

UAE Police Administrative Employee Innovative Behavior: The Integration of Knowledge Sharing and Leadership

Abdulla Naser Abdulqawi Gharama, Gamal S.A. Khalifa and
Ahmed Hamoud Al-Shibami

Abstract--- *The purpose of the study is to identify the relationship among Strategic leadership (SL) knowledge-oriented leadership (KOL) and knowledge sharing (KS) toward employee innovative behavior (EIB) in UAE police administration. A quantitative research approach has been conducted for the study and survey-based method has followed in the research and distribute questionnaire among employee to collect data. The questionnaire has developed into five point Likert scale and structured questionnaires were distributed among UAE police administration employees. This study finding has showed separately direct and indirect relationship influences among variables. SL and KOL influence on KS toward EIB. The influence of SL and KOL to KS has significantly influence and KS play role as mediator of SL, KOL and EIB. These relationships are supported according the result that shown in the hypotheses.*

Keywords--- *Knowledge-oriented Leadership (KOL), Strategic Leadership (SL), Knowledge Sharing (KS) and Employee Innovative Behavior (EIB).*

I. INTRODUCTION

In today's work environment, employees constitute an important resource for organizations and a key determinant of corporate success, with innovative work and motivation [1]–[3]. Interestingly, innovation focuses the emerging need for today's organizations to proactively address challenges and issues of the future by undertaking radical transform to their environments and the marketplace [4]–[6]. Organizations can no longer remain successful by merely adapting to external change or innovating in terms of system and behavior [7], [8]. In the previous research, researcher describes the innovation in different conceptualize field and shows different view of influence on productivity[9], performance[10], [11], growth, survival and inventing new ideas and technology[12]–[14]. However, this study purpose have their different view about the nature of innovative behaviour, creation and understanding of the importance and aspects of employee innovative behaviour criteria [15], [16]. So, employee innovative behaviour commonly prescribes to any organization that creates and builds organizational success by utilizing innovative activities[6], [17].

In addition, in the recent year, increasing competition and tremendously changing technology people desires follow the innovation behavior, invention, creativity and new ideas [18], [19]. It has been viewed as new ideas of system, method or device introducing something new where employee can innovate a varieties of ways that changes

*Abdulla Naser Abdulqawi Gharama, Faculty of Business and Accountancy, Lincoln University College (LUC), Selangor, Malaysia.
Gamal S.A. Khalifa, Faculty of Tourism and Hotels, Fayoum University, Egypt and Faculty of Hospitality and Tourism, Lincoln University College (LUC), Selangor, Malaysia.
Ahmed Hamoud Al-Shibami, Faculty of Business and Accountancy, Lincoln University College (LUC), Selangor, Malaysia.*

from minor to major implication of the service or other facilities [20], [21]. From the aspects of market and technology innovation divided in four categories such as incremental innovation, radical innovation, architectural innovation, and disruptive innovation [22], [23]. However, in the aspect of employee behaviour consists of implement the idea of related technology and behavioural composition to be creative[8]. The theoretical contribution of this study is that connect with knowledge-oriented leadership, knowledge sharing and employee innovative behaviour.

Accordingly, leaders are sincerely responsible to change and build up position of the organization and emphasize on the collaboration, promote innovation, and realize the emerging demands of the market[2], [24], [25]. Therefore, organization remains constantly for those have process with extraordinary skills, improvement truthful relationship with subordinates [26]. However, it is necessary that leader must understand about the strength for taking best decision as per organization required [27]. The importance of the leadership emerges a crucial role as effective in the organization which established by the predetermined rules and imposition [28]–[31]. The idea of importance leadership has been assessed that gives value to the power the leader and non-leader as they produce huge productivity with low cost and generate new opportunities [30]. In the meantime, knowledge oriented leadership rather than the position of the association innovates, focus learning way and influence of subjective knowledge exchange [32]. Accordingly, it makes important part of the system to improve innovation behavior in the organization. Therefore, Knowledge-oriented leadership influence on innovation in order to increase organizational creativity.

Thus, strategic leadership plays an important role in this study as to ensure the strategic plan of the organization for future success. Strategic leadership engages with vision that builds trust, collaboration, and mutual responsibilities for success[33]. Vision helps leaders to make smart choice of their decision that are being made with the end in mind [34]. Generally leadership always has been about winning the hearts and mind of followers to achieve a common goal. However, the most important think about the qualities of the leaders which are needed for recent turbulent economic global context and the system of training and development professionals to prepare their leaders to deal with the challenges ahead [35], [36]. Moreover, strategic leadership influence on knowledge sharing and employee innovative behavior directly and indirectly in order to concentrate innovative appearance of employee.

Furthermore, knowledge sharing also facilitates the wide range of positive changes to the organization [37], [38]. Therefore, researcher believes that those company practice knowledge sharing practices will be in the front line for the innovation [39]. So, the sharing knowledge is vital for the improvement of organizational innovation [40]. Accordingly, Taminiou, Smit, & De Lange, (2009)[41]investigated that knowledge sharing cast a vital role to the innovation in terms of both the explicit and tacit components of knowledge sharing. In addition, it mediates between strategic leadership, knowledge-oriented leadership and innovation to articulate leadership skills and knowledge practice to increase innovative behavior. To the best of authors' knowledge, little attention has been drawn in all those relationships to determine employee innovative behavior. Finally, the research is to examine the relationships of knowledge-oriented leadership, strategic leadership and knowledge sharing to determine the employee innovative behavior.

II. LITERATURE REVIEW

2.1 Knowledge-oriented Leadership

Leadership is not always associated with someone adopting the high level of position instead it is needed at all position in the organization, even who has no position also can practice it [8], [42]. The concept of thinking as all the leaders are good people is continuously being blind from the reality of human condition[6]. Northouse, (2018)[43] shared four themes of leadership that are arising in the context of group, procedure, influence, and group attainment. Khoo & Burch, (2008)[44] identified some of characteristics be known for knowledgeable leaders such as willingness to exercise but not for dominant, force, tough, aggressive, difficult or critical, strong inclination to be confident, inspire towards, followers to a developmental orientation, tendencies to be nurtured.

Empirically found the board array of personality characteristics and meritorious leadership behavior including leaders intelligence, proactivity, activity inhibition and need for achievement, power and affiliation, focus on control, innovation and overcoming risk capability, pragmatism nurturance, self-confidence, aggression and criticalness, positive activities, moral post-conventional reasoning [10], [45]–[48].

For instance, maximum ability to earn knowledge that implies continue effort that should be remained in a progressive way by enhancing learning process [49]. Knowledge implement the employee's extinct motivation to be satisfied apart from the work to support knowledge creation and sharing in the organization [11], [50]–[52]. Consequently, the relationship between knowledge-oriented leadership and employee innovative behavior creates an advantage to be proactive in sense of being achieve knowledgeable leadership stability. This investigation indicates the unique attempt to build up new era for the organization in access of theory and practice within the organization.

H1: Knowledge-oriented leadership directly influence on employee innovative behavior

H2: Knowledge-oriented leadership directly influence on knowledge sharing

H6: Knowledge sharing mediates between Knowledge-oriented leadership and employee innovative behavior

2.2 Strategic Leadership

Leadership defined as the capability and ability to influence personal or group to gather specific ambition, for processing the quality such as professional beliefs, goal determination, motivation skills, process personal interest and commitments, inspire others to lead and control overall situation [33], [53]. Accordingly, strategic leadership is initial function of a leadership, improvement and introduce learning environment as their key responsibility in the organization by individual direction or to others as an activity (Bolden, 2004). In this way, the strategic leader can compel follower by exhausting power, motivation, precaution, appeal of strategy and allow using the available wisdom tools to get the work done. Kim & Mauborgne, (1992)[54] explored another effective description that is incorporating employee's confidence in the concept of strategic leadership and ability of a person that influence the confidence to subordinates which is required fulfill the objectives and goal.

Strategic leadership of organizations remains an under research topic as challenges the assumptions that only chief executives provide strategic leadership in organization [55]. It refers to the creation of an overall sense of

purpose and directions which guide integrated strategy formulation and implementation in organization[29], [33]. It involves interaction among individuals in dyads and groups in micro and macro level variables[56]. Daily, McDougall, Covin, & Dalton, (2002)[57] have considered that it is a consistent analytical and development approach to strategy, system and structure of an organization and true responsibility of the general manger or top management.

For instance, wording through that paradox of leading and managing is demanding and difficult. Executives should start thinking of themselves as strategic leadership who has to accept and manage the visionaries and managerial leaders in their organization [58]. This study, strategic leadership distinctly influence on knowledge sharing for the knowledge distribution culture within the organization. On the other hand, it directly influences on employee innovative behavior by mediating effect of knowledge sharing.

H3: Strategic leadership directly influence on employee innovative behavior

H4: Strategic leadership directly influence on knowledge sharing

H7: Knowledge sharing mediates between Strategic leadership and employee innovative behavior

2.3 Knowledge Sharing

There is small division of knowledge in the organization that helps to share knowledge as broad knowledge and sharing knowledge [59]. From this argument, the researcher posit organization that broad knowledge may benefited from knowledge sharing by using area acquisition in improving innovation in different corner of the system. An administration has accumulated with knowledge that knows how different market and discipline domains through knowledge exploration [60].

The reason is of this that organization has already information about heterogeneous policy segment and benefits of additional knowledge for generating ideas [61]. In difference, knowledge sharing proposes the potential for new and true innovative combinations of knowledge by inducing as kaleidoscopic thinking [62]. At the stage of knowledge based comprises and administration required shake to introduce a new perspectives on its existing pieces of knowledge.

On the other hand, knowledge sharing leads to the development in the innovation activities [63]. Similarly, Gopalakrishnan & Bierly, (2001)[64] proposes the innovation relying on knowledge emits from three dimension such as tacit-explicit, simple-complex and systemic-autonomous. Although there is an argument against that notion, [65] supported that only two types of innovation comes with knowledge creation and utilization activities as a whole. Swan, Bresnen, Newell, & Robertson, (2007)[66] explains in detail that the innovation and knowledge sharing linkage based on three perspectives (i.e. production, process as well as practice). Nevertheless, the relationship between knowledge sharing and innovation has been tested empirically [67]. But there is no study considers the effect such as the specific and of knowledge sharing on the innovation fastness in the organization of UAE police. Thus knowledge sharing is assumed to be an important factor to improve the innovation of an organization [68] because the knowledge sharing accelerates the employee innovative behavior directly and

indirectly [69]. Meanwhile, in this study, knowledge sharing mediates between knowledge-oriented leadership and employee innovative behavior.

Thus, the ability of an organization to innovate increase thorough the adoption of new process and solve the existing problems as well as to satisfy the market demands faster compared with competitors [70]. We assume that an individual having desire to share or transfer the knowledge with another one can increase collective learning and increase the synergies benefits for the organizations. Tidd et al., (2005)[70] have created innovative ideas and process. On the other side, the administration must cover two of requirements for developing innovation that are breakthrough ideas which discover technology in real opportunities within miscellaneous information and implementing the breakthrough ideas into commercial technologies through resource fusion and utilization [71].

H5: Knowledge sharing directly influence on employee innovative behaviour

2.4 Employee Innovative Behavior

Employee innovative behavior includes innovative ideas, research and development intensity, technical patents process, new product development, innovative technology and design, numbers of inventions and trademarks granted[6], [72]–[74]. Tidd et al., (2005) emphasized that although innovative behaviour varies in different type, scale and sector in process and required to be managed. Managing innovative behaviour is more effective and significant in organizational task for the future.

Chandra & Neelankavil, (2008)[75] have argued that innovative behaviour of development is complex, expensive and risky and that' why organizational innovation success are very low. Grewal, Weill, & Andrews, (2007)[76] believes that without measuring risk there is no progress made and risk balance against benefits can make culture which is nurtured for innovative behaviour. Therefore, technological innovation has been driven force leading to prevent crime and control strategy both individual and concern groups by the local and formal police agency [77], [78]. In addition, technological innovative behaviour can enhance the strong preventive power of protect crime in the police admin[79].

Similarly, the linkage offers to prevent crime strategies which employed by the individual and groups of the residents [79], [80]. The phoning system is practiced for tracing out crime and deal with multiple of problems which respond quickly to the location via patrol cars in the employee innovativeness [81]. This technological rapid changes in the police organization procedures helps to know them and implementing new innovative technique. Constantly, innovation something is re-invented and emphasize the fact the organization should stick to particular innovation for certain period of time as sign of inertia [82].

Consequently, employee innovative behaviour represents one of the most significant sustainable sources of competitive advantage because of context specific nature [8], [83]. Therefore, innovative behaviour acts in this study as the prior step of being innovative in their work place specially prevent crime. Other variables are influence in the model to employee innovative behaviour in order to increase innovative behavioural approaches of the employees.

III. THE THEORETICAL FRAMEWORK

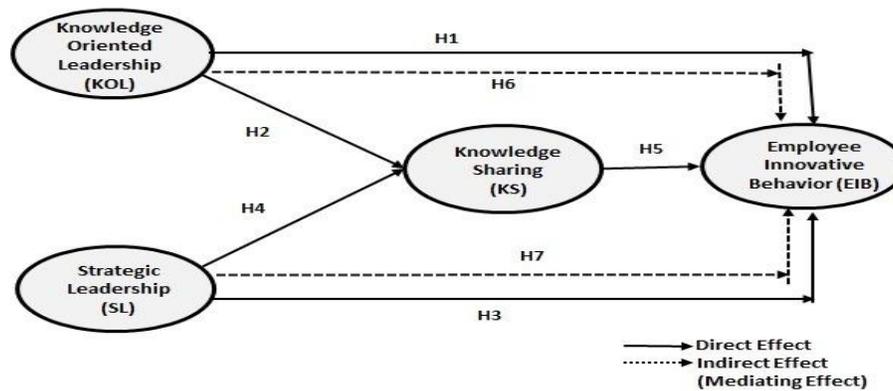


Fig. 1: The Conceptual Framework

IV. METHODOLOGY AND DESIGN

Research methodology indicates the way of conducting study from two of approaches in the research field. With the positivism and objective universal, the paradigm of the research has decorated. Ultimately, a quantitative methodological approach to data collection and analysis may be inferred from the development of the argument in line with the positivist and objectivist paradigms [84]. This research methodology has appeared with survey-based questionnaire to collect data from the UAE police employees. In this study, quantitative research process followed for questionnaire survey and get feedback instantly. Methods of the research depend on the questionnaire or interview procedures to collect information regarding the problem and context of the study field. For testing the hypotheses, a survey questionnaire is designed to collect data. This study survey consists of five parts with questions focused on the flowing contents: knowledge-oriented leadership, strategic leadership, and knowledge sharing and employee innovative behavior. Brynard & Hanekom (1997)[85] argue that quantitative methods tend to be more suitable when the need to assign figures and direct an investigation towards the realization of a universal truth. In this concept, to determine the reliability and validity, hypothesis testing of the measurement variables quantitative methods can be used [86]. This research applies a survey-based methodology for gathering data, which has many advantages that mainly suitable for this study. Information about respondents' beliefs, motives and attitudes provides by an effective survey design in the study field in the case of research, measure the perceptions of organization employees.

3.1 Data Collection and Procedures

A respondent is asked to give their opinion which is measured on a 5-point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). At first, prepared questionnaire sample was showed to the authorities to get permission. The authority reviewed the questionnaire and give us feedback to collect data from the employee. The data collected into four steps; first steps have taken 45 days to get 100 valid questionnaire form the employees. Accordingly, four steps together collected 389 valid questionnaires after distriduting 500 questionnaires. Concequently, PLS (Partial Least Squire) was used to analyze this study in order to find out the result for support the hypothesis and outcomes.

V. DATA ANALYSIS AND RESULTS

4.1 Descriptive Analysis

Table (1) shows the frequency and percentage for demographic profile of respondents in the study sample. It shows that male respondents are more (64.3%) than females (35.7%). The above table showed that most of the respondents were in aged 25-35 years and frequency 268 where percentage 67.3%. The second highest aged were responded 36 to 45 at 29.6% by following less than 25 years were 2.0% and 46-55 were 1.0%. Meanwhile, the descriptive stat for educational level has showed as highest educated respondents were bachelor level and frequency, 273 and percentage 68.3%. The second highest postgraduate educated respondents were responded as to show the frequency as 121 and percentage, 30.4% by following high school respondents were 0.8% and diploma level of education were 0.3%. In addition, the profile of tenure were showed the highest frequency, (1-5), 181 where percentage 45.5%. In following, second highest tenure were (6-10), frequency (128), percentage (32.2%). At last, the demographic profile have counted the local and foreigners as the statistics showed the highest frequency (358), percentage, (89.9) and following foreign respondents were (10.1%).

Table 1: Summary of Demographic Profile of Respondents

		Frequency	Valid Percent (%)
Gender	Male	256	64.3
	Female	142	35.7
Age	Less than 25	8	2.0
	25 to 35	268	67.3
	36 to 45	118	29.6
	46 to 55	4	1.0
Educational level	High school	3	0.8
	Diploma	1	0.3
	Bachelor	273	68.6
	Postgraduate	121	30.4
Tenure	Less than 1 year	4	1.0
	1-5	181	45.5
	6-10	128	32.2
	11-15	79	19.8
	More than 15	6	1.5
Nationality	Foreigner	40	10.1
	UAE	358	89.9
Total		398	100

4.2 Measurement Model Assessment

This study employed Structural Equation Modeling-Variance Based (SEM-VB) through Partial Least Squares (PLS) method to analyze the research model using the software of SmartPLS 3.0 [87]. After the descriptive analysis, this study follows the two-stage analytical technique recommended by [88], [89], starts with the measurement model assessment (validity and reliability), followed by the structural model assessment (testing the hypothesized relationships). Schumacker & Lomax, (2004)[90] and Hair et al., (2010)[91] 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 [92].

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 0.876 to 0.907 were higher than the suggested value of 0.7 [93], [94]. Additionally, for testing construct reliability all the *composite reliability* (CR) values ranging from 0.909 to 0.927 were higher than 0.7 [95]–[97], which adequately indicates that construct reliability is fulfilled as shown in Table 2. 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 [89]. Factor loadings greater than 0.50 were considered to be very significant [91]. 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. 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 [91] ranging from 0.639 to 0.713. The convergent validity for all constructs has been successfully fulfilled and adequate convergent validity exhibited as Table 2 shows.

Table 2: Mean, Standard Deviation, Loading, Cronbach's Alpha, CR and AVE

Constructs	Item	Loading (> 0.5)	M	SD	α (> 0.7)	CR (> 0.7)	AVE (> 0.5)
Employee Innovative Behavior (EIB)	EIB1	0.879					
	EIB2	0.872					
	EIB3	0.852	3.938	0.329	0.899	0.925	0.713
	EIB4	0.818					
	EIB5	0.798					
Knowledge Oriented Behavior (KOL)	KOL1	0.843					
	KOL2	0.859					
	KOL3	0.854					
	KOL4	0.853	3.724	0.134	0.907	0.927	0.647
	KOL5	0.828					
	KOL6	0.714					
	KOL7	0.654					
Knowledge Sharing (KS)	KS1	0.830					
	KS2	0.813					
	KS3	0.849	3.878	0.148	0.876	0.909	0.668
	KS4	0.800					
	KS5	0.793					
Strategic Leadership (SL)	SL1	0.822					
	SL2	0.850					
	SL3	0.830	3.061	0.302	0.886	0.914	0.639
	SL4	0.834					
	SL5	0.725					
	SL6	0.727					

Note: 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 ($p < 0.01$)

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 [89], 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).

Table 3: Results of Discriminant Validity by the Cross Loading

	<i>EIB</i>	<i>KOL</i>	<i>KS</i>	<i>SL</i>
IB1	0.879	0.412	0.410	0.423
IB2	0.872	0.411	0.411	0.427
IB3	0.852	0.375	0.434	0.418
IB4	0.818	0.426	0.466	0.469
IB5	0.798	0.404	0.467	0.440
KOL1	0.358	0.843	0.370	0.527
KOL2	0.376	0.859	0.398	0.539
KOL3	0.388	0.854	0.363	0.575
KOL4	0.414	0.853	0.409	0.579
KOL5	0.445	0.828	0.364	0.526
KOL6	0.385	0.714	0.325	0.538
KOL7	0.335	0.654	0.332	0.498
KS1	0.465	0.382	0.830	0.425
KS2	0.448	0.373	0.813	0.410
KS3	0.431	0.400	0.849	0.412
KS4	0.358	0.334	0.800	0.328
KS5	0.411	0.371	0.793	0.385
SL1	0.372	0.548	0.383	0.822
SL2	0.414	0.599	0.412	0.850
SL3	0.410	0.525	0.392	0.830
SL4	0.387	0.552	0.418	0.834
SL5	0.444	0.502	0.348	0.725
SL6	0.449	0.493	0.357	0.727

Key: SL: Strategic Leadership;KOL: Knowledge Oriented Behavior;EIB: Employee Innovative Behavior; KS: Knowledge Sharing

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 [98], [99], thus suggesting a good discriminant validity [89]. In addition, the correlation between exogenous constructs is less than 0.85 [100]. Hence, the discriminant validity of all constructs is fulfilled.

Table 4: Results of Discriminant Validity by Fornell-Larcker Criterion

	<i>EIB</i>	<i>KOL</i>	<i>KS</i>	<i>SL</i>
<i>EIB</i>	0.844			
<i>KOL</i>	0.482	0.804		
<i>KS</i>	0.520	0.456	0.817	
<i>SL</i>	0.518	0.673	0.483	0.800

Note: Diagonals represent the square root of the average variance extracted while the other entries represent the correlations.

Key: SL: Strategic Leadership; KOL: Knowledge Oriented Behavior; EIB: Employee Innovative Behavior; KS: Knowledge Sharing.

4.3 Structural Model Assessment

Hair, Hult, Ringle, & Sarstedt, (2017) suggested assessing the structural model by looking at the beta (β), R^2 and the corresponding t-values via a bootstrapping procedure with a resample of 5,000. Moreover, they recommend reporting the effect sizes (f^2) as well as the predictive relevance (Q^2). As [101] argue that the p-value determine whether the effect exists but it does not reveal the size of the effect.

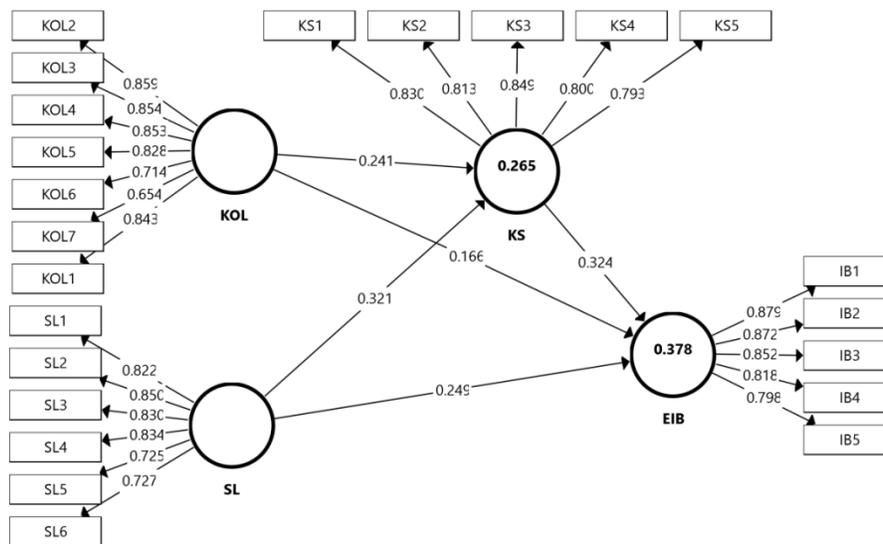


Figure 2: PLS algorithm Results

Key: SL: Strategic Leadership, KOL: Knowledge Oriented Leadership, EIB: Employee Innovative Behavior, KS: Knowledge Sharing

4.3.1 Hypotheses Tests

The structural model assessment as shown in Figure 2 and Table 5 provides the indication of the hypothesis tests, with 5 out of the 5 hypotheses are supported. KOL, significantly predict EIB. Hence, H1, is accepted with ($\beta = 0.166, \tau = 2.665, p < 0.05$). KOL, significantly predict KS. Hence, H2, is accepted with ($\beta = 0.241, \tau = 3.881, p < 0.001$). SL, significantly predict EIB. Hence, H3, is accepted with ($\beta = -0.249, \tau = 4.012, p < 0.001$). SL, significantly predict KS. Hence, H4, is accepted with

($\beta = 0.321, \tau = 5.747, p < 0.001$). KS, significantly predict EIB. Hence, H5, is accepted with ($\beta = 0.324, \tau = 5.482, p < 0.001$). SL, KOL and KS are explaining 37.8 % of the variance in EIB. The R^2 values achieved an acceptable level of explanatory power as recommended by Cohen (1988)[102] and Chin (1998)[99] indicating a substantial model.

Table 5: Structural Path Analysis Result

Hypothesis	Relationship	Std Beta	Std Error	t-value	p-value	Decision	R ²	f ²	Q ²	VIF
H1	KOL -> EIB	0.166	0.174	2.665	0.008	Supported	0.378	0.023	0.249	1.905
H2	KOL -> KS	0.241	0.241	3.881	0.000	Supported	0.265	0.043	0.164	1.825
H3	SL -> EIB	0.249	0.243	4.012	0.000	Supported	0.378	0.051	0.249	1.966
H4	SL -> KS	0.321	0.318	5.747	0.000	Supported	0.265	0.077	0.164	1.826
H5	KS -> EIB	0.324	0.323	5.482	0.000	Supported	0.378	0.124	0.249	1.360

Key: SL: Strategic Leadership, KOL: Knowledge Oriented Leadership, EIB: Employee Innovative Behavior, KS: Knowledge Sharing

This study also assessed effect sizes (f^2). Effect size f^2 determines whether an exogenous latent construct has a substantial, moderate or weak impact on an endogenous latent construct [103]. Hair et al., (2017) recommend to test the change in the R^2 value. 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 5 shows, that all relationships with medium effect sizes.

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 Q^2 is greater than 0 then the predictive relevance of the proposed model exists for a certain endogenous construct [89], [104]. As Table 5 shows that all the values of Q^2 greater than zero 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 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 [105]. To measure and assess the degree of multicollinearity, variance inflation factor (VIF) widely used [105]. There is cause for concern when the largest VIF is greater than 10 [106], [107]. And according to Hair et al., (2017) a multicollinearity issue exists when the largest VIF is greater than 5. Table 5 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 less than 5 ranging from 1.360 to 1.966. It means that the variance of exogenous constructs explains in the endogenous construct are not overlapping with each other.

4.3.2 Indirect Hypothesis Testing (Mediation Assessment)

To test the mediation hypotheses H4, the Preacher & Hayes (2004) and Preacher & Hayes (2008) method of bootstrapping the indirect effect was applied.

H6: KS mediates the relationship between KOL and EIB.

The bootstrapping analysis showed that the indirect effect was significant with a t-value of 3.268 and p-value < 0.001. Preacher & Hayes (2008)[109] indicated that when the indirect impact of KOL on EIB through KS, with 95% Boot CI: [LL = 0.032, UL = 0.125], does not straddle a 0 in between, this indicates there is mediation. Thus we can conclude that the mediation effect is statistically significant, indicating that H6 was also supported (see table 6).

H7: KS mediates the relationship between SL and EIB.

The bootstrapping analysis showed that the indirect effect was significant with a t-value of 4.340 and p-value < 0.001. Preacher & Hayes (2008)[109] indicated that when the indirect impact of KOL on EIB through KS, with 95% Boot CI: [LL = 0.059, UL = 0.149], does not straddle a 0 in between, this indicates there is mediation. Thus we can conclude that the mediation effect is statistically significant, indicating that H7 was also supported (see table 6).

Table 6: Bootstrapping the Indirect Effect of KS

<i>Hypothesis</i>	<i>Relationship</i>	<i>Std Beta</i>	<i>Std Error</i>	<i>t-value</i>	<i>p-value</i>	<i>Decision</i>
H6	KOL -> KS -> EIB	0.078	0.078	3.268	0.001	Supported
H7	SL -> KS -> EIB	0.104	0.102	4.340	0.000	Supported

(Preacher and Hayes2004, 2008)

Key: SL: Strategic Leadership, KOL: Knowledge Oriented Leadership, EIB: Employee Innovative Behavior, KS: Knowledge Sharing

VI. DISCUSSION

This study contributes to the employee innovative behavior through investigating for the influence of KOL, SL, and KS in the UAE police administration sector. This study linked as prior investigation between strategic leadership and knowledge sharing toward employee innovative behavior. Furthermore, the mediation of knowledge sharing acts as unique role of investigation. The direct influences of knowledge-oriented and strategic leadership are to employee innovative behavior. The reliability and validity of the instruments are obligatory if we aim to produce meaningful results [110]. The variable's validity and reliability were greatly acceptable as was mentioned prior in the result. The current study is consisting with prior work that knowledge-oriented leadership increase the knowledge sharing among employees towards their innovative behavior.

First, the direct influence of knowledge-oriented leadership with knowledge sharing shown positive and significant relationships and indirectly toward employee innovative behavior. In addition, Donate & de Pablo, (2015)[111] have illustrated the knowledge-oriented leadership and knowledge sharing of the organization. Moreover, the significant influence of knowledge-oriented leadership with employee innovative behavior comprises the relationship in order to increase employee innovative characteristics. In the current era, modern organizations are focusing on the massive developments and flourishing the business with the help of knowledge management [112]. Effective leadership to gather knowledge is most important criteria for approaching to the field and his subordinates to direct the path of success. Secondly, strategic leadership influence to knowledge sharing directly that shown that

shown positive and significant relationship in the current study result. Chen & Barnes, (2006)[113] have mentioned the behavioral leadership and knowledge sharing with the strategic alliances of the organization. Consequently, strategic leadership style or approach has common and direct connections in according to make strategic plane for future target and goal [114].

On the other hand, strategic leadership has direct influence on employee innovative behavior as shown the result is significant relationship statement. One way for organizations to become more innovative is to capitalize on their employees' ability to be innovative. Leaders vary in the extent to which they typically display consulting, delegating and monitoring behavior [115]. Moreover, knowledge sharing directly influence on employee innovative behavior as shown in the result positive and significant influents. The findings of the study indicate the support of the knowledge-oriented leadership, strategic leadership and knowledge sharing plays a critical role in enhancing employees' innovation behavior at the workplace. The staff reported that they perceived greater strategic leadership approaches and knowledge sharing environment when they highly have innovative behavior in their workplace or organization which helps them to develop a higher level persuasion with new ideas and concepts [115]. Admittedly, innovation has been more essential in a business where the human capital is significantly the major source of competitive advantage [116]. "Increasing recognizable leadership in different approaches is imminently practical for organizational innovative behavior to implement. Improving support would also be far less expensive and complex than raising compensation or redesigning jobs to reduce turnover [117].

VII. IMPLICATIONS

The theoretical implication of the study is to indicate the possible outcome which is retrieved from the relationship based findings. The findings of the present study establish condition to the effectiveness of knowledge-oriented leadership in engendering innovative behavior. Results supported our argument that followers need to feel empowered to act on the inspirational leadership. Thus, whereas the present study confirms the proposition that knowledge-oriented leadership may engender innovative. Accordingly, relationship based outcomes consider the knowledge-oriented leadership influence knowledge sharing in order to increase knowledge sharing within the organization. Donate & de Pablo, (2015) have considered that knowledge-oriented leadership have associated with innovation in terms of the organizational management. The current epic is based on the knowledge based economy in which knowledge sharing is the backbone of the management in the administrative sector [118]. Furthermore, knowledge-oriented leadership influence on employee innovative behavior through knowledge sharing as [119] mentioned in the literature.

The results of the present study imply that strategic leadership can be instrumental in increasing in employee innovative behavior through knowledge sharing. Pieterse, Van Knippenberg, Schippers, & Stam, (2010)[120] have investigated on other leadership approaches for employee innovative behavior but this study resulted strategic leadership influence on direct relationship with employee innovative behavior. On the other hand, the indirect placed of knowledge sharing for strategic leadership and employee innovative behavior is greater acceptance in the theoretical phenomena that strategic leadership is more essential for innovative behavior in terms of spreading knowledge or sharing knowledge [121].

The managerial implication indicates that organizations should not simply promote knowledge-oriented leadership or discourage strategic leadership, but should take follower innovative behavior into account. Through management development programs leaders could be made aware of the level of employee innovative behaviors of followers, indicating when more attention should be paid to stimulating knowledge sharing culture or environment. In general, it seems most beneficial to stimulate employees' knowledge sharing and innovative behavior. Through knowledge sharing may set the stage for the more effective use of knowledge-oriented leadership in engendering innovative behavior. Furthermore, research has shown that knowledge-oriented and strategic leadership can be learned and gathered knowledge for suggesting and planning for the future that have been developed [122].

VIII. LIMITATIONS AND FUTURE RESEARCH

The study has some limitations for future research indications. The identification of leader behaviors does indeed have the proposed connection with employees' innovative behavior. We found a wide range of knowledge-oriented and strategic leadership practices that play a role, but other behaviors are most relevant is not yet clear. It seems unlikely that all practices can be treated as atomistic ingredients that have an additive enhancing effect on employees' innovative behavior. Perhaps some different leadership approaches might be found in other sectors [115]. Also, in our survey we limited ourselves to leaders as a source of relevant approaches. Although some respondents were answered when they used to be an employee, additional respondents with subordinates may provide a more comprehensive of relevant leader behaviors. Above mentioned both Leaders play a role in creating a positive climate and provide the opportunity for employees to have external work contacts. These examples show that leaders also have indirect influence on individual innovation through the way in which they structure the work environment. Thus, future research should also try to address how leaders adapt to and even shape the environmental and organizational settings in such a way that the context optimally stimulates employees' innovative behavior.

REFERENCES

- [1] F. Damanpour, "Organizational size and innovation," *Organ. Stud.*, vol. 13, no. 3, pp. 375–402, 1992.
- [2] M.S. Alkathiri, G.S.A. Khalifa, A.E. Abuelhassan, O. Isaac, and I. Alrajawi, "Ethical Leadership as a Predictor for Employee's Performance: The Mediating Role of Affective Organizational Commitment," *J. Eng. Appl. Sci.*, vol. 14, no. 21, pp. 7857–7869, 2019.
- [3] A. S. Alkhateri, A. E. Abuelhassan, G.S.A. Khalifa, M. Nusari, and A. Ameen, "The Impact of Perceived Supervisor Support on Employees Turnover Intention: The Mediating Role of Job Satisfaction and Affective Organizational Commitment," *Int. Bus. Manag.*, vol. 12, no. 7, pp. 477–492, 2018.
- [4] C.K. Prahalad and G. Hamel, "Strategy as a field of study: Why search for a new paradigm?," *Strateg. Manag. J.*, vol. 15, no. S2, pp. 5–16, 1994.
- [5] M.M. Crossan and M. Apaydin, "A multi-dimensional framework of organizational innovation: A systematic review of the literature," *J. Manag. Stud.*, vol. 47, no. 6, pp. 1154–1191, 2010.
- [6] N.A.O.M. Alareefi, A.E. Abuelhassan, G.S.A. Khalifa, M. Nusari, and A. Ameen, "Employee's Innovative Behaviour: Evidence from Hospitality Industry," *Pakistan J. Soc. Sci.*, vol. 16, no. 1, pp. 14–29, 2019.
- [7] C. Camisón and A. Villar-López, "Organizational innovation as an enabler of technological innovation capabilities and firm performance," *J. Bus. Res.*, vol. 67, no. 1, pp. 2891–2902, 2014.
- [8] T.A.R.M. Alsaadi, A.E. Abuelhassan, G.S.A. Khalifa, A. Ameen, and M. Nusari, "Empowering Leadership Predictors for Employees Creativity," *Int. Bus. Manag.*, vol. 13, no. 3, pp. 119–129, 2019.
- [9] M.S. Mohamed, G.S.A. Khalifa, M. Nusari, A. Ameen, A. H. Al-Shibami, and A. E. Abuelhassan, "Effect of Organizational Excellence and Employee Performance on Organizational Productivity Within Healthcare Sector in the UAE," *J. Eng. Appl. Sci.*, vol. 13, no. 15, pp. 6199–6210, 2018.

- [10] M.S. Alkathiri, A.E. Abuelhassan, G.S.A. Khalifa, M. Nusari, and A. Ameen, "Ethical Leadership, Affective Organizational Behaviour and Leader-Member Exchange as Predictors for Employees Performance," *J. Eng. Appl. Sci.*, vol. 14, no. 19, pp. 6998–7012, 2019.
- [11] W. Al-Ali, A. Ameen, O. Isaac, G.S.A. Khalifa, and A. Hamoud, "The Mediating Effect of Job Happiness on the Relationship between Job Satisfaction and Employee Performance and Turnover Intentions : A Case Study on the Oil and Gas Industry in the United Arab Emirates," *J. Bus. Retail Manag. Res.*, vol. 13, no. 4, pp. 1–15, 2019.
- [12] A. Ganter and A. Hecker, "Deciphering antecedents of organizational innovation," *J. Bus. Res.*, vol. 66, no. 5, pp. 575–584, 2013.
- [13] A. Noruzy, V.M. Dalfard, B. Azhdari, S. Nazari-Shirkouhi, and A. Rezazadeh, "Relations between transformational leadership, organizational learning, knowledge management, organizational innovation, and organizational performance: an empirical investigation of manufacturing firms," *Int. J. Adv. Manuf. Technol.*, vol. 64, no. 5–8, pp. 1073–1085, 2013.
- [14] M. Polder, G. van Leeuwen, P. Mohnen, and W. Raymond, "Product, process and organizational innovation: drivers, complementarity and productivity effects," 2010.
- [15] K. Goffin and R. Mitchell, *Innovation management: Strategy and implementation using the pentathlon framework*, vol. 2. Palgrave Macmillan Basingstoke, 2005.
- [16] O. Qoura and G.S. Khalifa, "The Impact of Reputation Management on Hotel Image among Internal Customers: The Case of Egyptian Hotels," *International J. Heritage, Tour. Hosp.*, vol. 7, no. 2, pp. 261–274, 2016.
- [17] M.K. Al Falasi, M.S. Nusari, G.S.A. Khalifa, A. Ameen, and O. Issac, "Towards a Better Understanding of Project Management Assets and Employee Performance of Quality: An Empirical Study Within State-Owned Enterprises (SOEs) in the UAE," *J. Eng. Appl. Sci.*, vol. 14, no. 19, pp. 6934–6946, 2019.
- [18] R.K. Yin, P.G. Bateman, and G.B. Moore, "Case studies and organizational innovation: Strengthening the connection," *Knowledge*, 2016.
- [19] G.S.A. Khalifa, "The Egyptian Hotels, Where in the Competitive Environment? Competitive Strategies and Market Orientation and its Impact on Customer Loyalty: The Mediating Role of Operational Performance," *Int. J. Manag. Hum. Sci.*, vol. 2, no. 4, pp. 60–72, 2018.
- [20] K. Fartash *et al.*, "The Impact of Technology Acquisition & Exploitation on Organizational Innovation and," *Eurasia J. Math. Sci. Technol. Educ.*, vol. 14, no. 4, pp. 1497–1507, 2018.
- [21] M.S. Mohamed, G.S.A. Khalifa, A.H. Al-Shibami, I. Alrajawi, and O. Isaac, "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.*, vol. 14, no. 10, pp. 3234–3242, 2019.
- [22] G. Azar and F. Ciabuschi, "Organizational innovation, technological innovation, and export performance: The effects of innovation radicalness and extensiveness," *Int. Bus. Rev.*, vol. 26, no. 2, pp. 324–336, 2017.
- [23] R.S.H.A. Shamsi, A. A. Ameen, O. Isaac, A. H. Al-Shibami, and G. S. Khalifa, "The Impact of Innovation and Smart Government on Happiness: Proposing Conceptual Framework.," *Int. J. Manag. Hum. Sci.*, vol. 2, no. 2, pp. 10–26, 2018.
- [24] M.A. Morsy, G.S. Ahmed, and N.A. Ali, "Impact of Effective Training on Employee Performance in Hotel Establishments," *Int. J. Heritage, Tour. Hosp.*, vol. 10, no. 1/2, pp. 92–109, 2016.
- [25] N. Badran and G. Khalifa, "Diversity Management: Is it an Important Issue in Hotel Industry in Egypt?," *International J. Heritage, Tour. Hosp.*, vol. 7, no. 2, pp. 275–286, 2016.
- [26] H. Swain and S. Mohapatra, "A Comparative Study of Leadership Factors Affecting Public and Private Sector Banks in India: An Employee Perspective," *Prabandhan Indian J. Manag.*, vol. 6, no. 9, pp. 28–36, 2013.
- [27] T. Rath, B. Conchie, and T. Magazine, "Finding your leadership strengths," *Gall. Manag. Journal*, 12-2008, vol. 73, 2009.
- [28] T. Mengel, "Wisdom and Knowledge: Leadership in Balance," *Posit. Living E-Zine*, 2005.
- [29] B.A.F.H. Alharthi, G.S.A. Khalifa, and A. Bhaumick, "Redesign University Operational Performance through Strategic indicators, and Employees' commitment," *Int. J. Innov. Technol. Explor. Eng.*, vol. 8, no. 9, pp. 372–380, 2019.
- [30] M.N.A.N. Alharthi and G.S.A. Khalifa, "Business Continuity Management and Crisis Leadership: An Approach to Re-Engineer Crisis Performance within Abu Dhabi Governmental Entities," *Int. J. Emerg. Technol.*, vol. 10, no. 1a, pp. 32–40, 2019.

- [31] A.S. Alkhateri, G.S.A. Khalifa, A.E. Abuelhassan, O. Isaac, and I. Alrajawi, "Antecedents for Job Satisfaction in Ras-Al-Khaimah, Schools: Evidence from UAE," *J. Eng. Appl. Sci.*, vol. 14, no. 15, pp. 5097–5110, 2019.
- [32] M. Peet, "Leadership transitions, tacit knowledge sharing and organizational generativity," *J. Knowl. Manag.*, vol. 16, no. 1, pp. 45–60, 2012.
- [33] B.A.F.H. Alharthi, G.S.A. Khalifa, A. Ameen, O. Isaac, and A.H. Al-Shibami, "Investigating the Influence of Strategic Planning on University Operational Performance: The Mediating Role of Organizational Commitment in UAE," *Int. Bus. Manag.*, vol. 13, no. 2, pp. 49–62, 2019.
- [34] N.R. Bardhan and P. Patwardhan, "Leadership in a Transforming Environment," *Public relations leaders as sensemakers A Glob. study Leadersh. public relations Commun. Manag.*, p. 156, 2014.
- [35] S. Finkelstein and D. Hambrick, "Strategic leadership," *St. Paul West Educ. Publ.*, 1996.
- [36] R.D. Ireland and M.A. Hitt, "Achieving and maintaining strategic competitiveness in the 21st century: The role of strategic leadership," *Acad. Manag. Perspect.*, vol. 13, no. 1, pp. 43–57, 1999.
- [37] A. Vaccaro, R. Parente, and F.M. Veloso, "Knowledge management tools, inter-organizational relationships, innovation and firm performance," *Technol. Forecast. Soc. Change*, vol. 77, no. 7, pp. 1076–1089, 2010.
- [38] C.C.H. Law and E.W.T. Ngai, "An empirical study of the effects of knowledge sharing and learning behaviors on firm performance," *Expert Syst. Appl.*, vol. 34, no. 4, pp. 2342–2349, 2008.
- [39] I. Nonaka and H. Takeuchi, "The Knowledge Creating," *New York*, p. 304, 1995.
- [40] L. Argote and E. Miron-Spektor, "Organizational learning: From experience to knowledge," *Organ. Sci.*, vol. 22, no. 5, pp. 1123–1137, 2011.
- [41] Y. Taminiau, W. Smit, and A. De Lange, "Innovation in management consulting firms through informal knowledge sharing," *J. Knowl. Manag.*, vol. 13, no. 1, pp. 42–55, 2009.
- [42] A.J. DuBrin, *Instructor's Resource Manual with Test Bank: Leadership Research Findings, Practice, and Skills*. Houghton Mifflin., 2004.
- [43] P.G. Northouse, *Leadership: Theory and practice*. Sage publications, 2018.
- [44] H.S. Khoo and G.S.J. Burch, "The 'dark side' of leadership personality and transformational leadership: An exploratory study," *Pers. Individ. Dif.*, vol. 44, no. 1, pp. 86–97, 2008.
- [45] F.J. Yammarino and L.E. Atwater, "Understanding self-perception accuracy: Implications for human resource management," *Hum. Resour. Manage.*, vol. 32, no. 2-3, pp. 231–247, 1993.
- [46] J.M. Crant and T.S. Bateman, "Charismatic leadership viewed from above: The impact of proactive personality," *J. Organ. Behav.*, vol. 21, no. 1, pp. 63–75, 2000.
- [47] A.H.B. De Hoogh, D.N. Den Hartog, and P.L. Koopman, "Linking the Big Five-Factors of personality to charismatic and transactional leadership; perceived dynamic work environment as a moderator," *J. Organ. Behav. Int. J. Ind. Occup. Organ. Psychol. Behav.*, vol. 26, no. 7, pp. 839–865, 2005.
- [48] J.M. Howell and C.A. Higgins, "Leadership behaviors, influence tactics, and career experiences of champions of technological innovation," *Leadersh. Q.*, vol. 1, no. 4, pp. 249–264, 1990.
- [49] S. Santhidran, V.G.R. Chandran, and J. Borromeo, "Enabling organizational change—leadership, commitment to change and the mediating role of change readiness," *J. Bus. Econ. Manag.*, vol. 14, no. 2, pp. 348–363, 2013.
- [50] M. Osterloh and B. S. Frey, "Motivation, knowledge transfer, and organizational forms," *Organ. Sci.*, vol. 11, no. 5, pp. 538–550, 2000.
- [51] Q. Yang, R. Mudambi, and K. E. Meyer, "Conventional and reverse knowledge flows in multinational corporations," *J. Manage.*, vol. 34, no. 5, pp. 882–902, 2008.
- [52] G.S.A. Khalifa and N. M. Fawzy, "Measuring E-Service Quality (Expectation Vs. Perception) From Travel Agencies' Perspective: An Empirical Study on Egyptian Hotel Websites," *Int. J. Recent Trends Bus. Tour.*, vol. 1, no. 3, pp. 36–48, 2017.
- [53] M.L. Kaarst-Brown, S. Nicholson, G. M. Von Dran, and J. M. Stanton, "Organizational cultures of libraries as a strategic resource," 2004.
- [54] W.C. Kim and R.A. Mauborgne, "Parables of leadership.," *Harv. Bus. Rev.*, vol. 70, no. 4, pp. 123–128, 1992.
- [55] L. Heracleous and A. Papachroni, *Strategic Leadership and Innovation at Apple Inc*. SAGE Publications Ltd, 2016.
- [56] N. Khatri and H.A. Ng, "The role of intuition in strategic decision making," *Hum. relations*, vol. 53, no. 1, pp. 57–86, 2000.

- [57] C.M. Daily, P.P. McDougall, J.G. Covin, and D.R. Dalton, "Governance and strategic leadership in entrepreneurial firms," *J. Manage.*, vol. 28, no. 3, pp. 387–412, 2002.
- [58] W.G. Rowe, "Creating wealth in organizations: The role of strategic leadership," *Acad. Manag. Perspect.*, vol. 15, no. 1, pp. 81–94, 2001.
- [59] T.R. Gruber, "Toward principles for the design of ontologies used for knowledge sharing?," *Int. J. Hum. Comput. Stud.*, vol. 43, no. 5–6, pp. 907–928, 1995.
- [60] J.C. Prabhu, R.K. Chandy, and M.E. Ellis, "The impact of acquisitions on innovation: poison pill, placebo, or tonic?," *J. Mark.*, vol. 69, no. 1, pp. 114–130, 2005.
- [61] B. Van Den Hooff and J.A. De Ridder, "Knowledge sharing in context: the influence of organizational commitment, communication climate and CMC use on knowledge sharing," *J. Knowl. Manag.*, vol. 8, no. 6, pp. 117–130, 2004.
- [62] S. Kim and H. Lee, "The impact of organizational context and information technology on employee knowledge-sharing capabilities," *Public Adm. Rev.*, vol. 66, no. 3, pp. 370–385, 2006.
- [63] Z. Wang and N. Wang, "Knowledge sharing, innovation and firm performance," *Expert Syst. Appl.*, vol. 39, no. 10, pp. 8899–8908, 2012.
- [64] S. Gopalakrishnan and P. Bierly, "Analyzing innovation adoption using a knowledge-based approach," *J. Eng. Technol. Manag.*, vol. 18, no. 2, pp. 107–130, 2001.
- [65] E.S. Abou-Zeid and Q. Cheng, "The effectiveness of innovation: a knowledge management approach," *Int. J. Innov. Manag.*, vol. 8, no. 03, pp. 261–274, 2004.
- [66] J. Swan, M. Bresnen, S. Newell, and M. Robertson, "The object of knowledge: the role of objects in biomedical innovation," *Hum. relations*, vol. 60, no. 12, pp. 1809–1837, 2007.
- [67] R. Hall and P. Andriani, "Managing knowledge for innovation," *Long Range Plann.*, vol. 35, no. 1, pp. 29–48, 2002.
- [68] M.J. Donate and J.D.S. de Pablo, "The role of knowledge-oriented leadership in knowledge management practices and innovation," *J. Bus. Res.*, vol. 68, no. 2, pp. 360–370, 2015.
- [69] R. Madhavan and R. Grover, "From embedded knowledge to embodied knowledge: new product development as knowledge management," *J. Mark.*, pp. 1–12, 1998.
- [70] J. Tidd, J. Bessant, and K. Pavitt, *Managing innovation integrating technological, market and organizational change*. John Wiley and Sons Ltd, 2005.
- [71] S.A. Zahra and G. George, "The net-enabled business innovation cycle and the evolution of dynamic capabilities," *Inf. Syst. Res.*, vol. 13, no. 2, pp. 147–150, 2002.
- [72] B.B. Allred and K. S. Swan, "Global versus multidomestic: culture's consequences on innovation," in *Management International Review*, Springer, 2004, pp. 81–105.
- [73] M. Andrijauskiene and D. Dumciuviene, "National culture as a determinant of firms' innovative performance," in *Forum Scientiae Oeconomia*, 2018, vol. 6, no. 2018) Issue No. 1: Competitiveness of the modern organization: human, ethical and innovative aspects, pp. 47–68.
- [74] X. Zhao, W. Pan, and W. Lu, "Business model innovation for delivering zero carbon buildings," *Sustain. cities Soc.*, vol. 27, pp. 253–262, 2016.
- [75] M. Chandra and J.P. Neelankavil, "Product development and innovation for developing countries: potential and challenges," *J. Manag. Dev.*, vol. 27, no. 10, pp. 1017–1025, 2008.
- [76] M.S. Grewal, L.R. Weill, and A. P. Andrews, *Global positioning systems, inertial navigation, and integration*. John Wiley & Sons, 2007.
- [77] V. Ghosal and U. Nair-Reichert, "Investments in modernization, innovation and gains in productivity: Evidence from firms in the global paper industry," *Res. Policy*, vol. 38, no. 3, pp. 536–547, 2009.
- [78] A. Harris, "Leading Innovation and Change: knowledge creation by schools for schools," *Eur. J. Educ.*, vol. 43, no. 2, pp. 219–228, 2008.
- [79] G.S.A. Khalifa and E.H.A. Mewad, "Managing drivers and boundaries of information technology risk management (ITRM) to increase Egyptian hotels market share," *Int. J. Recent Trends Bus. Tour.*, vol. 1, no. 1, pp. 12–31, 2017.
- [80] D.A. Griffith and G. Rubera, "A cross-cultural investigation of new product strategies for technological and design innovations," *J. Int. Mark.*, vol. 22, no. 1, pp. 5–20, 2014.
- [81] J. Barry, "Bio-fuelling the Hummer? Transdisciplinary thoughts on techno-optimism and innovation in the transition from unsustainability," in *Transdisciplinary Perspectives on Transitions to Sustainability*, Routledge, 2016, pp. 120–137.
- [82] A.R. Fleischer, S.E. Semenic, J.A. Ritchie, M. Richer, and J. Denis, "The sustainability of healthcare innovations: a concept analysis," *J. Adv. Nurs.*, vol. 71, no. 7, pp. 1484–1498, 2015.

- [83] K.M. Eisenhardt and J.A. Martin, "Dynamic capabilities: what are they?," *Strateg. Manag. J.*, vol. 21, no. 10-11, pp. 1105–1121, 2000.
- [84] C. Marshall and G.B. Rossman, *Designing qualitative research*, 5th editio. Sage Publications, 1999.
- [85] P. Brynard and S.X. Hanekom, *Introduction to Research in Public Administration and Related Academic Disciplines*. J.L. van Schaik Academic, 1997.
- [86] W.G. Zikmund and B.J. Babin, "Exploring marketing research: Thomson-South Western," 2007.
- [87] C.M. Ringle, S. Wende, and J.M. Becker, "SmartPLS 3. Bonningstedt: SmartPLS," 2015. .
- [88] J.C. Anderson and D.W. Gerbing, "Structural equation modeling in practice: A review and recommended two-step approach," *Psychol. Bull.*, vol. 103, no. 3, pp. 411–423, 1988.
- [89] J.F. Hair, G.T.M. Hult, C. Ringle, and M. Sarstedt, *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed. London: Thousand Oaks: SAGE., 2017.
- [90] R.E. Schumacker and R.G. Lomax, *A Beginner's Guide to Structural Equation Modeling*. New York: Lawrence Erlbaum, 2004.
- [91] J.F. Hair, W.C. Black, B.J. Babin, and R.E. Anderson, *Multivariate Data Analysis*, 7th ed. New York: Pearson, 2010.
- [92] D.W. Barclay, C. Higgins, and R. Thompson, "The partial least square (PLS) approach to causal modeling: Personal computer adoption and use as an illustration," *Technol. Stud.*, vol. 2, no. 2, pp. 285–309, 1995.
- [93] V.R. Kannana and K.C. Tan, "Just in time, total quality management, and supply chain management: understanding their linkages and impact on business performance," *Omega Int. J. Manag. Sci.*, vol. 33, no. 2, pp. 153–162, 2005.
- [94] J.C. Nunnally and I. H. Bernstein, *Psychometric theory*. New York: McGraw-Hill, 1994.
- [95] C.E. Werts, R.L. Linn, and K.G. Jöreskog, "Intraclass reliability estimates: Testing structural assumptions," *Educ. Psychol. Meas.*, vol. 34, no. 1, pp. 25–33, 1974.
- [96] R.B. Kline, *Principles and practice of structural equation modeling*, 3rd ed. New York: The Guilford Press, 2010.
- [97] D. Gefen, D. Straub, and M.C. Boudreau, "Structural equation modeling and regression: Guidelines for research practice," *Commun. Assoc. Inf. Syst.*, vol. 4, no. 1, pp. 1–79, 2000.
- [98] C. Fornell and D.F. Larcker, "Evaluating structural equation models with unobservable variables and measurement error," *J. Mark. Res.*, vol. 18(1), pp. 39–50, 1981.
- [99] W.W. Chin, "Issues and opinion on structural equation modeling," *MIS Q.*, vol. 22, no. 1, pp. 7–16, 1998.
- [100] Z. Awang, *Structural Equation Modeling Using AMOS*. Shah Alam.Malaysia: Penerbit Universiti Teknologi MARA, 2014.
- [101] G.M. Sullivan and R. Feinn, "Using Effect Size - or why the p Value is not enough," *J. Grad. Med. Educ.*, vol. 4, no. 3, pp. 279–282, 2012.
- [102] J. Cohen, *Statistical Power Analysis for the Behavioral Sciences*, Second Ed. New York: Routledge, 1988.
- [103] D. Gefen and E.E. Rigdon, "An Update and Extension to SEM Guidelines for Administrative and Social Science Research," *MIS Q.*, vol. 35, no. 2, pp. 1–7, 2011.
- [104] Fornell, C., & Cha, *Partial least squares*. In R. P. Bagozzi (Ed.), *Advanced methods in marketing research* (pp. 52–78). Cambridge: Blackwell, 1994.
- [105] R.M. O'brien, "A Caution Regarding Rules of Thumb for Variance Inflation Factors," *Qual. Quant.*, vol. 41, no. 5, pp. 673–690, 2007.
- [106] B.L. Bowerman and R. O'Connell, *Linear Statistical Models: An Applied Approach*, 2nd ed. Belmont, CA: Duxbury, 1990.
- [107] R.H. Myers, *Classical and modern regression with applications*, 2nd ed. Boston: MA: Duxbury, 1990.
- [108] K.J. Preacher and A.F. Hayes, "SPSS and SAS procedures for estimating indirect effects in simple mediation models," *Behav. Res. Methods, Instruments, Comput.*, vol. 36, no. 4, pp. 717–731, 2004.
- [109] K.J. Preacher and A.F. Hayes, "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models," *Behav. Res. Methods*, vol. 40, no. 3, pp. 879–891, 2008.
- [110] R. Dembo *et al.*, "The validity of truant youths' marijuana use and its impact on alcohol use and sexual risk taking," *J. Child Adolesc. Subst. Abuse*, vol. 24, no. 6, pp. 355–365, 2015.
- [111] M.J. Donate *et al.*, "The role of knowledge-oriented leadership in knowledge management practices and innovation," *J. Bus. Res.*, vol. 68, no. 2, pp. 360–370, 2015.
- [112] S.L. Rynes, J.M. Bartunek, and R.L. Daft, "Across the great divide: Knowledge creation and transfer between practitioners and academics," *Acad. Manag. J.*, vol. 44, no. 2, pp. 340–355, 2001.
- [113] L.Y. Chen and F.B. Barnes, "Leadership behaviors and knowledge sharing in professional service firms engaged in strategic alliances," *J. Appl. Manag. Entrep.*, vol. 11, no. 2, p. 51, 2006.

- [114] A. Srivastava, K.M. Bartol, and E.A. Locke, "Empowering leadership in management teams: Effects on knowledge sharing, efficacy, and performance," *Acad. Manag. J.*, vol. 49, no. 6, pp. 1239–1251, 2006.
- [115] J.P.J. De Jong and D.N. Den Hartog, "How leaders influence employees' innovative behaviour," *Eur. J. Innov. Manag.*, vol. 10, no. 1, pp. 41–64, 2007.
- [116] C.P. Maertz Jr, R.W. Griffeth, N.S. Campbell, and D.G. Allen, "The effects of perceived organizational support and perceived supervisor support on employee turnover," *J. Organ. Behav. Int. J. Ind. Occup. Organ. Psychol. Behav.*, vol. 28, no. 8, pp. 1059–1075, 2007.
- [117] G.M. McEvoy and W.F. Cascio, "Strategies for reducing employee turnover: A meta-analysis," *J. Appl. Psychol.*, vol. 70, no. 2, p. 342, 1985.
- [118] K.A. Baker and G.M. Badamshina, "Chapter 5: Knowledge Management," *Manag. Benchmark Study. Off. Plan. Anal. Air War Colledge, US Air Force, Available from [http://www. au. af. mil/au/awc/awcgate/ doe/benchmark/](http://www.au.af.mil/au/awc/awcgate/doe/benchmark/)[Accessed 14 December 2005], 2002.*
- [119] M. Mura, E. Lettieri, G. Radaelli, and N. Spiller, "Promoting professionals' innovative behaviour through knowledge sharing: the moderating role of social capital," *J. Knowl. Manag.*, vol. 17, no. 4, pp. 527–544, 2013.
- [120] A.N. Pieterse, D. Van Knippenberg, M. Schippers, and D. Stam, "Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment," *J. Organ. Behav.*, vol. 31, no. 4, pp. 609–623, 2010.
- [121] A. Carmeli, R. Gelbard, and R. Reiter-Palmon, "Leadership, creative problem-solving capacity, and creative performance: The importance of knowledge sharing," *Hum. Resour. Manage.*, vol. 52, no. 1, pp. 95–121, 2013.
- [122] I. Reychav and J. Weisberg, "Bridging intention and behavior of knowledge sharing," *J. Knowl. Manag.*, vol. 14, no. 2, pp. 285–300, 2010.