to the top management to imply the idea for reducing lacking and weaknesses of the organization and improve operational performance for future stability.

LIMITATIONS

Nonetheless, the results of this research should be interpreted cautiously. Perhaps a serious limitation of this study was its focus on a single industry, thus, precluding the generalization of findings to other industries including services and public sectors. The data were gathered from single respondents which might result in possible response bias. Future research should strive to gather data from firms across whole supply chains. Another shortcoming of this study is the lack of adequate sample size which hindered us to apply more rigorous statistical tests such as structural equation models. The study should be regarded as an exploratory study and be used as a basis for further deepened research with relatively large data sets. Therefore, future research may examine the proposed associations by incorporating contextual variables into the framework including industry type, supply chain structure, ownership type and intraregional variations to further probe into contingencies and boundary conditions of relationships examined in this study. Finally, there is a need for further conceptualization and verification of the factors used in this study, following two rigorous factor analyses. If these factors with the same practices hold in other research settings, it could be possible to proceed with further conceptualization and theorization around the identified factors and test new hypothesis empirically.

REFERENCES

- Abd-Elaziz, M.E., W.M. Aziz, G.S. Khalifa and M. Abdel-Aleem, 2015. Determinants of Electronic Word of Mouth (EWOM) influence on hotel customers purchasing decision. Intl. J. Heritage Tourism Hospitality, 9: 194-223.
- Abou-Shouk, M.A. and G.S. Khalifa, 2017. The influence of website quality dimensions on E-purchasing behaviour and E-loyalty: A comparative study of Egyptian travel agents and hotels. J. Travel Tourism Marketing, 34: 608-623.
- Abou-Shouk, M.A., A.S. Abdelhakim and M.M. Hewedi, 2014. Factors affecting the development of target competencies among final-year tourism and hospitality students in Egypt. J. Hospitality Tourism Educ., 26: 178-187.
- Acemoglu, D., U. Akcigit, H. Alp, N. Bloom and W. Kerr, 2018. Innovation, reallocation and growth. Am. Econ. Rev., 108: 3450-3491.

- Ackoff, R., 1970. A concept of corporate planning. Long Range Plann., 3: 2-8.
- Adams, R., J. Bessant and R. Phelps, 2006. Innovation management measurement: A review. Int. J. Manage. Rev., 8: 21-47.
- Adi, H. and S. Pulos, 1980. Individual differences and formal operational performance of college students. J. Res. Math. Educ., 11: 150-156.
- Agwa, Y., W. Aziz and G. Khalifa, 2018. Evaluating food and beverage courses in higher private tourism and hotels institutes in Alexandria: Professionals perception. Intl. J. Heritage Tourism Hospitality, 11: 98-110.
- Albadry, H., 2015. The Effect of Pad Assisted Language Learning on Eveloping EFL Students Autonomous Language Learning. In: Critical CALL-Proceedings of the 2015 EUROCALL Conference, Helm, F., L. Bradley, M. Guarda and S. Thouesny (Eds.). Publishing Research, Padova, Italy, pp: 1-8.
- Albadry, O.M., 2016. Strategic management and its impact on universities service quality: The role of organisational commitment. Masters Thesis, University Plymouth, Plymouth, UK.
- Alkhateri, A.S., A.E. Abuelhassan, G.S. Khalifa, M. Nusar and A. Ameen, 2018. The impact of perceived supervisor support on employees turnover intention: The mediating role of job satisfaction and affective organizational commitment. Intl. Bus. Manage., 12: 477-492.
- Andersen, T.J., 2000. Strategic planning, autonomous actions and corporate performance. Long Range Plann., 33: 184-2000.
- Antony, J.P. and S. Bhattacharyya, 2010. Measuring organizational performance and organizational excellence of SMEs-Part 1: A conceptual framework. Measuring Bus. Excellence, 14: 3-11.
- Aragon-Correa, J.A., V.J. Garcia-Morales and E. Cordon-Pozo, 2007. Leadership and organizational learning's role on innovation and performance: Lessons from Spain. Ind. Marketing Manage., 36: 349-359.
- Awang, Z., 2014. Structural Equation Modeling using AMOS. Universiti Teknologi MARA, Shah Alam, Malaysia..
- Badran, N. and G. Khalifa, 2016. Diversity management: Is it an important issue in hotel industry in Egypt?. Intl. J. Heritage Tourism Hospitality, 7: 275-286.
- Barclay, D., C. Higgins and R. Thompson, 1995. The Partial Least Squares (PLS) approach to causal modeling: Personal computer adoption and use as an illustration. Technol. Stud., 2: 285-309.
- Barney, J.B., 1991. Firm resources and sustained competitive advantage. J. Manage., 17: 99-120.

- Bason, C., 2018. Leading Public Sector Innovation: Co-Creating for a Better Society. 2nd Edn., Policy Press, University of Bristol, Bristol, England, Pages: 336.
- Beehr, T.A., S. Glazer, R. Fischer, L.L. Linton and C.P. Hansen, 2009. Antecedents for achievement of alignment in organizations. J. Occup. Organiz. Psychol., 82: 1-20.
- Berry, F.S. and W.D. Berry, 2007. Innovation and Diusion Models in Policy Research. In: Theories of the Policy Process, Sabatier, P.A. (Ed.). Westview Press, Boulder, Colorado, USA., ISBN-13:978-0-8133-4359-4, pp: 223-260.
- Borman, W.C. and S.J. Motowidlo, 1993. Expanding the Criterion Domain to Include Elements of Contextual Performance. Jossey-Bass Publisher, San Fransisco.
- Borrego, M. and C. Henderson, 2014. Increasing the use of evidence-based teaching in STEM higher education: A comparison of eight change strategies. J. Eng. Educ., 103: 220-252.
- Boswell, W.R. and J.W. Boudreau, 2001. How leading companies create, measure and achieve strategic results through line of sight. Manage. Decis., 39: 851-860.
- Bowen, J.T. and S. Shoemaker, 2003. Loyalty: A strategic commitment. Cornell Hotel Restaurant Administration Q., 44: 31-46.
- Bowerman, B.L. and R.T. O'Connell, 1990. Linear Statistical Models: An Applied Approach. 2nd Edn., PWS-Kent Pub. Co., New York, USA., ISBN:9780534229856, Pages: 1024.
- Brown, S.L. and K.M. Eisenhardt, 1995. Product development: Past research, present findings and future directions. Acad. Manage. Rev., 20: 343-378.
- Celine, D., B. Fabrizio, M. Gabriel and Q. Alain, 2009. Too complex for me why do performance-approach and performance-avoidance goals predict exam performance?. Eur. J. Psychol. Educ., 24: 423-434.
- Chan, Y.E., S.L. Huff, D.W. Barclay and D.G. Copeland, 1997. Business strategic orientation, information systems strategic orientation and strategic alignment. Inf. Syst. Res., 8: 125-150.
- Chen, C.J. and Y.F. Huang, 2010. Creative workforce density, organizational slack, and innovation performance. J. Bus. Res., 63: 411-417.
- Chin, W., 1998. The Partial Least Squares Approach for Structural Equation Modeling. In: Modern Methods for Business Research, Marcoulides, G.A. (Ed.). Lawrence Erlbaum Associates, New Jersey, pp: 295-336.
- Chin, W.W., 1998. Commentary: Issues and opinion on structural equation modeling. MIS Q., 22: 7-16.

- Cohen, J., 1988. Statistical Power Analysis for the Behavioral Sciences. 2nd Edn., Lawrence Erlbaum Associates, Hillsdale, New Jersey.
- Conway, S. and F. Steward, 2009. Managing and Shaping Innovation. Oxford University Press, Oxford, USA., ISBN:9780199262267, Pages: 504.
- Croom, S., N. Vidal, W. Spetic, D. Marshall and L. McCarthy, 2018. Impact of social sustainability orientation and supply chain practices on operational performance. Intl. J. Oper. Prod. Manage., 38: 2344-2366.
- Damanpour, F. and W.M. Evan, 1984. Organizational innovation and performance: The problem of organizational lag. Admin. Sci. Q., 29: 392-409.
- Dodgson, M., 2018. Technological Collaboration in Industry: Strategy, Policy and Internationalization in Innovation. Taylor & Francis, Abingdon, UK., ISBN:9781351265584, Pages: 206.
- Drucker, P., 2014. Innovation and Entrepreneurship. 1st Edn., Routledge, Abingdon, UK., ISBN-13:9781138019195, Pages: 346.
- Feng, M., W. Yu, X. Wang, C.Y. Wong and M. Xu *et al.*, 2018. Green supply chain management and financial performance: The mediating roles of operational and environmental performance. Bus. Strategy Environ., 27: 811-824.
- Flynn, L.R. and D. Pearcy, 2001. Four subtle sins in scale development: Some suggestions for strengthening the current paradigm. Intl. J. Market Res., 43: 1-14.
- Fornell, C. and D.F. Larcker, 1981. Evaluating structural equation models with unobservable variables and measurement error. J. Market. Res., 18: 39-50.
- Fornell, C. and J. Cha, 1994. Partial Least Squares. In: Advanced Methods of Marketing Research, Bagozzi, R.P. (Ed.). Blackwell Business, Cambridge, Massachusetts, pp: 52-78.
- Gagnon, M.A. and J.H. Judd, 2003. Employee strategic alignment at a wood manufacturer: An exploratory analysis using lean manufacturing. For. Prod. J., 53: 24-29.
- Galbreath, J., 2010. Drivers of corporate social responsibility: The role of formal strategic planning and firm culture. Br. J. Manage., 21: 511-525.
- Garcia-Morales, V.J., M.M. Jimenez-Barrionuevo and L. Gutierrez-Gutierrez, 2012. Transformational leadership influence on organizational performance through organizational learning and innovation. J. Bus. Res., 65: 1040-1050.
- Gefen, D. and E.E. Rigdon, 2011. An update and extension to SEM guidelines for administrative and social science research. MIS. Q., 35: 1-7.

- Gefen, D., D.W. Straub and M.C. Boudreau, 2000. Structural equation modeling and regression: Guidelines for research practice. Commun. Assoc. Inform. Syst., 4: 1-77.
- Gold, A.H., A. Malhotra and A.H. Segars, 2001. Knowledge management: An organizational capabilities perspective. J. Manage. Inform. Syst., 18: 185-214.
- Hair, J.F., W.C. Black, B.J. Babin and R.E. Anderson, 2010. Multivariate Data Analysis: A Global Perspective. 7th Edn., Pearson Education Limited, Upper Saddle River, New Jersey, ISBN-13: 9780135153093, Pages: 800.
- Hair, J.F., W.C. Black, B.J. Babin, R.E. Anderson and R.L. Tatham, 2006. Multivariate Data Analysis. 6th Edn., Pearson, London, UK., ISBN:9788131715284, Pages: 925.
- Hair, Jr., J.F., G.T.M. Hult, C.M. Ringle and M. Sarstedt, 2017. A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). 2nd Edn., Sage Publisher, Thousand Oaks, California.
- Henderson, J.C. and H. Venkatraman, 1999. Strategic alignment: Leveraging information technology for transforming organizations. IBM Syst. J., 38: 472-484.
- Henseler, J., C.M. Ringle and M. Sarstedt, 2015. A new criterion for assesing discriminant validity in variance-based structural equation modeling. J. Acade. Marketing Sci., 43: 115-135.
- Hulland, J., 1999. Use of Partial Least Squares (PLS) in strategic management research: A review of four recent studies. Strat. Manage. J., 20: 195-204.
- Hult, G.T.M., D.J. Ketchen Jr., S.T. Cavusgil and R.J. Calantone, 2006. Knowledge as a strategic resource in supply chains. J. Operat. Manage., 24: 458-475.
- Hussein, I.E., M.A. Abou-Shouk and G.S. Khalifa, 2013. Evaluating tourism and hospitality graduates: Perceptions of stakeholders in Egypt. Proceedings of the 3rd Regional Conference on Tourism Research, October 29-31, 2013, Bayview Hotel, Langkawi, Malaysia, pp: 764-774.
- Inman, R.A., R.S. Sale, K.W. Green and D. Whitten, 2011. Agile manufacturing: Relation to JIT, operational performance and firm performance. J. Oper. Manage., 29: 343-355.
- Isaac, O., Y. Masoud, S. Samad and Z. Abdullah, 2016. The mediating effect of strategic implementation between strategy formulation and organizational performance within government institutions in Yemen. Res. J. Appl. Sci., 11: 1002-1013.
- Jansen, J.J.P., F.A.J. Van Den Bosch and H.W. Volberda, 2006. Exploratory innovation, exploitative innovation and performance: Effects of organizational antecedents and environmental moderators. Manage. Sci., 52: 1661-1674.

- Jimenez-Jimenez, D. and R. Sanz-Valle, 2011. Innovation, organizational learning and performance. J. Bus. Res., 64: 408-417.
- Johnes, J., 1996. Performance assessment in higher education in Britain. Eur. J. Oper. Res., 89: 18-33.
- Kannan, V.R. and K.C. Tan, 2005. Just in time, total quality management and supply chain management: Understanding their linkages and impact on business performance. Omega, 33: 153-162.
- Ketokivi, M. and X. Castaner, 2004. Strategic planning as an integrative device. Administrative Sci. Q., 49: 337-365.
- Kettunen, J., 2006. Strategic planning of regional development in higher education. Baltic J. Manage., 1: 259-269.
- Kezar, A., A.C. Chambers, J.C. Burkhardt, 2015. Higher Education for the Public Good: Emerging Voices from a National Movement. Wiley, Hoboken, New Jersey, USA., ISBM:9781119177951, Pages: 384.
- Khadem, R., 2008. Alignment and follow-up: Steps to strategy execution. J. Bus. Strategy, 29: 29-35.
- Khalefa, G.S.A., 2015. Ethnic restaurants meal experience: Egyptian customers perceptions. Intl. J. Heritage Tourism Hospitality, 9: 93-112.
- Khalifa, G.S. and E.H.A. Mewad, 2017. Managing drivers and boundaries of Information Technology Risk Management (ITRM) to increase Egyptian hotels market share. Intl. J. Recent Trends Bus. Tourism, 1: 12-31.
- Khalifa, G.S. and M.A. Abou-Shouk, 2014. Investigating the success factors of hotel websites: The case of Egyptian hotels. Asia Pac. J. Innovation Hospitality Tourism, 3: 131-151.
- Khalifa, G.S.A. and M. Hewedi, 2016. Factors affecting hotel website purchasing intentions: Evidence from Egypt. J. Faculty Tourism Hotels, Fayoum Univ., 8: 50-69.
- Khalifa, G.S.A. and N.M. Fawzy, 2017. Measuring E-service quality (Expectation vs. perception) from travel agencies perspective: An empirical study on egyptian hotel websites. Intl. J. Recent Trends Bus. Tourism (IJRTBT), 1: 36-48.
- Kleinberg, J.M., R. Kumar, P. Raghavan, S. Rajagopalan and A.S. Tomkins, 1999. The web as a graph: Measurements, models and methods. Proceedings of the International Conference on Computing and Combinatorics (COCOON 1999), July 26-28, 1999, Springer, Berlin, Heidelberg, Germany, ISBN:978-3-540-66200-6, pp: 1-17.
- Kline, R.B., 2010. Principle and Practice of Structural Equation Modeling. 3rd Edn., Guilford Press, New York, ISBN: 9781606238776, Pages: 427.

- Kruss, G., S. McGrath, I.H. Petersen and M. Gastrow, 2015. Higher education and economic development: The importance of building technological capabilities. Intl. J. Educ. Dev., 43: 22-31.
- Langly, A., 1988. The roles of formal strategic planning. Long Range Plann., 21: 40-50.
- Lannelongue, G., J. Gonzalez-Benito and O. Gonzalez-Benito, 2015. Input, output and environmental management productivity: Effects on firm performance. Bus. Strategy Environ., 24: 145-158.
- Latorre-Medina, M.J. and F.J. Blanco-Encomienda, 2013. Strategic management as key to improve the quality of education. Procedia Soc. Behav. Sci., 81: 270-274.
- Leal-Rodriguez, A.L., J.A. Ariza-Montes, J.L. Roldan and A.G. Leal-Millan, 2014. Absorptive capacity, innovation and cultural barriers: A conditional mediation model. J. Bus. Res., 67: 763-768.
- Leigh, N.G. and E.J. Blakely, 2016. Planning Local Economic Development: Theory and Practice. 6th Edn., SAGE Publications, Thousand Oaks, California, USA., ISBN:9781506364001, Pages: 536.
- Luo, Y. and S.H. Park, 2001. Strategic alignment and performance of market-seeking MNCs in China. Strategic Manage. J., 22: 141-155.
- Lusch, R.F. and S. Nambisan, 2015. Service innovation: A service-dominant logic perspective. MIS. Q., 39: 155-176.
- Malhotra, N.K., S.S. Kim and J. Agarwal, 2004. Internet users information privacy concerns (IUIPC): The construct, the scale and a causal model. Inf. Syst. Res., 15: 336-355.
- Menon, A., S.G. Bharadwaj, P.T. Adidam and S.W. Edison, 1999. Antecedents and consequences of marketing strategy making: A model and a test. J. Marketing, 63: 18-40.
- Miller, C.C. and L.B. Cardinal, 1994. Strategic planning and firm performance a synthesis of more than two decades or research. Acad. Manage. J., 37: 1649-1665.
- Mohamed, M.S., G.S.A. Khalifa, A.H. Al-Shibami, I. Alrajawi and O. Isaac, 2019. The mediation effect of innovation on the relationship between creativity and organizational productivity: An empirical study within public sector organizations in the UAE. J. Eng. Appl. Sci., 14: 3234-3242.
- Mohamed, M.S., G.S.A. Khalifa, M. Nusari, A. Ameen and A.H. Al-Shibami *et al.*, 2018. Effect of organizational excellence and employee performance on organizational productivity within healthcare sector in the UAE. J. Eng. Appl. Sci., 13: 6199-6210.

- Montoya-Weiss, M.M. and R.J. Calantone, 1994. Determinants of new product performance: A review and meta analysis. J. Prod. Innovation Manage., 11: 397-417.
- Myers, R.H., 1990. Classical and Modern Regression with Applications. 2nd Edn., Duxbury, Washington.
- Nusari, M., M. Al Falasi, I. Alrajawy, G.S. Khalifa and O. Isaac, 2018. The impact of project management assets and organizational culture on employee performance. Intl. J. Manage. Hum. Sci., 2: 15-26.
- O'Brien, R.M., 2007. A caution regarding rules of thumb for variance inflation factors. Qual. Quantity, 41: 673-690.
- Ouakouak, M.L. and N. Ouedraogo, 2013. The mediating role of employee strategic alignment in the relationship between rational strategic planning and firm performance: A European study. Can. J. Administrative Sci. Rev. Canadienne Sci. Administration, 30: 143-158.
- O'Reilly, C.A., D.F. Caldwell, J.A. Chatman, M. Lapiz and W. Self, 2010. How leadership matters: The effects of leaders alignment on strategy implementation. Leadersh. Q., 21: 104-113.
- Peterson, S.J., F. Luthans, B.J. Avolio, F.O. Walumbwa and Z. Zhang, 2011. Psychological capital and employee performance: A latent growth modeling approach. Personnel Psychol., 64: 427-450.
- Prager, D.J. and G.S. Omenn, 1980. Research, innovation and university-industry linkages. Sci., 207: 379-384.
- Prajogo, D.I., 2016. The strategic fit between innovation strategies and business environment in delivering business performance. Intl. J. Prod. Econ., 171: 241-249.
- Preacher, K.J. and A.F. Hayes, 2008. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. Behav. Res. Methods, 40: 879-891.
- Qoura, O. and G.S.A. Khalifa, 2016. The impact of reputation management on hotel image among internal customers: The case of egyptian hotels. Intl. J. Heritage Tourism Hospitality, 7: 261-274.
- Radomska, J., 2014. Linking the main obstacles to the strategy implementation with the companys performance. Procedia Soc. Behav. Sci., 150: 263-270.
- Ringle, C.M. and M. Sarstedt, 2016. Gain more insight from your PLS-SEM results: The importance-performance map analysis. Ind. Manage. Data Syst., 116: 1865-1886.
- Rolstadas, A., 1998. Enterprise performance measurement. Intl. J. Oper. Prod. Manage., 18: 989-999.

- Rudd, J.M., G.E. Greenley, A.T. Beatson and I.N. Lings, 2008. Strategic planning and performance: Extending the debate. J. Bus. Res., 61: 99-108.
- Saunila, M., S. Pekkola and J. Ukko, 2014. The relationship between innovation capability and performance: The moderating effect of measurement. Int. J. Prod. Perform. Manage., 63: 234-249.
- Schumacker, R.E. and R.G. Lomax, 2004. A Beginner's Guide to Structural Equation Modeling. 2nd Edn., Lawrence Erlbaum Associates, New Jersey, USA., ISBN:0-8058-4017-6,.
- Shamsi, R.S.H.A., A.A. Ameen, O. Isaac, A.H. Al-Shibami and G.S. Khalifa, 2018. The impact of innovation and smart government on happiness: Proposing conceptual framework. Intl. J. Manage. Hum. Sci., 2: 10-26.
- Shrader, C.B., L.A. Taylor and D.R. Dalton, 1984. Strategic planning and organizational performanceb critical appraisal. J. Manage., 10: 149-171.
- Spee, A.P. and P. Jarzabkowski, 2011. Strategic planning as communicative process. Organ. Stud., 32: 1217-1245.
- Sullivan, G.M. and R. Feinn, 2012. Using effect size-or why the P value is not enough. J. Graduate Med. Educ., 4: 279-282.
- Tangen, S., 2003. An overview of frequently used performance measures. Work Study, 52: 347-354.
- Uluskan, M., A.B. Godfrey and J.A. Joines, 2017. Integration of six sigma to traditional quality management theory: An empirical study on organisational performance. Total Qual. Manage. Bus. Excellence, 28: 1526-1543.

- Urabe, K., J. Child and T. Kagono, 2018. Innovation and Management: International Comparisons. Walter de Gruyter, Berlin, Germany, Pages: 372.
- Urgal, B., M.A. Quintas and R. Arevalo-Tome, 2013. Knowledge resources and innovation performance: The mediation of innovation capability moderated by management commitment. Technol. Anal. Strategic Manage., 25: 543-565.
- Valdez, G., 2017. Intermediate manager experience: Implications for operational performance within veterinary clinical institutions. Ph.D Thesis, Argosy University Atlanta, Atlanta, USA.
- Werts, C.E., R.L. Linn and K.G. Joreskog, 1974. Intraclass reliability estimates: Testing structural assumptions. Educ. Psychol. Meas., 34: 25-33.
- Williams, J.C., 1988. A data-based method for assessing and reducing human error to improve operational performance. Proceedings of the Record for 1988 IEEE 4th International Conference on Human Factors and Power Plants, June 5-9, 1988, IEEE, Monterey, California, USA., pp: 436-450.
- Woodside, A.G. and W.G. Biemans, 2005. Modeling innovation, manufacturing, diffusion and adoption/rejection processes. J. Bus. Ind. Marketing, 20: 380-393.
- Wooldridge, B. and S.W. Floyd, 1990. The strategy process, middle management involvement and organizational performance. Strategic Manage. J., 11: 231-241.