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Article in *International Journal of Recent Technology and Engineering* · March 2020

DOI: 10.35940/ijrte.F7864.038620

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# Managerial and Organizational Factors Influencing Organizational Learning

Raid Moh'd Al-adaileh

**Abstract:** *Although the concepts of Learning Organization (LO) and Organizational Learning (OL) have been in use for about three decades, the reality of learning practices is still doubted. This study attempts to investigate the impact of some carefully selected organizational and managerial factors on the OL through the mediating role of IT infrastructure. The findings of this study revealed that management style as a managerial factor and strategic orientation as an organizational factor has a direct positive impact on OL. In addition, the results confirmed that IT infrastructure has mediating impact between managerial factors and OL. Accordingly, the study recommends that more open and flexible styles are needed to encourage OL. Additionally, prompting of OL requires a strategic actions and consideration*

**Keywords:** *organizational learning, IT infrastructure, strategy.*

## I. INTRODUCTION

One of the most fundamental impacts of the Information Technology (IT) revolution on businesses has been the way in which organizations can improve and accelerate their learning experience and facilitate diffusion and use of their learning to achieve their targeted goals and objectives. However, internal organizational environment is an important attribute that might influence organizational learning capabilities where people support on individual, group and organizational levels may determine the overall success and effectiveness of organizational learning as a goal-oriented methodology. It seems that organizations of different types cannot survive without adopting to the competitive and rapidly changing business which we are witnessing today where they face great challenges that could affect their effectiveness and performance [1]. In their attempt to keep pace with such challenges, organizations are forced to shed more light on modern administrative concepts such as OL. This concept, as one could argue, has not received a sufficient and serious attention in most organizations due to the lack of awareness of the importance of transition to LO which play a significant role in directing organizations future [2]. Hence, LO can be viewed as the processes and activities, through which the organization seeks to internally and externally improve its performance,

develop its capabilities, activate its relations and adapt environmental changes[3][4]. In addition, several personal, organization, and environmental factors need to be addressed and seriously considered if we are really willing to be described as learning organization. The cited distinctions between the concept of LO and OL should be emphasized where OL is present processes whereas LO is a model method of organization [5]. This study deals with the concept of OL by focusing on the process rather than the ideal form of organization.

Constitution of an appropriate regulatory framework to encourage OL seems also critical. The idea of this research project will focus on investigation of some organizational factors that might influence the diffusion and application of any LO initiative. The identification of these factors is through an analysis, review and evaluation of the available literature. Addressing these factors in a scientific manner and based on a sound methodological and theoretical base is expected to facilitate successful diffusion and utilization of OL concept. This accordingly can enhance management capabilities to create, follow up and sustain a scientific and practical organizational awareness and hopefully to introduce potential methods and mechanisms not only to increase the level of knowledge concerning OL but also to apply and follow up the application of these in certain organizational settings. In this paper, the researcher will investigate the managerial and organizational factors role and their impact on the OL through the mediating role of IT infrastructure. Since the number of studied conducted in this area are still little stated[6][7], this study responds to the previous research recall recommendations which aforementioned. The study starts with theoretical background and hypothesis development. Then, the methodological considerations are explained followed by data analysis. Finally, the discussion and future research recommendations are presented.

## II. THEORETICAL BACKGROUND

### A. Organizational Learning

OL can be seen as a set of process and activities that occurs in the companies to seize and transfer knowledge that lead to bring about positive behavioral changes and productivity improvement and to increase knowledge and understanding within the organizational context [8].

**Revised Manuscript Received on March 15, 2020.**

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[2] who is considered a pioneer in the LO discipline, views OL as the means by which individuals in organizations constantly discovers how they constitute the reality in which they work and how they can change that reality. This, as he argues, requires continuous review and test of experience and to convert it into organizational knowledge, the whole organization will be able to obtain it and make it relevant to its purposes.

However, many previous researches argue that LO is mainly about process of knowledge acquiring and creation [9][10][11][12]. LO are those organizations being able to keep pace with changes and constantly renew themselves by accomplishing needed transformations [13]. The field of LO have received a substantial attention as a successful strategic management of organizations' resources and a potential for renewable distinctive competencies and sustaining a competitive advantage [14]. [15] defined LO as a way to achieve a strategic objective through creates, distributes and incorporates knowledge, transforms itself and adjust organization activities based on new knowledge and experience.

[16] pointed out that LO is considered as open system which supported and controlled by organizational strategy and its build and applied in order to respond reactively and proactively to the environment changes and deal with these changes. This organization possesses an extraordinary combination of interrelated systems and processes, by which individual and OL dynamics and interactions become the organization distinctive competency that could insure its position in the future and sustain its competitive advantage. [6] pointed out that LO is considered as process for shifting conception or reasoning plans, but not essentially as an outcome improving process.

This study views LO from a practical rather than theoretical perspective, it is concerned with the real implications of learning and its added value to business operations. It is seen as the knowledge, skills, and accumulated experiences gained by people as well as the real use of these to improve organizational effectiveness and efficiency. Accordingly, this study tries to investigate the organizational and managerial factors that might have a significant impact on the OL. Therefore, the study tries to present an integrated view based on the confluence of organizational and managerial factors and the mediating role of IT infrastructure.

### B. Managerial Factors and OL

A number of researcher's underline that empowerment has a beneficial impact on OL [17]. Certain empirical research found an intense positive relationship between major characteristics of empowerment and OL [18][19]. These studies argue that empowerment allows power sharing, self-efficacy and open communication which inspires individuals to follow their growth process, to pursue development opportunities, and adapt change which reflect on the level of OL. The concept of management style and its impact on OL was discussed in the previous researches and from different perspectives [20][21]. One could argue that management style has a critical role in supporting organizations to achieve its goals and to encourage OL [22][23]. Management can impose and encourage certain

behavioral patterns among employees that help creating an appropriate learning climate. Accordingly, to test the above propositions, this study draw the following hypotheses:

- **H1.1: There is a statistical significant impact for Empowerment on OL.**
- **H1.2: There is a statistical significant impact for management style on OL.**

### C. Organizational Factors and OL

The relationship between strategic orientation and OL has attracted considerable attention in some previous literature. [24] found out that strategic orientation constitutes a strong predictor of organization performance and can support OL in different ways. In addition, there is significant empirical evidence that strategic orientation can encouraged organization to certify alignment between different capabilities in organization in order to adapt and implement innovation to be more ecological [25][26]. In spite of this, just a few previous research have exposed a positive relation between strategic orientation and OL in particular. A thing that needs to re-assessed since strategy, as this study argues, can enforce and target learning environment and learning capabilities of employees.

Furthermore, the concept business agility was investigated in the literature as a way to manage organizational risk and change [27], and as a critical path to achieve competitive advantage [28] and supporting organizations to be more response for crises [29]. [30] argue that business agility is reflected as an organizational aptitude that supports OL and help organization to react and deal with the changing in business environment. Business agility and also be viewed as an outcome of business agility which seems necessary to encourage the application of learning experiences. to test the above propositions, the following hypotheses are proposed:

- **H2.1: There is a statistical significant impact for strategic orientation on OL.**
- **H2.2: There is a statistical significant impact for business agility an OL.**

### D. IT Infrastructure

A lot of previous literature have discussed IT infrastructure and identify it as a set of software and hardware components that are essential required to operate the business.

It includes investment in hardware, software, and services (e.g. consulting, education, and training) that are shared across the entire business. [31] state that different organizations infrastructure and culture facilities OL process and support individual development. [32] pointed out that IT infrastructure has a significant impact on the overall organization performance and it plays a critical role in adoption new changes and technology.

Most previous literature addressed IT infrastructure as independent and dependent factor. This research focused on the mediating role of IT infrastructure. To test this mediating role, this study proposes the following hypotheses:

- **H3.1:** IT infrastructure will mediate the influential relationship between managerial factors (Empowerment, management style) and organizational learning.
- **H3.2:** IT infrastructure will mediate the influential relationship between organizational factors (strategic orientation, business agility) and organizational learning.

To test the above hypotheses, the following research model is proposed.

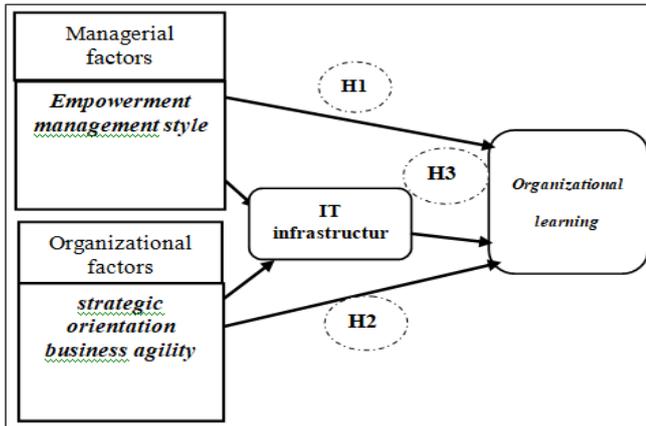


Fig.1. Proposed Research Model

### III. METHODOLOGY

This research adopts a quantitative and hypothetical-based research or analytical research to explain the influential relationships between the variables and to examine its hypotheses. A structured survey through the use of questionnaire is used to collect the research data. The development of the data collection instrument is based extensive review of previous literature concerning the research topic. Items were developed for each research construct. The questionnaire was in form of 5-Likert scale where respondents valued different statement about research variables The study population consisted of employees from different universities in Jordan. 250 questionnaires were distributed to a convenient sample. 237 questionnaires were collected. Structural equation modeling (SEM) approach was used to investigate the impact of managerial and organizational factors on the OL.

#### A. Data Analysis

IBM SPSS version 25 and Smart PLS 3 were applied on the collected data to conduct structural equation modeling (SEM) for diagnosing not only the measurement model, but also the structure of the variables. SEM allows researchers to investigate the relationship between dependent and independent variables concurrently, and provide statistical procedures to deal with research models[33]. In addition, SEM was chosen in this research because it is convenient for investigating research model that has mediating variables where other method like regression is not able to cover such relationship[34]. Concerning the appropriate sample size, researchers have varied views about the suitable size especially when the study is based on SEM. For instance, [35] pointed out that the appropriate size for research sample

should be between 100 and 150 subjects' minimum. Whereas [36] required the sample size to be at least 250subjects'. While the sample size in many articles and published research ranged between 200 and 500 subjects[37].

#### B. Analysis Result

To achieve research objectives, 250 questionnaires were distributed, 242 questionnaires were collected, 5 were excluded and accordingly, 237 were analyzed. (76%) male, and 24% females. The age of respondents ranges between less than 30 years (20%), between 31 and 40 years (45%), and 41 and 50 years (18%) and those above 50 years (17%).

Convergent validity was examined by calculating factor loadings for all instrument items. All Factor loadings ranging from .572 to .894 and exceed minimum recommended level 0.5 [38][39].

Cronbach's alpha was applied to investigate internal consistency. The values of alpha test ranged between (.788) and (.908) which is considered as an acceptable level of reliability according to[40]. The average variance extracted (AVE) for each latent variable was above 0.50 which show good level of convergent validity according to [39]. Moreover, composite reliability (CR) was also applied to check internal reliability and it indicates a good internal reliability if CR value greater than 0.7 [33]. As well as, the CR values ranged from 0.857 to 0.932 which indicates to good internal reliability. Table (1) summarizes these results.

Table- I: Alpha, CR and AVE

Construct	alpha	CR	AVE
Management Style	0.897	0.918	0.585
Empowerment	0.817	0.864	0.518
Strategic Orientation	0.901	0.932	0.733
Business Agility	0.809	0.877	0.645
IT infrastructure	0.788	0.857	0.601
Organizational learning	0.908	0.932	0.725

Discriminant validity through correlation coefficients between research variables ranged from .415 to .778. This increased our confidence on the discriminant validity as [41] noted that correlation coefficients less than .80 suggest evidence of discriminant validity. Table.2 summarizes the result of correlation test.

Table- II: Correlations of Study Variables

Variables	1	2	3	4	5	6
1 Management Style	1					
2 Empowerment	0.724	1				
3 Strategic Orientation	0.531	0.519	1			
4 Business Agility	0.415	0.469	0.778	1		
5 IT infrastructure	0.738	0.686	0.563	0.519	1	
6 Organizational learning						1

6	Organizational learning	0.741	0.675	0.703	0.649	0.753	1
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The previous findings allocate evidence of discriminant and convergent validity for the proposed model indicate that the researcher can move ahead with further analysis. Figure 2 summarize the study path model.

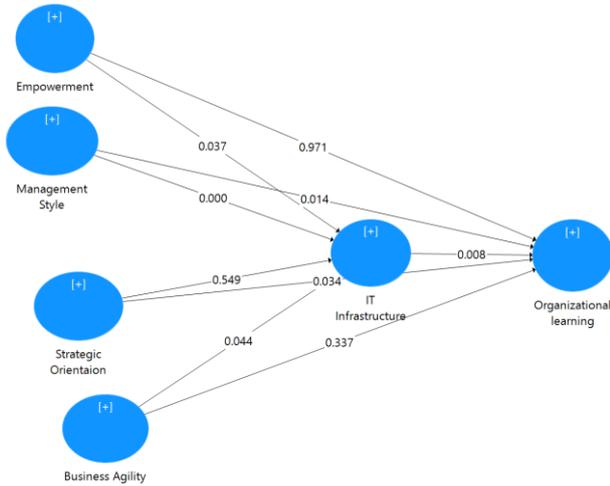


Fig.2. Research Path Model

Accordingly, bootstrapping method was conducted to investigate the impact of the independent variables (i.e., empowerment, management style, strategic orientation and business agility) on the mediator (IT infrastructure) and the dependent variable (OL). Against this framework, this study tries to provide more understanding concerning the relationship among these variables. The results presented in Table 3, 4 above provided details for the research hypotheses. The main information and outcomes of the hypotheses is shown in table 5.

Table- III: Correlations of Study Variables

Independent variables	Dependent variables	t-value	P
Management Style	Organizational learning	2.465	***
Empowerment	Organizational learning	0.036	0.971
Strategic Orientation	Organizational learning	2.123	***
Business Agility	Organizational learning	0.962	0.337

Table- III: Indirect path hypothesis result

Independent variables	Mediator	Dependent variables	t-value	P
Management Style	IT infrastructure	Organizational learning	2.142	***
Empowerment	IT infrastructure	Organizational learning	2.558	***
Strategic Orientation	IT infrastructure	Organizational learning	0.541	0.589
Business Agility	IT infrastructure	Organizational learning	1.648	0.1

Table- IIIII: Hypothesis Results

Hypothesis	P	Supported or not
H1.1: There is statistical significant impact for Empowerment as managerial factor on the organizational learning.	$\rho > .05$	Not
H1.2: There is statistical significant impact for management style as a managerial factor on the organizational learning.	$\rho < .05$	Supported
H2.1: There is statistical significant impact for strategic orientation as an organizational factor on the organizational learning.	$\rho < .05$	Supported
H2.2: There is statistical significant impact for business agility as an organizational factor on the organizational learning.	$\rho > .05$	Not
H3.1: IT infrastructure will mediate the relationship between managerial factors (Empowerment, management style) and organizational learning.	$\rho < .05$	Supported
H3.2: IT infrastructure will mediate the relationship between organizational factors (strategic orientation, business agility) and organizational learning.	$\rho > .05$	Not

IV. DISCUSSION AND CONCLUSION

The findings of this study emphasized the direct impact of management style on OL and fail to confirm the direct impact of empowerment on OL. In addition, the study confirmed our proposition concerning the direct impact of strategic orientation on OL. In relation to the mediating impact of IT infrastructure, the study revealed that IT infrastructure can mediate the influential relationship between managerial factors including empowerment and management style and OL. While no mediating role for IT infrastructure is observed concerning the organizational factors and OL. Management style seems to be a critical factor that has both direct and indirect impact on OL.

This could be explained based on the fact that the behavior of management and its philosophy can open the door for more interaction and participation where the chance of learning can be drastically. Moreover, consultative, participative, and democratic styles of management can encourage sharing and transferring of knowledge among employees through team-working and collaborative work environment they may introduce. All these behavioral patters can directly and indirectly encourage OL.

This finding agrees also with the findings of some previous studies[22][23]. Strategic orientation is also another influential factors that has a direct impact on OL.

Strategic orientation represents the overall business direction in the future and expresses the its response to the changes in its environment as well as it is attempt to create a state of fit between an organization and its external environment. When learning is seen as an organizational competency and a strategic

business initiative, actions should be in place to create and sustain an appropriate learning environment. This argument is supported by [24] who state that strategic orientation can be seen as a predictor of OL. It also agrees with some other previous research in other context (e.g. [25][26]).

The contribution of this study was to determine the importance of management style and strategic orientation in enhancing OL. This highlights the primary role of management in converting the theories and concepts of LO that have become well established into a practical reality beneficial to organizations of all kinds. Also, this study showed the intermediate effect of the technical infrastructure with regard to the relationship of both organizational empowerment and the administrative style in organizational learning, which was not directly addressed in previous studies.

## V. RECOMMENDATIONS

According to the findings of this study, the following recommendations are proposed:

- ✓ Open, participatory and democratic management styles should be strengthened, as this has a vital role in creating and sustaining the appropriate environment for OL.
- ✓ Empowerment is an important mechanism that enhances the values of OL and contributes to the development of individuals' knowledge and gives them an opportunity to apply their knowledge and acquired skills.
- ✓ The enhancement of the OL environment should be part of the overall strategy of the organization as this has an impact on enhancing the idea of learning within the organization.
- ✓ Future research should consider and evaluate some other factors that can influence OL including demographic and cultural factors. Future research should also explore some mechanism to accelerate learning throughout an organization.

## REFERENCES

1. Karaevli, A., & Hall, D. T. T. (2006). How career variety promotes the adaptability of managers: A theoretical model. *Journal of Vocational behavior*, 69(3), 359-373.
2. Senge, P. (1990). *Peter Senge and the learning organization*. Recuperado de.
- 3.
4. Sharpanskykh, A., & Stroeve, S. (2009, August). An agent-based approach to modeling and analysis of safety culture in air traffic. In 2009 International Conference on Computational Science and Engineering (Vol. 4, pp. 229-236). IEEE.
5. Guo, Y., Justice, L. M., Kaderavek, J. N., & McGinty, A. (2012). The literacy environment of preschool classrooms: Contributions to children's emergent literacy growth. *Journal of research in reading*, 35(3), 308-327.
6. Örtengren, A. (2001). On differences between organizational learning and learning organization. *The learning organization*, 8(3), 125-133.
7. Canessa-Terrazas, E. C., Morales-Flores, F. J., & Maldifassi-Pohlhammer, J. O. (2017). The impact of IT-enhanced organizational learning on performance: evidence from Chile. *Revista Facultad de Ingeniería Universidad de Antioquia*, (82), 60-67.
8. Kanwal, E., Nawaz, W., Nisar, Q., & Azeem, M. (2017). Does Organization Learning Capacity influence the Organization Effectiveness? Moderating Role of Absorptive Capacity.
9. Endlich, N. A. (2001). An investigation of the nexus between strategic planning and organizational learning (Doctoral dissertation, Virginia Tech).
10. Kane, G. C., & Alavi, M. (2007). Information technology and organizational learning: An investigation of exploration and exploitation processes. *Organization Science*, 18(5), 796-812.
11. Real, J. C., Leal, A., & Roldán, J. L. (2006). Information technology as a determinant of organizational learning and technological distinctive competencies. *Industrial marketing management*, 35(4), 505-521.
12. Auh, S., & Menguc, B. (2005). Balancing exploration and exploitation: The moderating role of competitive intensity. *Journal of business research*, 58(12), 1652-1661.
13. Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: is organizational learning a missing link?. *Strategic management journal*, 24(8), 745-761.
14. Bui, C. T. (2009). *Discovering the factors for organizational success: an investigation of learning organization attributes within minority-owned small businesses in New England* (Doctoral dissertation, Capella University).
15. Dahou, K. B., Moh'd Al-adaileh, R., & Hacini, I. L. (2012). The role of information and communication technology in implementing a learning organization strategy. *Mediterranean Center of Social and Educational Research*, 3, 173.
16. Lewis, D. (2002). Five years on—the organizational culture saga revisited. *Leadership & Organization Development Journal*. Al-adaileh, Raed; Dahou, K., & Hacini, I. (2012). The impact of knowledge conversion processes on implementing a learning organization strategy. *The Learning Organization*, 19(6), 482-496.
17. Yuesti, A., & Sumantra, K. (2017). Empowerment On The Knowledge And Learning Organization For Community Development. *Scientific Research Journal (SCIRJ)*, 5(9).
18. Jamali, D., Zanhour, M., & Keshishian, T. (2009). Peculiar strengths and relational attributes of SMEs in the context of CSR. *Journal of Business Ethics*, 87(3), 355-377.
19. Greenberg, J., & Baron, R. (2003). *Behavior in Organizations, Understanding and Managing The Human Side of Work*. 8th, Prentice Hall. New York.
20. Ogbonna, E., & Harris, L. C. (2000). Leadership style, organizational culture and performance: empirical evidence from UK companies. *International Journal of Human Resource Management*, 11(4), 766-788.
21. Jerez-Gomez, P., Cespedes-Lorente, J., & Valle-Cabrera, R. (2005). Organizational learning capability: a proposal of measurement. *Journal of business research*, 58(6), 715-725.
22. Popper, M., & Lipshitz, R. (2000). Installing mechanisms and instilling values: the role of leaders in organizational learning. *The Learning Organization*, 7(3), 135-145.
23. Davenport, T. H., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Harvard Business Press.
24. Alhawamdeh, H. M., & Alsmairat, M. A. (2019). Strategic Decision Making and Organization Performance: A Literature Review. *International Review of Management and Marketing*, 9(4), 95.
25. Masa'deh, R. and Shannak, R. (2012) Intermediary Effects of Knowledge Management Strategy and Learning Orientation on Strategic Alignment and Firm Performance. *Research Journal of International Studies*, 24, 112-128.
26. Thourunroje, A. and Racela, O. (2013) The Contingent Role of Customer Orientation and Entrepreneurial Orientation on Product Innovation and Performance. *Journal of Strategic Marketing*, 21, 140-159. <http://dx.doi.org/10.1080/0965254X.2012.742129>
27. Khoramgah, S. S. (2012). Analysis Relationship between Entrepreneurship & Organizational Agility. *International Journal of Contemporary Research in Business*, 3(11), 860-868.
28. Tallon, P. P., & Pinsonneault, A. (2011). Competing perspectives on the link between strategic information technology alignment and organizational agility: insights from a mediation model. *Mis Quarterly*, 463-486.
29. Nijssen, M., & Paauwe, J. (2012). HRM in turbulent times: how to achieve organizational agility?. *The International Journal of Human Resource Management*, 23(16), 3315-3335.
30. Lee, S., & Lee, D. (2017). The Role Of Agility In The Relationship Between Use Of Management Control Systems And Organizational Performance: Evidence From Korea And Japan. *Journal of Applied Business Research (JABR)*, 33(3), 521-538.

31. Erfani Khanghahi, M., & Jafari, P. (2010). Direct and indirect impacts of transformational leadership style, learning culture and organizational learning on organizational intelligence in islamic azad university. *Quarterly Journal of Educational Leadership & Administration*, 1.
32. Al-Adaileh, Raed; Al-Mubaideen, Hisham; Al-smairat, Mohammed. (2016). The Factors Affecting the Use of E-Banking Services from the Customers' Point of View: A Field Study in the Jordanian Southern Region. *Jordan Journal of Business Administration*, 407 (3971), 1-16.
33. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (Vol. 6).
34. Raykov, T., & Traynor, A. (2016). Evaluation of multicomponent measuring instrument reliability in complex design studies. *Structural Equation Modeling: A Multidisciplinary Journal*, 23(2), 270-277.
35. Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
36. Hair, A. (1998). Tatham, and Black. *Análisis multivariante*.
37. Lomax, R. G., & Schumacker, R. E. (2004). *A beginner's guide to structural equation modeling*. psychology press.
38. Steenkamp, J. B. E., & Van Trijp, H. C. (1991). The use of LISREL in validating marketing constructs. *International Journal of Research in marketing*, 8(4), 283-299.
39. Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate data analysis: A global perspective* (Vol. 7).
40. Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
41. Kline, R.B. (2011). Principles and Practice of Structural Equation Modeling, *Analysis* 77, 390-410.

### ACKNOWLEDGMENT

It is optional. The preferred spelling of the word “acknowledgment” in American English is without an “e” after the “g.” Use the singular heading even if you have many acknowledgments. Avoid expressions such as “One of us (S.B.A.) would like to thank ... .” Instead, write “F. A. Author thanks ” Sponsor and financial support acknowledgments are placed in the unnumbered footnote on the first page.

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