Relationship between Perceived Behavioral Control, Attitude and Knowledge Sharing among Engineers in Oil and Gas Companies

Mustafa Ahmed Hadi Almher 1*, Banan Badeel Abdal 2
1 College of Graduate Studies Universiti Tenaga Nasional Malaysia
2 College of Graduate Studies Universiti Tenaga Nasional Malaysia

ABSTRACT

To enhance the job performance of engineers in the oil and gas sector, their knowledge and skills should be constantly updated through knowledge sharing. Perceived behavioural control and attitude have been identified as factors that contribute to effective knowledge sharing among employees. However, very little is known about perceived behavioural control and attitude toward knowledge sharing in the Iraqi oil and gas sector. Therefore, this study investigates the relationship between engineer’s perceived behavioural control and attitude on their intention towards knowledge sharing in public oil and gas firms in Iraq. To participate in the study, 240 engineers from oil and gas companies in Iraq were randomly selected. A questionnaire designed in a Likert scale format was used for the data collection. The data were analysed using descriptive statistical analysis and Correlation analysis. The results of the analysis show that there is a positive relation between engineer’s perceived behavioural control and attitude on their intention towards knowledge sharing in public oil and gas firms in Iraq. The study makes some recommendations on how to increase engineers’ perceived behavioural control and attitude and eventually increase their intention towards knowledge sharing.

Keywords:
Selection
Attitude
Knowledge sharing
Oil and gas
Perceived behavioural control

1. INTRODUCTION

In the present day economy of knowledge, employees are considered the major asset of every organization. Thus, the development of every organization is determined by the knowledge and skills of its employees. Knowledge is generally regarded as a core asset that employees can possess. Employers should ensure that the knowledge is increased or updated regularly to increase job performance. This is one of the reasons why some people have strong feelings associated with sharing their expertise and knowledge among employees of an organization (Lindsay, Sheehan, & De Cieri, 2020). For example, common sense indicates that a person might
have more willingness for sharing his or her knowledge with the people whom they like or with whom they have a positive emotion such as sympathy. By following this argument, it can be understood that people also tend to disclose less or nil with whom they have negative connectivity such as disappointment or anger (Ahmed, Ahmad, Ahmad, & Zakaria, 2019). Not always individuals are ready to share knowledge. For example, people do not share their knowledge when they feel that the knowledge that they own is powerful and hence they do not engage in sharing it (Ismail, 2020).

The feeling of an individual to share knowledge may not be up to the mark as that of the requirement by an organization (Nair & Sivakumar, 2018). That is why it is important to understand the factors which influence the decision of engineers for sharing knowledge. Scholars have identified many factors that affect knowledge sharing depending on societies, industries and sectors of the economy. Also, there is a very much significant difference between the public and private sector (Okyere-Kwakye & Nor, 2020). Hence, factors that affect knowledge sharing must be studied in different contexts for a better understanding (Boateng, Dzandu, & Agyemang, 2015). Perceived behavioural control and attitude are some of the factors that enhance knowledge sharing intention among employees of an organization. However, very little is known about these factors in the Iraqi oil and gas industries. Therefore, this study explores the relationship between attitude, perceived behavioural control and knowledge sharing intention of engineers in public oil and gas companies in Iraq.

1.2 Research Questions
1. What is the relationship between engineer’s perceived behavioural control on their intention towards knowledge sharing in public oil and gas firms in Iraq?
2. What is the relationship between engineer’s attitude on their intention towards knowledge sharing in public oil and gas firms in Iraq?

2. LITERATURE REVIEW
Knowledge sharing is considered as a social interaction where skills, knowledge and experiences of individuals of an organization are exchanged and transferred in the entire organization or a department (Dey & Mukhopadhyay, 2020). Knowledge sharing is also defined as an activity whereby transfer, exchange and disseminate of ideas, know-how, skills, expertise and suggestions which are important to an organization or its members (Dutta et al., 2015). It is a relationship between two individuals, one individual is the person who holds the knowledge and the other individual is the person who wants to gain the knowledge (Lindsay et al., 2020).

In the process of knowledge sharing, knowledge is initially gained and systematically structured, and later transferred from one person to another or a group of people. Since knowledge sharing is the process that comprises activities more than just data collection, the value possessed by knowledge gets improved through sharing (Martinez et al., 2019). As such, via means of proper knowledge management, the work quality of employees, their problem-solving capacity, competency, and decision-making skills, gets enhanced which eventually results in multiple benefits for the whole organization. The process of knowledge sharing can take place either directly or indirectly, through face to face communication or other ways of knowledge sharing platforms (Han, 2018). The key component in knowledge sharing within an organization is the “willingness of individuals” since a major chunk of information in an organization is kept by its people (Ali & Dominic, 2018).

At present, knowledge sharing is regarded as the turning point of various organizations around the world. Incompetency and inability of knowledge sharing might hinder or create a negative effect on the global operations of organizations (Kim & Shim, 2018). Some such benefits are- increasing the performance of teams (Chowdhury et al., 2020), increasing the overall performance of organizations (Curtis & Taylor, 2018) via increasing sales and revenue brought in from the newly developed products and services (Curtis & Taylor, 2018), lowering the time taken for developing products and services (Boateng et al., 2015). Various factors have been identified as enablers of knowledge sharing in organizations. These include attitude
Attitude
Attitude can be defined as "an individual's positive or negative assessment of his or her performance of a specific behaviour" (Javaid, Soroya, & Mahmood, 2020). Knowledge, as well as knowledge sharing is deeply correlated by the attitude of individuals towards learning, storing, transferring and exchanging knowledge (Javaid et al., 2020). People's attitude not only affects knowledge sharing but also prevents them from developing, exchanging, storing and sharing knowledge. Because of interpretation activities, the attitude of individuals may be accompanied by certain pre-determined behaviour that impacts the acquisition of knowledge sharing as well as transfer positively or negatively (Arvola et al., 2008).

Perceived Behavioral Control
Perceived behavioural control is defined as the "extend up to which an individual considers the performance of a behaviour to be difficult or easy" (Ajzen & Fishbein, 2000). They extend up to which the performance of a particular behaviour is considered as difficult or easy is impacted by the controlling factors which accompany this element (Sun, Law, & Schuckert, 2020). In the theory of planned behaviour, perceived behavioural control is defined as "the control an individual has over his or her behaviour and which directly affects his or her behaviour" (Sun et al., 2020). Elements of control have been divided into two which are internal control factors and external control factor (Aitken, Watkins, Williams, & Kean, 2020). Internal control factors are in association with self-efficacy as well as personal scientific knowledge for technical expertise. External control factors are associated with the environment of an individual (Dinc & Budic, 2016).

3. RESEARCH METHOD
This study employs a cross-sectional survey research design which enables a researcher to collect data from a single sample at a precise point at a time unlike in longitudinal research
which involves the repeated collection of similar sample for a protracted period (Rindfleisch, Malter, Ganesan, & Moorman, 2008). For this study, data were gathered from a sample of investigation at a particular time. The target population of this study includes all engineers that work in public oil and gas companies in Iraq. The sample is demonstrative of the entire population. Thus, the sample size of this research includes 240 engineers that work in 3 public oil and gas companies in Iraq including south oil company, South Refineries company and Basra oil company.

The study adopts a questionnaire from previous studies (Kakhki et al., 2020). The questionnaire was designed in a five-point Likert scale from “strongly disagree” (1) to “strongly agree” (5) and to measurement respondents’ agreement with the items of the questionnaire.

The items for the dependent variable, intention towards knowledge sharing were taken from Kakhki et al., (2020). While the independent variables were taken from other sources: Perceived behavioural control (Zhang and Ng (2012), and attitude (Kakhki et al., 2020).

Reliability analysis was run to ensure the internal consistency of the questionnaire. The alpha Cronbach’s coefficient is more than 0.7 for each variable which is considered acceptable (Sekaran & Bougie, 2016).

![Fig. 1. Conceptual framework](image)

To ensure the validity of the questionnaire, two teams of experts validated the items. The first team comprises professors from a human resource department in a university in Malaysia. The second team includes two experts from the oil and gas industry. Both teams validated the questionnaire and ensure that it covers the items related to the variables and previous investigations (Sekaran & Bougie, 2016).

The questionnaire was distributed to the respondents during lunchtime in their respective organizations. They were given 20 minutes to fill out the questionnaire. Then, the researcher collected the questionnaire upon completion. After collecting the data, the normality test was run to make sure that the data is normally distributed and fit to run the correlational analysis. The P-value of Kolmogorov-Smirnov is observed to be 0.181 and which is more than 0.05. As a result, the data distribution is normal. Additionally, the Shapiro-Wilk’ P-value is 0.119 and that is greater than 0.05. Hence, the distribution of data in this research is normal.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s alpha</th>
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<tr>
<td>Knowledge sharing Intention</td>
<td>0.92</td>
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<tr>
<td>Attitude</td>
<td>0.89</td>
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<tr>
<td>Perceived Behavioral Control</td>
<td>0.90</td>
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To answer the research questions of the study, SPSS (Statistical Package for Social Sciences) version 24.0 was used to analyse the data. Specifically, Pearson Correlation analysis was
conducted to answer the research questions. The results of the correlation analysis show that there is a positive significant correlation between engineers’ attitude and intention towards knowledge sharing (r = .638, p = .000) Sig. at 0.05 as in Table 3.

Table 3. Correlation between attitude and intention towards knowledge sharing

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<th>Intention towards knowledge sharing</th>
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<tr>
<td>Attitude</td>
<td>Pearson Correlation</td>
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<td>Sig. (2-tailed)</td>
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<td>Intention</td>
<td>Pearson Correlation</td>
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The correlation analysis’ outcomes demonstrate that the P-value for the knowledge sharing intention and Attitude’s (AT) relationship is <0.05. Therefore, it suggests that the correlation amongst intention of knowledge sharing and Attitude (AT) is significant statistically. Likewise, the positive correlation coefficient of knowledge sharing intention and Attitude (AT) displays that Attitude (AT) has affirmatively correlates with knowledge sharing intention. Thus, the intention of engineers concerning the sharing of knowledge in public oil & gas firms in Iraq is positively and significantly interrelated to Attitude (AT). Likewise, the outcomes of the analysis have confirmed a significantly positive effect of Attitude (AT) on the engineers’ intention for sharing knowledge in public firms of gas and oil in Iraq. These all conclusions indicate that the results of the analysis of data support this initial hypothesis of the research. For that reason, a significant positive relationship of Attitude (AT) on the engineer’s intention for sharing knowledge in Iraqi public firms of oil and gas was observed.

Therefore, it suggests that the improvement of engineer’s Attitude (AT) towards the sharing of knowledge would escalate the intention of their knowledge sharing. Hence, these conclusions are in agreement with the former researcher’s results regarding the association between behavioural intention and attitude. Moreover, there exists compact empirical evidence which supports such a relationship. Such as, (Mafabi et al., 2017) presented an altered model during their examination that studied the factors affecting an individual’s intention while sharing information. Moreover, they directed research over a set of samples comprising employees inside a large organization’s unit. And further, their consequences supported the developed hypothesis which was that the employees’ attitude correlates the employees’ information sharing intention (Mafabi et al., 2017). Additionally, (Abdillah et al., 2018) established an integrated model which also provided an attitude’s crucial impacts’ empirical validation on the usage of information sharing as well as on its intention. Observing the consequences of an alternative study elaborated that attitude was deliberated as a critical factor. And it further predicts the intentions for following the training system based on computer and software development’ aggressive mode (Abdillah et al., 2018). Hence, attitude is acknowledged as a key factor that facilitates the individual’s usage behaviour towards information technology. Likewise, (Mohammad et al., 2018) executed research that comprised multiple individual and dissimilar variables. Hence, by their investigation, they observed attitude as a key element affecting people’s behavioural intention (Mohammad et al., 2018).

Relationship between engineer’s perceived behavioural control on their intention towards knowledge sharing

The results of the correlation analysis show that is a positive significant correlation between perceived behavioural control and
The result shows a correlation among the Knowledge sharing intention and Perceived Behavioral Control (PBC) displayed a statistical significance according to the outcomes of the study’s correlation analysis. Furthermore, a positive correlation was observed on the Intention of knowledge sharing by the Perceived Behavioral Control (PBC) through the correlation analysis’ findings. Further, the intention of engineers concerning the sharing of knowledge in public firms of gas and oil of Iraq was perceived to have a significant and positive correlation with the PBC (Perceived Behavioral Control). Moreover, the outcomes of analysis verified a significantly positive effect of Perceived Behavioral Control (PBC) on the engineers’ intention to the sharing of knowledge in communal firms of oil and gas of Iraq. Likewise, it suggests that engineer’s improved Perceived Behavioral Control (PBC) for knowledge sharing will augment the intention of their knowledge sharing. Additionally, such results are similar to the former studies’ outcomes regarding the association between behavioural intention and control of perceived behaviour. Moreover, in the case where a person is thought to comprise an abundant inductor control and competence over her/his knowledge, then there is an expectation regarding that specific individual’s intention of knowledge sharing (Kakhki et al., 2020). Hence, it would gradually lead to a person’s sharing and engaging her/his knowledge with others (Mafabi et al., 2017).

5. CONCLUSION

The study investigates the relationship between engineer’s perceived behavioural control and attitude on their intention towards knowledge sharing in public oil and gas firms in Iraq. The findings of the study show a positive relationship between engineer’s perceived behavioural control and attitude on their intention towards knowledge sharing in public oil and gas firms in Iraq. The findings would be useful in supporting the companies of oil and gas to determine the major factors for sharing knowledge intention of their workers. Thus, understanding the knowledge sharing determinants of any organizations and interchange amongst employees as well as suitable management practices could be employed to encourage these kinds of behaviour. Hence, enhancing the innovation, productivity, and complete competitiveness of an organization. Although there are other factors that potentially influence the intention of engineers towards knowledge sharing, the study is limited to only two mentions earlier. Also, the study is restricted to only three public companies of gas and oil in Iraq which affect the generalization of the findings. And only a questionnaire is used for the data collection. Future studies can use more respondents from both private and public companies and use other instruments such as interviews for the
data collection. Despite the limitations, the study has contributed to the literature in the field, and provide insight for managers on how to enhance knowledge sharing among engineers by encouraging them to have a positive perceived behavioural control and attitude. Eventually, their performance will be increased.

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