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The role of organisational climate in managing knowledge sharing among academics in higher education

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ABSTRACT

Organizations have often implemented Knowledge Management programs to connect employees better and promote knowledge sharing (KS). In the context of Higher Education Institutions (HEIs), this is particularly valid as knowledge creation and dissemination direct their mission and vision. Academics are one of the pillars of HEIs, where knowledge is created and shared. Nonetheless, as HEIs strive to promote academics' knowledge sharing culture, the actual behaviour of academics might remain inhibited by numerous issues, namely the organizational. Prior research has been focused primarily on individual, technological and scarce aspects of organizational elements. Therefore, this study assesses the role of organizational climate operationalized by organizational leadership and trust in academics' KS in HEIs. Partial Least Square (PLS) method where variance-based Structural Equation Modelling (SEM) was applied in this study. Results from 257 surveyed academics indicate that organizational climate has an exceptionally strong influence on academics' KS practices. Additionally, organizational leadership and trust had a positive relationship with academics' KS behaviour. These findings indicate that it is necessary to consider organizational elements and their interactions when understanding and fostering academics' knowledge sharing behaviour in HEIs context.

1. Introduction

The power of knowledge is enhanced when knowledge is shared (Nonaka & Takeuchi, 1995), and knowledge sharing (KS) has been arguably the foundation of many knowledge management programs (Hislop, 2013). Knowledge management (KM) programs have been gaining more importance as an essential topic for research, particularly in the academic field (Al-Kurdi, El-Haddadeh, & Eldabi, 2018; Fauzi, Tan, Thurasamy, & Ojo, 2019; Sunalai & Beyerlein, 2015). The potential role of KM in contributing to the success of organizations in general and universities, in particular, should not be overlooked. KM enhances the decision-making process by making it faster and efficient to find relevant information and resources (Beadles, Aston, Lowery, & Johns, 2005; Lopez-Nicolas & Soto-Acost, 2010). A large number of studies have examined the factors that influence KS in various settings (Bock, Zmud, Kim, & Lee, 2005; Hislop, 2013; Jiacheng, Lu, & Francesco, 2010; Qureshi & Evans, 2015). Few studies addressed knowledge sharing in universities and particularly among academics. Although academics play a crucial role as expert knowledge workers engaged in knowledge activities through teaching and research (Fullwood & Rowley, 2017; Kim & Ju, 2008), Increased number of researchers argued that knowledge-hoarding continues to be a challenge in academic institutions (Cheng, Ho, & Lau, 2009, Fullwood & Rowely, 2013; Charband & Jafari Navimipour, 2018; Fauzi et al., 2019). Thus, managing KS in academia is now an emerging research agenda. When employees disseminate their knowledge, skills and expertise among organizational members, the performance of employees improves, and organizations become more innovative. In this context, managing employees' knowledge effectively and efficiently is essential for the success of the organization. Today, numerous organizations in other sectors have realized the benefits and advantages of knowledge sharing. KS research in these sectors has been extended to achieve an organization's intended goals. Several studies have examined the factors that influence KS in various environments (Ahmed, Ahmad, Ahmad, & Zakaria, 2018; Bock et al., 2005; Hislop, 2013; Qureshi & Evans, 2015).

Universities are knowledge-intensive organizations that create and disseminate knowledge to students and society. Thus, knowledge management and sharing in universities are emerging issues. Significant benefits in terms of competitive advantage for universities can come from harnessing knowledge within universities (Mahdi & Almsafir, 2014). Academics are recognized as intellectual leaders for the development of society. Their primary tasks are considered

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teaching, learning, and publication. However, prior studies suggests that academics are idiosyncratic, reluctant to share knowledge, and attentive to their individual attainment instead of achieving universities' goals (Al-Kurdi et al., 2018; Charband & Jafari Navimipour, 2018; Fullwood & Rowley, 2017; Fullwood, Rowley, & Delbridge, 2013; Othman & Skaik, 2014; Tan, 2016). This is a dilemma for managing knowledge and sharing in universities. Meanwhile, researchers like Howell and Annansingh (2013) and Al-Kurdi, Gohneim, and Roubaie (2014) and Fullwood and Rowley (2017) list number of barriers to knowledge sharing in higher education but, in general, there is a lack of empirical research into knowledge sharing in the higher education sector. Therefore, there is a need to understand what factors can influence academics' KS intentions and in doing so could improve universities' knowledge management and sharing practices for more innovative capability. Revealing the perceptions and attitudes of academics toward sharing information and knowledge will assist in understanding what academic institutions must be aware of in order to establish an organizational culture that generates new knowledge by institutionalizing the knowledge-sharing process. Prior research into knowledge sharing in a higher education context has primarily focused on Malaysia (e.g. Al-Kurdi et al., 2018; Goh & Sandhu, 2013; Tan, 2016). However, cultural differences limit the generalisability of this research. Consequently, this study seeks to address the research gap in this area. Therefore, the main question that this study is attempting to answer is "How various organizational variables (Organizational climate, leadership and trust) influence academics' KS behaviour?" Notably, the research objectives are to:

- Investigate critical factors that may enable knowledge sharing or act as blocks to sharing knowledge between academics in HEIs.
- Develop a practical understanding of the impact of organizational climate, leadership, trust on knowledge sharing beyond cultural boundaries.

The research uses quantitative methodology in the investigation. This study consists of nine sections: 1. Introduction; 2. Background of KS in HEIs; 3. Issues and Challenges of KS in Academia; 4. Organizational Climate; 5. Theoretical Background and Framework; 6. Research Methodology; 7. Data Analysis and Results; 8. Discussion; and 9. Conclusions.

2. Significance of knowledge management and sharing in HEIs

Given the research objectives, this chapter first reviews studies on knowledge management and sharing in the context of Higher Education Institutions to gain sufficient understanding of the critical concepts associated with knowledge sharing activities in HEIs. Many organizations are increasingly investing in KM to connect employees better and promote knowledge sharing activities. This is followed by a description of context-specific enablers and barriers to knowledge sharing a particularly organizational climate, which is the critical concept examined in this study. Knowledge in this study is divided into tacit and explicit. Explicit knowledge can be easily retrieved by everyone and easily obtained, and Meanwhile, tacit knowledge is more valuable, it cannot be obtained or access quickly, because of it is intangible, and It must be shared by the person who owns the knowledge (Goh & Sandhu, 2013).

Many studies in the commercial and public sector have revealed that knowledge sharing is a fundamental element of Knowledge Management (KM) process and strategies (Jiacheng et al., 2010; Kukko, 2013). Even though the importance of KM in other sectors and the extent of HEIs as knowledge centred organizations, Cronin (2001) argued that there is no guarantee for KM to have similar success in the HEI sector. He suggested this lack of guarantee is due to the lack of shared culture in the higher education sector when compared to the corporate culture in the commercial sector. Similarly, Rowley (2000) asked Is higher education ready for knowledge management? Ramachandran (2013) established that there were few attempts by HEIs to implement comprehensive KM and KS programs and strategies. Some of these attempts were implemented in the University of Leeds, Ohio State University and Robert Gordon University (Branin, 2003; McManus & Loughridge, 2002). Although the fundamental purpose of these projects was to manage explicit knowledge in the organization in order to provide communication means between librarians and faculty members, they did not address knowledge sharing among academics.

A university is seen as a platform for academics to share ideas and insights (Martin & Marion, 2005). Jones and Sallis (2013) argued that academics are expert knowledge workers engaged in university-related knowledge activities like teaching and research. Saad and Haron (2013) listed three categories of knowledge that academics could exchange: coded, social, and institutional knowledge. Institutional knowledge refers to university key activities such as research, expertise, and policies. Social knowledge is related to shared culture, beliefs, values, ethics, and norms. The third type of knowledge is coded knowledge; this type includes knowledge shared among academics in electronic or written format. Each of these types of information may be shared in a variety of ways that can range from sharing among colleagues in a formal setting to sharing among a wide variety of individuals in a social setting (Talja, 2015). In this respect, academics' knowledge is considered a vital resource and an asset for universities as they create knowledge through research and disseminate knowledge to students through teaching activities and industry through collaboration (Fullwood & Rowley, 2017). Their engagement in KS activities is critical for the success of KM efforts, teaching and research output (Kim & Ju, 2008; Fullwood, Rowley, & McLean, 2018). From the perspective of academics, sharing knowledge takes place during normal job activities with students and other academics (Sohail & Daud, 2009). The problem arises when some academics do not contribute or share knowledge. Reluctance to share knowledge by academics would undermine the institution's efforts to achieve its objectives, enhance research collaboration, and enhance innovation in society at large. Despite the importance of KS among academics, a small number of studies have taken place in universities (Feiz, Dehghani Soltani, & Farsizadeh, 2017; Fullwood et al., 2018; Howell & Annansingh, 2013).

Although there are number of studies (e.g. Alotaibi, Crowder, & Wills, 2014; Fullwood et al., 2013; Howell & Annansingh, 2013; Jolaee, Nor, Khani, & Yusoff, 2014) that examined factors influencing academics' knowledge sharing practices but, in general, there is a lack of empirical research into knowledge sharing in the higher education sector. While Alotaibi et al. (2014) suggested a model to identify factors affecting academics' knowledge sharing among academics using technology, the knowledge sharing Technology Model is not empirically tested or validated. Jolaee et al. (2014) suggested that attitudes are positively influencing knowledge sharing intention, while self-efficacy, subjective norms and trust were not found to be of significance. The insignificance of trust conflicted with findings from previous studies (e.g. Davenport & Prusak, 1998; O'Dell & Grayson, 1998). Extrinsic or external rewards were found to not have a positive effect on KS among academics in the study by Jolaee et al. (2014). This finding was inconsistent with earlier findings (Liebowitz, 1999; Quinn, Anderson, & Finkelstein, 1996). Fullwood et al. (2013) suggested that the KS culture among academics is individualistic in nature and self-serving. Besides, reactions by academics regarding the effect of leadership and IT were low or reasonably neutral. This was not in line with the findings of Wang and Noe (2010).

3. Barriers and enablers of knowledge sharing among academics in HEIs

This section reviews relevant contextual studies to gain ample understanding of investigated factors that may influence academics' behaviour towards sharing knowledge in academia. Academics in this study refers to faculty members that are directly involved in teaching,

research and other academic activities. Most of academics are experts in their area and for the knowledge residing in their head to be disseminated, it has to be shared. The dilemma ascents when academics are not willing to share their knowledge. Riege (2005) clustered potential reasons that may prevent academics from sharing into three clusters: individual, organizational and technological. These factors will be discussed next in details.

Liebowitz (2001) argued that educational institutions do not apply coherent KM programs. The lack of application of KM and KS in HEIs compared to other sectors can be attributed to the few attempts to utilize the widely recognized benefits of KM (Cheng et al., 2009). According to Tippins (2003) reluctance to share knowledge can be a significant issue in academia because of the emphasis on publishing primary research, a highly individualistic undertaking. Universities are observed as a platform for academics to share ideas and insights (Martin & Marion, 2005). KM and knowledge sharing among academics ought to be a critical factor in knowledge intensiveorganizations like universities. Academics are generally perceived to be independent, individualistic, and autonomous. They incline to focus on individual academic goals and visions rather than working toward common goals (Fullwood et al., 2013). Academics are also embedded within an organizational mixture of disciplinary context and institutional alliances (Austin, 1990; Kuh & Whitt, 1988) that is made up of numerous subcultures (Tierney, 1988). Clark (1987) stated that these subcultures involves professional, institutional and disciplinary cultures or subcultures. Ipe (2003) and Rowley (2000) argued that these subcultures plays a key role in determining the knowledge sharing behaviour of academic staff and shape the way they teach and interact with their peer and students.

Faculty members produce great amounts of research and course-related resources as the result of their teaching and scholarly research activities. Research related knowledge are frequently disseminated through academic publications, conferences and forums. However, most of the time, course related resources and other types of knowledge are organized and preserved individually. For example, statistical materials, course management skills and research interests of students have highly valuable intellectual and practice merits. These resources and knowledge might not be shared efficiently between colleagues who teach the same courses in the same semester or following semesters (Kim & Ju, 2008).

On the other hand, Tan (2016) suggested that KS in academia is influenced at the organisational, technological, and individual levels. Using Theory of Planned Behaviour (TPB), Goh and Sandhu (2013) validated a KS model that included emotional factors like active commitment, trust, subjective norms, attitude and perceived behavioural control (PBC). They showed all examined factors to have positive influence on academics' KS behaviours. However, Daud, Wahab, and Nordin (2015) found that only TPB constructs (intention, attitude, subjective norm and PBC) had an impact on KS behaviour among academics. Academics' organisational, individual, and technological factors were examined by Cheng et al. (2009). The researchers found thatorganizational factors like incentive systems had the strongest influence on academics' KS behaviour. By contrast, Kim and Ju (2008) determined that academics' perceptions andorganizational reward systems were found to impact academics' KS the most.

4. Organizational climate, leadership and trust

Most prior research have focused for the most part on individual, technological and some aspects of organizational factors (Daud et al., 2015; Goh & Sandhu, 2013; Kim & Ju, 2008; Tan, 2016), and do not go in depth to understand the primary organizational predictors such as the prevailing organizational climate, leadership and trust. This section will examine the literature in an attempt to gain ample understanding of these organizational factors and their potential impact on an individual's knowledge sharing behaviour.

Organizational climate is believed to be associated with organizational culture, but it takes a different perspective. While the literature indicates that culture describes the organizational beliefs, values and artefacts, climate explains the features of the organization from the perspective of employees (Schein, 1985). Organizational climate is more concerned with subjective impressions, feelings and perception of the actions of organizational members (Gray, 2008). Hence, organizational climate guides employees' conduct by conveying to them what behaviour is desirable and appropriate in the organization. Subjective norms are frequently formed after considering organizational values and norms (Chennamaneni, Teng, & Raja, 2012; Shanker, Bhanugopan, Van der Heijden, & Farrell, 2017). Ajzen and Fishbein (1980) argued that organizational climate could influence an individual's subjective norm by relaying to them what behaviour is appropriate or expected. Also, Chennamaneni et al. (2012) suggested that organizational climate had the highest impact on employees' subjective norms. A climate of free-flowing information, employees trusting others and the management is suggested to promote KS (Hinds & Pfeffer, 2003; Wasko & Faraj, 2000). Several empirical studies signified the strong relationship between organizational climate and KS intention (Abzari & Abbasi, 2011; Bock et al., 2005; Chennamaneni et al., 2012). Bock et al. (2005) have characterized organizational climate into fairness, innovativeness, and affiliation. Fairness refers to an employee's perception that organizational practices are just and fair. This builds trust among employees and can motivate employees to share knowledge. Innovativeness concerns employees' perceptions that the organization highly regards creativity and innovation. This builds trust between organizational members and management and can promote KS. Affiliation is the perception of belonging to an organization.

It should be noted, however, that the Bock study emphasizes the corporate environment rather than an educational one or an HEI. While studies examined the role of organizational climate on KS in the commercial sector, there were very limited studies related to HEI context.

On the other hand, there have been many other studies that have examined organizational trust. For example, Long (2002) examined the building of organizational trust. Wech (2002) tested the relationship between interactions and trust of leaders. Gilbert and Li-Ping Tang (1998) described organizational trust as "a feeling of confidence and support in an employer… organizational trust refers to employee faith in corporate goal attainment and organizational leaders, and to the belief that ultimately, organizational action will prove beneficial for employees" (p. 322). Previous literature in the non-HEI sector has documented, trust among employees is an essential prerequisite for knowledge sharing (Ali et al., 2014; Paliszkiewicz & Koohang, 2013). Therefore, exploring the role of organizational trust in academics' knowledge sharing in HEI is promoted.

In the context of higher education institutions, two types of leadership were identified by Yielder and Codling (2004). Academic leadership and managerial leadership are distinct types. Managerial leadership is concerned with job titles, authority and controls as well as administrative supervision. Connelly and Kelloway (2003) confirmed that employees' perceptions of management support characterized by leadership had a positive impact on knowledge-sharing culture among MBA students at four Canadian universities. Al Husseini and Elbeltagi (2013) showed that leaders could stimulate the transfer of tacit and explicit knowledge between employees. Despite the number of studies exploring the impact of leadership on knowledge sharing in the commercial sector, limited studies investigated the role of academic leadership on knowledge sharing among academics.

5. The underpinning knowledge sharing behavioural theories

This study points to identify organizational factors that may contribute to influencing academics' knowledge sharing behaviour in a university setting. In doing so, this section will review the main underlying theories in human behavioural studies followed by the

selection of an appropriate theoretical lens for this study with its rationale.

Behaviour is the degree to which an individual decides to perform or not perform a specific action, and it is determined by the individual's intention to perform it or not (Ajzen & Fishbein, 1980; Ajzen, 1991). Robertson (2002) states that knowledge sharing is a human action; therefore, it is an optional behaviour and cannot be forced on individuals. Due to the claimed particular characteristics of academics like independence and idiosyncratic personalities, they may have different perceptions and attitudes toward knowledge-sharing than members in other types of organizations (Fullwood et al., 2014; Fullwood & Rowley, 2017; Kim & Ju, 2008). To be able to understand academics' behaviour towards KS further, the authors assessed several existing behavioural models and selected the Theory of Planned Behaviour (TPB). TPB will be discussed in the next section. Theory of Reasoned Action (TRA) was not selected since it does not consider the factors that facilitate the performance of the behaviour referred to as "control beliefs" (Ajzen, 2006). Also, the Technology Acceptance Model (TAM) was excluded because of the focus on the user's acceptance and usage of technology and not the general individual behavioural examination. (Venkatesh, Morris, Davis, & Davis, 2003). However, dimension like Trust was incorporated from Social Capital theory (SCT) to supplement variables from TPB. According to SCT, Trust is a social mechanism that exists in the structure of social relations. (Paxton, 2002). In the context of knowledge sharing, it can be assumed that people share their knowledge with those who trust them. Therefore, trust as another vital factor that influences knowledge sharing was incorporated in this study as an independent variable (Riege, 2005). According to Gray (2008), organizational climate is concerned with employees' perceptions and feelings of actions by other organizational members. Thus, it is an essential factor to be included in this study.

5.1. Theory of planned behaviour (TPB)

TPB is one of the prominent theories in assessing individual behaviour. Arise in the 80 s; it was first proposed by Ajzen and Fishbein (1980), initially as Theory of Reasoned Action (TRA). The theory stated that behaviour is a predictor of both the attitude and subjective norm. An added variable of perceived behavioural control (PBC) makes up TPB in 1990 (Ajzen, 2006). TPB suggests three separate antecedents control human behavioural intentions to do particular behaviour: attitudes, subjective norms, and perceived behaviour controls (Ajzen, 1991). TPB is one of the most influential and widely used theories to explain human behaviour in specific contexts (Morris, Marzano, Dandy, & O'Brien, 2012; Arnold et al., 2006). Moreover, TPB is a well-established theory with pre-determined factors that influence behavioural intention and actual behaviour (Hsieh, Rai, & Keil, 2008; Pavlou & Fygenson, 2006). TPB was efficiently used in many studies to predict and understand antecedents to KS intentions and behaviour among individuals (Abzari & Abbasi, 2011; Daud et al., 2015; Goh & Sandhu, 2014; Tohidinia & Mosakhani, 2010). While TPB was arguably one of the most influential applied behavioural models, researchers have contemplated how to extend it further. Some writers incorporated factors driven from other theories, including Social Exchange Theory, Self Determination Theory, and others (Chennamaneni, 2006; Tohidinia & Mosakhani, 2010) in efforts to increase our collective understanding of KS behaviours. Likewise, this study tends to extend TPB by infusing it with several additional variables based on the literature in understanding human behaviour, with academics as primary knowledge sharing providers in HEIs.

5.2. Research model and hypothesis development

The main aim of this study is to investigate knowledge sharing behaviour and its predictors among university academics within the prevailing organizational climate in HEIs. In doing so, a conceptual framework for this study was developed based on TPB in which "attitude", "subjective norm" and "behaviour-based control" were influential factors of the intention to share knowledge (Fishbein & Ajzen, 1975). Organizational climate characterized by fairness and affiliation was included as a key independent variable based on previous studies (Bock et al., 2005). Also, "trust" was incorporated into the research model based on the SCT (Kim & Ju, 2008). The developed research model is presented in Fig. 1.

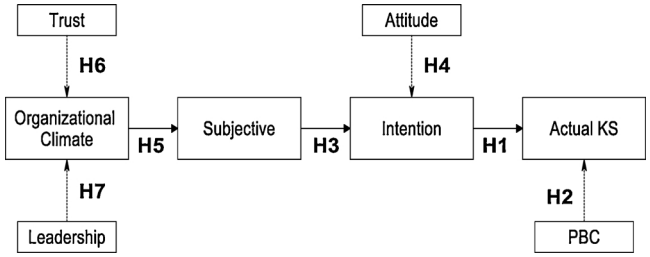

Fig. 1. Research model.

According to TPB, the behavioural intention has been regarded as essential for examining actual behaviour as a dependent variable (Ajzen, 1991). Intentional behaviour is described by Ajzen (1991) as the readiness of someone to engage in knowledge sharing activity. In a well-designed study, a strong significant causal link was found between the physician's intention and actual knowledge sharing behaviour by Ryu, Ho, and Han (2003). Similar results were reported by Tohdinia and Mosakhani, (2010). Based on the results of prior studies and according to the TPB, it can be argued that KS intention has a significant impact on actual sharing behaviour. The first hypotheses, H1, relates to the intention to share knowledge between academics. It suggests that if the academics have the intent to share knowledge, they are more likely to share it

H1. Intention to share knowledge between academics will lead to greater actual sharing of knowledge.

Perceived Behaviour Control (PBC) is established by the TPB model as a determinant of predicting the intention to perform a specific behaviour. PBC is described by Ajzen (1991) as the beliefs of the individual on the accessibility or inaccessibility of resources or factors needed to perform, facilitate or hinder the behaviour performance. Typically, the role of PBC collectively with attitude and subjective norm predict intentional behaviour. Second, jointly with intention, it acts as a co-determinant of the actual behaviour (Ajzen, 1991). Ryu et al. (2003) showed that the lack of perceived behavioural control negatively affects KS. They also found a significant impact on physicians' actual KS. In a well-designed study, Chennamaneni et al. (2012) asserted the positive relationship between PBC and actual knowledge sharing. This suggested the second hypothesis:

H2. *There is a significant relationship between academic's perceived behaviour control and actual knowledge sharing.*

Subjective norms refer to an individual's perception of social pressure to perform or not to perform a specific behaviour of interest (Ajzen, 1991). TPB suggests that a subjective norm is a critical factor that can influence intention toward a specific behaviour. SN is positively linked to the intention to perform a behaviour. Chennamaneni et al. (2012) found positive impacts of SN on the intention to share knowledge among academicians. Similar findings were reported by Othman and Skaik (2014) where SN was found to be a strong predictor of KS intention among academics. This literature led to the concept for the third hypothesis:

H3. Subjective norms have a significant effect on the academic's intention to share knowledge.

According to Ajzen and Fishbein (1980), attitudes are a set of beliefs

(positive or negative) feelings toward the intention to perform a behaviour. Therefore, attitude is the degree to which an individual has a favourable or unfavourable assessment of the behaviour (Ajzen, 1991). TPB considers attitude as a key determinant impacting the intention to perform a specific behaviour. Chennamaneni et al. reported a significant positive relationship between attitudes and intention to share knowledge., (2012). Hsu and Lin (2008) concluded that attitudes are a strong predictor of intentional KS using a blog system from the world wide web. This led to the next hypothesis:

H4. A more positive academics' attitude towards knowledge sharing will lead to greater intention to share knowledge among other academics

While organizational climate characteristics are associated with culture, it takes a rather different viewpoint. Culture has been described as "the way we do things around here ", this conclusion is both complex and hard to justify because of many different factors and constraints, formal and informal, verbal and tacit. (Abzari & Abbasi, 2011)., on the other hand, describes characteristics of the organization from the viewpoint of the individual participant (Schein, 1985); therefore organization climate refers to the perceptions and emotions of employees regarding their work environment. Bock et al. (2005) identified fairness, innovativeness and affiliation as characters of organization climate that determinants individual's subjective norm toward the intention of knowledge sharing. Fairness is an employee's perception that organizational practices are; therefore, fairness would encourage individuals to share knowledge. Affiliation, on the other hand, provides a sense of togetherness to employees to help each other. Khalil et al. (2014) showed that affiliation was a significant predictive of organizational climate towards KS intention. This assessment of the literature led to the fifth hypothesis:

H5. Organizational climate characterized by fairness and affiliation has a significant relationship with academics' subjective norm towards sharing knowledge.

Hsu, Ju, Yen, and Chang (2007) suggested that trust is a complex multi-facet concept; consequently, the literature provided several definitions of organizational trust. One is by Mayer, Davis, and Schoorman (1995), where they described trust as "willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p. 712). Gilbert and Li-Ping Tang (1998, p. 322) on the other hand, defined organizational trust as the "… the belief that an employer will be straightforward and will follow through on their commitments". Davenport and Prusak (1998) identified trust as a prerequisite of knowledge sharing among employees, while Kukko (2013) empirically outlined that a lack of trust among employees is a barrier to knowledge sharing. Hence, an organizational trust could affect the tendency of employees to share information with higher ranked employees. This conceptualization led to the sixth hypothesis:

H6. Organizational trust has a significant relationship with the organizational climate.

Previous studies mostly defined leadership as the ability to influence other people to follow a leader in order to help the leader achieve his or her goals (Dessler, 2001). Banutu-Gomez (2013) indicated that leadership influences the relationships between leaders and followers to accomplish shared goals. Prior research identified two primary types of leadership: transformational and transactional, which are known by "New Leadership" domain (Burns, 1978 cited by Bass, 1985). Both these types were based on the work of Bass (1985), and the original work of Burns (1978) and House (1977). Transformational leadership is defined in term of the leader's effect on followers: followers feel trust, admiration, loyalty, and respect toward the leader, they are motivated to do more than they initially expected to do (Yukl, 1998). Transactional leadership, on the other hand, involve some exchange between leaders, co-workers and followers (Bass & Avolio, 1994). They reach agreements of what followers would receive for achieving the negotiated performance level (Howell & Avollio, 1993). Due to the role leaders play, they have an enormous impact on KM and knowledge sharing practices within their organizations (Politis, 2002). They create conditions to promote KS culture. The literature relating to leadership style led to the seventh and final hypothesis:

H7. Leadership style has a significant relationship with organizational climate among academics.

6. Research methodology

To achieve the research objectives, this study proposes a conceptual model of the factors that affect academics' KS in HEIs. The conceptual model was operationalized by previous relevant studies (Bock et al., 2005; Kim & Ju, 2008; Taylor & Todd, 1995, 1995; Riege, 2005). The conceptual model will be validated using Partial Least SequreSquare (PLS)- Structural Equation ModelingModelling (SEM). A questionnaire was used developed to collect the data from faculty members as the most appropriate methodology as it is cost-effective, fast and easy to collect responses from a large number of participants (Bryman & Bell, 2014). The researcher employed survey data collection based on the questionnaires designed by (Bock et al., 2005; Kim & Ju, 2008; Riege, 2005; Taylor & Todd, 1995) with minor modifications to ensure contextual consistency for HEIs. Table 1 summarises the sources of the items for measuring the variables and results of their reliability test results (Cronbach α) in the online survey. All items were measured using seven-point Likert scales in which "1 = strongly disagree" and "7 = strongly agree", with the exception of the initial section on types of knowledge where five-point scale was used, and possible response was "never", "seldom", "sometimes", "often" and "always". Besides, the questionnaire included demographic data including colleges, length of time in HEIs, position, and gender. The questionnaire was pre-piloted with expert researchers and then piloted with a small sample of typical respondents. All piloted measurements showed adequate Cronbach α larger than 0.70.

6.1. Sample and data collection

The population of this study is academic staff at higher academic institutions. The data was collected via direct emails to fill the survey sent to universities associated with the authors. Initially, UK universities were targeted; the survey was sent to 1000 faculty members. However, the response rate was meagre. Universities are organized differently; however, generally, they have a similar structure (Altbach, Reisberg, & Rumbley, 2009; Altbach, 2015). They are divided into several schools or faculties, academic departments, have a board of trustees, chancellor and vice-chancellor. Thus, the authors chosen to expand the sample outside of UK to increase access to participants, questionnaire replies were collected from academics working at

Table 1
Source of Measurement Items.

Construct	Source	Cronbach's α
Intention to share knowledge	Bock et al. (2005)	0.92 (Explicit) 0.93 (Implicit)
Attitude towards knowledge sharing	Bock et al. (2005)	0.91
Subject Norm (SN)	Bock et al. (2005)	0.82
Perceived Behaviour Control (PBC)	Taylor and Todd (1995)	0.70
Organizational Climate	Bock et al. (2005)	Affiliation 0.89 Fairness: 0.87
Trust	Kim and Ju (2008)	0.77
Leadership	Riege (2005)	

institutions associated with the authors who were affiliated and have contacts in different universities in the Gulf Cooperation Council including Saudi Arabia, UAE, Bahrain, Kuwait, Qatar, Oman in addition to Jordan and Egypt universities.

Also, given the low response rate and the difficulty of access, a snowball sampling technique was utilized to reach 3000 academics. To do this, ResearchGate, Academia.edu and LinkedIn groups were also used to increase the sample size. After repeated follow up emails, the final response rate was less than 10% but acceptable for the study, data analysis and PLS-SEM to test the hypothesis. A total of 257 valid surveys were considered for SPSS and PLS data analysis. The population surveyed contained more males than females, and more than half of the population was highly educated with a PhD or Doctorate; the total percentage of respondents holding master's degrees and PhDs was nearly 98%. In terms of academic positions, lecturers were the most significant participants in the survey at 21.8%, followed by associate professors at 18.3%. Assistant and full professors were equally represented at 14% each. The distribution of age and education suggests that these respondents are experienced and highly educated in the field of general academic knowledge. The indication, then, is that the population of interest for the general topical area of knowledge management and knowledge-sharing was reached. Individual disciplines were well represented. Respondents reported being employed in a wide range of disciplines, including Social Science, Arts and Humanities, Science, Technology, Engineering and Mathematics (STEM), Health and Social Care. The vast majority of the respondents (84.8%) had been at their universities 15 years or less. This demographic represents tenure. Public universities had a somewhat higher rate of response than did private universities. The type of organizations that respondents worked at was represented relatively equally. Fifty-Seven per cent of the respondents reported that they work for public universities, and 43% worked for private institutions.

6.2. Study instrument

The main instrument of the study was a questionnaire with two parts. The two parts were comprised on demographics that described the respondent population. The second part provided the study's questions. These questions related to the variables.

7. Data analysis and results

The study adopted a two-step process as suggested by Hair and Hult (2016) to assess the measurement model and the structural model. The first step involved assessing the measurement model by running algorithm in SmartPLS 3.0.

7.1. Measurement model

The measurement model tested in two stages: convergent and discriminant validity analyses. All of the measurement items had loadings higher than the recommended value of 0.70 (see Table 2) The composite reliability values, which explain the extent to which the construct indicators indicate the latent construct, ranged from 0.836 to 0.915, beyond the recommended value of 0.80 indicate adequate convergent consistency, with a majority of them that is greater than 0.85 (see Table 2).

The results of the average variance extracted were in the range of 0.561 and 0.755, whereby each average variance extracted value was well above the recommended level of 0.50. (see Table 2) This indicates adequate convergent validity of items in each construct. Overall, the result shows that this study's measurement model has provided adequate internal consistency and convergent validity. Next, the discriminant validity was tested. Based on the results, all square roots of average variance extracted exceeded the off-diagonal elements in their corresponding row and column. Also, all off-diagonal elements are lower than square roots of average variance extracted (bolded on the diagonal), which indicates satisfactory discriminant validity (see Tables 2 and 3). Thus, the result confirmed that the Fornell and Larcker's (1981) criterion are met. 5.2 Overall Fit of the Structural Model

Validation of structural model was accomplished with SMART PLS version 3.0. The model was setup in SMART PLS as per the guidelines given in the PLS-Graph Users Guide (Chin, 2001). Missing data were replaced

Table 3
Correlation Matrix, Cronbach a, Composite Reliability and AVE.

	ATT_	INT	KSB	LEAD	OC	PBC_	SN	TRU	t value
INT	0.578	**0.734**	0.257	0.702	0.462	0.224	0.506	0.281	11.463
INT	0.537	**0.818**	0.320	0.764	0.560	0.216	0.824	0.413	16.035
INT	0.477	**0.715**	0.129	0.747	0.464	0.152	0.440	0.175	8.982
INT	0.410	**0.726**	0.259	0.787	0.664	0.210	0.578	0.406	13.023
SN	0.477	0.585	0.433	0.586	0.659	0.497	**0.865**	0.596	28.444
SN	0.537	0.818	0.320	0.764	0.560	0.216	**0.824**	0.413	23.762
SN	0.585	0.705	0.331	0.701	0.709	0.406	**0.915**	0.510	34.528
PBC	0.255	0.258	0.293	0.247	0.283	**0.693**	0.304	0.273	7.003
PBC	0.308	0.259	0.262	0.249	0.329	**0.759**	0.375	0.305	6.745
PBC	0.124	0.160	0.389	0.169	0.372	**0.840**	0.314	0.394	10.083
PBC	0.139	0.159	0.256	0.160	0.268	**0.717**	0.304	0.231	6.763
TRU	0.275	0.373	0.387	0.368	0.552	0.329	0.450	**0.863**	19.922
TRU	0.285	0.339	0.374	0.333	0.518	0.405	0.500	**0.900**	20.743
TRU	0.399	0.462	0.363	0.464	0.636	0.364	0.593	**0.917**	22.527
OC	0.460	0.517	0.362	0.526	**0.789**	0.396	0.610	0.610	17.832
OC	0.588	0.542	0.357	0.548	**0.832**	0.321	0.597	0.529	22.419
OC	0.417	0.495	0.352	0.495	**0.745**	0.400	0.552	0.520	15.836
OC	0.530	0.663	0.335	0.688	**0.793**	0.281	0.618	0.436	17.422
OC	0.484	0.596	0.305	0.592	**0.675**	0.326	0.492	0.419	15.382
OC	0.454	0.445	0.251	0.459	**0.712**	0.165	0.483	0.387	12.153
LEAD	0.578	0.734	0.257	**0.702**	0.462	0.224	0.506	0.281	8.057
LEAD	0.537	0.818	0.320	**0.764**	0.560	0.216	0.824	0.413	14.043
LEAD	0.477	0.715	0.129	**0.747**	0.464	0.152	0.440	0.175	9.765
LEAD	0.410	0.726	0.259	**0.787**	0.664	0.210	0.578	0.406	13.646
KSB	0.217	0.272	**0.836**	0.261	0.318	0.282	0.361	0.342	10.321
KSB	0.091	0.178	**0.693**	0.164	0.174	0.166	0.219	0.208	3.988
KSB	0.270	0.205	**0.654**	0.189	0.235	0.249	0.258	0.204	6.640
KSB	0.178	0.222	**0.856**	0.210	0.391	0.392	0.321	0.426	14.452
KSB	0.280	0.316	**0.874**	0.313	0.427	0.383	0.376	0.415	14.128
KSB	0.272	0.367	**0.876**	0.370	0.436	0.398	0.401	0.347	15.317
ATT	**0.830**	0.610	0.317	0.597	0.665	0.318	0.603	0.423	17.350
ATT	**0.874**	0.562	0.177	0.545	0.478	0.190	0.495	0.262	14.825
ATT	**0.862**	0.535	0.218	0.532	0.499	0.153	0.474	0.231	18.262

Table 2
Cross Loading of Factors.

	ATT_	INT	KSB	LEAD	OC	PBC_	SN	TRU	α	CR	AVE
ATT_	**0.855**								0.817	0.891	0.732
INT	0.668	**0.749**							0.744	0.836	0.561
KSB	0.280	0.336	**0.803**						0.889	0.915	0.645
LEAD	0.655	0.994	0.327	**0.751**					0.744	0.837	0.563
OC	0.645	0.718	0.433	0.730	**0.760**				0.852	0.891	0.577
PBC_	0.262	0.270	0.407	0.268	0.419	**0.754**			0.748	0.840	0.569
SN	0.616	0.814	0.413	0.792	0.740	0.424	**0.869**		0.837	0.902	0.755
TRU	0.363	0.442	0.418	0.439	0.641	0.408	0.579	**0.894**	0.874	0.923	0.799

Table 4
R Square, Path Coefficient, T-Value and P-Value.

Construct		R^2	β	t Value	P
KSB		0.22			
	INT		0.24	3.97	0.00
	PBC		0.34	6.79	0.00
INT		0.71			
	SN		0.54	15.55	0.00
	ATT		0.26	5.49	0.00
SN		0.54			
	OC		0.64	24.23	0.00
OC		0.66			
	LEAD		0.55	13.82	0.00
	TRU		0.39	9.84	0.00

with a "-1". Following Chin (1998), bootstrap resampling Method (500 iterations) that uses randomly selected subsamples was employed to estimate the theoretical model and hypothesised relationships. The R square value (R2) in a structural equation model measures the amount of variance in the dependent variable that an independent variable explains. As a rule of thumb, this R2 for endogenous variables should be higher or equal to 0.10 (Falk & Miller, 1992). The R2 values, path coefficients, t values and the significance values are presented in Table 4.

7.2. Results

Having evaluated the measurement model, we tested the structural model. Fig. 2 depicts the path coefficients and their significance along with the R2-values for each dependent construct. As indicated in Fig. 2 and Table 5, the results of hypotheses testing show that all proposed factors had statistically significant relationships, therefore all hypothesis were supported. Out of the examinedorganizational factors, organisational climate has the strongest impact (t = 24.23, β = 0.74) on academics' subjective norm. As expected, SN had the second significant influence on academics' intention to share knowledge (t = 15.55, β = 0.64). leadership jointly with trust had strong influence onorganizational climate. While attitude, had moderate influence on academics' intention to share knowledge, perceived behaviour control had slightly stronger relation with intention.

Table 5
Summary of Hypothesis Testing.

	Construct	Path Coefficient	T Statistics	P Values	Results
H1	**INT - > KSB**	0.244	3.972	0.000	Supported
H2	**PBC_ - > KSB**	0.341	6.795	0.000	Supported
H3	**SN - > INT**	0.649	15.557	0.000	Supported
H4	**ATT_ - > INT**	0.268	5.494	0.000	Supported
H5	**OC - > SN**	0.740	24.237	0.000	Supported
H6	**TRU - > OC**	0.396	9.846	0.000	Supported
H7	**LEAD - > OC**	0.556	13.282	0.000	Supported

8. Discussion

The current study provides theoretical and practical insights to understand knowledge sharing behaviour and its predictors among selected academics in HEIs. The findings should also be beneficial to both researchers in the domain of KM and the practitioners: academic administrators and HEIs policymakers in general as well. While commercial sector experienced an extended number of research studies in the area of knowledge sharing, previous research on knowledge sharing in the context of higher education primarily focused on Malaysia and Saudi Arabia (Goh & Sandhu, 2013; Tan, 2016). We adopted a selected number of factors to examine the process by which knowledge is shared among academics in higher education in multiple countries. The main objective of this study was to examine factors that might impact KS among academics in HEIs from an organizational perspective. To address this crucial issue, a conceptual research framework based on the Theory of Planned Behaviour has been developed to provide a more comprehensive understanding of the impact of organizational climate on inter-campus KS practices between academics. In this study, the organizational climate is operationalized by organizational trust and leadership to reflect holistic organizational elements. Several empirical findings in this study were consistent with previous knowledge-sharing studies in higher education (Fullwood et al., 2013; Kim & Ju, 2008;

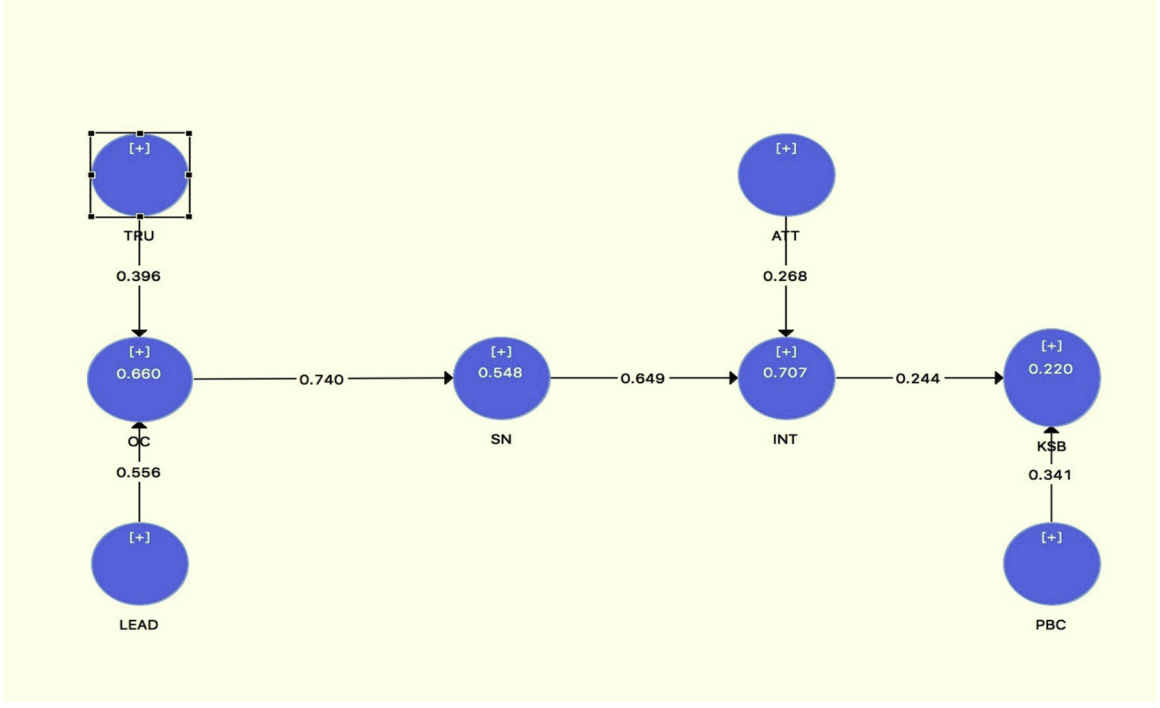

Fig. 2. PLS SEM Results.

Nordin, Daud, & Osman, 2012). However, a large number of these studies were mainly conducted in Malaysian universities with homogenous staff. Although the populations were not homogenous with the populations in the current study, the results were similar, suggesting that knowledge-sharing is the critical factor rather than culture.

This study has significantly recognized the positive influence of organizational climate, trust and leadership on knowledge sharing intention of academics. The results of this study indicate that all hypothesis was supported and strengthen the findings of previous studies. Analysis of data from surveyed higher academic institutions found that organizational climate (H5), trust (H6) and leadership (H7) have a positive and significant relationship with the intention to share knowledge. Together, these three predictors explained 66% of the variance of knowledge sharing intention between academics. Besides, all variables grounded on TPB had a positive relationship with academics' KS as predicted by the model. Hence, the findings answer the primary research question of this study "How various variables influence academics' KS behaviour?"

In explaining the hypothesis, TPB, intention to share knowledge had a significant influence on actual KS behaviour. This implies that the intention to share knowledge is a precondition of actual KS behaviour. The empirical findings of this study revealed a positive significant path coefficient of $\beta = 0.24$, $t > 1.96$ and $P \leq 0.05$. This finding was consistent with other KS studies (e.g. Bock et al., 2005; Chennamaneni et al., 2012; Goh & Sandhu, 2013; Othman & Skaik, 2014; Tohdidin and Moskhani, 2010). This finding suggests that the higher the intention of academics towards KS, the more likely to participate in KS behaviours. Although, this study revealed that attitude and subjective norm emerged as significant predictors of academics' intention towards knowledge-sharing (H3, H4). Thus, it is of interest to point out that only 66.5% of the survey respondents intended to share knowledge in the future. The literature clearly showed that sharing of knowledge is a productive activity both from the educational, psychological and business perspectives (Othman & Skaik, 2014). Thus, it is interesting that a minority of the respondents, all highly educated individuals, believe that it is not a good practice to share knowledge. Perhaps the most significant knowledge factor gained in the sections of the survey that dealt with attitudes towards the sharing of knowledge was that only 60% of the respondents disagreed in some form with the idea that sharing knowledge with their colleagues is harmful. The corollary is that the remaining of these respondents believe or not sure that sharing knowledge with colleagues could be harmful. To have a minority of the academics feel that sharing knowledge is a negative experience highlights an area of improvements needed in the academic environment

PBC refers to the beliefs of the individual on the accessibility or inaccessibility of resources needed to perform, facilitate or hinder the behaviour performance. The empirical results of this study revealed a positive path coefficient of $\beta = 0.34$, $t > 1.96$ and $p \leq 0.05$. The finding of this study thus suggests that the higher the academics' level of control and competency over his/her KS capabilities, the more likely to engage in KS. This finding received support from previous studies focusing on KS (e.g. Ajzen, 1991; Chennamaneni et al., 2012; Pavlou & Fygenson, 2006; Taylor & Todd, 1995). The results of this research are further according to past research, and therefore, it can be argued that despite the diversity of academics at HEIs, they are extremely inspired to take part in KS activities to the level that they believe that time and resources allow doing so.

TPB consider SN a critical factor in determining intention to perform a particular behaviour. SN showcases the participant's feelings of whether the actions are approved, triggered, and used by the participant's group of influence. The organizational climate in the context of HEIs would clarify academics' perceptions of the overall existing academic environment. As expected and compatible with the framework of TPB, subjective emerged as a significant predictor of academics' intention towards KS. Consistent with previous literature, the finding of this study indicates extremely positive relation at $\beta = 0.64$, $t > 1.96$ and $p \leq 0.05$ (Daud et al., 2015; Goh & Sandhu, 2013; Othman & Skaik, 2014; Srite & Karahanna, 2006). However, the finding of the current study does not support the conclusion of Jolaee et al. (2014), who found no significant relation between SN and intention to share among academics in Malaysia. It seems possible that this result is due to the social aspects of academics working at that university. Nevertheless, the findings of this study indicate that academics consider the expectations by colleagues, academic managers and leaders to be significant in terms of KS activities.

In this study, organizational climate refers to the shared values, beliefs, and assumptions by academics within HEIs (Chennamaneni et al., 2012). It usually guides the employee's actions towards specific behaviour. This study operationalized organizational climate by using affiliation and fairness in an academic context. Consistent with previous results, this study found the organizational climate to have an exceptionally substantial positive impact on academics' subjective norm at $\beta = 0.74$, $t = 24.23$ (the highest path coefficient and t-value among all factors). Prior empirical Evidence confirms similar results in the commercial sector (Abzari & Abbasi, 2011; Chennamaneni et al., 2012; Khalil, Atieh, Mohammad, & Bagdadlian, 2014). This finding shows that organizational climate positively influences academics' decision to participate in KS activities; it also highlights that management fairness and affiliation to the university are conductive of organizational climate that would encourage KS.

In this research, organizational trust represents the employee's beliefs and feelings that management is reliably delivering and following through on their responsibilities towards staff and operations (Gilbert & Li-Ping Tang, 1998:322). The current study indicates positive relationships between academics' organizational trust and organizational climate at a beta coefficient of 0.39 and $t > 1.96$ and $p = 0.00$. This result is in line with those of previous studies (Casimir, Lee, & Loon, 2012; Davenport & Prusak, 1998; Kukko, 2013). The findings reported here suggest that organizational trust plays a critical role in promoting KS among academics. Hence, academic managers should foster organizational programs to strengthen this relationship.

In this study, leadership refers to the influences between leaders and followers intending to accomplish shared objectives (Banutu-Gomez, 2013). As discussed earlier, previous literature identified two critical types of leadership: transformational and transactional that would impact academics' KS behaviour. In this study, leadership was empirically found to have a positive impact on academics' subjective norm at a beta coefficient of $\beta = 0.55$, $t = 13.28$. The result mirrors those of previous studies that examined the role of leadership on KS (e.g. Fullwood et al., 2013; Nguyen & Mohamed, 2011; Ramayah & Effendi, 2011). However, this outcome is contrary to that of Wickramasinghe and Widyaratne (2012) who found no such relationship. This somewhat surprising result could be associated with the context of their study, the current study is exploring KS in HEIs, while the study by Wickramasinghe and Widyaratne (2012) investigated KS in a project team context. Another possible explanation of their finding is due to the substantial reliance of team members on each other rather than team leaders in a team or project environment. The findings reported here indicate that management leadership is vital in promoting KS behaviours among academics. Investigation of the HEI leadership variable showed that nearly 60% of the academics believed their leadership had a strong sense of direction (59.5%), but 36.6% disagreed, with nearly 4% being undecided as to the direction of the leadership. The feeling of separation between the academics and the university managers was emphasized by the fact that 43.2% of the respondents felt that senior management did not seek their opinions, while 39.6% felt that the managers sought their opinion out. At the same time, 24.1% felt that senior management was not respected by the academics, while 66.5% believed that senior management was respected. Both of these response sets support very consistent responses through the course of the research. Undoubtedly, this is an area that could be explored in further research, perhaps research based on the current study but with a concentration on

leadership and culture.

9. Conclusion and future research

According to the literature, active knowledge-sharing behaviour cannot be forced but must be fostered with the help of motivators associated with academics' intentions to share knowledge with others. Based on the findings, it can be concluded that the selected academics for this study believed that organizational climate, leadership and trust culture existed among peers and academic management in their institutions. They also believed that organizational leadership (management) somehow need to play a more significant role in supporting and promoting support knowledge sharing activities. The next section will summarise the key findings of the study.

Sharing climate, the findings of this study have shown the importance of academics' subjective norm when it comes to KS behaviour. This indicates that academics' perception and feelings of the actions of organizational members, including leadership and other colleagues, significantly influence the sharing of knowledge. The present research was designed to examine the influence of organizational climate on academics' KS behaviour in HEIs by proposing a model based on the Theory of Planned Behaviour augmented with constructs driven from social exchange theory. The model was validated by PLS- SEM analysis, which was statistically significant. The organizational climate was found to be the strongest predictor of actual KS ($\beta = 0.74$) and explained that 66 per cent of the variance in the subjective norm. ($R2 = 0.66$). The second strongest predictor revealed by this study was SN ($\beta = 0.64$) and explained 54 per cent of the variance of intention to share. Academic managers should capitalize on this by exercising their positive influence on encouraging KS behaviour through consistent demonstration of the value of collaboration and helping other colleagues. Forming smaller cross-discipline research communities of practice would enhance academics' subjective norms. The finding of this study also highlights the positive role of leadership and organizational trust in encouraging KS activities. Hence, university managers and department leaders should visibly demonstrate their support and commitment to promoting KS behaviours and value of sharing knowledge internally and externally. Moreover, University officials and academic leaders must promote coherent programs to encourage internal and external knowledge collaborations in light of increased internationalization of higher education sector and transnational academics' mobility.

The findings of this research provide theoretical and practical suggestions in determining and explaining knowledge sharing behaviour of academics. On the theoretical face, This study expanded previous research by outlining a set of comprehensive organizational elements that are likely to affect knowledge sharing behaviours and provide empirical support regarding the influence of these elements in the HEI context. This study offers an integrated and extended TPB theoretical model that employed the well-cited TPB variables and augmenting it with constructs driven from social exchange theory and previous literature. This illustrates a stronger theoretical base. Moreover, the study's findings provide a robust model for intention-based KS behaviour. (Bock et al., 2005; Chennamaneni et al., 2012; Jolaee et al., 2014; Othman & Skaik, 2014). Due to the exhaustiveness of the antecedents identified, the variables explained about 71 per cent of the variance in KS intention. From a pragmatic perspective, The findings of this study suggest that academics' attitudes are a strong predictor of intentional behaviour and actual sharing of knowledge, therefore, university officials should promote positive attitudes towards sharing behaviours. The results of this study indicate that organizational climate and leadership had a substantial influence on academics' subjective norm; therefore, academic managers and department leaders should visibly demonstrate their support and commitment to promoting knowledge sharing behaviours and value of sharing knowledge internally and externally.

Similar to most of the research work, the findings of this study are subject to at least three limitations. First, the design of this research used cross-sectional data. This method may limit causality to be drawn from the results. Nonetheless, the relationships proposed by this study were grounded on well-cited theories and received theoretical support. However, further research can undoubtedly benefit from collecting longitudinal data, which would make the findings more robust. Second, the study focused on some factors informed by the literature and behavioural theories of KS among academics. The results of this research explained part of the variance on actual KS behaviour (the dependent variable). There could be other factors that impact results but are not part of this study. Hence, future research can add other constructs that would influence academics' KS such as personal traits, organizational structure, reward system, reputation, psychological factors, emotional factors, organizational commitments, intrinsic and extrinsic motivations to the research model to explore their impact on KS behaviour. As the results of this study are drawn from a single method, the possibility could be open for common method bias. However, as the focus of this study is to understand academics' KS behaviours working at widely spread HEIs, using multiple methods would be impractical and low value. Future research can validate the conceptual model qualitatively or using multiple methodologies using interviews or focus groups to triangulate the study findings and gain a greater understanding of academics' in-depth views. Given the widespread geographical locations of HEIs, this would require extensive time, efforts, resources and significant funding.

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