

The Development of Innovation Capabilities. A Review Paper about the Challenges and Future Research Trend in the UAE High Education

Tariq Humaid Almaskari¹, Effendi Mohamad² and Siti Norbaya Yahaya³

¹*Institute of Technology Management and Entrepreneurship*

Universiti Teknikal Malaysia Melaka

Email: t.almaskari@hotmail.com

²*Fakulti Kejuruteraan Pembuatan*

Universiti Teknikal Malaysia Melaka

Email: effendi@utem.edu.my

³*Faculty of Technology Management and Technopreneurship*

Universiti Teknikal Malaysia Melaka

Email: sitinorbaya@utem.edu.my

Article Info

Volume 83

Page Number: 7299 - 7307

Publication Issue:

March - April 2020

Abstract

High education plays a core role in the development of both human and institutions through providing the needed skills that fill up the market gap and bridging the theory gap through practicing these skills. Yet, the universities in all world, especially in developing countries are facing massive challenges that limit their capabilities to be innovative. For example, in the UAE, a one of developing countries with high ranking in education developing faces several internal challenges of internal competencies. They also face a massive competition from other universities in the leading countries. To overcome these challenges, transformational leadership has been recognized to play an effective role in innovation development through encouraging internal players to be more innovative. Thus, this paper discusses the potential of innovation development in the high education institutions in the UAE. The finding of this paper suggests that the UAE government can mitigate the external and internal challenges that impede the innovation development through adopting strong leadership. Thus, providing a holistic model in how to innovate universities through behavioural leadership is recommended which is the key objective of ongoing research.

Article History

Article Received: 24 July 2019

Revised: 12 September 2019

Accepted: 15 February 2020

Publication: 06 April 2020

Introduction

Recently in the corporate world, changes can be quickly seen, and the countries educational sector that is making progress by following innovative

approaches functionality in sector that can be considered to be contributing to its development and sustainability (Timmer et al., 2015). Employees' innovation is seen as the practice of consuming and processing new knowledge or operational

knowledge to obtain the latest procedures, facilities and knowledge (Teixeira, Oliveira, & Curado, 2018). Innovative capabilities can be realized as significant aspect of organizational success and improvement (Gomes & Wojahn, 2017). Similarly, innovation can be expressed as a major advantage of the organization (Autio et al., 2014). Specifically, these organizational skills generate new knowledge and implement appropriate knowledge and creative concepts to effectively capture market value. In addition, the skills used in the organization to help improve and change its conventional skills. The significance of innovation within organizations has been shown on several studies during the past years. The purpose of this study is to explore the innovation in the UAE, specifically, the influence of innovation on improving the employees' performance within institution. Innovative potential indicate the creative abilities and skills of individuals (Aziati, Tasmin, Bee Jia, & Abdullah, 2014). Innovative potential can never be realized as innovative behaviour if an institution's functional climate does not enhance innovation (Blok & Lemmens, 2015).

In recent era, the fast growth of modification occurs in corporate world (Paquette & Messier, 2010), corporates are progressively moving with innovative approaches and it can be consider as contributing an important part in their development and sustainability (Ferrante, Constantinescu & Jackson, 2014). Innovation refers to a practise of consuming and handling new gained knowledge or operating standing knowledge as to attain latest procedures, facilities, and knowledge (Poor & Lebad, 2017). Innovation can be measured as a crucial facet for the success and development of an organization. Similarly, innovation can be expressed as the basic strenght of an organization (Liu et al., 2014), specifically, the skill of an organization to generate new knowledge and execute appropriate knowledge and concepts of creativity to attain market value effectively (Leutner, et al., 2014). Furthermore, the study of Wonglimpiyarat (2017) mentions that the skills used in an organization improve and change standing technologies. Numerous businesses pursue innovation capability in particular way to attain valuable outcome, expand their earnings and attain greater execution (Christensen, Bartman & Bever, 2016). Numerous studies have showed the relationship among employees' innovation and

discovered that innovation is an essential aspect within organization's achievement (Sok et al., 2013).

In the universities, institutions are tackling quick technological and social variations. Innovative culture shows a vital role within the essential changes in universities (Scheffran et al., 2012). Research has indicated that innovative culture can be used to understand innovative concepts in educational sector (Zhu, 2015). Innovative culture can enable effective distribution of materials for learning, improve accommodating independently modes of learning from different place, and can assistance to make absorbing different contents from different communities helpful in using interaction channels to rich the organization culture towards technology (Zhu, 2015). Educational sector particularly in UAE towards employees' innovation as the depth of the development and success (Rezk et al., 2016). Science and technology around the globe facing the speedy growth, and rivalry for talent is the major challenge, the establishments in UAE are creating countless endeavours to employ and encourage innovation in employees of universities (Aziz, 2015).

The universities in the United Arab Emirates are under continuous determination to look for different strategies, which help them to achieve a competitive advantage (Alghalban, 2017). There are various factors, which have helped these organizations to be efficient in the stable environments that are management control, standardized routines and division of labour (Johnso & Szamosi, 2018; Salim & Sulaiman, 2011). However, as the competitive strategies have become obsolete, organizations have been compelled by the changes in the business environments to search for new strategies which can be applied for a competitive edge (Johnso & Szamosi, 2018). Some of the significant central environment forces, which were faced by the contemporary organizations, are the developments in the communication and information technology and economic globalization which is also known as the integration of the markets and operations in borderless economic space (Alghalban, 2017; Griffin & Moorhead, 2007). In spite of the past research that behavior of leadership is a significant forecaster of employee's innovation, very rare studies has been discovered broadly the impression

of leadership behaviors for innovation (Oeij et al., 2017; Gupta & Singh 2014). The considerable past few years' research has concentrated mostly on quantitative analysis current leadership theories and used instruments by past researchers (Frisch & Huppenbauer, 2014; Qu, Janssen & Shi 2015). Yet, research links of behavioral leadership, employees' innovation has tracked by inappropriate conclusions which strength be the outcome of slight studies in discovering the leadership behaviors connected to employees' innovation that impact these relationships (Hao, He & Long, 2018; Herrmann &

Felfe 2013). According to Erkutlu & Chafra (2015) here is not one only way that leaders do to raise spirits of employee's innovation, phenomenon (innovation) is a multi-factor complex, which needs additional examination, likewise Ramos et al. (2016) discussed further broad research is desired to improved understanding the scenario of leadership behaviors towards innovation of employees. Yukl (2012) also underlined several studies necessity to discover how behaviors of leadership touches employees' innovation within the organization.

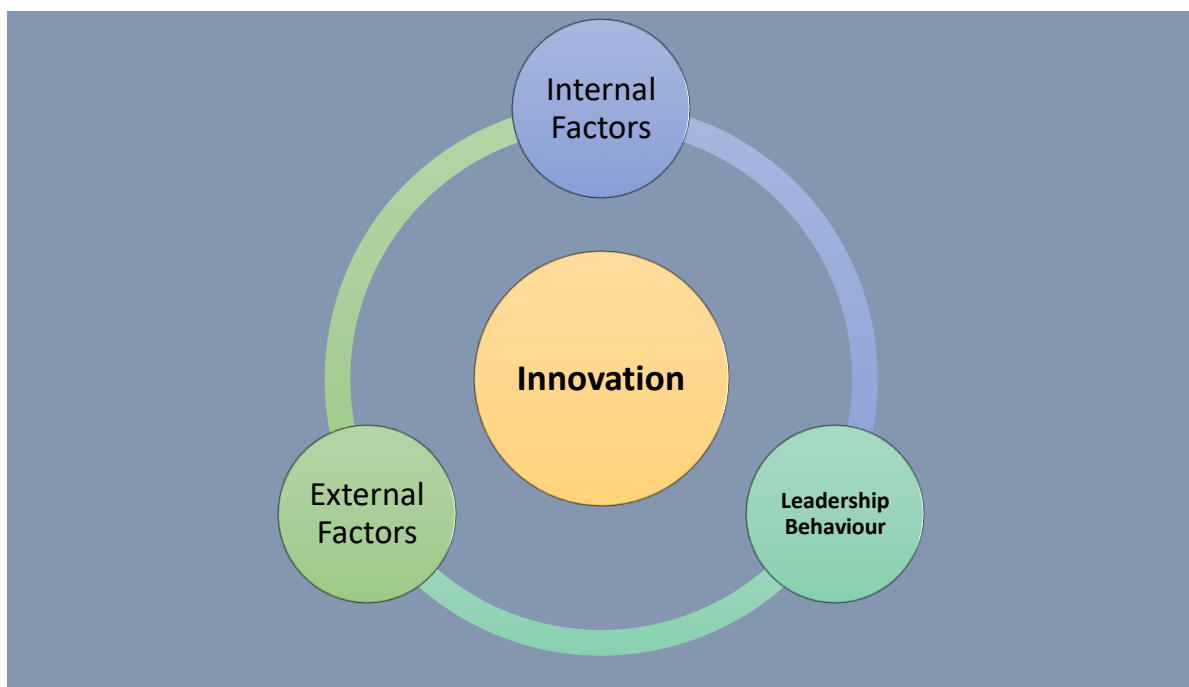


Figure 1: Key drivers for Innovation Development

Innovation Development in the UAE SMEs

Numerous researchers reflect that the consideration of innovation is an important element within an organization (Yahaya & Ebrahim, 2016; Moriano et al., 2014; Mulki, Caemmerer & Heggde, 2015; Colbert, Barrick & Bradley, 2014). Innovation culture can produce impact on employee's innovation capabilities within an education institution (Lasakova, Bajzíkova & Dedze, 2017; Blouin et al., 2009). Also, the employees' innovative capability can create new opportunities and technological enhancement as well as improved changes in technology managing through based on knowledge (Mittal & Dhar, 2015). While, to

identify the effect of innovation for enhancing the performance of employees it requires a set of studies to analyse systematically in the context of government owned (Ordanini, Parasuraman & Rubera, 2014). Hence, a number of previous studies confirmed that there are essential factors to create a right leadership conducive to innovation; including material and moral support, giving opportunities, accepting risks, the importance of encouragement and continuous motivation (Baruah & Paulus, 2019; Brewer, 2015; Bedell & Mumford, 2007; Hülshager, Anderson & Salgado, 2009). United Arab Emirates, like several other countries, stand facing the challenge of structuring and satisfying an educated population. Specific challenges are caused by the

necessity to educate an aggregate ratio of the population to advanced levels in tidiness to backing the progress of a modern-day skills and knowledge economy, as different to an economy constructed on services and products (Hülshager, Anderson & Salgado, 2009). UAE higher education faces a challenging combination of employees' capabilities and knowledge drivers that interrelate to produce a problem obstructing and make difficulties in innovation in the models used to educate adults.

UAE economy has based on oil with solid controls of government activities through key economic decision making (Delgado, 2016). Around the globe UAE holds about 20% or more than that reserves of petroleum, consider as the biggest oil exporter and perform as a leading part in OPEC (Safari et al., 2018). The export earnings of UAE roughly 80% of budget revenues and 45% of GDP through petroleum sector (UAE CIA Fact Book, 2010). UAE is ranked 54th among the world finest economies. However, employees' innovation efficiency of UAE, innovation outputs is ranked low; 126th in the

world (Manning, 2018). Therefore heavy investments over the past years invested by UAE in improving inputs of their employees' innovation, to ensure that these investments needs care to lead to genuine employees' innovative outputs (Andersson & Formica, 2018). Dobni and Klassen (2015) specifies the main function of management is aimed to manage innovation in a determination to extent the eventual aims for forceful job participation and the commitment to organizations. Hung & Huang (2014) suggested that the complete institution environment consists of innovation culture which can affect the credibility of institution. Several studies found in literature that examined the leadership behavior of the executives in organization under the content of theoretical and operational models (Yahaya & Ebrahim, 2016; Muenjohn & McMurray, 2014), but there are few evidence found in literature investigating the conceivable impacts of leadership behavior on the innovation of employees in organization (Rauniyar, Ding & Rauniyar, 2017), thus it is also lack of literature for organizations in UAE.

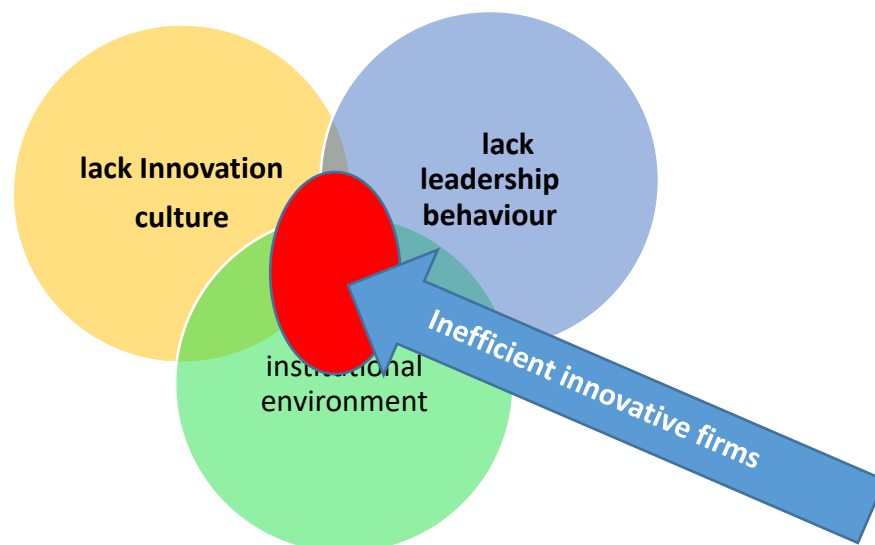


Figure 2: Lecture Gaps

Future Research Demand

In the literature found a gap towards discovering qualities of behaviors of leadership related for employee's innovation performance. While leadership are considered as most important factors in work environment of organization, past research into the combination of different behaviors of leadership and employee's innovative performance

has been found very limited (Amabile, 2019). The relationship among leadership behaviors and employee's innovation, studied consumed moreover only theory based standpoint (Janssen & Van Yeperen 2004; Li, Zhao & Begley, 2015; Wang, Tsai & Tsai 2014; Boies, Fiest & Gill 2015). Numerous models came out from different studies that have been observed as interpreters of employee's innovation were initially established for

different outcomes of organization, like effectiveness and performance (Jaiswal & Dhar, 2015; Gupta & Singh 2015). Recent research frequently reports general leadership features and its behaviors in its place of examining those styles of leadership connected to employee's innovation, and miscarries to clear completely the relations among leadership behaviors and innovation. After reviewing the literature this study pursues to go above previous conducted research and react to this main counted gap in the literature by using a quantitative research design to discover how leadership behaviors effects employee's innovation in an organization. One of the major contributions of this study will be its development of a complete concept of leadership behaviors enhancing employee's innovation.

In long-term plan for organization, technological and cultural diversity is one of the tools used to encourage development of employee (Choi et al., 2016). Past studies in literature recommend that features of leadership behaviors serve as antecedents to employee technological and cultural diversity in organizations (Yahaya & Ebrahim, 2016). Transformational and transactional leaders are convincing and capable among employees to instill positive perceptions for organization (Deichmann & Stam, 2015).

The appeal characteristic is concerned about to be an element of technological and cultural diversity (Zhang & Gheibi, 2015). Past studies suggested that appealing leaders can strengthen technological and cultural diversity of employee leads by proposing vision and a sense of innovation towards creativity (Handini & Sanggarwati, 2017; To et al., 2015). Moreover, leaders encourage employees to participate in the innovative work process (Weng et al., 2015), which will encourage employees to continuously develop skills of creativity (Dong et al., 2017). Employees' technological and cultural diversity is thus strengthened. Few studies identifying the importance for leaders to adopt such style of leadership to strengthen employees technological and cultural diversity which leads towards innovative work behavior (Masa'deh et al., 2016). This study will contribute in identification of mediating effect of the employee technological and cultural diversity between leadership behaviors and innovation.

According to the literature, contribution of employee's skills and knowledge is vital for the success of organization (Dong, Bartol & Zhang, 2017). Such concepts like the capability to empower, initiate and encourage are measured as most useful necessities to promote efficiency of organization and their services for customers (Slåtten, Svensson & Sværi 2011; Dong et al, 2015). Examining the part of theoretical based leadership behaviors models whereas overseeing important organizational characteristics may not have ability to gratify the demands of existing complex settings of work. It is thoughtful now that moving ahead from past classifications and implementing a new method to considerate how to conceptualize leadership that improves employee's innovative will give as a result in a shape of more accurate model of leadership behaviors (Gupta & Singh 2013; Slater, Mohr & Sengupta, 2014).

In the same way, the transformational and transactional model adopted for leadership which has been a popular style to observe the impact of leadership qualities towards creativity, but does not take in laissez faire leadership potentials that newly have been create to be imperious for organizational and also employee's innovativeness such as empowering, build up a good team, in coaching, giving, and providing resources (Slater, Mohr & Sengupta, 2014; Jaiswal & Dhar, 2015; Gupta & Singh 2015). According to Atalay, Anafarta and Sarvan (2014) those leadership behaviors found to be powerful on performance and efficiency may also inspire innovativeness. Therefore, this study measured a further complete approach, to clarify more deeply the leadership mandatory for employee's innovation in the organization. By taking an investigative approach, it pursues to realize further accurately those styles of leadership conducive to promising employee's innovation.

Conclusion

Leadership has an imperative role in the success of an organisation and new approaches are evolved in literature. Despite of this significant attention, a few studies explored empirically, it due to issues related to measurement. However, authentic leadership in some studies tends to examine its relationship with various outcomes like job performance, employees innovation, voice behaviour and work engagement work happens and job satisfaction. Yet, few studies

investigated how leadership influence innovation capabilities. This study encouraged to address this gap by examining leadership potentials that are likely to affect employee's innovation in this study. These studies are unsure about which leadership behaviour are more appropriately impacts the creativity of employees. Especially, the association of leadership with employee creativity in UAE context has not been explored yet empirically.

Acknowledgement

Thanks to Universiti Teknikal Malaysia Melaka for the support

References

- [1]. Aziati, A. H. N., Tasmin, R. H., Bee Jia, L., & Abdullah, N. H. (2014). The relationship of technological innovation capabilities and business innovation capabilities on organization performance: Preliminary findings of Malaysian food processing SMEs. *2014 International Conference on Engineering, Technology and Innovation: Engineering Responsible Innovation in Products and Services, ICE 2014*, 1–8. <https://doi.org/10.1109/ICE.2014.6871574>
- [2]. Blok, V., & Lemmens, P. (2015). The emerging concept of responsible innovation. Three reasons why it is questionable and calls for a radical transformation of the concept of innovation. *Responsible Innovation 2: Concepts, Approaches, and Applications*. https://doi.org/10.1007/978-3-319-17308-5_2
- [3]. Gomes, G., & Wojahn, R. M. (2017). Organizational learning capability, innovation and performance: study in small and medium-sized enterprises (SMES). *Revista de Administração*, 52(2), 163–175. <https://doi.org/10.1016/j.rausp.2016.12.003>
- [4]. Paquette, A., & Messier, C. (2010). The role of plantations in managing the world's forests in the Anthropocene. *Frontiers in Ecology and the Environment*, 26(2), 12–27. <https://doi.org/10.1890/080116>
- [5]. Teixeira, E. K., Oliveira, M., & Curado, C. M. M. (2018). Knowledge management process arrangements and their impact on innovation. *Business Information Review*, 35(1), 29–38. <https://doi.org/10.1177/0266382118757771>
- [6]. Anderson, N., Potočník, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of management*, 40(5), 1297–1333.
- [7]. Andersson, T., & Formica, P. (2018). Lessons from Abu Dhabi: The Road Towards an Innovative Entrepreneurial Economy. In *Entrepreneurship Ecosystem in the Middle East and North Africa (MENA)* (pp. 543–563). Springer, Cham.
- [8]. Anggadwita, G., & Dhewanto, W. (2016). Women's entrepreneurial intentions in micro and small enterprises (MSEs) in Indonesia: The influence of environmental factors on perceived behavioral control. *Journal of Administrative and Business Studies*, 1(1), 1–7.
- [9]. Atwater, L., & Carmeli, A. (2009). Leader–member exchange, feelings of energy, and involvement in creative work. *The Leadership Quarterly*, 20(3), 264–275.
- [10]. Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research Policy*, 43(7), 1097–1108.
- [11]. Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington, E. (2000). Shopfloor innovation: Facilitating the suggestion and implementation of ideas. *Journal of occupational and organizational psychology*, 73(3), 265–285.
- [12]. Baer, M., & Oldham, G. R. (2006). The curvilinear relation between experienced creative time pressure and creativity: moderating effects of openness to experience and support for creativity. *Journal of Applied Psychology*, 91(4), 963.
- [13]. Bain, D., & Kleinknecht, A. (Eds.). (2016). *New concepts in innovation output measurement*. Springer.
- [14]. Barling, J., Slater, F., & Kevin Kelloway, E. (2000). Transformational leadership and emotional intelligence: An exploratory study. *Leadership & Organization Development Journal*, 21(3), 157–161.
- [15]. Cheung, M. F., & Wong, C. S. (2011). Transformational leadership, leader support,

- and employee creativity. *Leadership & Organization Development Journal*, 32(7), 656-672.
- [16]. Christensen, C. M., Bartman, T., & Van Bever, D. (2016). The hard truth about business model innovation. *MIT Sloan Management Review*, 58(1), 31.
- [17]. Coccia, M. (2017). The source and nature of general purpose technologies for supporting next K-waves: Global leadership and the case study of the US Navy's Mobile User Objective System. *Technological Forecasting and Social Change*, 116, 331-339.
- [18]. Colbert, A. E., Barrick, M. R., & Bradley, B. H. (2014). Personality and leadership composition in top management teams: Implications for organizational effectiveness. *Personnel Psychology*, 67(2), 351-387.
- [19]. Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.
- [20]. Croitoru, A. (2012). Schumpeter, JA, 1934 (2008), The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle. *Journal of comparative research in anthropology and sociology*, 3(02), 137-148.
- [21]. De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and innovation management*, 19(1), 23-36.
- [22]. De Long, D. W., & Fahey, L. (2000). Diagnosing cultural barriers to knowledge management. *Academy of Management Perspectives*, 14(4), 113-127.
- [23]. Deichmann, D., & Stam, D. (2015). Leveraging transformational and transactional leadership to cultivate the generation of organization-focused ideas. *The Leadership Quarterly*, 26(2), 204-219.
- [24]. Dorenbosch, L., Engen, M. L. V., & Verhagen, M. (2005). On-the-job innovation: The impact of job design and human resource management through production ownership. *Creativity and innovation management*, 14(2), 129-141.
- [25]. Du Plessis, M. (2007). The role of knowledge management in innovation. *Journal of knowledge management*, 11(4), 20-29.
- [26]. DuBrin, A. J. (2015). *Leadership: Research findings, practice, and skills*. Nelson Education.
- [27]. Eisenbeiss, S. A., van Knippenberg, D., & Boerner, S. (2008). Transformational leadership and team innovation: Integrating team climate principles. *Journal of applied psychology*, 93(6), 1438.
- [28]. El Amouri, S., & O'Neill, S. (2014). Leadership style and culturally competent care: Nurse leaders' views of their practice in the multicultural care settings of the United Arab Emirates. *Contemporary nurse*, 48(2), 135-149.
- [29]. Elbaz, A. M., & Haddoud, M. Y. (2017). The role of wisdom leadership in increasing job performance: Evidence
- [30]. Ismail, M. (2005). Creative climate and learning organization factors: their contribution towards innovation. *Leadership & Organization Development Journal*, 26(8), 639-654.
- [31]. Jabeen, F., Behery, M., & Abu Elanain, H. (2015). Examining the relationship between the psychological contract and organisational commitment: The mediating effect of transactional leadership in the UAE context. *International Journal of Organizational Analysis*, 23(1), 102-122.
- [32]. Jaffer, S. (2013). *Harnessing innovation in the 21st century: The impact of leadership styles* (Doctoral dissertation, The George Washington University).
- [33]. Jaiswal, N. K., & Dhar, R. L. (2015). Transformational leadership, innovation climate, creative self-efficacy and employee creativity: A multilevel study. *International Journal of Hospitality Management*, 51, 30-41.
- [34]. Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and organizational psychology*, 73(3), 287-302.
- [35]. Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. *Academy of management journal*, 47(3), 368-384.
- [36]. Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leader-member exchange, and the outcomes of

- job performance and job satisfaction. *Academy of management journal*, 47(3), 368-384.
- [37]. Jaussi, K. S., & Dionne, S. D. (2003). Leading for creativity: The role of unconventional leader behavior. *The Leadership Quarterly*, 14(4-5), 475-498.
- [38]. Jetter, A. J., & Kok, K. (2014). Fuzzy Cognitive Maps for futures studies—A methodological assessment of concepts and methods. *Futures*, 61, 45-57.
- [39]. Johnson, P., & Szamosi, L. T. (2018). HRM in changing organizational contexts. In *Human resource management* (pp. 27-48). Routledge.
- [40]. Jung, D. D., Wu, A., & Chow, C. W. (2008). Towards understanding the direct and indirect effects of CEOs' transformational leadership on firm innovation. *The leadership quarterly*, 19(5), 582-594.
- [41]. Jung, D. I., Chow, C., & Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. *The leadership quarterly*, 14(4-5), 525-544.
- [42]. Kahai, S. S., Sosik, J. J., & Avolio, B. J. (2003). Effects of leadership style, anonymity, and rewards on creativity-relevant processes and outcomes in an electronic meeting system context. *The Leadership Quarterly*, 14(4-5), 499-524.
- [43]. Kasemsap, K. (2017). Strategic innovation management: An integrative framework and causal model of knowledge management, strategic orientation, organizational innovation, and organizational performance. In *Organizational Culture and Behavior: Concepts, Methodologies, Tools, and Applications* (pp. 86-101). IGI Global.
- [44]. Nisula, A. M., & Kianto, A. (2013). Evaluating and developing innovation capabilities with a structured method. *Interdisciplinary Journal of Information, Knowledge, and Management*, 8, 59-82.
- [45]. Northouse, P. G. (2018). *Leadership: Theory and practice*. Sage publications.
- [46]. Obeidat, B. Y., Al-Suradi, M. M., Masa'deh, R. E., & Tarhini, A. (2016). The impact of knowledge management on innovation: An empirical study on Jordanian consultancy firms. *Management Research Review*, 39(10), 1214-1238.
- [47]. Oeij, P. R., Gaspersz, J. B., Van Vuuren, T., & Dhondt, S. (2017). Leadership in innovation projects: an illustration of the reflective practitioner and the relation to organizational learning. *Journal of Innovation and Entrepreneurship*, 6(1), 2.
- [48]. Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of management journal*, 39(3), 607-634.
- [49]. Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of management journal*, 39(3), 607-634.
- [50]. Omolayo, B. (2007). Effect of leadership style on job-related tension and psychological sense of community in work organizations: A case study of four organizations in Lagos State, Nigeria. *Bangladesh e-Journal of Sociology*, 4(2), 30-37.
- [51]. Ordanini, A., Parasuraman, A., & Rubera, G. (2014). When the recipe is more important than the ingredients: A qualitative comparative analysis (QCA) of service innovation configurations. *Journal of Service Research*, 17(2), 134-149.
- [52]. Paquette, A., & Messier, C. (2010). The role of plantations in managing the world's forests in the Anthropocene. *Frontiers in Ecology and the Environment*, 8(1), 27-34.
- [53]. Parzefall, M. R., & Coyle-Shapiro, J. A. (2011). Making sense of psychological contract breach. *Journal of Managerial Psychology*, 26(1), 12-27.
- [54]. Perry-Smith, J. E., & Shalley, C. E. (2003). The social side of creativity: A static and dynamic social network perspective. *Academy of management review*, 28(1), 89-106.
- [55]. Poor, H. S., & Lebaday, Z. (2017). The effect of organizational culture on knowledge management maturity. *Palma Journal*, 16(1), 126-139.
- [56]. Prajogo, D. I., & Oke, A. (2016). Human capital, service innovation advantage, and business performance: The moderating roles of dynamic and competitive environments. *International Journal of Operations & Production Management*, 36(9), 974-994.
- [57]. Qu, R., Janssen, O., & Shi, K. (2015). Transformational leadership and follower

- creativity: The mediating role of follower relational identification and the moderating role of leader creativity expectations. *The Leadership Quarterly*, 26(2), 286-299.
- [58]. Rego, A., Sousa, F., Marques, C., & e Cunha, M. P. (2014). Hope and positive affect mediating the authentic leadership and creativity relationship. *Journal of Business Research*, 67(2), 200-210.
- [59]. Rezk, M. R. A., Ibrahim, H. H., Radwan, A., Sakr, M. M., TvaronaviÄ ienÄ, M., TvaronaviÄ ienÄ, M., & Piccinetti, L. (2016). Innovation magnitude of manufacturing industry in Egypt with particular focus on SMEs. *Entrepreneurship and Sustainability Issues*, 3(4), 307-318.
- [60]. Shim, W. S., & Steers, R. M. (2012). Symmetric and asymmetric leadership cultures: A comparative study of leadership and organizational culture at Hyundai and Toyota. *Journal of World Business*, 47(4), 581-591.
- [61]. Slåtten, T. (2011). Antecedents and effects of employees' feelings of joy on employees' innovative behaviour. *International Journal of Quality and Service Sciences*, 3(1), 93-109.
- [62]. Slåtten, T., Svensson, G., & Sværi, S. (2011). Empowering leadership and the influence of a humorous work climate on service employees' creativity and innovative behaviour in frontline service jobs. *International Journal of Quality and Service Sciences*, 3(3), 267-284.
- [63]. Tierney, P., Farmer, S. M., & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel psychology*, 52(3), 591-620.
- [64]. Timmer, M. P., Dietzenbacher, E., Los, B., Stehrer, R., & De Vries, G. J. (2015). An illustrated user guide to the world input-output database: the case of global automotive production. *Review of International Economics*, 23(3), 575-605.
- [65]. Weng, R. H., Huang, C. Y., Chen, L. M., & Chang, L. Y. (2015). Exploring the impact of transformational leadership on nurse innovation behaviour: A cross-sectional study. *Journal of Nursing Management*, 23(4), 427-439.
- [66]. Wonglimpiyarat, J. (2017). Technology auditing and risk management of technology incubators/science parks. *World Journal of Entrepreneurship, Management and Sustainable Development*, 13(1), 44-56.
- [67]. Yahaya, R., & Ebrahim, F. (2016). Leadership styles and organizational commitment: literature review. *Journal of Management Development*, 35(2), 190-216.
- [68]. Yukl, G. (2012). Effective leadership behavior: What we know and what questions need more attention. *Academy of Management Perspectives*, 26(4), 66-85.
- [69]. zeng, P., & Gheibi, S. (2015). From intrinsic motivation to employee creativity: The role of knowledge integration and team psychological safety. *European Scientific Journal, ESJ*, 11(11).
- [70]. Zhu, C. (2015). Organisational culture and technology-enhanced innovation in higher education. *Technology, Pedagogy and Education*, 24(1), 65-79.