Factors Affecting Innovative Work Behavior among Employees in Algeria Petroleum Sector

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ABSTRACT

With the development of digitalization, there is a growing need for the business organizations to work through some innovative practices. However, such organizational practices are primarily linked with the employees' behaviour towards innovation which is further linked with the job demand and learning goal orientation. The purpose of this study is to investigate how job demands (JD) affect innovative work behavior (IWB). Additionally, the study will look into how Learning Goal Orientation (LGO) functions as a mediating factor in the relationship between JD and IWB. Data from 225 employees working in the production division of Sonatrach petroleum company in Algeria were gathered via a self-administered survey. Partial Least Squares-Structural Equation Modeling was used to analyse the data (PLS-SEM). The study’s findings revealed no statistically significant difference in the direct link between JD and IWB. It was found that the LGO mediates the link between JD and IWB to some extent. The finding implies that by emphasising learning goals, firms can proactively enhance individuals’ innovativeness at work. Future research should also take into account other crucial factors including job security and the work environment's mediating role in learning goal orientation across various industries and geographical regions.

1. INTRODUCTION

The strategic and competitive environment of an organization and the innovation process are inseparable [1]. In this competitive environment, the value of innovation is well established criteria to identify the organization success. According to Ballé et al. [2], operational excellence is not achieved by just applying so-called “lean” practices but also requires cultivating an aptitude and an expectation for continuous improvement within every employee such as innovative work behavior (IWB). Therefore, Augmenting employee’s innovation performance, the organizational environment of innovation is essentially supporting the behavioural perspective of innovation work behavior [3, 4]. Innovative work behaviour is defined as an employee's deliberate creation, introduction, and use of new ideas that are advantageous to performance within a work role, a group, or an organisation [5]. Further, Schumperter [6] defines “Innovation is the act of producing something new and its result. (p, 19), which provides value in terms of profit and beneficial to the organization. Innovative behavior refers to introducing and implementing new concepts, items, methods, and practices in a person's job function, work group, or organisation [7]. Individuals or groups within the organisation that are a part of the organisational structure can engage in innovative activity. As per Yuan and Marquardt [8], assertive, managerial research on innovation behavior emphasises on Job demands are defined as those organisational, social, or physical requirements of the job that necessitate persistent effort on the part of the employee and are consequently related to specific physiological and psychological costs [9]. Considering the complex and uncertain digitized business environment, it is accepted that innovation has become a vital choice for the firms while dealing with the different challenges in the digital era [10]. As a result of such competitive market, one of the most vital driver for the innovative outcomes are knowledgeable workers. These individuals are the people with the high degree of education and expertise who are primarily involve in the creation, distribution and application of the knowledge [11]. Therefore, the innovative behaviours of the knowledge workers are based on the notion that such individuals conceptualized a behavioural response which reflect the generation of new ideas, their promotion and implementation within the organization [12]. More importantly, this study enhances the innovation process among the employees related to contribution knowledge of petroleum industry in Algeria. Petroleum industry has potential to boost the economic growth of many countries such as Algeria. Specifically, this sole industry contributes to 20 percent of Algerian Gross Domestic Product (GDP), 85 percent of total exports in Algeria and accounting for 60 percent of the country’s budget revenues [13] which makes its importance for innovation in terms of organization productivity and employee innovative work performance to the economy in general and petroleum industry in particular. More importantly, innovation in the petroleum industry mainly focuses on the increasing the efficiency, reducing the ecological impact, and utilization of latent technology and methods for exploring oil and gas. However, such development can not be achieved without putting some gigantic investment under the title of research and development. In the meantime, taking into account those individuals who can primarily paly their major role towards creating an innovative environment would also geenrate
fruitful results for the organization. Therefore, although there are high expectations for employee work behavior, but there are few practical strategies for enhancing, evaluating, and managing it [14]. In addition, another contextual determinant of employee’s IWB is job demands in work role position. Individual innovation would refer to behavioural and cognitive attempts made by an individual to lessen, accept, and meet demands imposed by their job [15]. Job demands refer to those physical, social or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs [16]. Organizational research has indirectly referred to the important interactive effects of job demands with work environment on employees’ behavior [17]. Job demands are revealing the importance of employee’s IWB [5]. The evidence shows that job demands is positively related to IWB [14]. Moreover, it is believed that job demands are the instigator of the workplace actions. In order to meet the standards at workplace, self-evidently workers are demanded to undertake the prescribed work behaviour. Many times, job design factors like work demand have its an impact on the IWB which determines the employment opportunity. The higher job demand tends to reflect the situation where there are less job related opportunities comparatively to the available experienced individuals. However, related to the association between the job demand and IWB, several points have been observed in the existing literature. For example, high job demand derives the innovation where the organizations or industries can attract talent individuals who are more suitable to perform specific tasks. At the same time, job demand also reshapae the perivities of innovations where the firms focus. With the mediation impact of learning goal orientation (LGO), job demands that are adaptable and can be changed when the requirements of the creative process change appear to be the most favourable for IWB. Learning goal orientation (LGO) is defined as the motivation to improve competency through deliberate learning and undertaking challenging tasks [18]. In particular, learning goal orientation has been found to be positively related to open to new experiences and optimism [16]. LGO positively and indirectly influences innovative behavior [17]. It mediates the effects of work engagement on, in-role job performance and IWB [18]. Hence, it is possible that LGO motivates individuals to pursue challenging tasks and impact the understanding and response to outcomes which leads to IWB [19]. As noted above the importance of the oil and gas industry to the Algerian economy and IWB is vital to foster and develop in. To do so, this study will generally enhance a systematic approach of job demands, learning goal orientation and IWB to advance organisational performance in order to contribute to the body of knowledge generally and the Algerian petroleum sector specifically.

2. LITERATURE REVIEW

2.1 The relationship between job demands and innovative work behavior

Job demands variable is potentially provided as quantitively factor that elaborate working fast and hard, huge work to do, and providing a too little time [5]. Janssen [5] initially found that the relationship between job demands and innovative work behavior is influenced by fairness perception. In other study, De Spiegelaere et al. [20] work on job demands-resources model (JD-R) to identify the links in using demands (time pressure and emotional pressure), resources, job engagement” and IWB. They report a positive link between job demands and IWB when job control is less effective. Furthermore, Dediu et al. [14] explore the connection between job demands and employee innovative work behavior. The findings show that job demands has a positive linked with idea generation rather idea implementation. In addition, time pressure as a potential job demands, Amabile et al. [21] report that job demands create time pressure which resulted as a difference in employee’s performance. On the other hand, time pressure enhances work groups and individual’s efficiency [22] as to meet deadlines, time limit drives individual to do urgent work tasks on priority basis [23]. Ohly, Sonnentag and Plunkte [24] theorized framework that time pressure in moderate amount instigate fully activation of creative capabilities for innovative work behavior. Maqbool et al. [25] put forward further research to be extended to acquire a clear evidence of innovative work behavior rather directly predictors of time pressure. In short, the literature has shown how job demands affecting innovative work behavior. However the link between the two is still not very clear and need further investigation.

The following hypothesis is made in light of the debate above:

H1: There is a positive relationship between job demands and innovative work behavior (Figure 1).

2.2 The relationship between job demands and learning goal orientation

Learning orientation refers to the aims of enhancing capabilities, acquiring knowledge, finding new skills and provide the best designated efforts [26]. The learning model theorizes the higher learning occurrence with more demanding nature of job task [27]. Thus, this integrated and interactive relation develop learning prospects with high job demands. Therefore, Van Yperen and Janssen [28] investigate dispositional goal orientation in response of job demands variations. They claimed that high job demands develop learning adaptability among employees to manage difficult tasks. In addition, in managing difficult job demands, employees develop learning goal-oriented behavior to acquire new things, knowledge and to develop mastery skills. In this way, individuals consider a positive perception regarding potentially high job demands. As a result, Karasek’s [29] job demands control model is primarily explained organizational learning orientation, that is widely used and well immersed in highlighting the value of job characteristics (e.g., job demands and job control) [30, 31]. Furthermore, according to the studies of ref. [31-33] learning goal orientation is positively and significantly impacted by employment demands. More specifically, under Algerian context particularly in the petroleum sector, there has been limited studies carried out to investigate the relationship between job demands and learning goal orientation. The following hypothesis is put out in light of the discussion above:

H2: There is a positive relationship between job demands and learning goal orientation (Figure 1).

2.3 The relationship between learning goal orientation and innovative work behavior

LGO captures both the facets skill acquisition and intrinsic motivation. Learning goal orientation enable individuals to make solicitation and consider feedback for skill enhancement
and engage in the innovation process [34]. Innovation process and creativity concern with to develop and originate something novel ideas. To accomplish such innovations, for that purposes some new and requisite knowledge, skills and competence-promotion, realization and implementation of new ideas—often have yet to be learned [35]. Thus, for individual to seek knowledge, skills and innovative behaviour, they must go through some learning process. Therefore, this learning process promote the related advancement of competence for mutual benefits of LGO. According to the studies of ref. [35, 36], Learning goal orientation have a positive and significant relationship with IWB. The prior literature concludes that individual learning is an essential element for organization to get competitive edge in today’s challenges conditions [37, 38]. Attitumpong and Badir [39] found that results linking the learning orientation with innovative work behavior have been inconclusive. However, to the best of researcher’s knowledge, in the Algeria context particularly in the petroleum sector, there are limited studies examined the association between learning goal orientation and innovation work behavior. On the basis of the earlier discussion, the following hypothesis is proposed:

H3: There is a positive relationship between learning goal orientation and innovative work behavior (Figure 1).

2.4 Mediating role of learning goal organization

The mediating role of learning orientation has also been explored in the current literature. For example, Meekaewkunchorn et al. [40] have explored the performance of SMEs while adding the mediating effect of organizational orientation. A sample of 379 SMEs managers have been collected in Thailand and tested through Smart PLS. The study findings show that there is a significant and positive mediating effect of learning orientation on the relationship between organizational performance and business strategy. Real et al. [41] also explore the mediating effect of organizational learning for the business enterprises. The results through SEM indicate that organizational learning partially mediates on the relationship between performance dynamics and entrepreneurial orientation. Although the mediating effect of organizaional learning has reasonably been investigated in the current literature, yet the earlier studies are unable to explore its role as a mediator on the relationship between job demand and innovative work behaviour. For this purpose, following H4 has been proposed.

H4: There is a significant mediating effect of learning goal orientation on the relationship between job demands and innovative work behavior (Figure 1).

3. METHOD

A quantitative approach to testing the occurrence has been offered by the researcher. Employees of Sonatrach's production branch in Algeria took part in this study. The purposive sampling technique, a non-probability sampling method, was used to determine the sample size for this study. It involves using a wide range of designs to find all potential causes of a very specific and difficult-to-reach population [42]. The data was collected through a team of 5 members over a time span of 3.5 weeks. Moreover, all the teammates were guided enough to provide the proper guidelines to the targeted respondents regarding the filling of the questionnaire. A final sample of 225 responses have been collected which is found to be valid enough for applying the structural model and measurement model.

The stated sample technique may occasionally be the best option for the sampling design, especially when the population is partial and can provide the necessary information [42]. Therefore, using structural equation modelling partial least squares, we tested our fictitious model (PLS-SEM). Structural equation modelling (SEM) with SmartPLS 3.0 software is the analytical tool employed. collected through the self-distribution of questionnaires for research purposes. Data on the factors in this study were gathered using a questionnaire. Measurement items were adapted from the previous literature. In this study, the dependent variable is the innovative work behavior. It was described as a person acting in a way that is designed to deliberately develop, introduce, and use new concepts, procedures, or goods [5]. For measuring IWB, the scale contains nine items provided by Janssen, [5]. The independent variable, “job demands,” is operationalized as “Refer to having to work quickly and effectively, having a lot to do, and having insufficient time.” [5]. The study uses 8-items for measuring this construct provided by [5, 42]. Learning goal orientation is the mediating variable. The concept of Learning goal orientation is measured by using 5-items scales along with its operationalization by Vandewalle [15], a drive to better oneself by learning new things, being competent in new settings, and developing oneself. Along with the successful evaluation of the measurement model, which was a need for sequential analyses in SmartPLS 3.0, the structural model is also tested. Consistent bootstrapping was applied to 5,000 resamples of the Hair et al. [43] proposed reflective measurement model, which is depicted in Figure 2, in order to assess the hypotheses.

4. ANALYSIS AND FINDINGS

4.1 Validity test and reliability test

For testing the reliability of the data, one of the most cited approach is entitled as Cronbach alpha [43, 44]. The value of Cronbach alpha reasonably measures the reliability of the latent constructs as measured through relative items. Researchers claim that the threshold level for Cronbach alpha should be above 0.70. As per the findings under Table 1, it is found that the study variables entitled IWB, JD, and learning orientation have their relative alpha scores of 0.877, 0.795, and 0.865, respectively.

Moreover, the values of composite reliability (CR), Cronbach's alpha (α), and average variance extracted (AVE) obtained for convergent can be used to evaluate the outer
model [44]. The items’ loadings ranged from 0.588 to 0.949, which is a generally acceptable range in exploratory research, in accordance with the criteria of outer loadings supplied by Hair et al., (2017) [43], and they satisfied the threshold requirements of AVE (0.5) and CR (0.7) provided by Kline [45] and Hair et al. [43].

Regarding mediating effects on the relationship between job demands and innovative work behavior, findings indicated that the learning goal orientation construct had a partial mediating effect ($\beta = 0.123, t = 3.817, p<0.01$). So, the fourth hypothesis (H4) was confirmed. When: VAF < 20% (no mediation), VAF $\geq$ 20% and < = 80% (partial mediation), and VAF > 80%, (full mediation) according to the criteria of Hair et al. [45]. The VAF result for JD > LGO > IWB is 60%, indicating partial mediation (Table 3).

### 4.4 Discussion and finding

The findings indicate that H1 job demands have no significant influence on innovative work behavior. Hypothesis (H1) was therefore not supported. As a result, this outcome is consistent with the findings of earlier research [14, 20].

Based on the social exchange relationship, he discovered that workers are eager to repay by engaging in independent, creative work behavior that go beyond the obligations of their employment contracts. The quality of the social exchange relationship with the company will determine how creatively employees can respond to rising levels of job demands [5]. The second hypothesis was supported where job demands have significant positive impacts on learning goal orientation. The outcome is consistent with earlier research’s findings [21]. The results are consistent with the social exchange theory [46], according to which there is an expectation of a favourable return in the future when an employee or management performs a favor for another employee. Thus, it is possible that the respondents’ emphasis on learning goal orientation is a reflection of their appreciation for the finest available training, which might come from their management and improves their capacity to complete more work in a shorter amount of time. Since overqualified employees possess greater abilities to meet their job demands [47].

The results demonstrated that learning goal orientation has a good and significant impact on innovative work behavior. The results support those of Gong et al. [48], who discovered that learning orientation is likely to increase employee creativity and extend their finding to IWB. The findings support the view that employees’ IWB can be seen as the output of learning efforts provided learning orientation is taken into account as the input.

The present study’s findings revealed that the influence of JD on innovative work behavior is effectively mediated through LGO, which supports hypothesis four (H4). This can support the positive effects of JD through LGO on innovative work behavior. The successful mediation makes it clear how crucial LGO is in describing how JD’s indirect impact on innovative work behavior. According to the interpretation of this finding, JD also indirectly influences the innovative work behavior of Sonatrach production employees. LGO is crucial in explaining whatever impact JD may have on innovative work behavior.

This research has contributed in the existing literature in several perspectives. For instance, it is among the initial
research efforts to explore the direct impact of job demand, and learning orientation on the innovative work behavior. Moreover, this research also contributes from the context that it explores the mediating effect of learning orientation on the relationship between job demand and IWB. Besides, the study provides some meaningful policy implications both in theoretical and empirical perspective while taking into account the petroleum industry of Algeria.

5. CONCLUSIONS

The key purpose of current research was to explore the role of job demands in determining the IWB in the petroleum industry of Algeria. Moreover, it further examines the mediating effect of LGO on the relationship between job demands and IWB. The study findings reflect that there is a significant and positive impact of job demand, learning goal orientation on IWB in the petroleum industry of Algeria. Moreover, the results also confirm the mediating effect of LGO on the relationship between job demands and IWB.

The study's findings add to the body of knowledge in a number of ways by offering new perspectives on the elements that influence innovative work behavior through main impacts and mediating impact, particularly in the Algerian environment. The study also revealed that some characteristics had a stronger influence on innovative work behavior than others, adding to the growing body of information regarding the variables that are crucial for enhancing innovative work behavior. A theoretical relevance of this research's extra empirical evidence in the area of social exchange theory is also present. The application of theory has also been expanded through study, which has looked at the correlation with samples taken from the petroleum sectors (Sonatrach production division). This is important since focusing on various study environments may increase the theory's applicability. Additionally, the current study fills a research deficit in the body of knowledge on innovative work behavior in the contexts of Algeria specifically, the Middle East and North Africa generally. The study appeared to be able to fill a theoretical gap by examining innovative work behavior among Algerian petroleum sectors. The findings of the study would thus encourage researchers and top managers to focus more on innovative work behavior across all sectors in Algeria, not only the petroleum sector. On the other side, the practicability of this study implies that findings under current research can help the petroleum industry of Algeria regarding how to promote the innovative work behaviour while taking into account the dynamics like job demands and learning goal orientation. At the same time, this study also infer that during the time of innovation process, petroleum industry need to pay attention to encouraging their employees while be expressive enough while realizing assisting them to realize their innovative ideas. Finally, innovative work behaviour is cornerstone of innovations at organizational level which indeed very much crucial for the development and survival of the organization. Under such circumstances, paper can be used a decision making basis for the petroleum industry to intervene in the innovative work behavior through focusing on the learning goal orientation while creating a stressless working environment.

In addition, the study is restricted in some ways, however only production workers at the Algeria Sonatrach company are included in the research sample. To generalize the research findings, additional industries like SEM must be included in future studies. Second, the study used a cross-sectional survey methodology, requiring future research to use longitudinal surveys in order to produce insightful results. To generalize the findings, future study may concentrate on conducting comparisons with large and medium-sized firms from diverse regions and sectors in other countries. Future research should also take into account other crucial factors including job security and the work environment's mediating role in learning goal orientation across various industries and geographical regions.

REFERENCES

Time pressure: The role of job demands, job resources and individual innovation at work: Going beyond Karasek’s model?. Psciotherma, 19(4): 621-626.


