Influence of National Culture on Staff Preferences to Knowledge Sharing Practices: the Case of Saudi Arabia

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Abstract: ***A number of practices for sharing knowledge has been recommended in the literature. These practices, however, are considered to be applicable, universally. This assumption is challenged by this paper which empirically explores the relationship between national culture and knowledge sharing practices in the context of procuring educational buildings in Saudi Arabia. The paper reports on a research study with the aim to identify whether national culture dimensions could be significant variables that impact upon staff preferences in relation to project knowledge sharing practices. The paper critically reviews the literature to identify appropriate measures for knowledge sharing practices. It explores the means by which public sectors professional exchange project knowledge; evaluates policies and level of technical support needed to facilitate knowledge sharing, then proceeds to how employees perceive the benefits they will gain by practicing project knowledge sharing, and their role in this process. The paper tests the relationships among the research constructs based on data collected from 115 project managers responsible for the procurement of educational buildings in Saudi Arabia. The paper provides empirical evidence that the national culture has a significant influence on staff preferences. In light of the research findings the paper concludes with practical recommendations for project knowledge sharing practices that are in line with staff preferences and their cultural orientation. The recommendations should facilitate a more effective application of knowledge sharing practices.***

Keywords: Knowledge Sharing Practices, Staff Presences, National Culture, Educational Buildings

I. Introduction

While construction projects may vary in size and location, they share many common features in terms of functionality, procurement and construction [1]. Public sector projects in Saudi Arabia encounter common delays due to [2-4]:

1) Pressure exerted by the Saudi Government to speed up project completion.

2) Communication gap between constructors and designers.

3) Insufficient detailed working drawings.

4) Lack of the designer's knowledge of available materials and equipment.

Sharing project experience and knowledge among project staff will: reduce the cost of problem solving; and decrease the probability of repeat problems [5]. In other words, sharing knowledge leads to faster response times which help firms meet construction requirements with lower operational costs [6].

This paper intends to provide empirical evidence as an attempt to answer the following question: *To what extent does the national culture (NC) influence staff preferences for project knowledge sharing (KS) practices*? Establishing the extent to which this occurs will help to provide practical recommendations reflecting staff preferences and their cultural orientation, in order to facilitate the more effective application of KS practices.

In terms of the research scope, this paper focuses on the influence of the NC dimensions on staff preferences to KS practices, specifically in the context of the procurement of public educational building projects in Saudi Arabia.

II. Literature Review

A. Knowledge Sharing

KS is the dissemination of information or knowledge through a whole department or organisation [7]. Such KS is the voluntary dissemination of acquired skills and experience to the rest of the organisation [8]. Calantone et al. [9], acknowledge that, often, internal KS is defined as "the beliefs or routines for disseminating knowledge and experience across the units of an organisation". For Dyer and Nobeoka [10], KS can be defined as "those activities helping communities of people to work together, facilitating the exchange of their knowledge, enabling a learning environment, and increasing the ability to achieve individual and organisational goals".

To promote KS, an understanding of the factors preventing the sharing is required. These factors can be categorized into the following three levels; each level with its own barriers that block effective KS [11];[12]:

1) At an individual level, KS barriers are frequently related to a lack of communication skills and social networks, differences in NC, an overemphasis of position statuses, and a lack of time and trust.

2) At an organisational level, barriers tend to be linked to economic viability, the lack of infrastructure and resources, the physical environment, and the accessibility of formal and informal meeting spaces.

3) At a technological level, barriers appear to correlate with factors, such as, the refusal to use applications, due to a mismatch with need requirements, unrealistic expectations of IT systems, and difficulties in building, integrating and modifying IT systems.

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Organisational climate influences the perceived relative advantage, compatibility and complexity of KS [13-14]. These findings highlight that social-oriented organisational climate (i.e. top management support, open communication, stimulus to develop new ideas, and reward systems in inducing KS) are likely to have positive benefits and compatible beliefs about promoting KS.

While KS has become a key concern to organisations because of the increasing recognition that tacit knowledge is of more value than explicit knowledge [15]. Literature reveals that one of the biggest challenges in KS is the distribution of the right knowledge from the right people to the right people at the right time [11]. Even if the best management systems are instituted and effective information/communication techniques are put in use, the related working knowledge might still not be shared and infused into the right people [12].

Research on organisational learning and knowledge creation indicates that KS, communication and learning, in organisations, are deeply influenced by the cultural values of the individual employees [15]. Other studies outline cross-cultural sharing barriers, based on organisational culture. Still, there are few empirical studies that investigate the impact of NC on KS practices [16].

B. National Culture

The Global Leadership and Organizational Behaviour Effectiveness Research Program (GLOBE) define culture as "shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives that are transmitted across generations" [17]. The term culture can refer to professional culture, organisational culture, and/or national culture [18].

To study cultural influence on societies, one need typologies [19] or dimensions [20] that can be used to analyse the behaviours, actions and values of the members of a society[21]. This paper investigates the NC, as seen through the Value Survey Module 2008 (VSM 08) framework which, is based on Hofstede's earlier work [20], [22], [23], [24]; [25];[26].

Hofstede's dimensions were also identified as existing at the individual level, as well as at the national level [27]. These findings seem reasonable, since cultural differences exist across members of different cultures, and across members within one culture. Thus, what applies at the cultural level may or may not apply at the individual level. Furthermore, existing empirical studies in a number of Arab countries have tended to confirm Hofstede's findings [20]; [22];[[25]; [29,30].

Hofstede found four cultural dimensions: 1) the Power Distance Index (PDI); 2) the Individualism Index (IDV); 3) the Masculinity Index (MAS); and 4) the Uncertainty Avoidance Index (UAI) [22]. The fifth dimension was the Long Term Orientation Index (LTO) ([24];[29];[25]; [26]). In 2008, Hofstede et al. added two new cultural dimensions as the Indulgence vs. Restraint Index (IVR), and the Monumentalism Index (MON) [25]; [26]; [31].

III. RESEARCH METHODOLOGY

This paper provides empirical evidence for the argument that addresses the extent to which NC influences staff preferences to KS practices. Therefore, the key research objective is to provide practical recommendations, which are in line with staff preferences and their cultural orientation, in order to facilitate a more effective application of KS practices. In terms of research scope, the paper focuses on the influence of the NC dimensions on staff preferences to KS practices in the context of the procurement of public educational building projects in Saudi Arabia.

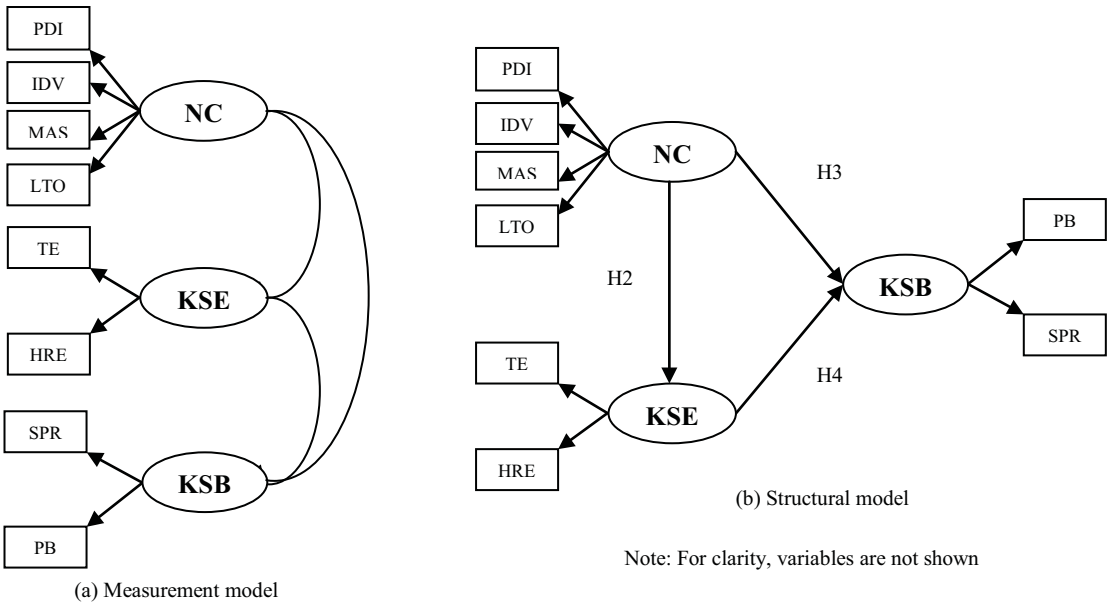
The paper employs quantitative methods derived from the research of well-established scholars in the field. Thus a self-administered survey was used to collect the data for the following four constructs: 1) knowledge sharing means (KSM), 2) knowledge sharing enablers (KSE), 3) knowledge sharing benefits (KSB), and 4) the national culture (NC). Most of the questionnaire items in this research were adapted from the available published questionnaire instruments. The questionnaire has three sections:

1) Knowledge sharing practices adapted from relevant literature.
2) Values Survey Module 2008 (VSM 08).
3) Demographic information of the respondents.

A questionnaire survey was conducted in Saudi Arabia (capital city, Riyadh). Personally administered questionnaires were distributed to all individual professionals working for the Directorates of Projects and Maintenance, in two Saudi government sectors: 135 individuals in the Vice-Ministry of Buildings in the Ministry of Education and 115 individuals in the General Directorate of Projects and Maintenance in the Technical and Vocational Training Corporation. The respondents were asked to describe their preferences, by rating each statement using a 5-point Likert rating system.

A total of 229 questionnaires returned, thus achieving an effective response rate of 81.2%; From the received responses, a total of 203 questionnaires were found to be valid and were retained for further analysis. Within the study, specific statistical techniques were employed to analyse the data collected from the field surveys. The data analysis served to fulfil three main objectives: 1) getting a feel for the data by checking the central tendency and the dispersion; 2) testing the goodness of the data by measuring the reliability and validity; and 3) testing the hypotheses developed for the research [32].

Confirmatory factor analysis (CFA) model were designed to test the multidimensionality and the factorial validity of the constructs of the theoretical framework [33]. As an objectives of the CFA was to confirm the dimensionality of the scales, achieving a clearer separation of the factors became the focal point. In the current study, the maximum likelihood estimation (MLE) was adopted as the estimation method for the CFA analysis, since MLE is relatively unbiased, especially under moderate violation of normality [34].



(a) Measurement model

(b) Structural model

Note: For clarity, variables are not shown

FIGURE I
TWO KEY SEM COMPONENTS

Structural Equation Modelling (SEM) is a technique, which is extended from multivariate analyses, was employed to quantitatively analyse the data collected from the questionnaire survey. Further, SEM is used to determine the validity of a theoretical (a priori) model by identifying, estimating and evaluating the linear relationships among a set of observed and unobserved variables [34]. Indeed, SEM provides a basis for hypothesis testing by estimating the path coefficients of the causal links of the linear relationships amongst the observed and observed variables [33], see Figure I.

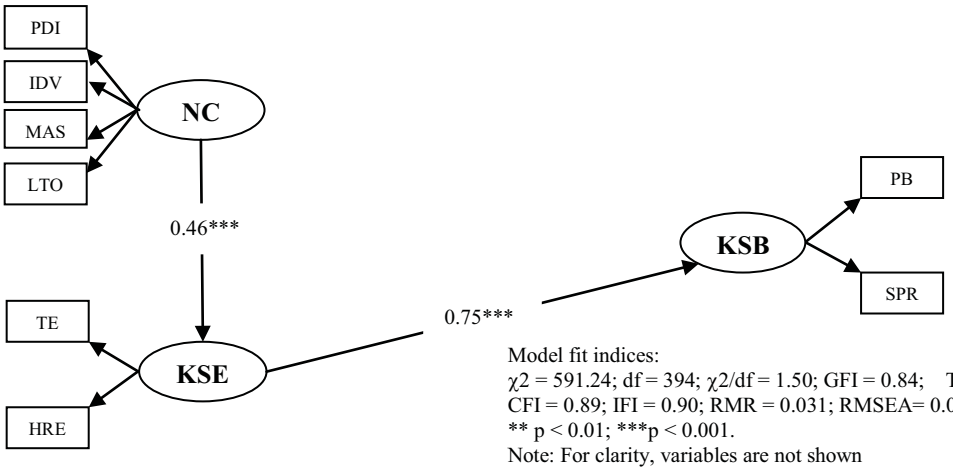
IV. RESULTS

Correlation and regression analyses found a moderate association between the NC construct and the KSM construct, factors and variables. The multiple regression analysis on the construct level indicated that the national culture had a positive association with the KS practices (KSM, KSE and KSB). The multiple regression analysis at the factor level showed that, firstly, three of the national culture factors (PDI, MAS and LTO) were significant predictors for the staff preference to the knowledge sharing means (KSM). Secondly, two of the national culture factors (PDI and MAS) were found to be significant predictors for the staff preference to the knowledge sharing enablers (KSE). Thirdly, two of the national culture factors (PDI and MAS) were found to be significant predictors for the staff belief in the knowledge sharing benefits (KSB). Furthermore, SEM was used to confirm that the KSE construct completely mediates the influence of the NC on KSB. In the structural model, the relationships between the four constructs are represented in order to test the hypothesised directional relationships.

A test was conducted on the mediating role of the KSE construct in determining the effect of the NC construct on the KSB construct. This was achieved by first assessing the initial model when the effect of KSE was not controlled for (i.e. assessing the conceptual model without the KSE construct). According to the results, all the fit indices indicated that the model (without the KSE construct), demonstrates an acceptable level of fit. More importantly, there was a significant and relatively strong positive direct effect on the KSB construct from the NC construct. The findings satisfied the basic requirements of a complete mediating effect, thus indicating that the KSE was a mediating construct that mediates the relationship between the NC and the KSB constructs (see Figure II).

V. DISCUSSION

The analysis of the NC dimensions identified four (PDI, IDV, MAS and LTO) out of the seven of NC dimensions as significantly correlating with the KS practices. The NC construct had a weak association with the KSE construct, factors and variables. The MAS was the only factor having statistically significant predicting power over the variance of all KSE factors, within the NC construct. The PDI also had statistically significant predicting power over the variance of the TE. In the current study, SEM has been used to explore the mediating role of the KSE construct. A two-step modelling approach has been followed. First, the entire measurement model was specified and assessed to establish its validity and uni-dimensionality. Second, the structural model was tested to examine the directional relationships between the constructs. In both steps, the model fit indices and parameter estimates were evaluated, with similar procedures and criteria as employed in the CFA.



Model fit indices:
$\chi 2 = 591.24$; df = 394; $\chi 2/df = 1.50$; GFI = 0.84; TLI = 0.88;
CFI = 0.89; IFI = 0.90; RMR = 0.031; RMSEA= 0.05
** $p < 0.01$; ***$p < 0.001$.
Note: For clarity, variables are not shown

FIGURE II
FINAL MODEL

The paper provides empirical evidence for the argument that management support and reward systems significantly improve the knowledge sharing process [13]; [11]. Also, the HR enablers and the technical enablers appear to reduce the barriers; at the organisational level, these include the lack of infrastructure and resources, while at the technological level, they include the unrealistic expectations of IT systems, and the difficulties inherent in building, integrating and modifying such systems.

Further, a high PDI score affects knowledge transfer because of the stable and strong hierarchical differences which characterize PDI orientated cultures. Thus, employees tend to be hesitant to speak out in front of their superiors; this may lead them to provide knowledge either only in a top-down direction or only if they are clearly advised to do so by their superiors.

Consequently, in a high PDI like in Saudi Arabia, employees will only support knowledge transfer if it is based on direct instruction of a superior [35]; [36]. The current study confirms these findings.

Relatively, in a culture with a high PDI the subordinate is expected to be told what to do, while the managers rely on formal rules as part of their supervisory role [25]. This paper confirms that the KS process can strongly benefit from having management support.

Based on the findings, the NC has a positive influence on the KSB, with the key culture dimensions being PDI, IDV and MAS. With regard to staff preferences in relation to the KSB, the respondents, in general, strongly believe in the benefit of the KS, namely, that it was important to practise it. In contrast, their curiosity into what other colleagues were doing was not a common practice. The findings confirm Yang [37] assertions that the stronger the KS climate an organisation has, then the degree of organisational efficiency achieved will be greater. Additionally, the current study also confirms the perceived benefits from KS practices. The other relationship tested was the mediating role of the KSE construct in determining the effect of the NC construct on the KSB construct.

This relationship was suggested by Ford and Chan [38]. The current test results confirm that the KSE construct completely mediates the relationships between the NC and the KSB constructs. It appears to be normal human behaviour that people naturally focus on those tasks that are more beneficial to them. Employees need a strong motivator in order to share knowledge [39]. For this reason, it is unrealistic to assume that all employees are willing to easily offer their knowledge to another without considering what may be gained or lost as a result of this action. Although, the respondents in this study believed in the benefits of KS, however, in a NC with a high PDI and low IDV and MAS, top management support plays an important role in these decisions. Hence, top management needs to reinforce and promote trust between workers.

Developing and enhancing such trust can be facilitated by arranging different meeting opportunities, such as social events and the occasional outdoor discussions [39].

VI. CONCLUSION

This paper has succeeded in providing the missing link between knowledge sharing practices and national culture. The research was conducted in response to the need to investigate the relationship between national culture and knowledge sharing. While some research, related to these topics, can be found in some professional journals, no research has examined the relationships between national culture and knowledge sharing practices in the construction industry in developing country, such as Saudi Arabia. The current study, therefore, provides data and background information to fill this knowledge gap.

Further, the findings provide empirical evidence to answer the question; *to what extent does the national culture influence the staff preferences to knowledge sharing practises?*

The findings stress the need for a personalization strategy, which links people, through networks, to facilitate personal contacts and face-to-face conversations.

The opportunity to share also exists when people can interact and communicate, when knowledge can flow, and interpersonal relationships can be developed. Such a strategy is the preferred approach in a culture with a low IDV, as is the case in Saudi Arabia. It is, therefore, recommended that people should spend more time, and work more closely, together to discuss problems, to reflect on their experiences, and to develop their relationship.

The findings also confirm that knowledge is exploited and transferred through problem solving or questioning, as it allows people to reflect on, and make sense of, their own experience. Underpinned by the research findings, this study sheds additional light on the national culture and knowledge sharing research by providing empirical evidence with regard to the relationships among these two concepts. More specifically, the results indicate that select national culture dimensions are positively related to knowledge sharing practices.

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