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Exploring the factors that lead to innovative work behaviour among academics in Saudi Arabia: A conceptual paper

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Abstract
Purpose: This study focuses on higher education in Saudi Arabia and how it has undergone significant structural and administrative changes after launching the Saudi Vision 2030. These changes demand increased innovation from university academics. However, there appears to be a lack of connection between extrinsic motivation, self-determination, university management support, and innovative work behaviour among academic staff. The primary objective of this research is to explore the relationship between these factors and to examine the role of quality culture as a moderator in these relationships.
Design/methodology/approach: The study will use a quantitative approach, focusing on academic staff and using purposive sampling for data collection. A staff list will be obtained from every university's human resource office, and an equal number of respondents will be recruited. Questionnaires will be distributed electronically, and the collected data will be analysed using SPSS 27.0 and SmartPLS 4.0 for descriptive and structural analysis.
Research limitations/implications: The study may not account for the dynamic nature of academic environments. Factors influencing innovative work behaviour may evolve, and the conceptualisation may not adequately capture these changes.
Practical implications: The findings could guide Saudi Arabia's academic community in promoting innovation through policies, strategies, and resources, fostering a conducive environment and developing support mechanisms.
Originality/value: This study aims to contribute to the existing body of knowledge on innovative work behaviour among university academics in Saudi Arabia. It seeks to uncover the intricate relationships between extrinsic motivation, self-determination, university management support, and innovative work behaviour moderated by quality culture within the country's higher education context.

Keywords: Innovative work behaviour, Extrinsic motivation, Self-determination, Management support, Quality culture.

Introduction

The modern world has experienced a rapid transformation marked by significant technological advancements. This transformation has been further accelerated by the COVID-19 pandemic, leading to a substantial shift in educational institutions from traditional classroom teaching to virtual methods (Irfan et al., 2021; Ullah Khan et al., 2023). This transition offers a unique opportunity to investigate academic staff's Innovative Work Behaviour (IWB), a critical aspect of higher education institutions (HEIs). IWB among academic staff is influenced by various factors, including administrative aspects at the institutional level and personal psychological factors at the individual level (Ayoub et al., 2021). In light of global challenges such as rapid technological changes and increased consumer demand, particularly in countries like Saudi Arabia (Aljaber, 2018; Alkhazim, 2003), academic institutions must enhance their capacities to meet these demands, much like business organisations (Alenezi, 2021; Saeed, 2023; Kim & Ju, 2008). HEIs are pivotal in fostering innovation and enhancing economic development and infrastructure (Lepik & Urmanavičienė, 2022; Obenndhain & Johnson, 2004). Furthermore, the wealth of academic experience is considered a key competitive advantage for HEIs (Maponya, 2005). Consequently, educational models must adapt to the demand for lifelong learning to address the technological and social changes brought about by the Fourth Industrial Revolution (FIR) (Oke & Fernandes, 2020). Failure to do so may render today's higher education systems incompatible with future societal needs (Abdullah & Almaqtari, 2024).

Educational institutions, including colleges, technical and vocational institutions, and universities, play a pivotal role in providing training, expertise, and a skilled workforce to various industries (Lieu et al., 2020; Sinha et al., 2021). Moreover, the educational sector bears a significant responsibility for fostering economic development by engaging in research activities and producing graduates equipped with the skills required to contribute effectively to the workforce (Müller et al., 2020). HEIs are expected to generate entrepreneurial individuals who drive economic growth through knowledge-centred projects (Kim & Ju, 2008). HEIs can also make substantial contributions to their local communities and society (Kim & Ju, 2008). By collaborating with other organizations and stakeholders in innovation and problem-solving efforts, HEIs can facilitate knowledge transfer and effect positive change in the world (Irfan et al., 2020). Therefore, universities and similar educational institutions have a profound impact on societies by imparting knowledge and skills to students, faculty, stakeholders, and leaders (Akram et al., 2021; Doytch & Narayan, 2021).

In Saudi Arabia's Vision 2030 context, the nation is undergoing a transformative phase, striving for diversification and sustainable development (Sinha et al., 2020). The education sector, particularly academicians, holds the potential to drive this transformative agenda through innovation. The Saudi Arabians' institutions have earned recognition for their citations, international outlook, research, teaching, and academic excellence. Saudi universities have also been ranked among the top ten in the Arab region for factors such as academic reputation, employer reputation, faculty-student ratio, and international research networking (Lane, 2021). Government investments have substantially supported HEIs in KSA, resulting in significant growth. The QS ranking identified the Saudi Arabian higher education system as one of the fastest growing in the Middle East, with five Saudi universities ranking in the top 500 World Universities Ranking for 2023 and 21 in the top 100 in the Arab region (QS, 2023).

However, despite these significant achievements, the higher education sector in KSA faces challenges such as a lack of motivational resources, professional contentment, and self-confidence among staff members, leading to low innovation (Li et al., 2021; Zhang et al., 2023). To address this issue, HEI leaders must prioritize and motivate academic staff through psychological empowerment and extrinsic motivation, which can boost morale and foster high

levels of innovative work behaviour (Zakari & Khan, 2022). While innovative work behaviour is recognized as a key driver of organizational innovation, it does not occur automatically.
Despite government investments in higher education and scholarships for faculty members to study abroad, some reports suggest that Saudi faculty members are drawn to the private sector within Saudi Arabia, neighbouring countries like Qatar and the United Arab Emirates (UAE), or Western nations, citing a lack of an innovative environment as one of the factors contributing to brain drain (Omar Asem, 2020). Tehseen and Hadi (2015) emphasized the need for the higher education sector to examine the factors motivating academic staff to innovate. Therefore, this study aims to determine the factors that lead to innovative work behaviour among faculty members in KSA universities.
Although substantial interest has been devoted to innovative work behaviour in recent years (Khan et al., 2022; Waheed et al., 2020; K. Wang et al., 2023), empirical research addressing its antecedents collectively remains limited in the literature. This study aims to fill this gap by exploring the antecedents of innovative work behaviour and their relationships (Waheed et al., 2020). Specifically, it focuses on the influence of extrinsic motivation, self-determination, and management support on innovative work behaviour, while considering the moderating role of a quality culture (R. Wang et al., 2020). These factors have been identified as important determinants of innovative work behaviour but have shown mixed results in previous studies. Past literature presents different antecedents of IWB but most of these possess inconsistent impact (Zahoor et al., 2022). In addition, the empirical evidence for the link between extrinsic motivation, self-determination, with innovative work behaviour appears to be inconsistent too (Basu & Green, 1997; Marane, 2012). Furthermore, in previous literature, the role of quality culture as moderating is inconsistent (Irfan, Saira and Marzuki, 2018; Pukkeeree et al., 2020). This study aims to investigate these inconsistent relationships and introduce a moderating effect to understand the interactions between these variables better. This research seeks to clarify the context of HEI in KSA and to decide the antecedents of innovative work behaviour that has become a matter of great importance for researchers and academicians.
The existing study is significant from both theoretical and practical perspectives. Theoretically, the study's contribution lies in its use of quality culture as a moderator and explaining important models and theories that shed light on innovative work behaviour. A completely integrated theoretical framework will guide future research on the HEIs sector to improve innovative work behaviour among university academicians. Practically, by investigating innovative work behaviour in academics, this study will introduce fresh and insightful implications for university management, especially in Saudi Arabia, on enhancing innovative work behaviour among the academic staff. This study is limited to academic staff who are (assistant professors, associate professors, and professors) from public universities in KSA. This study investigates the impact of the independent variables of extrinsic motivation, self-determination, and management support on innovative work behaviour that is moderated by quality culture.

Literature Review

Growth of Higher Education in Saudi Arabia

The KSA, established in 1932, initially grappled with economic challenges and a nascent educational infrastructure comprising only 12 institutions and approximately 700 students. The transformative discovery of substantial oil reserves in 1938 precipitated profound socioeconomic changes, markedly influencing the educational landscape. By 1950, the number of schools surged to 365, accommodating around 42,000 students. The formal establishment of the Ministry of Education (MoE) in 1954 was a pivotal development, encompassing all educational levels within its purview. However, it is critical to note that, during this period,

educational opportunities were exclusively available to males, with no provision for female education.

The foundation of King Saud University in Riyadh in 1957 signified a strategic move to retain Saudi students domestically for higher education, circumventing the need to send them abroad. By 1959, King Saud had expressed a progressive interest in female education, garnering support from religious scholars to initiate this paradigm shift. Consequently, the first school for girls was inaugurated in Riyadh in 1960, establishing a precedent for gender-segregated educational institutions at all levels. The provision of free education from elementary through secondary levels, extended to both Saudi and non-Saudi students, alongside complimentary higher education for Saudi citizens, underscored the state's commitment to educational accessibility.

Moreover, Saudi students attending higher education institutions received financial stipends. Despite these measures, literacy rates remained suboptimal, particularly among females. Data from the CIA in 2011 indicated that the literacy rate in 2003 was 78.8%, with male literacy at 84.7% and female literacy at 70.8% (Central Intelligence Agency, 2011; Fu et al., 2022).

The post-establishment period of King Saud University saw the creation of six additional universities over two decades. The expansion to seven universities necessitated the formation of the Ministry of Higher Education (MoHE), which emerged as the centralized authority overseeing higher education.

The MoHE's responsibilities included directing higher education policies, supervising university development across various sectors, coordinating inter-university activities, particularly in scientific disciplines and degree programs, fostering research initiatives, and establishing regulatory frameworks for institutional compliance (Nochta & Skelcher, 2020; Roy, 1992; Saleh, 1986; Zeng et al., 2023).

Despite the substantial growth of higher education in Saudi Arabia over the past decade, numerous psychological and managerial challenges persist, impacting the innovative behaviour of personnel within higher education institutions. These issues warrant critical examination to enhance the overall effectiveness and progressive trajectory of KSA's HEIs system.

Challenges in Higher Education Institutions

HEIs in KSA have witnessed rapid growth over the past twenty years that requires innovation for prospects (Alshehri et al., 2019; Sawahel, 2010). However, there is still no correlation between extrinsic motivation, self-determination, management support, and IWB, especially among the academic staff (Alzuman, 2015; Javed et al., 2019). Likewise, the moderating role of quality culture, extrinsic motivation, self-determination, management support, and innovative work behaviour among the academic staff is also novel in the literature (Rosli & Saleh, 2023; Huey et al. Ahmad, 2009; Lloréns Montes et al., 2003). Unfortunately, when the correlation is lacking between extrinsic motivation, self-determination, management support, and IWB in an academic setting, it can lead to poor working performance (Al-Ahmadi, 2009; Shanker et al., 2017). It reduces commitment or dedication to work and creates poor working cultural relationships among academic staff and the institution management. Invariable, there will be uncontrolled crises in the entire academic system in terms of reduction in the standard and productivity, among other issues (Aburizaizah, 2022; Alzahrani, 2011; Chatchawan et al., 2017; Kattuah, 2013). This causes a catalogue of drawbacks in the universities that are supposed to advance for excellent performance.

A thorough review of the literature reveals a marked increase in scholarly attention to IWB in recent years (Bon & Mustafa, 2013; De Jong & Den Hartog, 2010; Shanker et al., 2017). Numerous researchers contend that both historical and contemporary studies on innovative work behaviour predict institutional success, employee outcomes, financial performance, and competitive advantage (Bon & Mustafa, 2013; Shanker et al., 2017). In the context of KSA,

identifying the factors of IWB has assumed paramount importance for researchers and academicians. The extant literature identifies various antecedents of innovative work behaviour; however, the findings are often inconsistent.

Furthermore, previous literature has established the moderating effect of quality culture on these complex relationships (Pukkeeree et al., 2020). This study seeks to advance the understanding of this phenomenon by exploring quality culture as a contextual variable that shapes the interplay between extrinsic motivation, self-determination, management support, and IWB within the context of the KSA. The Saudi Arabian Ministry of Education's initiative to implement new strategies for enhancing the standard of higher education and fostering innovation underscores the relevance of this study. Thus, this investigation will be instrumental in achieving these strategic objectives.

Self-Determination Theory (SDT)

Over the past four decades, self-determination theory (SDT) has underpinned numerous experimental studies, significantly influencing diverse fields and cultural contexts (Chen, 2014; Deci et al., 2001). This theory is particularly relevant to health research, education, parenting, sports, and motivation in the context of innovative behaviour (Adams, 2014; Attiq et al., 2017; Devloo et al., 2015; Gagné & Deci, 2005). At its core, SDT explores motivation and behaviour through the lenses of individual differences in motivational orientations, contextual influences, and interpersonal perceptions. Hagger and Chatzisarantis (2016) assert that SDT is crucial in elucidating the antecedents and processes underlying innovative behaviour. The theory posits that behaviours driven by the desire for monetary or fame-related rewards will persist as long as these rewards are sustained and the conditions remain favourable (Wang et al., 2021).

Furthermore, SDT emphasizes the distinction between autonomous and controlled aspects of extrinsic motivation. Uninteresting activities typically require extrinsic motivation, with initial engagement hinging on the perceived contingency between specific behaviours and their outcomes, such as implicit approval or tangible rewards. Therefore, proposing that enhancing employees' extrinsic motivation can lead to improved performance and innovation (Abassi et al., 2023; Ogutu, 2014).

Management support is pivotal in fostering creativity among employees through extrinsic motivation, as highlighted by Chang and Teng (2017). Leaders who apply SDT principles can cultivate work environments that optimize employee motivation through both autonomous motivation (performing tasks aligned with intrinsic values) and controlled motivation (performing tasks due to external pressures).

Unlike previous need-based theories, SDT views motivation as dependent on situational factors, emphasizing the role of environmental elements such as culture and climate (Ryan & Deci, 2000, 2020). However, few studies have scrutinized the effects of different motivational sources on innovative work behaviour and the role of environmental support in bolstering it (Mouratidis et al., 2011). Fulfilling the psychological needs can enhance autonomous motivation and promote the internalization of extrinsic behaviours, ultimately fostering innovative work behaviour.

Hypothesis Development

Figure 1 postulates the conceptual framework, delineating the relationships between extrinsic motivation, self-determination, and management support as IVs and innovative work behaviour as the DV. Moreover, the framework posits quality culture as a moderating variable, specifically within the context of academic staff at Saudi Arabian universities.

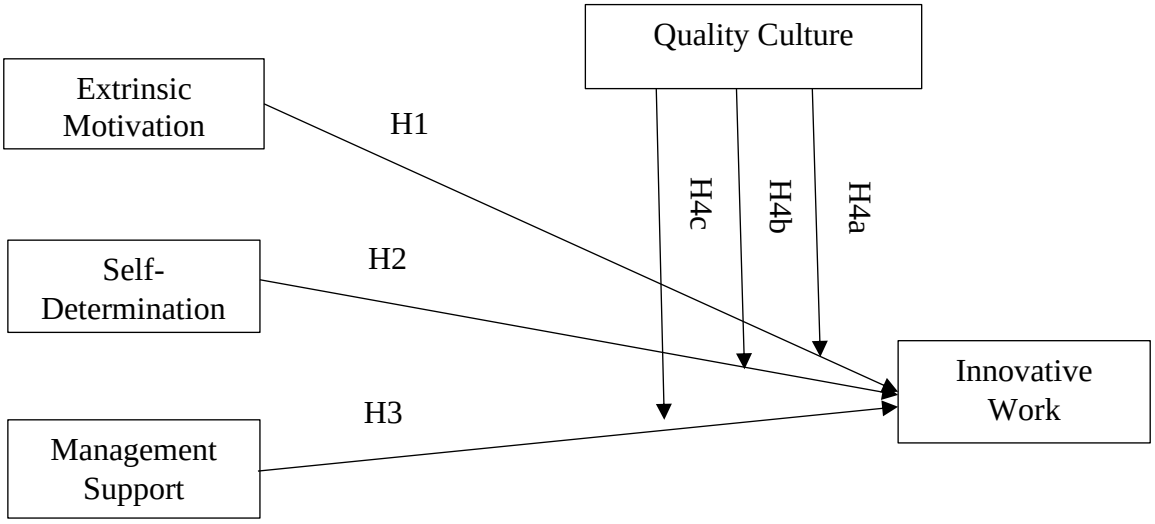

Figure 1. Conceptual framework

Extrinsic Motivation and Innovative Work Behaviour (IWB)

Extrinsic motivation is a pivotal determinant in directing an individual's efforts towards generating and implementing innovative ideas. It is widely acknowledged as an efficacious mechanism for fostering employee innovation within organisational settings. When employees recognise that their innovative endeavours will be rewarded, their inclination to engage in such activities significantly increases (Milka et al., 2015; Venketsamy & Lew, 2024). The positive impact of extrinsic motivation on innovative work behaviour is substantiated by empirical studies (den Broeck et al., 2021; Venketsamy & Lew, 2022). Consequently, extrinsic motivation emerges as an indispensable factor in stimulating innovation among employees (Aljumah, 2023; Fang et al., 2013). This discussion thus leads to the formulation of the following hypothesis:

Hypothesis 1: There is a positive relationship between extrinsic motivation and innovative work behaviour.

Self-determination and Innovation Work Behaviour

Autonomous and innovative work motivation is characterized by employees engaging in their tasks out of intrinsic interest and personal volition rather than as a result of external pressures (Gagné et al., 2010; Vujčić et al., 2017). Employees with high levels of autonomous motivation demonstrate a profound sense of volition and meaningfulness in their work, aligning their work-related activities with their own identity, personal interests, and values. This alignment allows them to engage in tasks out of a sense of choice, even without inherent interest (Appolloni et al., 2023; Vujčić et al., 2017). Moreover, the active engagement in self-development processes inherent in autonomous motivation engenders psychological determination, which is pivotal in fostering innovative behaviour (Ryan & Deci, 2017; Yasir et al., 2023). This theoretical framework supports the following hypothesis:

Hypothesis 2: Self-determination is positively related to academicians' innovative work behaviour.

Management Support and Innovative Work Behaviour

The study by (Yembergenova et al., 2021) shows that perceived organisational support indirectly affects the relationship between person-organization fit and innovative work behaviour. The work by (Rhoades et al., 2001) proposed that individuals with a high level of

affective commitment to their organisations are more productive than those with low effective, committed employees. When employees have a passion or feeling of support from the organisations, they want to achieve organisational goals and remain in the organisations (Chen & Eyoun, 2021; Meyer & Allen, 1991). Moreover, organisational support influences the level of commitment to the organisation and positively impacts innovative work behaviour (Blau, 1964; Odugbesan et al., 2023). Similar results are illustrated by (Akhtar et al., 2019; Utomo et al., 2023). Therefore, the following relationship is hypothesised:

Hypothesis 3: Management support has a positive impact on innovative work behaviour.

Quality Culture as Moderator

Quality culture is instrumental in stimulating innovative behaviour and reinforcing employees' commitment to their organisation. It underscores the significance of innovation as a core value within the institution and fosters norms that support ongoing innovation efforts. Consequently, a robust quality culture encourages the development of novel solutions and enhancements and promotes practices such as direct feedback and effective communication networks. These practices facilitate the generation of tacit knowledge and support independent efforts to pursue innovation. Moreover, the implementation of rewards and incentives further motivates staff, leading to improvements in both the quality and quantity of products (Hartmann, 2006).

Previous research has established the moderating role of quality culture in various inconsistent relationships (Irfan et al., 2018; Pukkeeree et al., 2020). However, its role as a moderator between extrinsic motivation, self-determination, management support, and innovative work behaviour among academic staff represents a novel area of study (Huey et al. Ahmad, 2009; Lloréns Montes et al., 2003). Examining moderating variables is crucial in managerial and psychological research, particularly in understanding their influence on the strength and nature of relationships between variables. Although moderation's impact is significant, testing and analysis methods remain ambiguous. Baron and Kenny (1986) addressed this by suggesting that moderation occurs when two variables display an inconsistent relationship. Prior studies have highlighted inconsistent connections between extrinsic motivation (Abdullatif et al., 2016; Siregar et al., 2019), self-determination (Afsar et al., 2014; Z. Wang et al., 2021), and management support (Ilhamsyah, 2019) with innovative work behaviour. These documented inconsistencies provide a solid foundation for introducing quality culture as a moderating variable in this research. Consequently, this study seeks to contribute to the literature by examining the following moderating relationships:

Hypothesis 4a: Quality culture moderates the relationship between extrinsic motivation and IWB.

Hypothesis 4b: Quality culture moderates the relationship between self-determination and IWB.

Hypothesis 4c: Quality culture moderates the relationship between management support and IWB.

Methods

This study will adopt a quantitative methodological approach to explore the impact of exogenous variables (extrinsic motivation, self-determination, and management support) on the endogenous variable (innovative work behaviour) in the presence of a moderator (quality culture). Therefore, this study employs a quantitative approach to thoroughly investigate the impact of exogenous variables on endogenous variables and the influence of moderating variables. This methodology facilitates systematic data collection from academicians at HEIs in KSA.

Operationalization, defined by Denzin (2009) as “the development of specific research procedures (operations) that will result in empirical observations representing those concepts

in the real world," refers to the measurable expression of variables. The items for measuring variables will be derived from previous literature, using a five-point Likert scale to gauge respondents' assessments.

In quantitative research, surveys are recommended for data collection from large populations that are challenging to observe directly (Bobbie, 2013). The survey method is straightforward to administer, easy to code, and simplifies analysis (Hughes & Sharrock, 2016). Consequently, this study will utilise the survey research method for data collection.

The study population consists of faculty members from public sector universities in KSA. According to recent statistics, Saudi Arabia has 29 public-sector universities employing over 70,000 faculty members (MOE, 2021; Statista, 2021). For sample size determination, various formulas have been suggested in previous studies. However, this study will use the Krejcie & Morgan (1970) online sample size calculator, which indicates that for a population of 70,000, the sample size should be 383. Therefore, this study will recruit 383 faculty members from public-sector universities in Saudi Arabia.

The study employs a quantitative approach to rigorously examine the influence of exogenous variables on endogenous variables, as well as the moderating effect of specific factors on this relationship. This methodological framework facilitated the systematic collection of data from academic staff within HEIs in KSA.

As the study population is widely scattered, the sampling technique describes the process of selecting individuals to represent the entire population. Purposive sampling is a type of sample design used to achieve this purpose (Uma et al., 2016). This study aims to collect data only from assistant professors, associate professors, and professors in Saudi public universities. Therefore, purposive sampling will be selected as a more suitable sampling technique for data collection in this study. A list of the faculty members will be obtained from the Human Resources (HR) office of selected universities, with an equal number of respondents will be recruited therefrom. Moreover, an electronic mail (e-mail) service will be utilised to deliver the questionnaires to randomly selected faculty members on their official email. This study will implement pre-testing to get feedback from a small sample before distributing the survey widely.

Descriptive analysis is required to transform raw data into informative data. Descriptive analysis helps to understand the research outcomes in an organised numeric form (Zikmund et al., 2013). In this study, descriptive analysis will be conducted using the SPSS version 27.0. Furthermore, PLS-SEM will be employed to evaluate the measurement and structural models, with SmartPLS version 4.0 serving as the primary tool for this analysis.

Discussion and Conclusion

Theoretical Implications

Exploring the factors that drive innovative work behaviour among academics in Saudi Arabia has several theoretical implications that can contribute to understanding innovation in academic settings. Here are some potential theoretical implications:

First, the research could shed light on how cultural factors specific to Saudi Arabia impact innovative work behaviour. This might contribute to the broader discussion on the role of culture in fostering or hindering innovation within academic environments. Second, Theoretical frameworks developed in this context could be applied more broadly to other academic settings, allowing for a better understanding of the unique factors influencing innovation within the academic sphere. Third, the study may highlight the interconnectedness of individual and organisational factors in driving innovative work behaviour. This could contribute to developing comprehensive models that consider personal characteristics and institutional support structures. Last, the findings may lead to the adaptation of existing

innovation theories to fit the academic context better, addressing the specific challenges and opportunities faced by academics in Saudi Arabia. The research may identify specific factors that are particularly influential in driving innovation among academics. This could contribute to the development of targeted interventions or strategies to enhance innovative work behaviour in academic settings. The research may enable a comparative analysis with global academic communities by exploring innovation within the Saudi Arabian academic context. This could provide insights into the universality or uniqueness of factors influencing innovation across different cultural and institutional settings.

Practical and Social Implications

The findings could be instrumental in shaping policies and strategies to foster innovation within the academic community in Saudi Arabia. This might involve creating a conducive environment, providing resources, and developing support mechanisms for innovative endeavours. Second, Universities and academic institutions could design targeted professional development programs based on the identified factors that drive innovative work behaviour. This could include training sessions, workshops, and mentorship programs. Third, the study could encourage initiatives that promote interdisciplinary collaboration and networking among academics. Creating platforms for knowledge exchange and collaborative projects could enhance innovative practices. Fourth, recognising the influence of cultural factors, institutions could implement measures to enhance cultural understanding and sensitivity among academic staff. This might involve creating a more inclusive and diverse environment that values different perspectives.

Limitations and Suggestions for Future Research

The study's findings may be specific to the context of Saudi Arabia and may not be directly applicable to academics in other cultural or institutional settings. This limits the generalizability of the research. Second, Saudi Arabia is a diverse country with a mix of local and expatriate academics. The study may not fully capture the nuances of how cultural differences influence innovative work behaviour, as it might oversimplify the experiences of a heterogeneous academic community. Last, as a conceptual paper, the study might lack empirical data to support its arguments. Without concrete evidence from surveys, interviews, or observations, the conceptual framework may be challenging to validate.

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