The Mediating Role of Technology on the Relationship between Innovation Strategies/Practices and Job Performance

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Abstract— This research used five Likert scale from strongly disagree to strongly agree and the survey instruments were validated scales, used by reputable researchers in this field. Despite the fact that all the constructs rooted from the literature, their validities were further tested using SPSS 20.0 for internal validity and overall scale reliability.A total number of 250 Questionnaires are distributed to the sample of operations staff in the Government Ministry of UAE to find out mediating effect of technology on the innovation strategies/practices on job performance. Similarly, Quantitative analysis using SEM were used to evaluate and measure a relatively large sample in order to test hypotheses and examine relationships between variables. The findings revealed that, Technology does not show any mediation effect on the relationship between Product Innovation and Job Performance. Similarly, Job Performance is shown to have no mediation effect on the relationship between Market Innovation and Job Performance. In addition, Technology does not mediate the relationship between Process Innovation, and Organisational Innovation and Job Performance with respective statistics.

Keywords: Job Performance, Market Innovation, Product Innovation, Process Innovation, and Organisational Innovation

I. INTRODUCTION

Innovation literature states that organization is one of the key factors for success and survival (De Medeiros et al., 2014) and sustainable competitive advantage (Herrera, 2015). Despite the multiplicity of definitions for innovation in the literature, there is no global consensus on the exact definition of the term (see Amara and Landry, 2005). Innovation was first described by the German economist and political scientist Schumpeter, who defined it as the driving force for growth.

In a review of the literature on factors affecting job performance, Fu & Deshpande (2014) found that job performance is one of the most important dependent variables and has been studied for many decades. Employees are one of the most important parts of any organization, and the main goal for any organization is to improve job performance while implementing any new techniques or strategies. Examining job performance as a concept can do so in a number of ways, including the ability of an employee to meet their goals and organizational standards (Schmillan, 2016).Therefore, it is expected that the implementation of the innovation strategy will improve the employees' job performance along with improvement in financial and organizational performance; otherwise, it will be unacceptable among employees who are the key to the In the case of the UAE, the National Innovation Strategy (NIS) is designed to take innovations to new heights in the UAE, where innovation culture is embedded between individuals, companies and governments. It mainly focuses on identifying priority areas that lead to future innovations. Many businesses around the world increase their competitiveness around innovations. Studies have shown that companies that adopt a systematic and consistent approach to innovation report higher levels of gross value to each employee, with higher wages and benefits compared to other companies (Fonseca et al., 2014; Adams et al., 2016). Such organizations help to increase the competitiveness and standard of living of the countries they serve. The Ministry of Culture, Youth and Community Development in the UAE plays a key role in economic development by mobilizing financial resources and providing the necessary funds to contribute to the national economy and create the necessary investment for this purpose.

It is common for organizations to be innovative in order to survive and thrive, and there is empirical evidence for this claim. Wal-Mart's success in the United States, for example, is partly attributable to innovations in its supply chain and distribution networks. The move toward flexible specialization in the Italian textile industry has allowed it to produce high-value goods, which have continued to do so in the face of global competition from low-cost producers. Innovations in lean production, overall quality management, and high-involvement management techniques have been attributed to the commercial success of the Japanese carmaker. On the other hand, failure or inability to innovate can harm organizations. Some claim that innovation is failing to address the current plight of the automotive industry in the United States (SOI, 2016).

It should be borne in mind that many companies practice innovative practices without specific and clear innovation strategies. This practice involves situations that force the company to innovate in at least one type of innovation, whether at the product or process or market or organization level. However, it is found out that ministry of culture, youth and community development UAE are

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implementing innovative activities for the economic development of UAE and employee performance.

Of the seven states in the UAE, the state of Dubai is the focus of this study because it enables greater reforms, greater economic and market growth, and a stronger position in the business world (UAE MFT 2012; OBG 2016). It reflects the characteristics of the UAE economy in the areas of infrastructure, business activity, investment destination, competitive environment and economic and social change. As an emerging market, Dubai has achieved significant levels of modernization, industrialization and rapid economic growth, which is considered a transitional stage between the emerging and developed market economy. It is developing into an emerging market economy with a strategic plan to increase local debt and equity market liquidity, set up a market exchange and regulatory body, provide opportunities for foreign direct investment, sourcing and trade, and adopt international technology. Establish a solid foundation and maintain competitive advantage in the era of knowledge driven economies (UAE MFT 2012; OBG 2016).

Dubai has formulated a sustainable strategy to promote large-scale innovation and provide financial and logistic support to companies with great potential to become an innovation hub for the region (UAE MFT 2012); However, the right factors and environment exist at the company level to make it more innovative in the local market. For example, economic development phase-wise ensures that total early-stage entrepreneurial activity has a lower share of early-stage entrepreneurial activity in innovation-based economies compared to the UAE and other countries, including Dubai. Driven economies. The Global Competitiveness Index UAE scores 25 (in 139 countries) and 4.9 (out of 7 index points) the basic needs of 8 and 5.8, capacity enhancers of 21 and 4.8, and innovation and advanced factors. 27 and 4.4 (UAE MFT 2012; OBG 2016).

Therefore, they are for improvement in the parameter of the innovation and advanced factors that the UAE currently lags behind when compared to other developed markets and economies with Innovation Score 3.4 and Index 6.69, which is below the global index average of 8.11. This less innovative ability can further (if not properly address) foreign investment and diversification efforts, thereby increasing the global market's vulnerability. In the burgeoning Dubai market, the opening of the market to foreign firms and investments has created rapid changes and complex and diverse industrial dynamics that challenge business operations and alter the competitive landscape, providing a great setting for exploring management and business practices (DCCI 2016).

The traditional innovation literature, inspired by Joseph Schumpeter (1934), is mainly concerned with patent intensities in manufacturing industries and developed markets and economies (Endres & Woods, 2010; Ankra et al., 2013; Anne-Mette, 2012). The upheaval of emerging markets and economies has created tangible changes through structural reforms and growth-promoting investments, and provides firms with greater opportunities and better environments (Adams & Comber 2013; Hussain 2013).

In UAE government sector there are certain typologies which are specifically used for the service sector innovations by different researchers: Service innovations, Service Delivery innovations, Administrative / Organizational / policy innovation, Conceptual innovations, and Systematic Innovations (Raja & Wei. 2014). However, most researchers do not see significant importance for these specific service typologies.

Job performance can be seen from many angles, for example in Bormann and Motowid (1997) identified two types of employee behavior that are essential to organizational effectiveness: work performance and contextual performance (Yuan & Woodman, 2010). Task performance refers to behaviors that are directly involved in producing goods or services, or indirectly supporting the company's core processes, and contextual performance refers to individual efforts that are not directly related to their core work tasks.

Innovation has created many opportunities for organizations to not only improve their existing business operations and competitive advantage but also to engage in new ones and gain high business growth performance (Christensen et al., 2015). At the present time, organizations are increasingly relying on innovation to stand out from competitors, create value for customers and boost their growth (Wirtz et al., 2010).

In this study, the following four dimensions of job performance are the dependent variables: task performance, contextual performance, positive performance, and negative productive work behavior. According to a previous brief review, the problem of the study is that it examines the impact of different types of innovation (services, process, organizational and marketing) on different aspects of job performance (task, contextual and adaptive). Performance along with counter-productive work behavior in the public sector in the UAE). Therefore, this study chose to analyze the mediating / moderating effect of technology on innovation strategies / practices on job performance.

II. LITERATURE REVIEW

It is emphasized that there is no particular imprint towards organizational innovation, but it may be a mixture of intelligent managerial initiatives, direct and indirect worker participation and collaborative industrial relations (Wilkinson 2010; Katow & Budhwar, 2010). Encouraging and encouraging innovative practices and creativity inherent in the organization is one way to achieve growth and sustain performance. In addition, innovative approaches to translate institutional structures and culture to commercialization must be supported (Anja & Rutherford, 2012; Dodgson 2001).

Agion and Howitt (2005); De Marche, (2012) notes that in today's dynamic and global competitive environment, innovation is becoming more relevant, in which there are three main trends; Excessive and challenging markets, focusing on international competition, assorted and rapidly changing technologies.

Yilmaz et al. (2005), the strategic management literature has identified innovation as the most critical enabler for organizations to create value and maintain competitive advantage in an increasingly complex and rapidly changing environment. Tid et al. (2001) argue that innovation efficiency is increasingly recognized in developing and sustaining competitive advantage. Innovation has a very significant impact on corporate performance by producing a better market place that conveys better performance and competitive advantage (Walker, 2004).

Wheelwright and Clark (1992) argue that in today's dynamic and global competitive environment, product and service innovations are becoming more relevant, mainly three main trends, including centralized international competition, chaotic and challenging markets, and assorted and rapidly changing technologies.

Zhou and Wu (2010) emphasize that innovation is crucial for organizations to adapt to turbulent environments and achieve sustainable competitive advantage. They claim that organizations need a continuous innovation process to respond to ever-changing environmental conditions and that the goal of sustainability is to find new ways to do business. Davila et al. (2006) agree that innovation is the most important factor for sustaining success and that it is an integral part of the overall business.

Innovative performance has positive effects on long-term companies' product, market and financial performance; However, in the short term, investments initiated and utilization of internal resources may cause losses first. Lawless and Anderson (1996) stated that the adoption of new technologies for innovation may have an initial penalty. Similarly, Damanpur & Ivan (1984) emphasize that usually the duration of a period can be exceeded to observe the positive effects of innovations on firm performance. For this reason, the effects of innovative performance are first associated with the non-financial aspects of corporate performance, such as increased customer satisfaction or product speed, which then leads to higher financial returns. Once innovative performance improves, product and marketing performances also improve, and then through their mediation, financial performance begins to improve and others. (2011).

We must remember that it is long overdue to observe the positive effects of innovations on the performance of the organization (Damanpour and Ivan, 1984). Even if there are no direct rewards by the innovation market, the company can adapt to the environment (TC et al., 1997) to generate dynamic capabilities and gain first-mover advantages (Liberman & Montgomery, 1998) or respond faster to market changes (Cohen & Leventhal, 1990).

III. METHODOLOGY

For the purpose of this research, this study is applied to the government sector in the UAE, as Raja & Wei (2014) agreed that innovation methodologies in the private sector are still applicable in the public sector. The questionnaires are distributed to the sample of operations staff in the Ministry of Culture, Youth and Community Development of UAE to find out the effects of innovations on employees; job performance.

The selections of the actual respondents were arrived at through stratified random sampling of the population. In view of that, two hundred and fifty (250) staffs form the sample size of this research as classified below: management staffs 50, HR staffs 50, employee relations staffs 50, operations staffs 50 and training staffs 50. The sample frame was made up of five dimensions (management, HR, employee relations, operations and training staffs) all within the ministry of culture, youth and community development UAE.

Similarly, this study applied Quantitative analysis, because of its capability to evaluate and measure a relatively large sample in order to test hypotheses and examine relationships between variables.The survey instruments used for this study were validated scales, used by reputable researchers in this field. Despite the fact that all the constructs rooted from the literature, their validities were further tested using SPSS 20.0 for internal validity and overall scale reliability. As clearly depicted, this research revolves around the three working hypotheses that formed the basis of the research framework. Now, attempts have been made to bring to limelight the construct embedded in each of the research hypotheses as reviewed from the literature, along with their levels of reliability. Before that, it's worthwhile to recognize that different schools of thought viewed the issue of reliability differently. While some held the view that the value of the Cronbach's alpha should be > 0.8, others suggested alpha = 0.7, but the most "lenient" authors consider the 0.6 <= alpha < 0.7 range suitable for exploratory purposes (Garson, 2012). However, in the literature, PLS-SEM is viewed as an appropriate method for examining the relationships between less rigid and LVs. Despite all the criticism, recently PLS-SEM has been increasingly applied in various fields. This makes the PLSSEM method more robust in estimating the structural model. PLS-SEM is seen as an alternative method when CB-SEM does not meet distributional expectations (Hair et al., 2011).

Therefore, in determining which statistical method is suitable to use, this study follows the rules of thumb proposed by Hair et al. (2011) to choose between CB-SEM and PLSSEM. The focus of the analysis in this study does not include measuring model volatility. The focus of this study is the impact of innovation strategies on the job performance of employees in the UAE Ministry of Culture, Youth and Community Development.

Therefore, it is important to use latent variable (LVs) scores to examine the underlying relationship between LVs. This study uses a large number of LVs and complex modeling of the research model. According to (Hair et al. 2016; Klein, 2015), PLS is suitable for large complex models with many latent variables consisting of 100 constructs and 1,000 indices. Therefore, the focus of this study is to test relationships according to prior theoretical knowledge. The ability of PLS-SEM to evaluate the interactions between residues and their effects on the model makes this technique an appropriate approach used in this research.

IV. RESEARCH FINDINGS

To test the interceding impact of innovation on the connection between Product Innovation, Market Innovation, Process Innovation, Organizational Innovation and Job Satisfaction, the bootstrapping strategy is utilized. The bootstrapping technique has been portrayed as the best strategy for testing intervention against the Sobel test technique (Hayes, 2014). The procedure includes a re-inspecting of information somewhere in the range of 500 and multiple times, from which the all out effect, direct effect and backhanded effect gauges, and their separate 95% certainty interim qualities are created. The calculation additionally gauges the two-followed critical qualities for impacts alongside lower and furthest cutoff points.

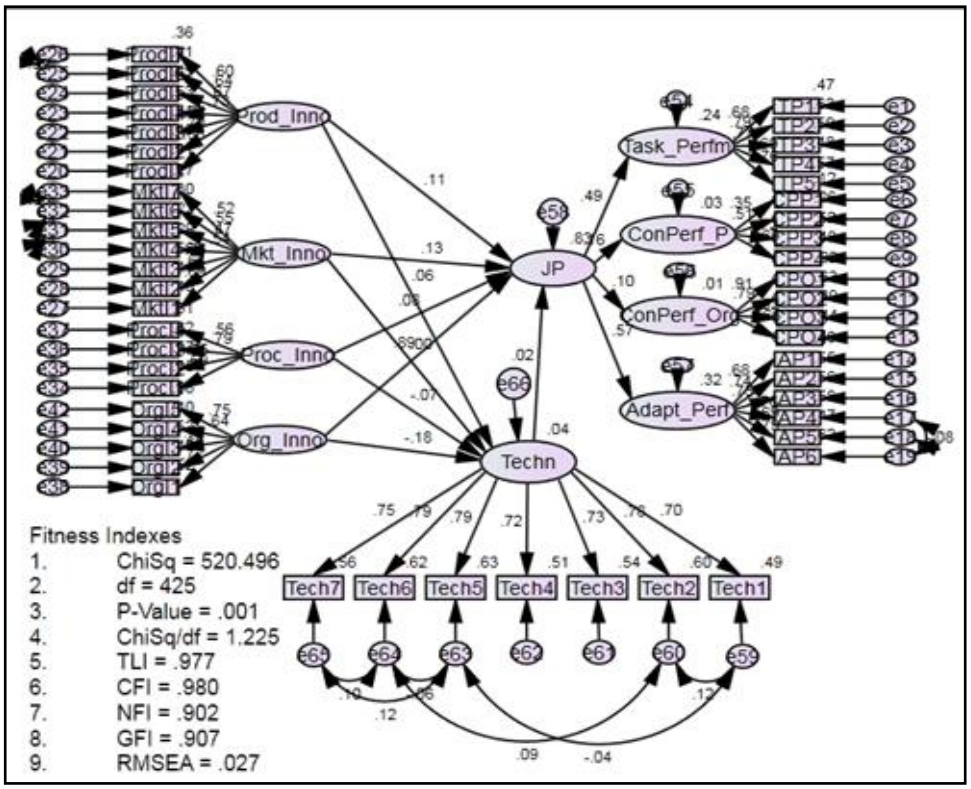

Figure 1: Architecture model

Table 1 shows a rundown of the wellness records got from the underlying and last basic model. The examination showed that the last model fulfilled all the important necessities for model acknowledgment.

Table 1: Wellness lists for beginning and last models basic models

Category	Parsimonious fit	Absolute fit	Incremental fit	Incremental fit	Absolute fit	Comment
Fitness Indexes	Chisq/df	GFI	CFI	NFI	RMSEA	
Acceptance Threshold	Chisq/df ≤ 30	GFI ≥ .90	CFI ≥ .90	NFI ≥ .90	RMSEA ≤ .08	
Initial Structural Model	1.774	.779	.841	.701	.054	Model does not accepted because of fitness
Final Structural Model	1.225	.907	.980	.902	.027	Fitness level achieved, model accepted

Table 2 shows the bootstrapping result for testing the intervention impact of Technology in the examination model. As appeared in the table Technology doesn't show any intercession impact on the connection between Product Innovation and Job Performance (β= .001; 95% CI: -.013~.001; p=.523). Additionally, Job Performance is appeared to have no intervention impact on the connection between Market Innovation and Job Performance (β= - .000; 95% CI: .000~.000; p=.361). Furthermore, Technology doesn't intervene the connection between Process Innovation, and Organizational Innovation and Job Performance with separate insights as appeared in Table 4.22.

Table 2 Two-followed essentialness of bootstrap certainty interim for backhanded impact

Path relationship	Estimate	Lower Bounds	Upper Bounds	P-value
JP← Techn← Prod_Inno	.001	-.013	.001	.523
JP← Techn← Mkt_Inno	.000	.000	.000	.361
JP← Techn← Proc_Inno	-.001	-.003	.002	.442
JP← Techn← Org_Inno	-.001	.002	.001	.497

V. CONCLUSION

Precursors such as Product Innovation, Process Innovation, Organizational Innovation and Marketing Innovation have been identified. A research paradigm has been developed to validate the proposed implications of these antecedents of innovation strategies 'relationship with employees' job performance. Some interactions between these factors and the mediating role of the technology factor have also been proposed in the model for empirical testing. Additional effort has been made to investigate the different aspects of Task Performance, Contextual Performance Interpersonal, Contextual Performance Organization, and Adaptive Performance of the Employee Job Performance Relationship.

Accordingly, a conceptual quantitative model has been developed incorporating the ten most relevant elements to validate the model with rich deep data analysis. A quantitative competition model with the same antecedents has also been developed to validate the controversy of the mediating role of technology in employee job performance relationships. Interconnected technology is a proposed competitive model to demonstrate the mediating role of technology on employees 'job performance. To achieve the research objective, methodological relevance is an important aspect of testing the proposed models.

The proposed and competing models were tested using AMOS, and with some modifications the proposed model (Figure 1) was found to be better than the competing model in terms of parsimonious model fit and explanatory power. The fit indices of the revised proposed model (Figure 2) show a very good model fit (TLI = .977, CFI = .980, NFI = .902, GFI = .907 and RMSEA = .027). The result of the revised proposed model is that both paths are important and theoretically justified. In a nutshell, the results of the revised proposed model output suggest that organizational innovation has a direct and positive impact on employees 'job performance.

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