

THE ROLE OF INNOVATIVE APPROACH ON EMPLOYEES' JOB  
PERFORMANCE: A STUDY OF GOVERNMENT SECTOR IN ABU DHABI,  
UAE

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## ABSTRACT

Transformation of the public sector driven by global competition towards improving services and facilities has been the focus of the UAE government in the recent decade. Hence, this study uncovered the effect of innovations on employees' job performance in the government sector. The study adopted quantitative approach where data was collected through questionnaires survey and analysed statistically. Questionnaire was designed based on the literature review where the main content of the questionnaire are factors on innovations and employees' job performance in the government sector. The survey utilized simple random sampling methods among employees in the Ministry of Culture, Youth and Community Development UAE. The respondents were staffs from management, human resource, employee relations, operations and training departments. A total of 300 questionnaires were distributed randomly and 265 were returned. Collected data have undergone data screening and found 258 responses were valid for further analysis. At the initial stage, the collected data were analysed using descriptive and univariate approach in SPSS software. It was found that five most significant factors affecting the oil and gas company performance are rewards and recognition, low employee turnover, effective behaviour, assuring job security and effective support system. The collected data was used to developed and assessed PLS-SEM model of casual relationship between the factors affecting oil and gas company performance using SmartPLS software. The model has two components which are measurement component and structural component. Measurement component is the relationship between the factor/variable/item and the independent/latent construct. It was been assessed with three criteria which are indicator reliability, convergent validity and discriminant validity. The results indicate that each of assessment criteria has achieved with the stipulated guidelines for PLS model assessment. While structural model is the relationship of independent construct with the dependent construct. The model was assessed based on five criteria which included path coefficients ( $\beta$ ), coefficient of determination ( $R^2$  value), effect size ( $f^2$ ), and predictive relevance ( $q^2$ ). Results of the assessment found that the model has substantial explaining power in representing the impact of the five groups of factors affecting the oil & gas company performance. In term of path analysis, Leadership and Job satisfaction groups of factors have significant relationship with the company performance. In term of effect size and predictive relevance, the model showed that only two group of factors which are Leadership and Job satisfaction were having small effect or relevant to company's performance while other groups have no effect size. Even though some of the results are not as expected as the hypotheses but it can be concluded that the structural model has been validated statistically. The data was to develop mediation model in SEM-AMOS software which comprises of innovation dimensions as independent constructs, job performance as dependent construct and mediates by technology construct. The model was assessed at two levels where at the measurement level was to ensure that the variables are in the respective construct using confirmatory factor analysis and at structural level to determine path relationship between the constructs. The overall results indicate that the innovation dimensions have positive effect on employees' job performance. Unfortunately, the technology has no mediation effects to the relationship between innovation dimensions and employees' job performance. It is hoped that this study will be a viable tool for improving job performance in the UAE government sector.

## ABSTRAK

Transformasi sektor awam di pacu oleh persaingan global terhadap penyampaian perkhidmatan yang lebih baik telah menadi tumpuan kerajaan UAE dalam beberapa dekad kebelakangan ini. Cabaran yang dihadapi oleh sektor kerajaan adalah untuk menjamin peningkatan berterusan dalam kecekapan kakitangan untuk memberikan perkhidmatan berkualiti tinggi. Kesusasteraan menunjukkan bahawa inovasi adalah salah satu faktor utama untuk kejayaan, kelangsungan hidup dan kelebihan daya saing yang mantap. Sifat klasik sebahagian besar sektor kerajaan termasuk UAE adalah kurang sistem penilaian prestasi kakitangan yang telus yang dilihat sebagai penyumbang penting kepada keadaan semasa prestasi kerja pekerja yang lemah. Antara masalah yang paling buruk bagi pekerja UAE adalah keletihan yang berlebihan, pelepasan awal dari kerja tanpa notis, jam makan tengahari yang lama, menggunakan alasan bahawa masalah domestik mengganggu kerja, kehadiran serta aduan merasa tidak sihat untuk pengecualian tugas. Oleh itu, ia merangsang untuk mengkaji kesan inovasi terhadap prestasi kerja pekerja di sektor kerajaan. Kajian ini menggunakan pendekatan kuantitatif di mana data dikumpul melalui soal selidik dan dianalisis secara statistik. Sebanyak 300 soal selidik telah diedarkan secara rawak dengan 260 jawapan didapati sah. Data yang dikumpulkan telah menjalani pemeriksaan data dan analisis deskriptif. Akhir sekali, data digunakan untuk membangunkan SEM-AMOS yang berkaitan dengan konstruk inovasi dan kepuasan kerja dengan pengantara melalui konstruk teknologi. Pemodelan dan penilaian yang dijalankan ke atas model ini mendapati bahawa kumpulan yang dikaji mempunyai kesan positif terhadap prestasi kerja. Penemuan mendedahkan bahawa, inovasi organisasi, inovasi produk, inovasi proses dan inovasi pemasaran mempunyai hubungan negatif dengan teknologi. Selain itu, inovasi organisasi, inovasi produk, inovasi proses dan inovasi pemasaran secara positif dikaitkan dengan prestasi kerja para pekerja. Bagaimanapun, diharapkan kajian ini akan menjadi alat untuk meningkatkan prestasi kerja di UAE.



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**LIST OF SYMBOLS AND ABBREVIATIONS**

UAE	-	United Arab Emirates
IT	-	Information technology
AMOS	-	Analysis of moment structures
SEM	-	Structural equation modelling
CB-SEM	-	Covariance-based structural equation modelling
CFA	-	Confirmatory factor analysis
$R^2$	-	Squared multiple regression
$\chi^2$	-	Chi-square
RMSEA	-	Root mean square error of approximation
TLI	-	Tucker-lewis index
GFI	-	Goodness-of-fit index
NFI	-	Standard fit index
CFI	-	Comparative fit index
AGFI	-	Adjusted fitness index
MCAR	-	Missing completely at random
MAR	-	Missing at random
EM	-	Expectation maximization
DF	-	Degrees of freedom
p-value	-	probability value

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Introduction

In the current economic situation, individuals, companies and governments around the world are striving to outperform their rivals because of competition. Hence all stakeholders are expected to improve the organisation performance, especially employees' performance. Employees' job performance is centred on the effective and efficient when conducting the given tasks. When employee performance increases it will trigger a positive trend of the organization/company efficiency (economic and operational) (Mohammed *et al.*, 2018). By understanding and exploring these variables which are the influence of employee performance to organisation performance, it should become priority for organisations. However with the introduction of innovation, it is seen as one of the drivers to improve the performance (Lewin, Massini & Peeters, 2009). As argued by McAfee (2012), innovation drives productivity in the organization which in turn brings a change in decision making.

Achieving superior and effective performances at global environment for public and private sector organisations are more critical now than ever before to remain competitive. Thus, organizations should be able to improve by providing better service at minimum costs. The current economic environment need public sector to improve its performance comparable to the private sector which seems more efficient. To improve and sustain the organization performance, it improvement processes and additionally motivating employees to give their best effort on the job performance (Sanderson *et al.*, 2009). Undeniably, many of the transformation failed because the underlying factors that drive the performance of people are not comprehensively addressed. Some of these factors are employee engagement

(Ibrahim & Falasi, 2014), condition of service, remuneration (Al Naqbi *et al.*, 2018), management capability, job security, creativity and innovation (Mohammed *et al.*, 2018; Sanderson *et al.*, 2009).

Globalization increases competition to survive and compete in the challenging business and market environments, organisations need to keep innovating and continue offering new and superior products and services (Yang *et al.*, 2012). Innovation was initially defined by the German economist and political scientist Joseph Schumpeter who described it as the motivating force for development. Joseph Schumpeter as father of innovation stated that maintaining economic development should be driven by “creative destruction” where it generates significant disruptive changes (Vilanova *et al.*, 2012).

Organisation needs to develop innovation competence in order to be innovative. It requires innovation processes which are the systems and activities for utilising the innovation potentials (Saunila *et al.*, 2012). There are varieties of innovation definitions in the literature but no globally accepted consensus on the meaning of the term (Amara & Landry, 2005). Other literatures asserted that innovation is one of the critical success factors and survival strategies of organisations (Jimenez & Sanz-Valle, 2011; Bell, 2005; Cho & Pucik, 2005; Gopalakrishnan & Damanpour, 1997; Damanpour, 1996; Fiol, 1996; Wolfe, 1994). Another assertion to an organisation is the sustainable competitive advantage (Standing & Kiniti, 2011; Bartel & Garud, 2009; Johannessen, 2008; Mumford & Licuanan, 2004).

Innovation is essential factor in economic development of a country and occurring faster in the government sector (Drucker, 2014). This dives the government organizations to apply Robotic Process Automation (RPA) and AI-driven reasoning automation to transform the services/businesses for improving job performance (Pera, 2017). Job stress is derived from job environment situation that poses a threat to an individual or when one cannot properly balance the available resources and job demands (Sonntag *et al.*, 2015). Job stress has been known universally as a social problem that has a combination of factors that disrupts the workers physically and psychologically and affects their health care as a whole (Lee *et al.*, 2016). It will decrease the rate of employee job performance, and the increased rate of absence and job displacement (Hayes *et al.*, 2015; Lambert *et al.*, 2018).



Job stress can arise from three aspects such as environment, organizational and individual/employee factors, possibility of affecting the job performance (Abbas *et al.*, 2015; Lambert *et al.*, 2016). According to Jankingthong *et al.* (2012), most of the literature on factors influencing job performance deduced that job performance is considered as dependent variable to several factors. Employees' satisfaction is one of the most critical parts of any organization and improving job performance. Job performance is important for any organization when implementing any new methods or strategies by studying job like employees' ability to accomplish their targets and organizational standards (Shmailan, 2016). Therefore, it is expected that the application of the innovation-related strategies tends to increase employees' job performance alongside financial and organizational performance improvement.

## 1.2 Background

United Arab Emirates (UAE) public sector has experienced a considerable transformation due to globalization over the last decade. UAE is considered to be amongst the fast-developing nations of the Middle East, North Africa and the gulf regions; which still struggles to be service-driven economies (Suliman & Alkathairi, 2013). This transformation has led to the reform of the UAE's traditional public administration. The public sector of UAE has transformed in scope, management and organization similar to the private sector, as such it has been under pressure to deliver high-quality and customer-focussed services. Consequently, the public sector has embracing new approaches to human resource management (HRM) practices that would stimulate employee performance in service quality (Turkyilmaz *et al.*, 2011).

Focus on job performance becomes one of the priorities of the UAE government in ensuring improving service delivery in the system to become the Middle East and North Africa's commercial and industrial hubs (UAE MFT, 2012). UAE as the fastest-growing markets is the most innovation-driven economy in the Arab realm. It divests from an oil-based to a knowledge-based economy and intended to attract businesses and investments from many countries by pursuing an outward-oriented development strategy, paying emphasis on economic policy reform and diversification, and rationalization of foreign investment regulation (Hsu & Ziedonis, 2013; Hossain, 2013). Dubai as one of the UAE regions has implemented substantial

reforms, accomplishing extraordinary economic and market growth, and forming a robust position in the business world.

It has reached the necessary levels of modernization, industrialization, and rapid economic growth that are regarded in a transitional period between a developing and a developed market economy (UAE MFT, 2012; OBG 2016). Nevertheless, the challenge remains as the Global Competitiveness Index (GCI) rates the UAE, as the 25<sup>th</sup> out of 139 countries and scores 4.9 out of 7 index points correspondingly, with the basic requirements of 8 and 5.8, efficiency enhancers of 21 and 4.8, and innovation and complexity factors of 27 and 4.4 (UAE MFT, 2012; OBG 2016).

Therefore, these are areas for improvement in the innovation and sophistication parameters where the UAE at present lags in contrast to other industrialized markets and economies with an innovation score of 3.4 and an index of 6.69, which is below the World Index average of 8.11. This low innovative capacity may further restrain foreign investment and diversification efforts if not appropriately addressed, thereby raising it could lead to a negative exposure to the global market. In the emerging Dubai market, the opening of the market to foreign firms and investment has created rapid changes and complex and heterogeneous industrial dynamics that challenges business operations and with the ever changing competitive landscapes, the UAE needs to offer a remarkable setting to explore in terms of management and business practices (DCCI 2016).

Since job performance in the government sector is seldom satisfactory as compared to that of the private sector, the present research intends to empirically evaluate on how innovation approaches (product innovation, process innovation, marketing innovation and organizational innovation) could affect the job efficiency of staff in the public organisation UAE government. Also, this study is expected to determine how technology could affect the relationship between innovation strategies and job performance in the UAE government sector.

### 1.3 Problem Statement

Driven by global competition to improve service delivery, the UAE government in latest decade has initiated the transformation of the public sector to assist the country as a centre for business excellence in the Middle East. The public sector needs continuous improvement in the employees' performance to deliver high-quality services as stated by Suliman & Alkathairi (2013). Besides that the sector has to overcome the challenges faced on the existing practices and reviewing the performance measurement system of the public sector administration (Almansoori, 2011; Turkyilmaz *et al.*, 2011). It also needs to address problems like lack of effective and efficient employees' performance; lack of creativity components; innovation, competitiveness and profitability in the UAE public sector (Alkathairi, 2013; Mohammed *et al.*, 2018). There many studies on employee's job performance in the public sector but are concentrated on management commitment and hygiene factors (Suliman & Akathairi, 2013); performance assessment (Almansoori, 2011); employee engagement and loyalty (Ibrahim & Falasi, 2014); employees' remuneration and incentives (Al Naqbi *et al.*, 2018).

However there is a lack of study on the effect of innovation to employee job performance where this study was intended to fill. Hence this study was to establish the relationship between innovation approaches with employees' job performance for the UAE government sector. The innovation components used in this study are adopted from Oslo Manual developed by the OECD and the European Commission in 2005, which describes four types of innovations namely product and services innovations, process innovations, organizational innovation, and marketing innovations. While for job performance factors, it could be seen from many perspectives but this study considered the dimension of job performance into four groups namely task performance, contextual performance [interpersonal], contextual performance [organizational] and adaptive performance (Gunday *et al.*, 2011; Weisburd & Braga, 2019). The study further explored technology as the mediating role on the relationship between innovation approach and employee job performance (Khairul, 2014; Azlaan *et al.*, 2015; Bouqur *et al.*, 2016) which made the study novel.

#### **1.4 Research Questions**

From the problem study statement, this research will be focusing on answering the following research questions:

- (i) Which innovation approach are important to the UAE government staff?
- (ii) Is there a relationship between innovation approach and job performance?
- (iii) Does technology mediates the relationship between innovation approach and job performance?

#### **1.5 Research Objectives**

The research objectives are as follow:

- i. To determine which innovation approach are important to the UAE government staff.
- ii. To identify the relationship between innovation approach and employee job performance in the UAE government sector.
- iii. To examine the mediating effect of technology on the relationship between innovation approach and employee job performance in the UAE government sector.

#### **1.6 Research Scope**

This study specifically focused on the Ministry of Culture, Youth and Community Development of UAE. The respondents were selected by using random sampling of the population. For this study, three hundred (300) staff selected as the sample size for this research. The collected data were analysed descriptively and also used for multivariate analysis of SEM-AMOS modelling to establish the structural relationship between factors considered in this study.

#### **1.7 Significance of the Study**

UAE government has intensifying its global competitiveness by improving public institutions delivery. This concurred with the study's concept on innovation approach and the way to improve job performance as part of the organization's overall

performance. Where the focused is on the effect of innovation on job performance examined through organizational rather than on financial performance of the organisation. Many elements affecting job performance was examined including the technology aspect. Hence, this study is considered as one of the first studies to examine the direct effect of innovations on job performance in the UAE government sector. On the other hand, this research would help the respective authority on how to adopt a prevailing approach in employees job performance.

## 1.8 Terminology

**Innovation approach:** is a plan to improve services offered by the public organisation. Innovation approach through a jobs-to-be-done lens with an effective approach should correctly consider job executor, job, and segment to target helping the customers.

**Product innovation:** introducing the new services or bringing significant improvement in the existing services.

**Job performance:** work-related activities expected for an employee and how well those activities were executed.

**Process innovation:** improving the services significantly or bringing significant improvements in supporting activities.

**Marketing innovation:** implementing a new method/approach that involves significant changes in providing the services.

**Organizational innovation:** introduction of new practices of doing activities, workplace organizing methods, decision-making system and new ways of managing external relations.

**Task performance:** behaviours that are directly involved in providing services, or activities that provide indirect support for the organization's processes

**Contextual performance:** individual efforts that are not directly related to their main task functions.

**Adaptive performance:** the extent to which an individual adapts to changes in a working system or work roles.

**Counterproductive work behaviour:** behaviour that harms the wellbeing of the organization.

## 1.9 Organization of the Thesis

The proposed thesis is being structured into five main parts, subsuming relevant chapters in themselves. Systematic writing of this research is intended to be structured to provide an overview for the reader. A synopsis of the content of each chapter is provided below;

**Chapter 1:** This gives an introductory view and background concerning the study, by putting the challenges that aroused the curiosity of the researcher, into perspective(s). It went further by setting the aim and objectives for achieving the research tasks ahead; it also briefly stated the research methodology, though this subcomponent shall be brought up, for more detailed and extensive discussion in part three of this thesis.

**Chapter 2:** This chapter purposely to gauge the extent of research efforts, that will be conducted in similar research areas. It also endeavours to deepen the topicality of this research, which helped to evolve gap(s) in the catalogue of existing research works. This chapter is being called contextual background, as it comprises of subheadings like the review of literature, theoretical foundation, conceptual underpinnings, and research assessment framework. This chapter also illustrates the development of the conceptual framework and measurement items adopted for this study.

**Chapter 3:** This chapter illustrates the proposed methodology adopted for this study. It provides details of various analysing approaches used for data analysis together with the data collection strategy used. This is the powerhouse of the entire research efforts, as it acts as the fulcrum around which the essence of the whole research revolves. The originality of scholarship that has been so reposed into this research work is hereby explicated for thorough exposition at this stage.

**Chapter 4:** The chapter contains the descriptive analysis results including the pre-test and the pilot test as well as the demography analysis. Also discussed in this chapter is the normality, exploratory factor analysis. The chapter presents the multivariate analysis using the Structural Equation Modelling (SEM-AMOS). The chapter ends with a detailed critical discussion of results with previous literature as they agree or contrast.

**Chapter 5:** This is the concluding chapter part, which strives to discuss in detail, the findings so gathered during this research, as well as drawing some reflections on the

policy implications emanated from the research, with a summary abstraction of the entire thesis. It focuses on chapter seven and its subheadings like summary and discussion of findings, policy implications of the findings, conclusion and recommendation.

### **1.10 Summary**

The chapter opens with an overview of the government sector in UAE, and the central concept of innovations types and job performance dimensions. From this overview, we state the research problem which is to investigate the role of innovation approach in improving job performance. Then we determine the research questions and their objective together with their scope and define the key terms mainly used in this study.



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## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter reviewed relevant literature related to the study. It reviewed the topics on concept of management, factors affecting employee performance, job performance, job performance measurement, innovation, innovation approach, job performance and the effects of innovation on job performance as well as the UAE national innovation approach.

#### 2.2 Concepts of Performance Management

Armstrong (2009) stated that one of the most important concepts of performance management is a continuous process of good management practices by setting direction, monitoring and measuring performance and taking action accordingly.. According to Pam (2000), performance management is about getting the results; getting the best from people and helping them to achieve their potential. While Chhabra (2018) defined performance management as a systematic process for improving organizational, developing the performance of the individuals and teams. Ndung'u (2009) has pointed out that performance management aligns individual with the organization's objectives. Wright (2003) has pointed out that individuals are more committed to their performance objectives when they believe those objectives are achievable and will result in important outcomes for themselves and the organization in which they work.

Gary (2004) defines performance management (PM) is the process of managing the execution of an organization's strategy. However in general there are



## REFERENCES

- Abbas, M., & Raja, U. (2015). Impact of psychological capital on innovative performance and job stress. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 32(2), 128-138.
- Abdallah, A.B., Obeidat, B.Y., Aqqad, N.O., Al Janini, M.N.K. and Dahiyat, S.E. (2017) An Integrated Model of Job Involvement, Job Satisfaction and Organizational Commitment: A Structural Analysis in Jordan's Banking Sector. *Communications and Network*, 9, 28-53.
- Afsar, B., Badir, Y., & Khan, M. M. (2015). Person–job fit, person–organization fit and innovative work behavior: The mediating role of innovation trust. *The Journal of High Technology Management Research*, 26(2), 105-116.
- Aghion, P., & Howitt, P. (2005). Growth with quality-improving innovations: an integrated framework. *Handbook of economic growth*, 1, 67-110.
- Akman, G., & Yilmaz, C. (2008). Innovative capability, innovation strategy and market orientation: an empirical analysis in Turkish software industry. *International Journal of Innovation Management*, 12(01), 69-111.
- Al Naqbi, R. A. K., Yusoff, R. M., & Dr. Ismail, F. B (2018). The Effect of Incentive System on Job Performance Motivation as Mediator for Public Sector Organization in UAE. *International Journal of Engineering & Technology*, 7(4.7), 380-388.
- Almansoori, M. E. A. (2011). *Perceptions of public sector staff of an organisation performance measurement system: a case study of the Abu Dhabi police service* (Doctoral dissertation, Liverpool John Moores University).
- Altındağ, E., & Köseadağı, Y. (2015). The relationship between emotional intelligence of managers, innovative corporate culture and employee performance. *Procedia-Social and Behavioral Sciences*, 210, 270-282.

- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of management journal*, 39(5), 1154-1184.
- Andrew, J. P. (2010). *Innovation 2010: A return to prominence-and the emergence of a new world order*. Boston, MA: Boston Consulting Group.
- Atuahene-Gima, K. (1996). Market orientation and innovation. *Journal of Business Research*, 35(2), pp.93-103.
- Baruah, B., & Ward, A. (2015). Metamorphosis of intrapreneurship as an effective organizational strategy. *International Entrepreneurship and Management Journal*, 11(4), 811-822.
- Baron & Kenney (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations, *Journal of Personality and Social Psychology Vol. 51, No. 6*, 1173-1182
- Bellantuono, N., Pontrandolfo, P., & Scozzi, B. (2013). Different practices for open innovation: a context-based approach. *Journal of Knowledge Management*, 17(4), pp.558-568.
- Bin Shmailan, A.S. 2016. The relationship between job satisfaction, job performance and employee engagement: An explorative study. *Issues in Business Management and Economics Vol.4 (1)*, pp. 1-8, January 2016.
- 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. In *Responsible Innovation 2* (pp. 19-35). Springer, Cham.
- Borman, W. C. and Motowidlo, S. J. 1997. Task performance and contextual performance: The meaning for personnel selection research. *Human Performance*, 10(2): 99-109.
- Borman, W. C., & Brush, D. H. (1993). More progress toward a taxonomy of managerial performance requirements. *Human performance*, 6(1), 1-21.
- Borman, W. C., Motowidlo, S. J. (1993). Expanding the criterion domain to include elements of contextual performance. In: Schmitt N, Borman WC, eds. *Personnel selection in organizations*. San Francisco, CA: Jossey Bass, pp.71-98.

- Brief, A. P., Motowidlo, S. J. (1986). Prosocial organizational behaviors. *Academy of Management Review*, 11, pp.710–725.
- Brynjolfsson, E., & McAfee, A. (2012). *Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy*. Brynjolfsson and McAfee.
- Cagan, J., Cagan, J. M., & Vogel, C. M. (2002). *Creating breakthrough products: Innovation from product planning to program approval*. Ft Press.
- Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial marketing management*, 31(6), pp.515-524.
- Calantone, R. J., Vickery, S. K., & Dröge, C. (1995). Business performance and strategic new product development activities: an empirical investigation. *Journal of Product Innovation Management: AN INTERNATIONAL PUBLICATION OF THE PRODUCT DEVELOPMENT & MANAGEMENT ASSOCIATION*, 12(3), 214-223.
- Camisón-Zornoza, C., Lapiedra-Alcamí, R., Segarra-Ciprés, M., & Boronat-Navarro, M. (2004). A meta-analysis of innovation and organizational size. *Organization Studies*, 25(3), pp.331-361.
- Campbell, J. P. (1990). Modeling the performance prediction problem in industrial and organizational psychology. In: In M.D. Dunnette and L.M. Hough (Eds.) *Handbook of industrial and organizational psychology*. Palo Alto, CA; *Consulting Psychologists Press*, pp. Vol 1 (2nd edition); 687-732.
- Campbell, J. P., McCloy, R. A., Oppler, S. H. and Sager, C. E. (1993). A theory of performance'. in C. W. Schmitt and W. C. A. Borman (eds), *Personnel Selection in Organizations*, San Francisco: Jossey-Bass, pp.35–70.
- Campbell, J. P., McHenry, J. J., Wise, L. L. (1990). Modeling job performance in a population of jobs. *Personnel Psychology*, 43(2), pp.313-33.
- Chen, Y. (2006). Marketing innovation. *Journal of Economics & Management Approach*, 15(1), pp.101-123.
- Chhabra, B. (2018). Work Role Stress and Employee Outcomes: Mediating Role of Job Satisfaction. In *Start-Up Enterprises and Contemporary Innovation Strategies in the Global Marketplace* (pp. 192-206). IGI Global.
- Choi, S. B., Cundiff, N., Kim, K., & Akhatib, S. N. (2018). The effect of work-family conflict and job insecurity on innovative behaviour of Korean

- workers: the mediating role of organisational commitment and job satisfaction. *International Journal of Innovation Management*, 22(01), 1850003.
- Chowhan, J. (2016). Unpacking the black box: understanding the relationship between strategy, HRM practices, innovation and organizational performance. *Human Resource Management Journal*, 26(2), 112-133.
- Christensen, C. M., Raynor, M. E., & McDonald, R. (2015). What is disruptive innovation. *Harvard Business Review*, 93(12), 44-53
- Clayton, C., (1997). *The Innovator's Dilemma*. Boston: Harvard Business School Press.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), pp.128-152.
- Cooper, R. G., Edgett, S. J., & Kleinschmidt, E. J. (2004). Benchmarking best NPD practices-II. *Research technology management*, 47(3), 50.
- Crant, J. M. (1995). The Proactive Personality Scale and objective job performance among real estate agents. *Journal of Applied Psychology*, 80, pp.532-537.
- 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.
- Cumming, B. S. (1998). Innovation overview and future challenges. *European journal of innovation management*, 1(1), 21-29.
- Damanpour, F. (1987). The adoption of technological, administrative, and ancillary innovations: Impact of organizational factors. *Journal of management*, 13(4), pp.675-688.
- Damanpour, F. (1996). Organizational complexity and innovation: developing and testing multiple contingency models. *Management Science*, 42 (5), pp.45-59.
- Damanpour, F., & Evan, W. M. (1984). Organizational innovation and performance: the problem of organizational lag. *Administrative Science Quarterly*, 29(3), pp.392-409.
- Damanpour, F., & Gopalakrishnan, S. (2001). The dynamics of the adoption of product and process innovations in organizations. *Journal of management studies*, 38(1), 45-65.

- Damanpour, F., Szabat, K.A., Evan, W.M. (1989). The relationship between types of innovation and organisational performance. *Journal of Management Studies*, 26 (6), pp.587–601.
- Davila, T., Epstein, M. J., & Shelton, R. D. (2006). *The Creative Enterprise* [Three Volumes]. Greenwood Publishing Group.
- Dharmadasa, I. M. (2009). Latest developments in CdTe, CuInGaSe 2 and GaAs/AlGaAs thin film PV solar cells. *Current Applied Physics*, 9(2), e2-e6.
- Dodgson, M. (1991). *Technology strategy in small and medium-sized firms*, in Acs, Z., Audretsch, D. (Eds), *The Economics of Small Firms*, Kluwer, Berlin.
- Dodgson, M., Gann, D. M., & Salter, A. (2008). *The management of technological innovation: strategy and practice*. Oxford University Press on Demand.
- Drechsler, W., & Natter, M. (2012). Understanding a firm's openness decisions in innovation. *Journal of Business Research*, 65(3), pp.438-445.
- Drucker, P. (2007). *Innovation and Entrepreneurship*. Routledge; 1 edition.
- Drucker, P. (2014). *Innovation and entrepreneurship*. Routledge.
- Duranton, G., & Puga, D. (2001). Nursery cities: Urban diversity, process innovation, and the life cycle of products. *American Economic Review*, 91(5), 1454-1477.
- Duranton, G., & Puga, D. (2001). Nursery cities: Urban diversity, process innovation, and the life cycle of products. *American Economic Review*, 91(5), pp.1454-1477.
- Enzing, C. M., Batterink, M. H., Janszen, F. H. A., & Omta, S. W. F. O. (2011). Where innovation processes make a difference in products' short-and long-term market success. *British Food Journal*, 113(7), pp.812-837.
- Ericsson, K. A., & Lehmann, A. C. (1996). Expert and exceptional performance: Evidence of maximal adaptation to task constraints. *Annual review of psychology*, 47(1), 273-305.
- Evangelista, R. & A. Vezzani. 2010. The economic impact of technological and organizational innovations. A firm-level analysis. *Research Policy*, 39 (1): 1253–1263.
- Fagerberg, J. (2003). *Innovation: a guide to the literature*. available at: [http://in3.dem.ist.utl.pt/mscdesign/03ed/files/lec\\_1\\_01.pdf](http://in3.dem.ist.utl.pt/mscdesign/03ed/files/lec_1_01.pdf).

- Fayers, P. M., Hand, D. J. (2002). Causal variables, indicator variables and measurement scales: an example from quality of life. *Journal of the Royal Statistical Society*, 165(2), pp.233-261.
- Fichman, R. G. (2000). The diffusion and assimilation of information technology innovations. *Framing the domains of IT management: Projecting the future through the past*, 105127, 105-128.
- Fluegge, E. R. (2008). Who put the fun in functional? Fun at work and its effects on job performance. Dissertation Abstracts International Section A: *Humanities and Social Sciences*, Vol69(7-A),pp.2009:2781.
- Frese, M., Kring, W., Soose, A., Zempel, J. (1996). Personal initiative at work: Differences between East and West Germany. *Academy of Management Journal*, 13, pp.937-63.
- Fu, N., Flood, P. C., Bosak, J., Morris, T., & O'Regan, P. (2015). How do high performance work systems influence organizational innovation in professional service firms?. *Employee Relations*, 37(2), 209-231.
- Gann, D. M., & Salter, A. J. (2000). Innovation in project-based, service-enhanced firms: the construction of complex products and systems. *Research policy*, 29(7-8), 955-972.
- Garrido, M. J., & Camarero, C. (2010). Assessing the impact of organizational learning and innovation on performance in cultural organizations. *International Journal of Nonprofit and Voluntary Sector Marketing*, 15(3), 215-232.
- Germain, R. (1996). The role of context and structure in radical and incremental logistics innovation adoption. *Journal of Business Research*, 35(2), pp.117-127.
- Glor, E.D. 2014. Studying the Impact of Innovation on Organizations, Organizational Populations and Organizational Communities: A Framework for Research. *The Innovation Journal: The Public Sector Innovation Journal*, Volume 19(3), 2014, article 1.PP.1-20.
- Greenberg, J. (1990). Organizational justice: Yesterday, today, and tomorrow. *Journal of Management*, 16, pp.399-432.
- Griffin, A. (1997). PDMA research on new product development practices: Updating trends and benchmarking best practices. *Journal of Product Innovation*

- Management: An International Publication of The Product Development & Management Association*, 14(6), 429-458.
- Griffin, M. A., Neal, A., Parker, S. K. (2007). A new model of work role performance: positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, 50(2), pp.327-347.
- Groves, P., Kayyali, B., Knott, D., & Kuiken, S. V. (2016). The 'big data' revolution in healthcare: *Accelerating value and innovation*.
- Guan, J. C., Richard, C. M., Tang, E. P., & Lau, A. K. (2009). Innovation strategy and performance during economic transition: Evidences in Beijing, China. *Research Policy*, 38(5), pp.802-812.
- Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International Journal of production economics*, 133(2), 662-676.
- Hafeez, U., & Akbar, W. (2015). Impact of training on employees' performance (Evidence from pharmaceutical companies in Karachi, Pakistan). *Business Management and Approach*, 6(1), 49-64.
- Harrison, J. S., Bosse, D. A., & Phillips, R. A. (2010). Managing for stakeholders, stakeholder utility functions, and competitive advantage. *Strategic Management Journal*, 31(1), pp.58-74.
- Hassan, M., Shaukat, S., Nawaz, M. S., & Naz, S. (2013). Effects of Innovation Types on Firm Performance: an Empirical Study on Pakistan's Manufacturing Sector. *Pakistan Journal of Commerce and Social Sciences*, Vol. 7 (2), pp.243-262.
- Hayes, B., Douglas, C., & Bonner, A. (2015). Work environment, job satisfaction, stress and burnout among haemodialysis nurses. *Journal of nursing management*, 23(5), 588-598.
- He, Z. L., & Wong, P. K. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization science*, 15(4), pp.481-494.
- Hulin, C. L. and Smith, P. C. (1965). *A linear model of job satisfaction*. *Journal of Applied Psychology*, 49, 209-216.
- Ibrahim, M., & Falasi, S. (2014). Employee loyalty and engagement in UAE public sector. *Employee Relations*, 36(5), 562-582.

- Jansen, J. J., Van Den Bosch, F. A., & Volberda, H. W. (2006). Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management science*, 52(11), 1661-1674.
- Johne, A., and Storey, C. (1998). New service development: a review of the literature and annotated bibliography. *European Journal of Marketing*, Vol. 32, Issue: 3/4, pp.184-251.
- Judge, T. A., Bono, J. E., Thoreson, C. J., & Patton, G.K. (2001) The job satisfaction-job performance relationship: a qualitative and quantitative review. *Psychological Bulletin*, 127(3), pp.376-407.
- Kempplila, S., Lonnqvist, A. (2003). Subjective productivity measurement. *The Journal of American Academy of Business*, 2(2), pp.531-537.
- Kim, S., & Yoon, G. (2015). An innovation-driven culture in local government: do senior manager's transformational leadership and the climate for creativity matter?. *Public Personnel Management*, 44(2), 147-168.
- Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Schaufeli, W. B., de Vet Henrica, C. W., & van der Beek, A. J. (2011). Conceptual frameworks of individual work performance: a systematic review. *Journal of occupational and environmental medicine*, 53(8), 856-866.
- Koopmans, L., Bernaards, C.M., Hildebrandt, H., Schaufeli, W.B., de Vet, H.C.W. and van der Beek, a.j. 2011. *Conceptual Frameworks of Individual Work*
- Lambert, E. G., Minor, K. I., Wells, J. B., & Hogan, N. L. (2016). Social support's relationship to correctional staff job stress, job involvement, job satisfaction, and organizational commitment. *The Social Science Journal*, 53(1), 22-32.
- Lambert, E. G., Qureshi, H., Frank, J., Klahm, C., & Smith, B. (2018). Job stress, job involvement, job satisfaction, and organizational commitment and their associations with job burnout among Indian police officers: A research note. *Journal of Police and Criminal Psychology*, 33(2), 85-99.
- Laura D Howe et al. (2016). Relationship between mediation analysis and the structured life course approach, *International Journal of Epidemiology*, 2016, 1-13
- Lawler, E. E. and Porter, L. W. (1987). *The effect of performance on job satisfaction*. In D. W. Organ (Ed.), *The applied psychology of work behavior* (pp. 88-99). Plano, TX: Business Publications.



- Lawless, M.W., Anderson, P.C. (1996). Generational technological change: effects of innovation and local rivalry on performance. *Academy of Management Journal*, 39, pp.1185-1217.
- Lawson, B. and Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. *International Journal of Innovation Management*, Vol. 5, No. 3, pp.377-400.
- Lăzăroi, G. (2015). Employee motivation and job performance. *Linguistic and Philosophical Investigations*, (14), 97-102.
- Le Blanc, P. M., Demerouti, E., & Bakker, A. B. (2017). Better? Job Crafting for Sustainable Employees and Organizations. *An introduction to work and organizational psychology: An international perspective*, 48.
- Lee, I., Lee, M., Im, J., & Bae, K. (2016). Family Support and Job Stress of Clinical Nurses. *Korean Parent-Child Health Journal*, 19(1), 1-8.
- LePine, J. A., Erez, A., Johnson, D. E. (2002). The nature and dimensionality of organizational citizenship behavior: a critical review and meta-analysis. *J Appl Psychol*, 87(1), pp.52-65.
- Lewandowski, M. (2015). Types of innovations in cultural organizations. *International Journal of Contemporary Management*, 2015(Numer 14 (1)), 67-78.
- Lewin, A. Y., Massini, S., & Peeters, C. (2009). Why are companies offshoring innovation? The emerging global race for talent. *Journal of International Business Studies*, 40(6), 901-925.
- Li, X., Qin, X., Jiang, K., Zhang, S., & Gao, F. Y. (2015). Human resource practices and firm performance in China: The moderating roles of regional human capital quality and firm innovation strategy. *Management and Organization Review*, 11(2), 237-261.
- Li, Y., Liu, Y., Ren, F. (2007). Product innovation and process innovation in SOEs: Evidence from the Chinese transition. *Journal of Technology Transfer*, 32, pp.63-85.
- Lichtenthaler, U. (2011). Open innovation: Past research, current debates, and future directions. *The Academy of Management Perspectives*, 25(1), pp.75-93.
- Lieberman, M. B., & Montgomery, D. B. (1998). First-mover (dis) advantages: retrospective and link with the resource-based view. *Strategic management journal*, 19(12), 1111-1125.

- Locke, E. A. (1976). *The nature and causes of job satisfaction*. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297-1349). Chicago: Rand McNally.
- Markham, S. K., & Lee, H. (2013). Product development and management association's 2012 comparative performance assessment study. *Journal of Product Innovation Management*, 30(3), pp.408-429.
- Martinez-Roman, J.A., Gamero, J. and Tamayo, J.A. (2011). Analysis of innovation in SMEs using an innovative capability-based non-linear model: a study in the province of Seville (Spain). *Technovation*, Vol. 31, No. 9, pp.459-475.
- Masa'deh, R. E., Shannak, R., Maqableh, M., & Tarhini, A. (2017). The impact of knowledge management on job performance in higher education: The case of the University of Jordan. *Journal of Enterprise Information Management*, 30(2), 244-262.
- Maxham III, J. G., Netemeyer, R. G., & Lichtenstein, D. R. (2008). The retail value chain: linking employee perceptions to employee performance, customer evaluations, and store performance. *Marketing Science*, 27(2), 147-167.
- Mazzanti, M., Pini, P. and Tortia, E. (2006). Organisational innovations, human resources and firm performance: the Emilia-Romagna food sector. *Journal of Socio-Economics*, Vol. 35, No. 1, pp.123-141.
- Mazzei, M. J., Flynn, C. B., & Haynie, J. J. (2016). Moving beyond initial success: Promoting innovation in small businesses through high-performance work practices. *Business Horizons*, 59(1), 51-60.
- Merx-Chermin, M. & Nijhof, W.J. 2005. Factors influencing knowledge creation and innovation in an organization. *Journal of European Industrial Training*, Vol. 29 Issue: 2, pp.135-147.
- Millot, V. (2009). Trademarks as an indicator of product and marketing innovations.
- Mobley, W. H. (1977). *Intermediate linkages in the relationship between job satisfaction and employee turnover*. *Journal of Applied Psychology*, 62, 237-240.
- Mohamed, M. S., Khalifa, G. S., Nusari, M., Ameen, A., Al-Shibami, A. H., & Abuelhassan, A. E. (2018). Effect of Organizational Excellence and Employee Performance on Organizational Productivity Within Healthcare Sector in the UAE. *Journal of Engineering and Applied Sciences*, 13(15), 6199-6210.

- Morrison, E. W., Phelps, C. C. (1999). Taking charge at work: Extrarole efforts to initiate workplace change. *Academy of Management Journal*, 42, pp.403–419.
- Mothe, C., & Uyen Nguyen Thi, T. (2010). The link between non-technological innovations and technological innovation. *European Journal of Innovation Management*, 13(3), pp.313-332.
- Motowidlo, S. J., Borman, W. C., Schmit, M. J. (1997). A theory of individual differences in task and contextual performance. *Human Performance*, 10, pp.71–83.
- Murphy, K. R. (1989). Dimensions of job performance. In: Dillon RF, Pellegrino JW, eds. *Testing: Theoretical and Applied Perspectives*, New York: Praeger, pp.218-247.
- Neely, A., Filippini, R., Forza, C., Vinelli, A. and Hii, J. (2001). A framework for analysing business performance, firm innovation and related contextual factors: perceptions of managers and policy makers in two European regions. *Integrated Manufacturing Systems*, Vol. 12, No. 2, pp.114-124.
- Noe, R. A., Hollenbeck, J. R., Gerhart, B., & Wright, P. M. (2017). *Human resource management: Gaining a competitive advantage*. New York, NY: McGraw-Hill Education.
- Nohria, N., & Gulati, R. (1996). Is slack good or bad for innovation? *Academy of Management Journal*, 39(5), pp.1245-1264.
- OECD (2005). *Oslo Manual: Proposed Guidelines for Collecting and Interpreting Technological Innovation Data*. Paris.
- Oke, A. (2007). Innovation types and innovation management practices in service companies. *International Journal of Operations and Production Management*, 27 (6), pp.564-587.
- Olson, E. M., Walker Jr, O. C., & Ruekert, R. W. (1995). Organizing for effective new product development: The moderating role of product innovativeness. *The Journal of Marketing*, 59(1), pp.48-62.
- Olsson, A., Wadell, C., Odenrick, P. and Bergendahl, M.N. (2010). An action learning method for increased innovation capability in organizations. *Action Learning: Research & Practice*, Vol. 7, No. 2, pp.167-179.
- Organ, D. W. (1988). *Organizational citizenship behavior: the good soldier syndrome*. Lexington, MA: Lexington Books.

- Parra-Requena, G., José Ruiz-Ortega, M., & Manuel García-Villaverde, P. (2011). Towards pioneering through capabilities in dense and cohesive social networks. *Journal of Business & Industrial Marketing*, 27(1), pp.41-56.
- Perdomo-Ortiz, J., Gonzalez-Benitoa, J. and Galende, J. (2006). Total quality management as a forerunner of business innovation capability. *Technovation*, Vol. 26, No. 10, pp.1170-1185.
- Performance - A Systematic Review. *Journal of Occupational and Environmental Medicine*. 2011; 53(8):856-866.
- Petty, M. M. , McGee, G. W. , and Cavender, J. W. (1984). *A meta-analysis of the relationships between individual job satisfaction and individual performance*. *Academy of Management Review*, 9, 712-721.
- Polder, M., Leeuwen, G.V., Mohnen, P., & Raymond, W. (2010). Product, process and organizational innovation: drivers, complementarity and productivity effects: UNUMERIT. Maastricht Economic and Social Research and Training Centre on Innovation and Technology.
- Popescu, G. H. (2015). The dynamics of social innovation networks. *Psychosociological Issues in Human Resource Management*, 3(2), 77-82.
- Prajogo, D.I. and Ahmed, P.K. (2006). Relationships between innovation stimulus, innovation capacity, and innovation performance. *R&D Management*, Vol. 36, No. 5, pp.499-515.
- Pulakos, E. D., Arad, S., Donovan, M. A., Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85, 612–624.
- Raja, M.W. & Wei, S. 2014. Relationship between Innovation, Quality Practices and Firm Performance: A Study of Service Sector Firms in Pakistan. *Journal of Management Research*, Vol. 6, No. 4, PP.124-140.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of management journal*, 38(2), 555-572.

- Rotundo, M., Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of performance: a polycapturing approach. *J Appl Psychol*, 87(1), pp.66-80.
- Sanderson, M., Harshak, A., & Blain, I. (2009). *Elevating Employee Performance in the Public Sector: How to Get the Best from Your People*. Germany: Booz & Company.
- Sapprasert, K. & T. H. Clausen. 2012. Organizational innovation and its effects. *Industrial and Corporate Change*, Volume 21, Number 5, pp. 1283–1305.
- Saunila, M. & Ukko, J. 2012. A conceptual framework for the measurement of innovation capability and its effects. *Baltic Journal of Management*. Vol. 7, No. 4, pp. 355-375.
- Saunila, M., & Ukko, J. (2013). Facilitating innovation capability through performance measurement: A study of Finnish SMEs. *Management Research Review*, 36(10), pp.991-1010.
- Schroeder, H. (2013). Strategic innovation for business performance: the art and science of transformation. *Technology Innovation Management Review*, 3(9), 6.
- Schubert, T. (2010). Marketing and organisational innovations in entrepreneurial innovation processes and their relation to market structure and firm characteristics. *Review of Industrial Organization*, 36(2), 189-212.
- Schweisfurth, T. G., & Raasch, C. (2015). Embedded lead users the benefits of employing users for corporate innovation. *Research policy*, 44(1), 168-180.
- Sethibe, T., & Steyn, R. (2016). Organizational climate, innovation and performance: A systematic review. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 2(2), 161-174.
- Shanker, R., Bhanugopan, R., Van der Heijden, B. I., & Farrell, M. (2017). Organizational climate for innovation and organizational performance: The mediating effect of innovative work behavior. *Journal of vocational behavior*, 100, 67-77.
- Shaukat, S., Nawaz, M. S., & Naz, S. (2013). Effects of innovation types on firm performance: An empirical study on Pakistan's manufacturing

sector. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 7(2), 243-262.

- Silva, M.J.M., Simões, J., Moreira, J. and Sousa, G. (2012). Investment and expenditure on innovation activities and innovative capability: empirical evidence from Portuguese services firms and KIBS. *International Business Research*, Vol. 5, No. 2, pp.114-122.
- Sinclair, R. R., Tucker, J. S. (2006). Stress-CARE: An Integrated Model of Individual Differences in Soldier Performance under Stress. In: Britt TW, Castro CA, Adler AB, eds. *Military life: The psychology of serving in peace and combat (Vol. 1): Military performance*. Westport, CT: Praeger Security International, pp.202-231.
- Soi, C. C. (2016). *Effect of Innovation Strategies on the Performance of Firms in the Telecommunication Industry in Kenya* (Doctoral dissertation, United States International University-Africa).
- Sonnentag, S. and Frese, M. (2002). Performance concepts and performance theory. in S. Sonnentag (ed.), *Psychological Management of Individual Performance*. Chichester: Wiley, pp.3–25.
- Sonnentag, S., & Fritz, C. (2015). Recovery from job stress: The stressor-detachment model as an integrative framework. *Journal of Organizational Behavior*, 36(S1), S72-S103.
- Sonnentag, S., Volmer, J., Spychala, A. (2010). *Job Performance*. In: The SAGE Handbook of Organizational Behavior: Volume I - Micro Approaches, Edited by: Julian Barling & Cary L. Cooper, pp.427-448.
- Staropoli, C. (1998). Cooperation in R&D in the pharmaceutical industry—the network as an organizational innovation governing technological innovation. *Technovation*, 18(1), 13-23.
- Strickland, T., Thompson, A., & Gamble, J. (2007). *Crafting and executing strategy: Text and readings*. McGraw Hill.
- Tidd, J., Pavitt, K., & Bessant, J. (2001). *Managing innovation* (Vol. 3), Chichester: Wiley.
- Suliman, A. and Alkathairi, M. (2013), “Organizational justice, commitment and job performance in developing countries: the case of the UAE”, *Employee Relations*, Vol. 35 No. 1, pp. 98-115.

- Teece, D.J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), pp.509–533.
- THOMAS, W.H.NG. & FELDMA, D.C. 2009. HOW BROADLY DOES EDUCATION CONTRIBUTE TO JOB PERFORMANCE? *PERSONNEL PSYCHOLOGY* 2009, 62, 89–134.
- Trapp, S. (2010). *Europaweite Umfrage: öffentliche Unterstützung für verantwortungsvolle Innovation in den Biowissenschaften und-technologien*.
- Tuna, N. (2018). *Culture Matters: Analysis of Culture in Sweden and Finland and Its Influence on Innovation and Job Performance*.
- Tuominen, M. and Hyvonen, S. (2004). Organisational innovation capability: a driver for competitive superiority in marketing channels. *The International Review of Retail, Distribution and Consumer Research*, Vol. 14, No. 3, pp.277-293.
- Turkyilmaz, A., Akman, G., Ozkan, C., & Pastuszak, Z. (2011). Empirical study of public sector employee loyalty and satisfaction. *Industrial Management & Data Systems*, 111(5), 675-696.
- UAE NATIONAL INNOVATION STRATEGY - *the Prime Minister's Office at the UAE Ministry of Cabinet Affairs* 2015.
- Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), pp.341-358.
- Van der Valk, T., Chappin, M. M., & Gijssbers, G. W. (2011). Evaluating innovation networks in emerging technologies. *Technological Forecasting and Social Change*, 78(1), pp.25-39.
- Van Dyne, L., LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, 41, pp.108–119.
- Van Scotter, J., Motowidlo, S. J., Cross, T. C. (2000). Effects of task performance and contextual performance on systemic rewards. *Journal of Applied Psychology*, 85, pp.526–535.
- Vilanova, M., & Dettoni, P. (2011). *Sustainable innovation strategies: Exploring the cases of Danone and interface*. ESADE, Institute for Social Innovation.

- Viswesvaran, C. (1993). *Modeling job performance: Is there a general factor?* Ph.D. dissertation, United States - Iowa: The University of Iowa.
- Viswesvaran, C., Ones, D.S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment*, 2000 Dec, 8(4), pp.216-226.
- Walker, R. M. (2004). Innovation and organizational performance: Evidence and a research agenda. *Advanced Institute for Management Research Working Paper*, WP No: 002 - June.
- Walker, R. M. (2008). An empirical evaluation of innovation types and organizational and environmental characteristics: Towards a configuration framework. *Journal of Public Administration Research and Theory*, 18(4), pp.591-615.
- Wang, Z.M. (2005). Managerial competency modeling and the development of organizational psychology: a Chinese approach. *International Journal of Psychology*, Vol. 38, No.5, pp.323-334.
- Weisburd, D., & Braga, A. A. (Eds.). (2019). *Police innovation: Contrasting perspectives*. Cambridge University Press.
- Wheelwright, S. C., & Clark, K. B. (1992). *Revolutionizing product development: quantum leaps in speed, efficiency, and quality*. Simon and Schuster.
- Williams, K. D., Karau, S. J. (1991). Social loafing and social compensation: The effects of expectations of co-worker performance. *Journal of Personality and Social Psychology*, 61, pp.570-581.
- Yilmaz, C., Alphan, L., & Ergun, E. (2005). Cultural determinants of customer-and learning-oriented value systems and their joint effects on firm performance. *Journal of business research*, 58(10), 1340-1352.
- Zemplinerova, A. (2010). Innovation Activity of Firms and Competition. *Politická ekonomie*, 2010(6), pp.747-760.
- Zhou, K. Z., & Wu, F. (2010). Technological capability, strategic flexibility, and product innovation. *Strategic Management Journal*, 31(5), pp.547-561.
- Zizlavsky, O. (2011). Factors of an Innovation Potential Development are Known, But Not Always Mastered. *Economics & Management*, 16.