

The Mediating Role of Knowledge Management Processes in the Relationship Between Entrepreneurial Leadership and Organisational Sustainability.

by

Nayel Al Hawamdeh, PhD
Associate Professor of Management Information Systems
Tafila Technical University
College of Business
Tafila, P.O. Box: 179, Zip Code 66110- Jordan
Mobile:+962775583535
ORCID ID: <https://orcid.org/0000-0003-4625-6936>
Web of Science Researcher ID: [AAE-6607-2021](#)
Corresponding author e-mail: nayelalhawamdeh@ttu.edu.jo

Abstract

The main aim of this study is to investigate the mediating role of knowledge management processes in the relationship between entrepreneurial leadership and organisational sustainability. This study utilises a quantitative research approach. Three hundred and fourteen individuals employed in the hospitality sector in Jordan completed a self-administered questionnaire. In addition, the study used Structural Equation Modelling (SEM) as a statistical method to analyse and assess the suggestions. The results confirm that the knowledge management process acts as a positive intermediary between entrepreneurial leadership and organisational sustainability. To the best of the authors' knowledge, this study is the first to investigate the mediating role of knowledge management processes on the relationship of between entrepreneurial leadership and organisational sustainability of hospitality businesses..

Keywords: Entrepreneurial Leadership, Organisational Sustainability, Knowledge Management processes, Hospitality Industry.

1. Introduction

Over the past decade, concern about environmental risk has escalated due to its high probability and severe repercussions (McLennan *et al.*, 2022). Also, due to the exponential use of natural resources for economic expansion, policymakers, the public, and governments have prioritised environmental sustainability (Tanveer *et al.*, 2023). The tourism and hospitality industry's non-renewable resource consumption causes environmental degradation (Rodr  guez-Anton *et al.*,

2012). However, the tourism and hospitality industry boost local businesses and industries (Qandah et al., 2021).

Leaders adopting entrepreneurial behaviours are not only nimble enough to adapt to a shifting environment but also creative enough to find new ways to innovate to keep their organisations at the forefront of their industries (Fontana and Musa, 2017; Imran and Aldaas, 2020). Despite the increasing focus on the importance of entrepreneurial leadership, the field remains undeveloped mainly (Latif et al., 2020; Molina-Collado et al., 2022).

Sustainability is a challenge, and the critical tactics for understanding and accomplishing it emphasise the significance of knowledge integration and sharing procedures (Weiland, 2016). Although the impact of entrepreneurial leadership on organisational sustainability appears plausible, the crucial question of how entrepreneurial leaders influence organisational sustainability has not yet been thoroughly addressed, particularly in the context of emerging economies such as Jordan (Qandah et al., 2021). Moreover, previous studies suggest that using knowledge management processes as a mediating variable could help explain the effect of leadership on various organisation-level outcomes (Latif et al., 2020; Nasab and Afshari, 2019).

However, while many studies have looked at the effects of entrepreneurial leadership on the individual level (Bagheri et al., 2022; Mehmood et al., 2022), the impact on the organisational level has been largely neglected (Latif et al., 2020). According to previous studies, entrepreneurial leadership is crucial in encouraging the knowledge management process within organisations (Hussain and Li, 2022; Latif et al., 2020; Mehmood et al., 2022). Moreover, while several studies have shown the importance of knowledge management processes in ensuring organisational sustainability (Batoool et al., 2022b; Demir et al., 2021), there needs to be more research regarding the role of knowledge management as a mediator between entrepreneurial leadership and organisational sustainability. Additionally, this study examines the mediating processes that underlie the links between entrepreneurial leadership and organisational sustainability to elucidate the contributions of entrepreneurial leadership. Although knowledge management is seen as an important channel for translating leaders' behaviours into organisational performance (Latif et al., 2020), the exact mechanism through which entrepreneurial leadership contributes to organisational sustainability is still unclear (Al Mamun et al., 2018).

This argument aligns with the theoretical framework of the resource-based view (RBV), which suggests that enterprises should strive to attain competitive advantage by leveraging their resources rather than relying on external resources (Barney, 1991).

Therefore, the objectives of this study are twofold: (i) to investigate the effect of entrepreneurial leadership on enhancing organisational sustainability in Jordanian hospitality organisations and (ii) to investigate the mediating role of knowledge management in the relationship between entrepreneurial leadership and organisational sustainability.

Accordingly, the following research questions were developed:

RQ1. What are the roles of entrepreneurial leadership in promoting organisational sustainability in the hospitality industry?

RQ2. Does the knowledge management process [Knowledge creation, Knowledge sharing, and Knowledge application] mediate the relationships between entrepreneurial leadership and organisational sustainability in the hospitality industry?

Also, the findings of this study are anticipated to make substantial contributions to the theory. Specifically, to the best of our knowledge, this study is the first to examine the impact of individual-level (entrepreneurial leadership) and organisational-level (knowledge management process) factors on organisational outcomes (organisational sustainability) in the hospitality sector. Besides, this study will add to the current body of knowledge in three significant ways by examining these questions. First, the main aim of this study is to fill the gaps in the existing literature and improve our current limited understanding of context-specific research, with a specific focus on the hospitality sector in emerging countries such as Jordan. Second, the study contributes to the existing body of knowledge on leadership and sustainability by elucidating the specific roles performed by entrepreneurial leaders in fostering organisational sustainability within the hospitality industry. Third, it contributes to the body of literature examining the connection between entrepreneurial leadership and organisational sustainability in the hospitality industry by focusing on the mediating role played by knowledge management processes. Last, our research has an important practical implication for hospitality organisations that want to achieve organisational sustainability by recognising the roles of entrepreneurial leadership and knowledge management processes.

2. Literature Review and Hypotheses Development

2.1 Entrepreneurial Leadership and Organisational Sustainability

According to Ong *et al.* (2015), organisational sustainability (OS) is defined as living and working in a way that satisfies and combines the current ecological, economic, and societal requirements without compromising the wellbeing of future generations. OS enhances the performance of the business, generates competitive advantage through stakeholder involvement, recovers risk management, and fosters innovation within an organisation (Zawawi & Abd Wahab, 2019).

From an organisational point of view, sustainability can be defined as the outcome of an organisation's activities (whether voluntary or mandated by law) that demonstrates the organisation's capacity to sustain its business operations (including financial viability where applicable) without having a detrimental effect on social or ecological systems (Smith and Sharicz, 2011). Moreover, Srisathan *et al.* (2020), define organisational sustainability as the extent to which businesses continue to operate and grow into the future, combined with their contingency plan for dealing with any threats to their continued viability or the safety of their employees and the public.

The assumption of environmental sustainability is that human populations can be contained within the physical and biological limits associated with their food supply and waste disposal systems (Goodland & Daly, 1996). Moreover, social sustainability refers to the incorporation of social capital, such as via participation in local communities (Lopes *et al.*, 2017). To achieve this goal, it is necessary that a balance be struck between economic growth and environmental protection (Khan *et al.*, 2016). Economic sustainability focuses on the financial worth of objects, which includes the costs associated with environmental consequences (Goodland & Daly, 1996).

Leadership in the hospitality industry, specifically in hotels, has been identified as crucial to achieving long-term sustainability and mitigating adverse environmental impacts (Abualigah *et al.*, 2022). Similarly, workers in highly competitive service sectors such as hotels face several novel challenges, including meeting rising customer expectations for customised service in the face of intense competition (Badar *et al.*, 2023). Therefore, the existing literature on leadership within the hospitality sector investigates paths away from traditional leadership techniques to meet the sustainability demands of the industry (Olaleye *et al.*, 2023; Sachdeva & Singh, 2023).

As a result of the growing recognition of entrepreneurship's unique potential and the wide variety of stakeholders who benefit from it, entrepreneurs are increasingly receiving the attention and resources they need to launch innovative products and create new employment opportunities that contribute significantly to economic growth (AL-edenat & Al Hawamdeh, 2021).

The term 'entrepreneurial leadership' is increasingly used to characterise a leader who is both innovative and capable of navigating risky market conditions to their company's advantage (Imran & Aldaas, 2020). Entrepreneurial leaders are more adaptable to change and prioritise innovation, and, through the incorporation of entrepreneurial-oriented leadership and entrepreneurial management, we get entrepreneurial leadership (Fontana & Musa, 2017).

Moreover, influencing others toward a goal through clear and compelling communication to identify and articulate opportunities that firms might pursue to maintain competitiveness is at the heart of entrepreneurial leadership (Fontana & Musa, 2017).

Also, according to Renko *et al.* (2015), entrepreneurial leadership is a distinct type of leadership that inspires and motivates followers by directing them to achieve corporate goals by capitalising on entrepreneurial possibilities.

In addition, entrepreneurial leadership is a distinctive leadership style that focuses on encouraging diverse talents to work more creatively and innovatively in communal processes to generate a cohesive strategy and original outcomes in response to an unpredictable business environment (Latif *et al.*, 2020).

The resource-based view theory (RBV) states that all businesses have access to resources that can be leveraged to increase their competitive edge, boost their performance over the long term, and ensure their continued success (Barney, 1991). The theory states that firms' productive potential is influenced by their many resources, including physical, organisational, and human resources (Ambrosini *et al.*, 2009; Fahy, 1996). Also, the RBV theory explains the logical connection between entrepreneurial leadership and achieving organisational sustainability in the hospitality context; it considers entrepreneurial leaders' analytical thinking, responsibility, emotional intelligence, accountability, and the four well-known RBV individual characteristics (valuable, rareness, imperfect imitability, and substitutability), which are intangible resources that help firms achieve organisational sustainability (Kruesi & Bazelmans, 2023; Pauceanu *et al.*, 2021).

Previous studies have also established the positive connection between entrepreneurial leadership and business success (Bagheri *et al.*, 2022; Latif *et al.*, 2020). This is because business performance is a direct result of a leader's choices and actions (Nguyen *et al.*, 2021).

Therefore, the following hypothesis has been developed considering the preceding discussion:

H1. Entrepreneurial Leadership (EL) is positively related to organisational sustainability (OS).

2.2 The Mediating Role of Knowledge Management Process

The emerging body of empirical research suggests that organisations in the hospitality industry require knowledge management since knowledge specialisation is necessary to provide specialised services (Anand *et al.*, 2023; Fauzi, 2023). Likewise, according to Choi *et al.* (2008), organisational knowledge is crucial to attaining sustainability. Similarly, Jilani *et al.* (2020) noted that the ability to generate, use, and share knowledge is essential to the sustainability of many businesses.

Also, most businesses seek to understand their knowledge base—both internal and external—and to employ cutting-edge technologies to maximise the impact of this understanding on their strategic goals and operational efficiency (Sathishkumar & Karthikeyan, 2017). Moreover, the widespread application of knowledge in modern businesses has led to the development of the knowledge management theory (Goswami *et al.*, 2021). Knowledge is the most valuable intangible resource and asset a business has since it forms the foundation for exponential development and enduring competitive advantage (Agrawal, 2021; Allameh *et al.*, 2011).

Knowledge management's primary goal is to develop techniques that facilitate the sharing of the right knowledge with the right people at the right time (Halawi *et al.*, 2006). Consequently, the main aim of organisations is to convert personal knowledge, which consists of information, experience, and comprehension into organisational knowledge (Rechberg & Syed, 2013).

Moreover, knowledge management is the process of generating, acquiring, capturing, sharing, and using knowledge within an organisation to improve its learning capacity and performance (Jiménez-Jiménez & Sanz-Valle, 2013; Scarbrough *et al.*, 1999). Although earlier research has focused on many types of knowledge management processes (Goswami *et al.*, 2021), the present study considers main three KM processes: knowledge creation, knowledge sharing, and knowledge application (Ahmed *et al.*, 2021; Shujahat *et al.*, 2019).

Knowledge creation (KC) is characterised as a continual, self-transcending process in which an individual exceeds the border of the old self into a new self by obtaining a new environment, a new worldview, and new knowledge (Nonaka *et al.*, 2000).

Knowledge Sharing (KS) is the act of making one's knowledge available to others within an organisation (Ipe, 2003). This includes not only the transfer of explicit knowledge but also the transfer of tacit knowledge in the form of skills and competencies that cannot be easily captured in a database or spreadsheet (Wang & Noe, 2010).

Knowledge Application (KA) is a critical aspect of knowledge management because it makes knowledge more active and applicable to the creation of organisational value (Ode & Ayavoo, 2020). As well, knowledge application is the process of accessing and using knowledge to help in making decisions, taking actions, solving problems, automating tasks, and giving training and support (Rastogi, 2000).

Knowledge management (KM) is essential for all organisations to ensure sustainability and preserve a strategic competitive advantage over the long term (Anshari & Hamdan, 2022).

According to the previous literature, knowledge management and organisational sustainability are positively associated (Demir *et al.*, 2021; Lopes *et al.*, 2017). Organisational success depends on having access to relevant and accurate information, which cannot be achieved without a solid foundation of knowledge (Aladwan *et al.*, 2022). Therefore, when it comes to long-term performance, firms cannot afford to neglect knowledge management (KM). Furthermore, researchers have found that businesses with strong knowledge management practises have an advantage over those that do not (Nonaka, 1994; Trivedi & Srivastava, 2022).

Knowledge-based view theory is a business-level theory that defines an organisation as a diverse pool of knowledge resources (Denford, 2013). Thus, the organisation must have valuable, unique knowledge (Curado & Bontis, 2006), and it needs knowledge management processes (i.e., creation, sharing, and application) (Shujahat *et al.*, 2017). Based on knowledge-based view theory, an organisation's knowledge is a strategic asset that, if managed well, may help it gain a competitive edge and improve its performance (Grant, 1996). In addition, the most valuable resources of knowledge management are its leaders (Bryant, 2003).

Based on the previous discussion, this research argued that knowledge management process mediates (KMP) the relationship between entrepreneurial leadership (EL) and organisational sustainability (OS) in the hospitality industry.

H2. Entrepreneurial Leadership positively influences knowledge management process [Knowledge creation (a), Knowledge sharing, (b) and Knowledge application(c)].

H3. Knowledge Management process [Knowledge creation (a), Knowledge sharing, (b) and Knowledge application(c)] is positively related to organisational sustainability (OS).

H4: Knowledge Management process [Knowledge creation (a), Knowledge sharing, (b) and Knowledge application(c)] mediates a positive relationship between entrepreneurial Leadership and organisational sustainability (OS).

[Insert Figure 1 Approximately Here]

3. Research Methodology

3.1 Sample and Data Collection

A survey-based quantitative methodology was used in this study. . In total, 314 respondents from 32 different Jordanian hospitality businesses completed the survey. The online survey links were sent by the Human Resources departments of the participating organisations, and then completed by all respondents. Summary demographic data for the sample are presented in Table 1.

Table 1 displays the demographic features of the respondents: Out of a total of 314, male made up 63% of the sample. The majority of respondents (59%), all in their thirties, came from this demographic. In addition, 71% of the participants held a bachelor's degree, while 19% held a diploma, and 10% held a master's degree. Over half of the people who took part have worked in the field for five years or more.

[Insert Table 1 Approximately Here]

3.2 Measurement

The measures used in this study were adapted from earlier research that was done and published in scholarly publications . They were all five-point Likert-type scales with responses ranging from '1' (strongly disagree) through to '5'. (Strongly agree).

The construct of Entrepreneurial leadership (EL) was assessed using an eight-item scale adapted from Renko *et al.* (2015), which included items, such as, 'My manager has a vision of

the future of our business’ and ‘My manager wants me to challenge the current ways we do business’.

Organisational Sustainability (OS) construct assessed through a 20-item scale established by Alipour *et al.* (2019) encompassed items, such as, ‘The sustainability management system (SMS) is clearly documented and understood’.

Knowledge creation, knowledge sharing, and knowledge application processes were used to measure the construct of knowledge management processes. For knowledge creation, an eight-item validated scale was used from Kianto *et al.* (2016), which includes items, such as ‘Employees are encouraged to seek information actively outside the organisation’. In addition, for Knowledge sharing, there are a total of ten items derived from Wong & Law (2002), including ‘In our organisation, we share knowledge based on our experience with other organisational members’. Moreover, for Knowledge application, a six-item validated scale was employed from the work of Tseng and Fan (2011), which includes items, such as, ‘My organisation employs knowledge to enhance efficiency’.

3.3 Common Method Bias

The effects of common method bias (CMB) on self-reporting variables were discussed, with several statistical methods for identifying and controlling the CMB presented and discussed (Chang *et al.*, 2010). To guarantee this, Harman’s single-factor test was applied (Podsakoff & Organ, 1986). Exploratory factor analysis and main component factors were applied to all questionnaire questions for five constructs with eigenvalues larger than 1, yielding a cumulative variance of 71.461 % and an explanatory variance of 42.052 % for the major factor (less than 50 %). Therefore, our research suggests that CMB is not a significant issue.

4. Data Analysis and Results

Based on a dataset of 32 hospitality organisations in Jordan, an analysis of moment structures (AMOS) was used to measure validation and test the structural model. Confirmatory Factor Analysis (CFA) was used in addition to SPSS and AMOS Version 27 to evaluate the components’ validity and reliability. The significance tests of the study hypotheses were conducted using a bootstrapping approach.

4.1. Measurement Model

This study used Cronbach's alpha (Cronbach, 1951) to measure the degree of reliability of each research variable (it varied from 0.73 to 0.83), with Nunnally and Bernstein (1994) determining that 0.7 was the threshold. The measuring model's convergent and discriminant validity were then evaluated using CFA. All factor loads were more than 0.6 (ranging from 0.62 to 0.89), composite reliability (CR) was greater than 0.7 (ranging from 0.72 to 0.82), and average extracted variance (AVE) was greater than threshold 0.5 (ranging from 0.63 to 0.78). All measurements were found to be valid according to the criteria for convergent validity established by Hair *et al.* (2006). The variables mean, standard deviations, factor loadings, AVEs, CRs, and CAs are displayed for each construct in Table 2.

[Insert Table 2 Approximately Here]

As shown in Table 3, the square root of AVE for each construct is greater than the correlations between constructs in the model. Overall, the findings validate the construct reliability and convergent and discriminant validity of the measures according to the model of Fornell and Larcker (1981).

[Insert Table 3 Approximately Here]

4.2 Structural Model and Research Findings

Kline (2015) asserts that the structural equation model (SEM) approach is extensively employed in research due to its capacity to illustrate diverse regression connections inside a single model and facilitate hypothesis testing. Investigating interaction and mediation effects is both relevant and practicable, as suggested by Le & Lei (2019). This work employed structural equation modelling (SEM) using maximum likelihood estimation methodologies to examine the proposed hypotheses. To assess the level of compatibility of the structural model, we examined several indicators. These included absolute fit measures such as Chi-square divided by degrees of freedom (CMIN/df), goodness of fit index (GFI), and root mean square error of approximation (RMSEA). Additionally, incremental fit measures such as normed fit index (NFI), adjusted goodness of fit index (AGFI), and comparative fit index (CFI) were also evaluated.

The Structural Equation Model (SEM) method is often used, according to Kline (2015), since it may show many regression correlations on a single model and test. Effects of interaction and

mediation are also acceptable and testable (Byrne, 2016). The proposal's hypotheses were examined in this study utilising both maximum likelihood estimate and SEM. By creating a structural model that describes the direct and indirect effects of entrepreneurial leadership on organisational sustainability through the knowledge management process, the presented hypotheses were examined. The structural model's fit measure (CFI) was assessed using absolute fit metrics like Chi-squared/df (CMIN/df), the goodness of fit index (GFI), and root mean square error of approximation (RMSEA), as well as incremental fit metrics like the normed fit index (NFI), the adjusted goodness of fit index (AGFI), and the comparative fit index (CFI) (CFI).

Table 4 shows that the model's fit indices are good (RMSEA = 0.049; GFI = 0.813; NFI = 0.937; AGFI = 0.848; CFI = 0.923), indicating that the latent construct relationships fit the data and effects of interaction and mediation are also acceptable and testable (Byrne, 2016).

[Insert Table 4 Approximately Here]

4.3 Direct Effects Analysis

The results of Table 5 and Figure 2 show the direct effect of the independent variable on the dependent variable. The direct effect of entrepreneurial leadership on organisational sustainability found that entrepreneurial leadership has a statistically significant and positive influence on organisational sustainability ($\beta = 0.356$, $t = 5.23$, $p < 0.001$).

The results also confirmed the positive effects of entrepreneurial leadership on three types of knowledge management process and that is as follows: Knowledge creation ($\beta = 0.253$, $t = 3.77$, $p < 0.001$), Knowledge sharing ($\beta = 0.315$, $t = 3.14$, $p < 0.001$), Knowledge application ($\beta = 0.293$, $t = 3.62$, $p < 0.001$).

Results also support the positive effects of entrepreneurial leadership on three key knowledge management processes: Knowledge creation ($\beta = 0.253$, $t = 3.77$, $p < 0.001$), Knowledge sharing ($\beta = 0.315$, $t = 3.14$, $p < 0.001$), and Knowledge application ($\beta = 0.293$, $t = 3.76$, $p < 0.001$).

Additionally, it was shown that identifying knowledge management processes significantly and positively impacted organisational sustainability. As it had a positive impact on organisational

sustainability as follows: Knowledge creation ($\beta = 0.408$, $t=4.15$, $p < 0.05$), Knowledge sharing ($\beta=-0.378$, $t=4.98$, $p < 0.001$), and Knowledge application ($\beta=0.369$, $t=2.94$, $p < 0.05$).

[Insert Table 5 Approximately Here]

[Insert Figure 2 Approximately Here]

4.4 Analysis of Indirect and Total Effects

Additional research was done to verify the magnitude and statistical significance of the indirect effect of knowledge management processes between entrepreneurial leadership and organisational sustainability. The significance of these knock-on effects was examined by employing Hair *et al.* (2017), suggested bootstrap confidence intervals approach with 5,000 iterations (Table 6).

The indirect effects of entrepreneurial leadership on organisational sustainability through knowledge management processes were significant and positive; Knowledge creation ($\beta = 0.383$; $p < 0.001$), Knowledge sharing ($\beta = 0.395$; $p < 0.001$), and Knowledge application ($\beta = 0.369$; $p < 0.001$) and all are in confidence intervals, as shown in Table 6, indicating that H4a, H4b, and H4c are supported. knowledge management processes, in other words, appears to partially mediate the relationship between entrepreneurial leadership and organisational sustainability.

[Insert Table 6 Approximately Here]

5. Discussion

This research examined the direct and indirect effect of entrepreneurial leadership on organisational sustainability, following recent research that highlighted the crucial importance of leadership on organisational sustainability (Nasir *et al.*, 2022). According to the findings of the analysis conducted for H1, it was determined that there exists a statistically significant positive relationship between entrepreneurial leadership and organisational sustainability of Jordanian hospitality organisations. This implies that entrepreneurial leadership plays a crucial role in ensuring the long-term viability of an organisation (Sarmawa *et al.*, 2020). Consequently, the results of this study are in line with those of other research that emphasises the importance of leadership in promoting organisational sustainability (Althnayan *et al.*, 2022; Sarmawa *et al.*, 2020).

The findings support [H2a,b,c]: entrepreneurial leadership practises are positively associated with knowledge management processes. Furthermore, the study elucidates that entrepreneurial leadership fosters knowledge management inside businesses by encouraging workers to actively pursue novel knowledge, share knowledge, and effectively apply acquired knowledge within the organisational context (Hussain & Li, 2022; Latif *et al.*, 2020; Mehmood *et al.*, 2022).

Additionally, the findings suggest that [H3a,b,c] is accepted: knowledge management processes positively affect organisational sustainability. This result is in line with the findings of prior research that pointed to the crucial role that knowledge management practices like knowledge sharing can play in elevating hospitality firms' commitment to sustainability (Batoool *et al.*, 2022b; Gupta & Agarwal, 2023).

However, the most significant finding, according to [H4a,b,c], was that the impact of entrepreneurial leadership on the organisational sustainability is partially influenced by the processes of knowledge management. Entrepreneurial leadership has a crucial role in enhancing the knowledge management processes, namely knowledge creation, knowledge sharing, and knowledge application, among workers (Hussain & Li, 2022; Latif *et al.*, 2020). This, in turn, contributes to the long-term sustainability of the organisation (Batoool *et al.*, 2022b; Martínez-Navalón *et al.*, 2023). The findings of this study are consistent with previous research that emphasises the significant contribution of entrepreneurial leaders in enhancing an individual's knowledge, skills, and capacities (Leitch *et al.*, 2013). Also, this finding aligns with other research that has found a link between entrepreneurial leadership and positive organisational outcomes when knowledge management processes are implemented (Latif *et al.*, 2020).

Therefore, based on these results, all proposed hypotheses have been accepted. Thus, accepting the put-forward hypotheses supports the Resource-Based View (RBV) theory, which posits that possessing significant human and organisational resources(e.g. entrepreneurial leadership and knowledge management) may contribute to achieving success, growth, and sustained viability within the hotel business (Hansen *et al.*, 2004).

5.1 Theoretical Implications

This study aims to address the gap in the current literature about the correlation between entrepreneurial leadership and organisational sustainability. By doing so, it contributes to the existing body of research and encourages more investigation in this field. Correspondingly,

this research adds to the existing body of knowledge by proposing and providing empirical evidence for the influence of entrepreneurial leadership on organisational sustainability, which paves the way for innovative discoveries to be made in a context typical of a developing country. Furthermore, this study adds a motivational dimension to the positive relationship between entrepreneurial leadership and organisational sustainability through knowledge management. This study makes the following contributions to academic literature. First, as far as we know, this is one of the first studies considering the relationship between entrepreneurial leadership and organisational sustainability in the Jordanian hospitality industry (Althnayan *et al.*, 2022; Hossain *et al.*, 2022; Molina-Collado *et al.*, 2022). Although several research have examined the impacts of entrepreneurial leadership on the individual level (Bagheri *et al.*, 2022; Mehmood *et al.*, 2022), the effects on the organisational level have been largely overlooked (Imran & Aldaas, 2020; Latif *et al.*, 2020). Second, this study contributes to the existing body of literature on leadership and organisational sustainability by demonstrating the potential ‘catalytic’ role that entrepreneurial leadership may play in fostering organisational sustainability. Third, amongst the few studies exploring the role of knowledge management processes as a mediating between entrepreneurial leadership and organisational sustainability in the hospitality sector, this study represents a significant contribution to the field. Furthermore, our findings suggest that knowledge management processes are pivotal in mediating the connection between entrepreneurial leadership and organisational sustainability.

5.2 Practical Implications

The findings of this study highlight the significant contributions of entrepreneurial leadership and knowledge management processes in facilitating the achievement and maintenance of sustainability within the hospitality industry. Considering the influence of entrepreneurial leadership on knowledge management processes and the reciprocal relationship between entrepreneurial leadership, knowledge management processes, and organisational sustainability in the context of hospitality organisations, hospitality managers must prioritise the enhancement of their entrepreneurial leadership competencies and the optimisation of knowledge management processes that contribute to the achievement of sustainable outcomes. (Batool *et al.*, 2022a; Imran & Aldaas, 2020). Moreover, the findings indicate that the three processes of knowledge management (Knowledge creation, Knowledge

sharing, and Knowledge application) enhance the positive effect of entrepreneurial leadership on organisational sustainability; thus, managers seeking to promote organisational sustainability should encourage knowledge management processes within organisations (Demir *et al.*, 2021; Hussain & Li, 2022).

6. Limitations and Directions for Future Research

The study contains multiple limitations that must be recognised. First, the data comes from the Jordanian hospitality industry, thus it makes sense to use the same methodology in other countries. Second, the current study only evaluates one type of leadership; other types, such as digital leadership, servant leadership, and ethical leadership, should be evaluated in future research. Third, only three knowledge management processes (Knowledge creation, Knowledge sharing, and Knowledge application) were described as meditation. It may be necessary to enhance the model by incorporating other knowledge management processes, including Knowledge storage, Knowledge acquisition, and Knowledge flow. Finally, while this study adopted a quantitative approach, researchers are urged to incorporate qualitative methods like focus groups and in-depth interviews in their future work.

References

- Abualigah, A., Koburtay, T., Bourini, I., Badar, K. and Gerged, A.M. (2022), "Towards sustainable development in the hospitality sector: does green human resource management stimulate green creativity? A moderated mediation model", *Business Strategy and the Environment*, Nos 1-16.
- Agrawal, N. (2021), "Modeling enablers of knowledge management process using multi criteria decision making approach", *VINE Journal of Information and Knowledge Management Systems*, Vol. 51 No. 3, pp. 389-417.
- Ahmed, Q., Sumbal, M.S., Akhtar, M.N. and Tariq, H. (2021), "Abusive supervision and the knowledge worker productivity: the mediating role of knowledge management processes", *Journal of Knowledge Management*, Vol. 25 No. 10, pp. 2506-2522
- Al Hawamdeh, N. (2022), "The influence of humble leadership on employees' work engagement: the mediating role of leader knowledge-sharing behaviour", *VINE Journal of Information and Knowledge Management Systems*, Vol. ahead-of-print No. ahead-of-print
- Al Mamun, A., Ibrahim, M.D., Yusoff, M.N.H.B. and Fazal, S.A. (2018), "Entrepreneurial leadership, performance, and sustainability of micro-enterprises in Malaysia", *Sustainability*, Vol. 10 No. 5, p. 1591.
- Aladwan, S.A., AL-Yakoub, T.A. and Adaileh, A.M. (2022), "Challenges of knowledge management in the public sector: evidence from the King Abdullah Award for Excellence in Jordan", *The TQM Journal*, Vol. ahead-of-print No. ahead-of-print.
- AL-edenat, M. and Al Hawamdeh, N. (2021), "Revisiting the entrepreneurial ventures through the adoption of business incubators by higher education institutions", *The*

- International Journal of Management Education*, Vol. 19 No. 1, pp. 100419.
- Alipour, H., Safaeimanesh, F. and Soosan, A. (2019), "Investigating sustainable practices in hotel industry-from employees' perspective: evidence from a mediterranean island", *Sustainability*, Vol. 11 No. 23, p. 6556.
- Alkhatib, A.W. and Valeri, M. (2022), "Can intellectual capital promote the competitive advantage? Service innovation and big data analytics capabilities in a moderated mediation model", *European Journal of Innovation Management*, Vol. ahead-of-print No. ahead-of-print.
- Allameh, S.M., Zare, S.M. and Davoodi, S.M.R. (2011), "Examining the impact of KM enablers on knowledge management processes", *Procedia Computer Science*, Vol. 3, pp. 1211-1223.
- Althnayan, S., Alarifi, A., Bajaba, S. and Alsabban, A. (2022), "Linking environmental transformational leadership, environmental organizational citizenship behavior, and organizational sustainability performance: A moderated mediation model", *Sustainability*, Vol. 14 No. 14, pp 8779.
- Ambrosini, V., Bowman, C. and Collier, N. (2009), "Dynamic capabilities: an exploration of how firms renew their resource base", *British Journal of Management*, Vol. 20 No. 1, pp. 9-24.
- Anand, A., Shantakumar, V.P., Muskat, B., Singh, S.K., Dumazert, J.-P. and Riahi, Y. (2023), "The role of knowledge management in the tourism sector: a synthesis and way forward", *Journal of Knowledge Management*, Vol. 27 No. 5, pp. 1319-1342.
- Anshari, M. and Hamdan, M. (2022), "Understanding knowledge management and upskilling in Fourth Industrial Revolution: transformational shift and SECI model", *VINE Journal of Information and Knowledge Management Systems*, Vol. 52 No. 3, pp. 373-393.
- Badar, K., Kundi, Y.M., Siddiquei, A.N. and Abualigah, A. (2023), "Linking environmentally-specific empowering leadership to hotel employees' green creativity: understanding mechanisms and boundary conditions", *Journal of Service Theory and Practice*, Vol. 33 No. 3, pp. 412-435
- Bagheri, A., Akbari, M. and Artang, A. (2022), "How does entrepreneurial leadership affect innovation work behavior? The mediating role of individual and team creativity self-efficacy", *European Journal of Innovation Management*, Vol. 25 No. 1, pp. 1-18
- Barney, J. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.
- Batool, F., Mohammad, J. and Awang, S.R. (2022a), "The effect of servant leadership on organisational sustainability: the parallel mediation role of creativity and psychological resilience", *Leadership & Organization Development Journal*, Vol. 43 No. 1, pp. 71-95.
- Batool, F., Mohammad, J., Awang, S.R. and Ahmad, T. (2022b), "The effect of knowledge sharing and systems thinking on organizational sustainability: the mediating role of creativity", *Journal of Knowledge Management*, Vol. ahead-of-print No. ahead-of-print.
- Bryant, S.E. (2003), "The role of transformational and transactional leadership in creating, sharing and exploiting organizational knowledge", *Journal of Leadership and Organizational Studies*, Vol. 9 No. 4, pp. 32-44.
- Byrne, B.M. (2016), *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*, Routledge, New York, NY.
- Carayannis, E.G., Sindakis, S. and Walter, C. (2015), "Business model innovation as lever of organizational sustainability", *The Journal of Technology Transfer*, Vol. 40 No. 1, pp. 85-104
- Chang, S.-J., Van Witteloostuijn, A. and Eden, L. (2010), "From the editors: common method variance in international business research", *Journal of International Business Studies*, Vol. 41 No. 2, pp. 178-184.
- Chen, Y.-A. and Chen, C.L. (2022), "Case study of sustainable service design in the hospitality industry", *Chinese Management Studies*, Vol. 16 No. 1, pp. 162-196.

- Choi, S.Y., Kang, Y.S. and Lee, H. (2008), "The effects of socio-technical enablers on knowledge sharing: an exploratory examination", *Journal of Information Science*, Vol. 34 No. 5, pp. 742-754.
- Cronbach, L. J. (1951), "Coefficient alpha and the internal structure of tests", *Psychometrika*, Vol. 16 No. 3, pp. 297-334.
- Curado, C. and Bontis, N. (2006), "The knowledge-based view of the firm and its theoretical precursor", *International Journal of Learning and Intellectual Capital*, Vol. 3 No. 4, pp. 367-381
- Demir, A., Budur, T., Omer, H.M. and Heshmati, A. (2021), "Links between knowledge management and organisational sustainability: does the ISO 9001 certification have an effect?", *Knowledge Management Research and Practice*, pp. 1-14.
- Denford, J.S. (2013), "Building knowledge: developing a knowledge-based dynamic capabilities typology", *Journal of Knowledge Management*, Vol. 17 No. 2. pp. 175-194
- Fahy, J. (1996), "Competitive advantage in international services: a resource-based view", *International Studies of Management and Organization*, Vol. 26 No. 2, pp. 24-37.
- Fauzi, M.A. (2023), "A bibliometric review on knowledge management in tourism and hospitality: past, present and future trends", *International Journal of Contemporary Hospitality Management*, Vol. 35 No. 6, pp. 2178-2201.
- Fontana, A. and Musa, S. (2017), "The impact of entrepreneurial leadership on innovation management and its measurement validation", *International Journal of Innovation Science*, Vol. 9 No. 1, pp. 2-19.
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Gil, A.J., Rodrigo-Moya, B. and Morcillo-Bellido, J. (2018), "The effect of leadership in the development of innovation capacity: a learning organization perspective", *Leadership and Organization Development Journal*, Vol. 39 No. 6, pp. 694-711.
- Goodland, R. and Daly, H. (1996), "Environmental sustainability: universal and non-negotiable", *Ecological Applications*, Vol. 6 No. 4, pp. 1002-1017.
- Goswami, A.K., Agrawal, R.K. and Goswami, M. (2021), "Influence of national culture on knowledge management process: literature review and research agenda", *Benchmarking: An International Journal*, Vol. 28 No. 4, pp. 1186-1212.
- Grant, R.M. (1996), "Toward a knowledge-based theory of the firm", *Strategic Management Journal*, Vol. 17 No. S2, pp. 109-122.
- Gupta, M. and Agarwal, S. (2023), "Enablers of knowledge sharing for organizational sustainability: proposing a conceptual framework", *Industrial and Commercial Training*, Vol. 55 No. 2, pp. 199-212.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006), *Multivariate Data Analysis*, 6th ed., Pearson Education, N.J.
- Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2017), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* ", 2nd ed., Sage, Thousand Oaks, CA.
- Hansen, M.H., Perry, L.T. and Reese, C.S. (2004), "A Bayesian operationalization of the resource-based view", *Strategic Management Journal*, Vol. 25 No. 13, pp. 1279-1295.
- Hossain, M.B., Nassar, S., Rahman, M.U., Dunay, A. and Illés, C.B. (2022) "Exploring the mediating role of knowledge management practices to corporate sustainability". *Journal of Cleaner Production*, Vol 374, p.133869.
- Hussain, N. and Li, B. (2022), "Entrepreneurial leadership and entrepreneurial success: the role of knowledge management processes and knowledge entrepreneurship", *Frontiers in Psychology*, Vol. 13 No. 1, pp. 1-18.
- Imran, R. and Aldaas, R.E. (2020), "Entrepreneurial leadership: a missing link between perceived organizational support and organizational performance", *World Journal of*

- Entrepreneurship, Management and Sustainable Development*, Vol. 16 No. 4, pp. 377-388
- Ipe, M. (2003), "Knowledge sharing in organizations: a conceptual framework", *Human Resource Development Review*, Vol. 2 No. 4, pp. 337-359.
- Jilani, M., Fan, L., Islam, M.T. and Uddin, M. (2020), "The influence of knowledge sharing on sustainable performance: amoderated mediation study", *Sustainability*, Vol. 12No. 3, p. 908.
- Jimenez-Jimenez, D. and Sanz-Valle, R. (2013), "Studying the effect of HRM practices on the knowledge management process", *Personnel Review*, Vol. 42 No. 1, pp. 28-49.
- Khan, E.A., Dewan, M.N.A. and Chowdhury, M.M.H. (2016), "Reflective or formative measurement model of sustainability factor? A three-industry comparison", *Corporate Ownership and Control*, Vol. 13 No. 2, pp. 83-92.
- Kianto, A., Vanhala, M. and Heilmann, P. (2016), "The impact of knowledge management on job satisfaction", *Journal of Knowledge Management*, Vol. 20 No. 4, pp. 621-636.
- Kline, R.B. (2015), *Principles and Practice of Structural Equation Modeling*, Guilford publications, New York, NY.
- Kruesi, M.A. and Bazelmans, L. (2023), "Resources, capabilities and competencies: a review of empirical hospitality and tourism research founded on the resource-based view of the firm", *Journal of Hospitality and Tourism Insights*, Vol. 6 No. 2, pp. 549-574.
- Kurtessis, J.N., Eisenberger, R., Ford, M.T., Buffardi, L.C., Stewart, K.A. and Adis, C.S. (2017), "Perceived organizational support: a meta-analytic evaluation of organizational support theory", *Journal of Management*, Vol. 43 No. 6, pp. 1854-1884
- Latif, K.F., Nazeer, A., Shahzad, F., Ullah, M., Imranullah, M. and Sahibzada, U.F. (2020), "Impact of entrepreneurial leadership on project success: mediating role of knowledge management processes", *Leadership & Organization Development Journal*, Vol. 41 No. 2, pp. 237-256.
- Le, P.B. and Lei, H. (2019), "Determinants of innovation capability: the roles of transformational leadership, knowledge sharing and perceived organizational support", *Journal of Knowledge Management*, Vol. 23No. 3, pp. 527-547.
- Leitch, C.M. and Volery, T. (2017), "Entrepreneurial leadership: insights and directions", *International Small Business Journal*, Vol. 35 No. 2, pp. 147-156.
- Lopes, C.M., Scavarda, A., Hofmeister, L.F., Thome', A.M.T. and Vaccaro, G.L.R. (2017), "An analysis of the interplay between organizational sustainability, knowledge management, and open innovation", *Journal of Cleaner Production*, Vol. 142, pp. 476-488.
- Martínez-Navalón, J.G., Gelashvili, V., DeMatos, N. and Herrera-Enríquez, G. (2023), "Exploring the impact of digital knowledge management on technostress and sustainability", *Journal of Knowledge Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JKM-07-2022-0544>.
- McLennan, M., Group, S. and Group, Z.I. (2022), *The Global Risks Report 2022*, 17th ed., World Economic Forum, Cologny, Geneva, available at: <https://www.weforum.org/reports/global-risksreport-2022>
- Mehmood, M.S., Jian, Z., Akram, U., Akram, Z. and Tanveer, Y. (2022), "Entrepreneurial leadership and team creativity: the roles of team psychological safety and knowledge sharing", *Personnel Review*, Vol. 51 No. 9, pp. 2404-2425
- Molina-Collado, A., Santos-Vijande, M.L., Gómez-Rico, M. and Madera, J.M. (2022), "Sustainability in hospitality and tourism: a review of key research topics from 1994 to 2020", *International Journal of Contemporary Hospitality Management*, Vol. 34 No. 8, pp. 3029-3064.
- Nasab, A.H. and Afshari, L. (2019), "Authentic leadership and employee performance: mediating role of organizational commitment", *Leadership and Organization Development Journal*, Vol. 40 No. 5, pp. 548-560.
- Nasir, A., Zakaria, N. and Zien Yusoff, R.(2022), "The influence of transformational leadership on organizational sustainability in the context of industry 4.0: Mediating role of innovative

- performance " ,*Cogent Business & Management*, Vol. 9 No. 1, pp 2105575
- Nguyen, P.V., Huynh, H.T.N., Lam, L.N.H., Le, T.B. and Nguyen, N.H.X. (2021), "The impact of entrepreneurial leadership on SMEs' performance: the mediating effects of organizational factors", *Heliyon*, Vol. 7 No. 6, pp. 1-13.
- Nidumolu, R., Prahalad, C.K. and Rangaswami, M.R. (2009), "Why sustainability is now the key driver of innovation", *Harvard Business Review*, Vol. 87 No. 9, pp. 56-64
- Nonaka, I. (1994), "A dynamic theory of organizational knowledge creation", *Organization Science*, Vol. 5 No. 1
- Nonaka, I., Toyama, R. and Konno, N. (2000), "SECI, Ba and leadership: a unified model of dynamic knowledge creation", *Long Range Planning*, Vol. 33 No. 1, pp. 5-34.
- Nunnally, J.C. and Bernstein, I. (1994), "Elements of statistical description and estimation", *Psychometric Theory 3 Edition*, McGraw-Hill, New York, NY.
- Ode, E. and Ayavoo, R. (2020), "The mediating role of knowledge application in the relationship between knowledge management practices and firm innovation", *Journal of Innovation and Knowledge*, Vol. 5 No. 3, pp. 210-218.
- Olaleye, B.R., Abdurrashid, I. and Mustapha, B. (2023), "Organisational sustainability and TQM practices in hospitality industry: employee-employer perception", *The TQM Journal*, Vol. ahead-of-print No. ahead-of-print.
- Ong, T.S., Soh, W.N., Teh, B.H. and Ng, S.H. (2015), "Influence of environmental disclosures on the financial performance of public listed Malaysian manufacturing companies", *Asia-Pacific Management Accounting Journal*, Vol. 10 No. 1, pp. 107-140.
- Pauceanu, A.M., Rabie, N., Moustafa, A. and Jiroveanu, D.C. (2021), "Entrepreneurial leadership and sustainable development—a systematic literature review", *Sustainability*, Vol. 13 No. 21, 11695.
- Podsakoff, P.M. and Organ, D.W. (1986), "Self-reports in organizational research: problems and prospects", *Journal of Management*, Vol. 12 No. 4, pp. 531-544.
- Qandah, R., Suifan, T.S., Masa'deh, R. and Obeidat, B.Y. (2021), "The impact of knowledge management capabilities on innovation in entrepreneurial companies in Jordan", *International Journal of Organizational Analysis*, Vol. 29 No. 4, pp. 989-1014.
- Rastogi, P.N. (2000), "Knowledge management and intellectual capital – the new virtuous reality of competitiveness", *Human Systems Management*, Vol. 19 No. 1, pp. 39-48.
- Rechberg, I. and Syed, J. (2013), "Ethical issues in knowledge management: conflict of knowledge ownership", *Journal of Knowledge Management*, Vol. 17 No. 6, pp. 828-847.
- Renko, M., El Tarabishy, A., Carsrud, A.L. and Brännback, M. (2015), "Understanding and measuring entrepreneurial leadership style", *Journal of Small Business Management*, Vol. 53 No. 1, pp. 54-74.
- Rodríguez-Antón, J.M., Del Mar Alonso-Almeida, M., Celemín, M.S. and Rubio, L. (2012), "Use of different sustainability management systems in the hospitality industry. The case of Spanish hotels", *Journal of Cleaner Production*, Vol. 22 No. 1, pp. 76-84.
- Sachdeva, C. and Singh, T. (2023), "Green transformational leadership and pro-environmental behaviour: unravelling the underlying mechanism in the context of hotel industry", *International Journal of Organizational Analysis*, Vol. ahead-of-print No. ahead-of-print
- Sarmawa, I.W.G., Widayani, A.A.D., Sugianingrat, I.A.P.W. and Martini, I.A.O. (2020), "Ethical entrepreneurial leadership and organizational trust for organizational sustainability", *Cogent Business and Management*, Vol.7 No.1,p.1818368
- Sathishkumar, A.S. and Karthikeyan, P. (2017), "A study on effective organizational learning through knowledge management model", *International Journal of Research in Commerce & Management*, Vol. 8 No. 4, pp. 34-36.
- Scarborough, H., Swan, J. and Preston, J. (1999), *Knowledge Management: A Literature Review.Issues in People Management*, Institute of Personnel and Development, London.

- Shujahat, M., Hussain, S., Javed, S., Malik, M.I., Thurasamy, R. and Ali, J. (2017), "Strategic management model with lens of knowledge management and competitive intelligence: a review approach", *VINE Journal of Information and Knowledge Management Systems*, Vol. 47 No. 1. pp. 55-93
- Shujahat, M., Sousa, M.J., Hussain, S., Nawaz, F., Wang, M. and Umer, M. (2019), "Translating the impact of knowledge management processes into knowledge-based innovation: the neglected and mediating role of knowledge-worker productivity", *Journal of Business Research*, Vol. 94, pp. 442-450.
- Smith, P.A.C. and Sharicz, C. (2011), "The shift needed for sustainability", *The Learning Organization*, Vol. 18 No. 1, pp. 73-86.
- Srisathan, W.A., Ketkaew, C. and Naruetharadhol, P. (2020), "The intervention of organizational sustainability in the effect of organizational culture on open innovation performance: a case of Thai and Chinese SMEs", *Cogent Business and Management*, Vol. 7 No. 1, p. 1717408.
- Tanveer, M.I., Yusliza, M.Y. and Fawehinmi, O. (2023), "Green HRM and hospitality industry: challenges and barriers in adopting environmentally friendly practices", *Journal of Hospitality and Tourism Insights*, Vol. ahead-of-print No. ahead-of-print.
- Trivedi, K. and Srivastava, K.B.L. (2022), "The role of knowledge management processes in leveraging competitive strategies to achieve firm innovativeness", *The Bottom Line*, Vol. 35 No. 2/3, pp. 53-72.
- Tseng, F. and Fan, Y. (2011), "Exploring the influence of organizational ethical climate on knowledge management", *Journal of Business Ethics*, Vol. 101 No. 2, pp. 325-342.
- Villaluz, V.C. and Hechanova, M.R.M. (2019), "Ownership and leadership in building an innovation culture", *Leadership and Organization Development Journal*, Vol. 40 No. 2, pp. 138-150.
- Wang, S. and Noe, R.A. (2010), "Knowledge sharing: a review and directions for future research", *Human Resource Management Review*, Vol. 20 No. 2, pp. 115-131.
- Weiland, S. (2016), "On the role of evidence and knowledge in sustainability governance – towards a reflexive approach to political decision-making?", *Revue de Metaphysique et de Morale*, Vol. 1, pp. 39-54.
- Wong, C.S. and Law, K.S. (2002), "The effects of leader and follower emotional intelligence on performance and attitude: an exploratory study", *The Leadership Quarterly*, Vol. 13 No. 3, pp. 243-274.
- Zawawi, N.F.M. and Abd Wahab, S. (2019), "Organizational sustainability: a redefinition?", *Journal of Strategy and Management*, Vol. 12 No. 3, pp. 397-408.

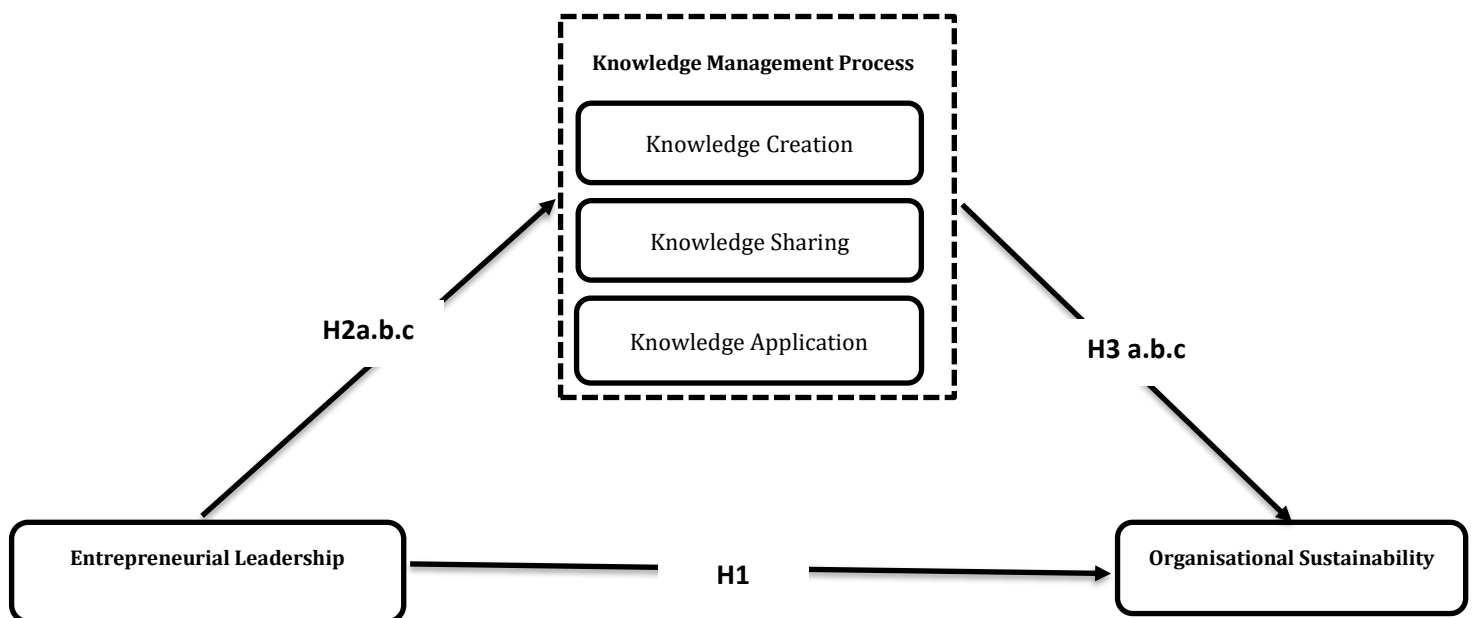


Figure 1: Research model

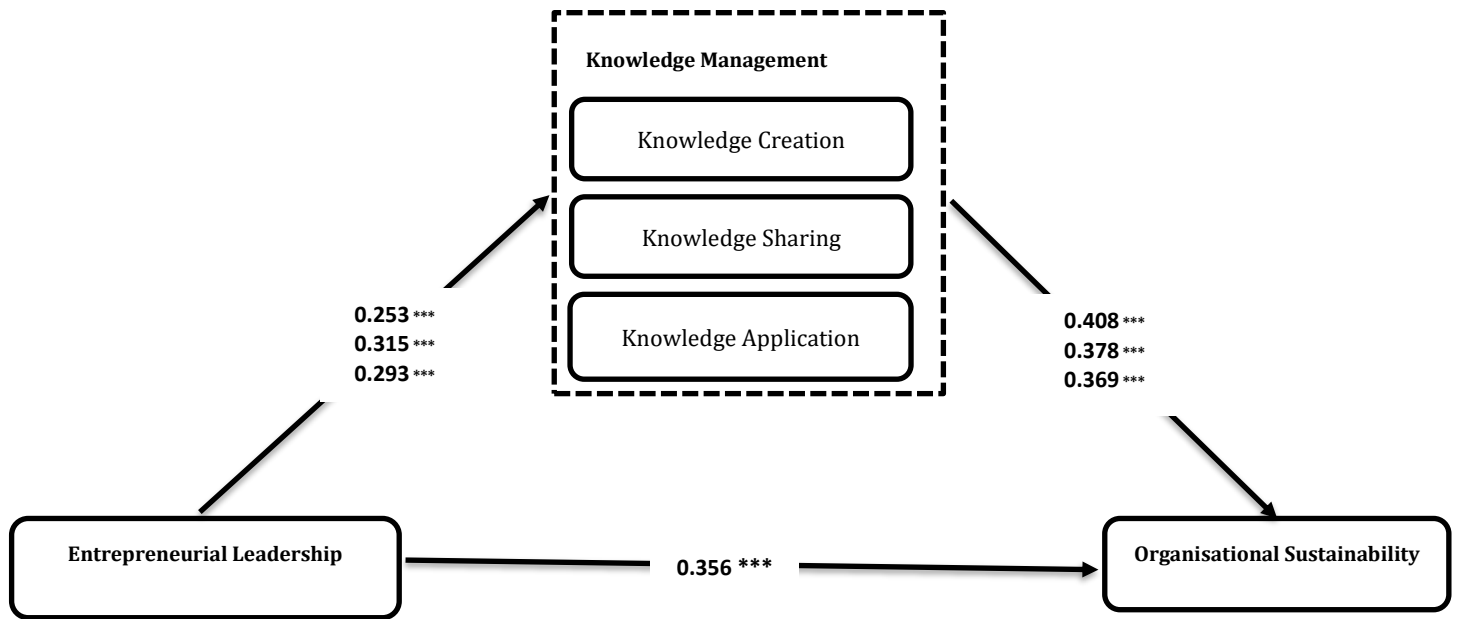


Figure 2: Path coefficients of the structural model

Note: *** $p < 0.001$; ** $p < 0.05$; and * $p < 0.1$

Table 1 Demographic characteristic of respondents 314		
Characteristics	No. of responses	(%)
<i>Gender:</i>		
Male	198	63
Female	116	37
<i>Age:</i>		
20-29	79	25
30-39	185	59
40 and up	50	16
<i>Experience</i>		
< 5	93	30
5-15 yeas	175	55
> 15 years	46	15
<i>Working positions</i>		
Manager	110	35
Employee	204	65
<i>Education level:</i>		
Diploma	59	19
Bachelor's degree	223	71
Master's degree	32	10

Table 2 Loading and Reliability							
Construct	Mean	SD	Item	Loading	CR	AVE	C α
Entrepreneurial Leadership (EL)	3.46	0.68	EL1	0.78***	0.82	0.73	0.81
			EL2	0.82***			
			EL3	0.72***			
			EL4	0.79***			
			EL5	0.83***			
			EL6	0.76***			
			EL7	0.74***			
			EL8	0.71***			
Organisational Sustainability (OS)	3.89	0.59	OS1	0.88***	0.79	0.69	0.80
			OS2	0.64***			
			OS3	0.75***			
			OS4	0.81***			
			OS5	0.74***			
			OS6	0.68***			
			OS7	0.88***			
			OS8	0.63***			
			OS9	0.71***			
			OS10	0.74***			
			OS11	0.85***			
			OS12	0.82***			
			OS13	0.68***			
			OS14	0.66***			
			OS15	0.84***			
			OS16	0.78***			
			OS17	0.69***			
			OS18	0.73***			
			OS19	0.84***			
			OS 20	0.66***			
Knowledge Creation (KC)	3.54	0.53	KC1	0.64***	0.74	0.63	0.76
			KC2	0.89***			
			KC3	0.82***			
			KC4	0.77***			
			KC5	0.69***			
			KC6	0.79***			
			KC7	0.80***			
			KC8	0.73***			
Knowledge Sharing (KS)	3.39	0.57	KS1	0.72***	0.77	0.74	0.80
			KS2	0.83***			

			KS3	0.89***			
			KS4	0.82***			
			KS5	0.78***			
			KS6	0.62***			
			KS7	0.86***			
			KS8	0.79***			
			KS9	0.68***			
			KS10	0.80***			
Knowledge Application (KA)	3.59	0.63	KA1	0.76***	0.80	0.78	0.78
			KA2	0.83***			
			KA3	0.84***			
			KA4	0.89***			
			KA5	0.73***			
			KA6	0.63***			
Notes: Ca _ 0.7; CR _ 0.7; AVE _ 0.5; ***Significant at p < 0.001							

Table 3 Convergent Validity					
Construct	EL	OS	KC	KS	KA
Entrepreneurial Leadership (EL)	<i>0.85</i>				
Organisational Sustainability (OS)	0.73	<i>0.83</i>			
Knowledge Creation (KC)	0.65	0.52	<i>0.79</i>		
Knowledge Sharing (KS)	0.71	0.61	0.53	<i>0.86</i>	
Knowledge Application (KA)	0.80	0.66	0.48	0.74	<i>0.88</i>
Notes: Diagonal elements (in italics) represent the square root of the AVE, while off-diagonal elements are construct correlations.					

Table 4 Model fit indices for structural model		
Fit index	Scores	Recommended value
Absolute fit measures		
CMIN/df	1.897	$\leq 2^a$; $\leq 5^b$
GFI	0.813	$\geq 0.90^a$; $\geq 0.80^b$
RMSEA	0.049	$\leq 0.08^a$; $\leq 0.10^b$
Incremental fit measures		
NFI	0.937	$\geq 0.90^a$;
AGFI	0.848	$\geq 0.90^a$; $\geq 0.80^b$
CFI	0.923	$\geq 0.90^a$;
Note: ^a Acceptability: acceptable; ^b Acceptability: marginal		

Table 5 Structural model results					
Hypothesis	Proposed effect	Estimate	p	t-value	Result
H1: EL $\rightarrow$ OS	+	0.356 ***	<0.001	5.23	Accepted
H2a: EL $\rightarrow$ KC	+	0.253 ***	<0.001	3.77	Accepted
H2b: EL $\rightarrow$ KS	+	0.315 ***	<0.001	3.14	Accepted
H2c: EL $\rightarrow$ KA	+	0.293 ***	<0.001	3.62	Accepted
H3a: KC $\rightarrow$ OS	+	0.408 ***	0.027	4.15	Accepted
H3b: KS $\rightarrow$ OS	+	0.378 ***	<0.001	4.98	Accepted
H3c: KA $\rightarrow$ OS	+	0.369 ***	0.034	2.94	Accepted
Note: ***p < 0.001; **p < 0.05; and *p < 0.1					

Table 6 Direct, indirect, and total effects analysis					
Path	Direct effects	Indirect effects	Total effects	Bias-corrected confidence intervals	
				Lower confidence level	Upper confidence level
H4a: EL → KC → OS	0.356 ***	0.383 ***	0.739***	0.229	0.448
H4b: EL → KS → OS	0.356 ***	0.395***	0.751***	0.235	0.473
H4c: EL → KA → OS	0.356 ***	0.369 ***	0.725***	0.243	0.461
Note: $p < 0.001$					