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The mediating role of absorptive capacity in the relationship between transformational leadership and corporate entrepreneurship

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Abstract: Absorptive capacity is widely acknowledged as a critical driver of innovation, business development, and self-renewal through the acquisition, transformation, assimilation, and application of knowledge. Despite the importance of the relationship between transformational leadership and corporate entrepreneurship, there exists a research gap due to the insufficient exploration of the mediating impact of absorptive capacity. This study endeavors to fill the existing research gap by delving into the interplay between transformational leadership and corporate entrepreneurship, taking absorptive capacity into consideration as a mediating factor. Surveys were collected from 154 middle managers representing a broad range of healthcare institutions in the United Arab Emirates. The study utilized a two-step structural equation modelling approach and provided empirical evidence to support the hypothesis that absorptive capacity mediates the relationship between transformational leadership and corporate entrepreneurship. These findings contribute to the resource-based view theory by demonstrating the effective role of transformational leadership in promoting corporate entrepreneurship through the development of absorptive capacity.

Subjects: Health & Development; Sustainable Development; Sociology & Social Policy;

Keywords: absorptive capacity; transformational; leadership; corporate; entrepreneurship; healthcare

1. Introduction

Transformational leadership has been acknowledged as a crucial factor in influencing a firm's performance by improving employees' innovativeness. By fostering a positive work environment that encourages knowledge sharing and supports a culture of innovation, a good leader can

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positively influence employees' self-efficacy, facilitate social identification within a group, and link their values to organizational values. This, in turn, creates an innovative culture that improves entrepreneurial activities at the organizational level. The literature suggests that transformational leadership is positively related to corporate entrepreneurship activities such as innovation, renewal, and venture. However, the relationship between transformational leadership and corporate entrepreneurship may vary across industries, as argued by Soomro (2022), which could impact the generalizability of past studies, especially in developing countries where corporate entrepreneurship literature is scarce. Recent studies indicate that transformational leadership facilitates absorptive capacity by creating a favorable environment for knowledge sharing, enabling the organization to recognize and use external firm expertise. Intellectual stimulation, which encourages employees to rethink their working patterns and suggest new approaches, is a key component of this initiative. Novel methods are also utilized to combine new and obtainable knowledge, as required in the knowledge transformation stage. Absorptive capacity, in turn, enhances learning capacity by encouraging employees to experience new methods, such as learning-by-doing, which can result in improved performance for organizations (Lane et al., 2006) and provide businesses with opportunities for innovative entrepreneurship (S. A. Zahra, Filatotchev, et al., 2009).

The extent of absorptive capacity's involvement in the correlation between transformational leadership and corporate entrepreneurship within healthcare establishments remains poorly documented. Organizations that invest in incorporating external knowledge tend to excel in reacting to shifting environmental circumstances and creating innovative goods that meet market demands. Nevertheless, the mediating impact of absorptive capacity on the transformational leadership and corporate entrepreneurship relationship in healthcare centers in the United Arab Emirates (UAE) has limited investigation. This study aims to fill this research void by contributing in two ways: firstly, it seeks to furnish empirical evidence on the relationship between transformational leadership and corporate entrepreneurship, guided by the resource-based perspective, from the standpoint of UAE healthcare centers. Secondly, it aims to scrutinize the mediating influence of absorptive capacity on the transformational leadership and corporate entrepreneurship relationship, guided by absorptive capacity theory. Previous research has emphasized the significance of exchanging and amalgamating freshly acquired knowledge with existing knowledge to create innovative outcomes, such as new products and services, that vary substantially from an organization's current portfolio. By examining the mediating role of absorptive capacity, this study seeks to provide a deeper understanding of the mechanisms that underlie the transformational leadership and corporate entrepreneurship relationship in healthcare institutions.

2. Literature review

Transformational leadership, introduced by James MacGregor Burns in 1978, is a highly effective leadership style that prioritizes the inspiration and motivation of followers towards achieving a shared objective. This approach has garnered significant attention in the leadership field and is one of the most extensively researched theories (Barney, 1991). According to Avolio and Bass (2004), there are four essential components of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence refers to the leader's capability to serve as a model for their followers, encouraging them to imitate their conduct and values. Inspirational motivation involves the leader's aptitude to motivate and inspire their followers through their communication and actions. Intellectual stimulation pertains to the leader's capacity to foster creativity and innovation among their followers. Lastly, individualized consideration denotes the leader's ability to provide individualized care and attention to their followers.

As per the resource-based view (Barney, 1991), organizations can use human capital as a significant resource to gain a competitive edge. In healthcare institutions, intangible resources such as human capital and organizational culture are essential in determining organizational success. Transformational leadership, on the other hand, focuses on the leader's ability to inspire

and motivate followers to reach their full potential, contributing to a corporate entrepreneurial culture. Therefore, transformational leadership is a vital intangible resource that can aid in the development of corporate entrepreneurial culture in healthcare institutions. Transformational leaders possess the necessary expertise and knowledge to develop and deploy resources and capabilities to achieve organizational objectives. They serve as role models, inspiring their followers to replicate their actions. Furthermore, they are usually endowed with excellent communication and charisma, enabling them to motivate and encourage their followers to achieve a common goal or vision. Transformational leaders also promote innovation by creating an environment that fosters creativity, influencing organizational innovativeness and self-renewal (Boukamcha, 2019). Additionally, they create an inclusive and diverse culture that improves employee satisfaction, retention, and performance, ultimately contributing to the organization's success.

In numerous industries, including healthcare, various studies have found a significant correlation between transformational leadership and corporate entrepreneurship. Soomro (2022) found that transformational leadership significantly influences corporate entrepreneurship among SMEs. Kim and Lee found that transformational leadership positively influences corporate entrepreneurship in healthcare organizations by promoting creativity, collaboration, and a focus on the needs of patients. Haase and Franco (2020) also revealed that Transformational leadership has a significant effect in the context of health organizations, particularly in increasing their collaborators' innovative behavior. In healthcare, transformational leaders promote collaboration and teamwork by creating a culture of trust and open communication. This collaborative environment can lead to the development of new ideas and solutions that benefit both patients and the organization. Therefore, we hypothesize that:

H1: Transformational leadership is positively associated with corporate entrepreneurship.

3. Transformational leadership and absorptive capacity

Transformational leadership and absorptive capacity are two critical concepts that have significant implications for organizational success. Transformational leaders possess skills and knowledge that facilitate the development and deployment of resources and capabilities to achieve organizational goals. The transformational leaders also tend to promote intellectual stimulation by creating an innovative business environment that helps followers develop new skills and capabilities, which influence organizational innovativeness and self-renewal. This ability to encourage creativity and innovation among followers can play a critical role in enhancing an organization's absorptive capacity. In addition, transformational leaders are more likely to create a culture of collaboration and teamwork, which can enhance an organization's absorptive capacity (Ferreras Méndez et al., 2018). Collaboration and teamwork can promote the exchange of ideas and knowledge among employees, which can help the organization to identify and assimilate external knowledge. The culture of collaboration and teamwork can also enhance employees' willingness to learn and develop new skills, which can further enhance the organization's absorptive capacity. When leaders inspire and motivate their employees, it creates an environment where individuals are more willing to learn and develop new skills (Ferreras Méndez et al., 2018). Employees who feel supported and valued are more likely to take risks and experiment with new ideas, which can lead to innovative solutions and improve the organization's absorptive capacity. Despite the inadequate empirical results on the relationship between AC and TL, research works emphasised the favourable effect of TL on AC (Anderson & Sun, 2017; Donnellan & Rutledge, 2019; H. Wang et al., 2011). Thus, the following hypothesis was formulated:

H2: Transformational leadership is significantly and positively related to absorptive capacity.

4. Absorptive capacity and corporate entrepreneurship

Over the past two decades, there has been increasing emphasis on the concept of absorptive capacity (AC) in literature. Tsai's (2001) studies have indicated that AC has an impact on business performance, innovation, inter-organisational learning, and intra-organisational knowledge distribution (Liu et al., 2021), thereby facilitating knowledge acquisition and application through ACAP. AC represents an organisation's ability to recognise the value of new information and apply it to its business (W. M. Cohen & Levinthal, 1990). S. A. Zahra, Filatotchev, et al. (2009) highlighted that AC enables businesses to identify prospects and innovative options for entrepreneurship. Additionally, AC could significantly improve an organisation's ability to identify and discover new opportunities by creating new skills and reducing cognitive inflexibility among top management (Presutti et al., 2019; S. Zahra & George, 2002). Absorptive capability can strengthen, refocus, or balance a firm's knowledge base (Campos-Climent & Sanchis-Palacio, 2017). ACAP encourages innovation speed, frequency, and magnitude, which could generate knowledge and become part of a company's future absorption capacity (S. Zahra & George, 2002). According to Scuotto et al. (2017), firms with strong AC are positively associated with improvement in their innovation activities. Stronger AC enables firms to identify and incorporate new knowledge (from external sources) into their existing knowledge base, gaining new insights into the market, customer base, technologies, and competitiveness (S. A. Zahra, Filatotchev, et al., 2009). Despite the significance of AC on the improvement in innovation capabilities, there is a relative limitation in the empirical attention to the association of AC with CE activities. This action hinders the testing and practical implications of crucial theoretical arguments (Kostopoulos et al., 2011). Therefore, the hypothesis (H3) below was suggested for testing:

H3: There is a positive and significant relationship between absorptive capacity and corporate entrepreneurship.

Building and retaining AC are crucial for a firm's achievement and sustainability in the long term (Seo et al., 2022), given that AC reinforces and balances the current knowledge base of the company (Hurtado-Palomino et al., 2022). With AC, companies are able to obtain and assimilate new knowledge (learning-by-doing) to improve their performance (Lane et al., 2006). S. Zahra and George (2002) elaborated on the organization's innovation activities, stating that the absorptive ability is essential. Therefore, stronger AC would reinforce a firm's innovative capabilities. The company that takes AC at an early stage is likely to achieve a sustainable competitive advantage for the immediate cost of advanced actions and growth (Campos-Climent & Sanchis-Palacio, 2017). Many researchers have concluded that members play a critical function in improving a company's capabilities. In this sense, leadership potential enhances the absorptive efficiency of the organization, which allows the business to achieve its goals.

It is also known that absorptive capability increases the potential of the business to cultivate CE by recognizing and utilizing external firm expertise (Sakhdari & Burgers, 2018). The association of entrepreneurship with leadership has gained increasing attention among scholars in entrepreneurship and leadership research contexts. This situation has become a call for further research into the link between the expansion of TL and CE (Pan et al., 2021; Verma & Mehta, 2020). According to Chen et al. (2021), several elements are taken into account in the influence on organizational performance, such as creativity and CE, which help create new goods, services, technology, and organizational methods and initiatives. On the other hand, transformational leaders encourage individual and team spirit among workers by showing positivity and passion towards them through support, incentives, and training. With intellectual stimulation, TL encourages workers to reconsider their working patterns, suggest new working approaches (Beh and Shafique, 2016), and recommend new methods of incorporating new understanding with current knowledge, as required in transforming knowledge (S. Zahra & George, 2002). In the case of AC through knowledge transformation, stimulation plays a crucial role in boosting organizational performance and profitability (Ahmed et al., 2019). Therefore, AC can sustain the association of TL with CE, which has

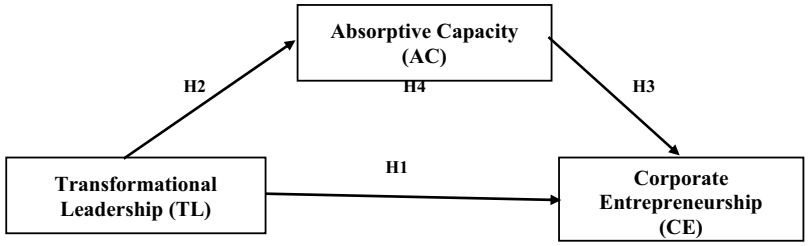


Figure 1. Conceptual framework.

not been empirically tested, especially from the perspective of healthcare institutions. To bridge this gap, the hypothesis (H4) below was proposed for testing as shown in Figure 1:

H4: Absorptive Capacity mediates the relationship between transformational leadership and corporate entrepreneurship

5. Methodology

5.1. Sample

After conducting a literature review, the hypothesis was established that transformational leadership can equip healthcare institutions with important corporate entrepreneurship through absorptive capacity. Given the impressive growth and achievements of the healthcare sector in the Middle East region, particularly in the UAE (S. A. Zahra, Filatotchev, et al., 2009), this research focused on healthcare institutions in the UAE. The targets of the research were managerial workers and large institutions with strong absorptive capacity, which can lead to gaining corporate entrepreneurship. Thus, large healthcare institutions were selected as the unit of analysis. The Federal Statistics and Competitive Authority reported that 247 large healthcare institutions were selected, consisting of 45 general and government hospitals, 98 private hospitals, and 98 advanced and specialist centers. The survey targeted managers and owners who were considered the most suitable informants for providing precise feedback on the matter due to their familiarity with organizational approaches. The survey was conducted in April 2020, and questionnaire sets were issued to 247 managers representing 247 healthcare institutions. The response rate was 62%, with 209 questionnaire sets collected in July 2020. After excluding irrelevant responses, the final sample of this research consisted of 154 healthcare institutions. Healthcare institutions were broadly classified into government hospitals, private hospitals, and specialist centers, with private hospitals constituting the majority (57.3%), followed by government hospitals (26.3%), and specialist centers (16.37%), as shown in Table 1.

5.2. Measures

In this study, the Multifactor Leadership Questionnaire™ consisting of 20 items was adapted for measuring TL, as recommended by Groves (2020). The TL construct was treated as a second-order latent construct, composed of four first-order dimensions, namely individual consideration, idealized influence, inspirational motivation, and intellectual stimulation. For measuring CE, 13 items were selected from prior research (Donnellan & Rutledge, 2019). This construct was also considered as a second-order latent construct with three first-order dimensions, which are risk-taking, self-renewal, and business venturing. Additionally, a 14-item scale developed by S. Zahra and

Table 1. Data Distribution

Healthcare institutions	Frequency (*n* = 171)	Percentage (%)
Private healthcare hospitals	88	57.31
General healthcare hospitals	41	26.32
Specialist healthcare centres	25	16.37

George (2002) was employed for measuring AC. The scale was further refined by Shafique and Kalyar (2018) to treat AC as a second-order latent construct with four first-order dimensions, including assimilation, acquisition, exploitation, and transformation. In this study, a seven-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (7) was used for all the measurement items.

5.3. Demographic factors

Table 2, demonstrates demographic information about the respondents. Approximately 42% of them have been operating for 11 to 15 years, while 21% of them have been operating for eight to 10 years, and 16% of them have been operating for 16 to 20 years of operations. Furthermore, the capacity of the healthcare institutions ranged from 50 to more than 300 beds. Most of the healthcare institutions, which accounted for 40% of the population, showed a capacity of 50 to 99 beds. This was followed by approximately 27% of the institutions that showed a capacity of 100 to 150 beds. Meanwhile, 12% of the institutions showed a capacity of 151 to 200 beds. The respondents from a large capacity showed a range of 201 to 250 beds and 251 to 300 beds, which accounted for 12% for every category. Following that, the institutions with more than 300 beds accounted for 5% of the respondents.

As seen in Table 2, the majority of the responses originated from the chief executive officer (CEO), which accounted for 83%. Following that, 17% of the population was represented by managers. Most respondents were male representing 81% of the population, while the remaining 19% were female. Furthermore, the figures indicated that males continuously dominated the leadership positions. This condition could be because men have a higher likeliness to be entrepreneurs, given that most data were from private hospitals and medical centres. The gender gap was also found to be in high positions, especially in the Middle East Countries including UAE, which was attributed to culture. Most of the respondents (approximately 45%) were in the middle age range from 41 to 50 years old, followed by approximately 26% who were aged from 51 to 60 years old. The respondents aged from 31 to 40 years old accounted for 24%, followed by the young respondents of 20 to 30 years who accounted for 4.5%. This condition indicated that managers in UAE healthcare were well-versed in their fields and possessed a long experience in serving their institutions. Most respondents had gained years of experience, with the experience of approximately 36% ranging from seven to 10 years, followed by 12% who gained four to seven years of experience 12%, and approximately 20% who gained above 10 years of experience. However, 12% of the respondents had less than three years of experience, indicating that the managers in healthcare institutions were considerably familiar with leadership and its effect. This condition improved the accuracy of the result.

5.4. Analysis

In this research, the proposed theoretical model was tested using the partial least squares (PLS) path modeling technique with the aid of SmartPLS 3, which is widely used in management studies and other related disciplines (Wu & Lu, 2012; S. A. Zahra, 1996). This technique was chosen as it is well-suited for analyzing organizational performance (the dependent factor), and is a variance-based SEM tool that has undergone significant development (McDonald, 1996). Before testing the model's reliability and validity, as well as the structural paths, this research assessed the assumptions of normality, common method bias, and multicollinearity (S. A. Zahra, 1996). A two-step SEM method was employed, which included evaluating the measurement and structural models. Finally, the PLS-SEM results were analyzed and reported following the guidelines of Hair et al. (2012).

5.5. Evaluation of measurement model

In this study, item reliability, internal consistency, convergent validity, content validity, and discriminant validity were assessed (Hair et al., 2012). The reliability examination was based on the outer loadings of each construct, with all items in Table 3 exceeding the 0.5 standard (Hair et al., 2014). The composite reliability (CR) coefficients ranged from 0.846 to 0.940, indicating sufficient

Table 2. Demographic information

Background information	No	%
Type of institution		
Gender		
Male	125	81%
Female	29	19%
Age		
Less than 20	0	0
20–30	7	4.5%
31–40	37	24%
41–50	69	45%
51–60	41	26%
Above 60	0	0
Job Position		
CEO	128	83%
Manager	24	17%
Others. Specify		
Job Experience		
Less than one year	0	0
From one to three years	18	12%
From four to seven years	49	32%
From seven to 10 years	56	36%
Above 10	31	20%
Years in operation		
Less than one year	0	0
From one to three years	0	0
From four to seven years	19	12%
From eight to 10 years	33	21%
From 11 to 15 years	65	42%
From 16 to 20 years	25	16%
Above 20 years	12	7%
Size		
Less than 30	0	0
30 to 50 beds	0	0
50 to 99	62	40%
100–150	42	27%
151–200	18	12%
201–250	12	8%
251–300	12	8%
More than 300	8	5%

internal consistency reliability. Additionally, the average variance extracted (AVE) values for all constructs were above 0.50, demonstrating adequate convergent validity (Chin, 1998).

The results of the analysis demonstrate that the average variance extracted (AVE) values for all latent constructs exceeded the threshold of 0.50, indicating satisfactory discriminant validity. In Table 3, it is evident that the loading factors for the dimensions of transformational leadership, which are idealised influence, individualised consideration, inspirational motivation, and

Table 3. Loadings, average variance extracted, and composite reliability

Constructs and Indicators	Standardised Loadings	AVE	CR
Idealised Influence		0.664	0.922
TFII1	0.695		
TFII2	0.800		
TFII4	0.856		
TFII5	0.781		
TFII6	0.824		
TFII7	0.741		
Individualised Consideration		0.626	0.87
IC1	0.550		
IC2	0.822		
IC4	0.654		
Inspirational Motivation		0.826	0.934
IM1	0.769		
IM3	0.834		
IM4	0.810		
Intellectual Stimulation		0.636	0.875
IS1	0.768		
IS2	0.628		
IS3	0.711		
IS4	0.699		
Business Venturing		0.713	0.925
BV1	0.768		
BV2	0.715		
BV3	0.734		
BV4	0.756		
BV5	0.739		
Risk-Talking		0.755	0.925
RT1	0.731		
RT2	0.792		
RT3	0.781		
RT4	0.760		
Self-Renewal		0.808	0.944
CR1	0.753		
CR2	0.695		
CR3	0.806		
CR4	0.796		
Acquisition		0.729	0.89
AC1	0.750		
AC2	0.790		
AC3	0.802		
Assimilation		0.648	0.846

(*Continued*)

Constructs and Indicators	Standardised Loadings	AVE	CR
AS2	0.770		
AS3	0.787		
AS4	0.606		
Exploitation		0.729	0.89
EX1	0.790		
EX2	0.692		
EX3	0.827		
Transformation		0.672	0.86
TR1	0.778		
TR2	0.770		
TR3	0.748		

intellectual stimulation, were all above the recommended threshold of 0.5. Specifically, the loading factors were 0.664, 0.626, 0.826, and 0.636, respectively. Similarly, the loading factors for the three dimensions of corporate entrepreneurship, namely business venturing, risk taking, and self-renewal, were 0.713, 0.755, and 0.808, respectively, indicating their strong relationship with the latent construct. Finally, the loading factors for the four dimensions of absorptive capacity, including acquisition, assimilation, exploitation, and transformation, were 0.729, 0.648, 0.729, and 0.672, respectively, suggesting their significant contribution to the overall construct.

Secondly, composite reliability is a statistical measure employed in research to evaluate the internal consistency and reliability of a multi-item scale or construct. It serves as an indicator of the interrelatedness or correlation among the items within a specific construct or scale. The composite reliability values for various factors within transformational leadership are presented in Table 3. These factors include idealized influence, individualized consideration, inspirational motivation, and intellectual stimulation, with respective composite reliability values of 0.922, 0.870, 0.934, and 0.875. Similarly, composite reliability values are reported for the dimensions of corporate entrepreneurship, namely business venturing, risk-taking, and self-renewal, which were found to be 0.925, 0.925, and 0.944 respectively. Additionally, the composite reliability values for absorptive capacity, encompassing acquisition, assimilation, exploitation, and transformation, were 0.89, 0.846, 0.89, and 0.86 respectively. These findings indicate that all factors exhibited composite reliability values above 0.70 or 0.80, suggesting a high level of internal consistency and reliability for the measures employed in the study.

To ensure the distinctiveness of the measures for various constructs, this research utilized the approach suggested by Fornell and Larcker (1981) to assess discriminant validity. The results are presented in Table 4, where it can be observed that the square root of the average variance

Table 4. Correlations and square root of average variance extracted for all latent constructs

Constructs	CE	AC	TF
CE	0.757		
AC	0.454	0.724	
TF	0.414	0.457	0.746

Notes: TF = transformational-leadership; CE = corporate-entrepreneurship; AC = absorptive-capacity

Table 5. Evaluation of structural model with moderating factor (full-model)

Path	Path Coefficient	S.E	t-value	p-value
Direct effect				
TF ➔ CA	0.334	0.089	3.758	0.000
TF ➔ CE	0.187	0.093	2.009	0.045
AC ➔ CE	0.393	0.088	4.455	0.000
Indirect effect				
TF ➔ AC ➔ CA	0.126		3.195	0.001

extracted (AVE) values exceeded the correlation coefficients among the latent variables. This indicates that the measures demonstrated satisfactory discriminant validity, as recommended.

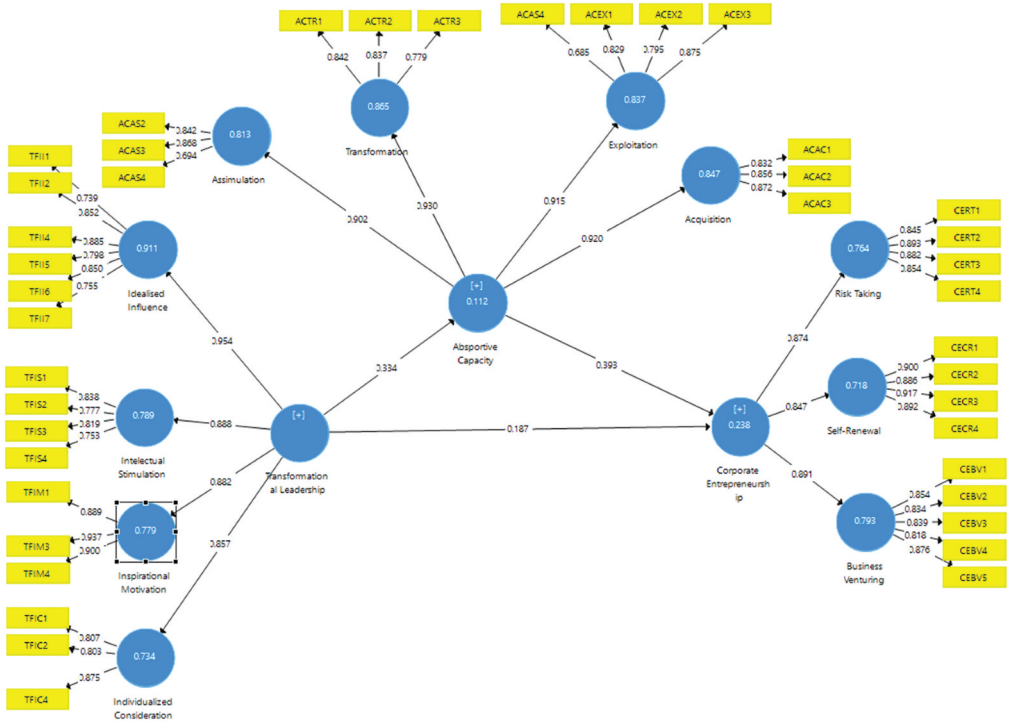
A check for multicollinearity was conducted by examining the variance inflation factor (VIF), which was recommended by Hair et al. (2014). According to them, if the tolerance values were 0.20 or lower, or if the VIF values were 5 or higher, it indicated the presence of collinearity among the independent factors. This research aimed to assess the minimum collinearity among the formative items. Results showed that the VIF values for all items ranged from 1.133 to 2.391, which were below the threshold range of 5 to 10. Hence, the research proved the absence of multicollinearity issues.

5.6. Assessment of structural model

Following the guidance of prior research (Hair et al., 2012), we utilized a standard bootstrapping procedure with 500 bootstrap replications to examine the significance of path coefficients in our study. The results of the structural model evaluation are presented in Table 5.

As shown in Figure 2, the paper introduces second-order factors and reflective second-order factors to improve analysis and obtain latent variable results in PLS-SEM. Second-order factors

Figure 2. Measurement model.



represent higher-level constructs that encompass multiple first-order factors, capturing broader dimensions. Reflective second-order factors assume that indicators reflect the latent variable as the underlying cause, while formative second-order factors treat the indicators as causes of the latent variable. By incorporating these factors, the paper aims to enhance the understanding of the measured variables' structure, provide a detailed analysis of relationships between constructs, and offer a more accurate representation of theoretical constructs.

Hypotheses H1, H3, and H4 were supported by the results of this study, which revealed a significant positive relationship between TL and CE in healthcare centers ($\beta = 0.187$, $t = 2.009$, $p < 0.05$) as well as between TL and the AC of healthcare institutions ($\beta = 0.334$, $t = 3.758$, $p < 0.001$). The findings also showed that AC partially mediated the relationship between TL and CE ($\beta = 0.126$, $p = 0.001$). The predictive ability of the structural model was assessed using the coefficient of determination (R^2), which explained the total variance in the dependent variable due to the independent variables. The R^2 values in this study exceeded the cutoff value of 0.02, indicating that the proposed model has sufficient predictive power for corporate entrepreneurship. Specifically, TL explained 10.9% of the total variance in AC, while AC and TL together explained 23.9% of the total variance in CE.

6. Discussion

This study aimed to investigate the influence of Transformational Leadership (TL) and absorptive capacity (AC) on Corporate Entrepreneurship (CE) in healthcare centers in the UAE, specifically exploring the mediating role of AC. First, this research recorded sufficient proof supporting the favourable and substantial impact of TL on the CE of healthcare institutions in the UAE. This result was in line with previous empirical results. To illustrate, TL among CEOs was recorded as having a favourable and substantial impact on CE in the aspect of strategic renewal, innovation, and business venturing (Soomro, 2022). Meanwhile, another research work recorded that TL had a positive and significant impact on CE in the aspect of pro-activeness, innovativeness, and risk-taking (Shafique & Kalyar, 2018). Empirical demonstration was performed on the favourable and substantial impact of TL on innovation, new business ventures (Chang et al., 2017), proactivity (Boukamcha, 2019), and risk-taking (Shafique & Kalyar, 2018). A transformational leader boosts workers' inventiveness through confidence, predictions, and standards, which creates positive results manifested through the company's new developments (Afsar et al., 2017). When workers are involved in decision-making at the organisational level, the top leadership could utilise the workers' innovativeness for new business ventures and self-renewal. Transformational leaders elaborate on the organisational mission and vision that attract the workers through inspirational motivation. This action increases the workers' proactivity, followed by the company's proactivity. However, a significant degree of risk-taking is not evitable under TL, given that leaders venture following the innovative ideas or beliefs recommended by workers who receive motivation from their leaders towards venturing for more creativity. Overall, numerous reports have been made on the favourable and substantial impact of TL on healthcare centres at the individual and organisational levels (Afsar et al., 2017; Soomro, 2022). Secondly, the findings of the study demonstrate a significant and positive relationship between transformational leadership and absorptive capacity within the healthcare sector of the UAE, thereby supporting the acceptance of Hypothesis 2. Specifically, transformational leaders play a pivotal role in establishing an organizational climate that fosters knowledge acquisition, assimilation, and utilization, all of which contribute to absorptive capacity. These leaders cultivate a shared vision and motivate employees to actively pursue and acquire new knowledge, both from internal and external sources.

By cultivating a supportive and learning-oriented environment, transformational leaders encourage their team members to engage in activities that enhance absorptive capacity. This includes participating in training programs, collaborating with external partners, and initiating knowledge-sharing initiatives, as supported by the research conducted by Beh and Shafique (2016). Furthermore, transformational leaders provide the necessary resources and support for employees to explore and experiment with new ideas. They foster an environment that encourages risk-taking

and empower their team members to challenge conventional practices and embrace change. The open and supportive atmosphere created by transformational leaders facilitates the absorption and integration of new knowledge, enabling the organization to adapt to changing circumstances and capitalize on emerging opportunities. By promoting a culture of continuous learning and innovation, transformational leaders enhance the organization's ability to effectively respond to the dynamic healthcare landscape in the UAE.

This research further elaborated on the mediating impact of AC on the association between CE and TL (Shafique & Kalyar, 2018). It has also enhanced the understanding of the role played by AC as the primary organisational mechanism affecting the association of TL with CE. Overall, AC has a stronger impact on CE compared to TL. TL also has a substantial impact on AC. Moreover, AC has a stronger impact on the entire dimensions of CE compared to TL. A transformational leader strengthens the workers' AC. With stronger AC, the obstacles in knowledge distribution under TL could be successfully solved. To illustrate this point, leaders distribute skills, expertise, and understanding among workers to gain, translate, and implement new organisational operations and enhance in-house communication (Levinthal & Daniel, 1990). Besides, AC indicates the importance of utilising and assimilating knowledge from external sources, which motivates CE (S. A. Zahra, Filatotchev, et al., 2009). With AC, companies are inclined to be involved in the creation of novel products, procedures, and networks, which are important in CE operations. The constant search and employment of novel business prospects reflecting CE (Chang et al., 2017) convert new knowledge and resources from external sources into organisational procedures (S. A. Zahra, Filatotchev, et al., 2009). With AC, organisations are involved in the creation of novel products, procedures, and networks crucial for incorporating entrepreneurship events. This condition results in the constant identification and use of new business prospects, such as CE (Shafique & Kalyar, 2018) and the communication of new knowledge and resources into organisations' procedures from various external sources (S. A. Zahra, Filatotchev, et al., 2009). With the acquirement and exploitation of external knowledge and sources, these elements are arranged by organisations to aid with CE outcomes (Shafique & Kalyar, 2018). The result of this research agreed with the literature that demonstrated AC as a crucial organisational instrument. Through this instrument, TL impacted CE in healthcare institutions. Transformational leaders raised the AC among workers in the companies by supporting the workers. They communicated their capabilities, responsibilities, skills, and knowledge to the organisational followers. These factors would be used by the followers to achieve, use, transform, and implement a unique practice and establish in-house communication by reducing the challenges in knowledge sharing. As a result, the efficacy of absorption process is improved (W. M. Cohen & Levinthal, 1990).

7. Theoretical implications

In the 21st century, constant innovation is important for the improvement and sustainability of companies' business performance, which includes constant incorporation and implementation of knowledge, expertise, and workers' innovativeness (Dess & Picken, 2000). Corporate entrepreneurship is critical for healthcare institutions and hospitals, as it promotes the development of innovative solutions and services to meet the changing needs of patients and stakeholders. This can lead to improved patient outcomes, increased operational efficiency, and sustainable growth, ultimately contributing to the success and competitiveness of healthcare institutions and hospitals. Yet, there is a lack of understanding on how to improve the association between transformational leadership and corporate entrepreneurship through absorptive capacity, especially among healthcare in the developing countries.

The finding of this study provides new and valuable evidence on the mediating role of absorptive capacity in the relationship between transformational leadership and corporate entrepreneurship among healthcare institutions in the UAE. This study contributes to the Resource-Based View of the firm by highlighting the importance of absorptive capacity in creating and sustaining a firm's competitive advantage. The results of this study suggest that transformational leadership can facilitate the development of absorptive capacity, which in turn can lead to the creation of

valuable resources through corporate entrepreneurship. This finding provides further support for the importance of human resources and the ability to acquire and assimilate new knowledge and resources in achieving and maintaining a firm's competitive advantage.

It is clear that TL is one of the important factors for companies to achieve stronger performance. Given the possibilities for leadership conduct to be obtained and applied (Patiar & Wang, 2016), healthcare institutions are able to support entrepreneurial activities through TL and AC. Leaders of healthcare institutions with restricted resources (Scheunemann & White, 2011) are required to recognise the importance of knowledge acquisition and absorption capacity in encouraging constant learning and entrepreneurial events. However, based on the momentum literature on TL, most of the past studies showed several limitations. First, the RBV theory was applied to enrich the TL literature, which remains a theoretically underdeveloped topic in the areas of CE (Alrowwad et al., 2020; Pan et al., 2021) and AC (Hsu & Chang, 2021), particularly in the healthcare institution (Ferreras Méndez et al., 2018; Głód, 2018).

This research has responded to the repeated calls for research to integrate TL and AC literature (Alrowwad et al., 2020). In healthcare institutions where resources are normally scarce (Sfantou et al., 2017), managers or leaders should have the awareness that the development of knowledge acquisition and absorption capacity assists in organisations' involvement in constant learning. This factor fosters entrepreneurial activities, which assist organisations in competing for limited resources and making positive impacts on performance.

8. Managerial implications

Thus, this study holds value among the directors and managers in the UAE healthcare organisations as a reference for the practice of collaborative culture, which fosters AC and improves CE capabilities in their organisations. Another managerial implication presents several results. To illustrate, Nguyen et al. (2022) highlighted that the employment of knowledge management measures would involve a particular organisational framework. Furthermore, the results have clarified the significance of TL practice as an organisational framework for improving organisational knowledge capital, which creates CE. It is possible for TL practice to be an ideal method of building workers' confidence to decrease the susceptibility and risk in interpersonal ties at the workplace (Nguyen et al., 2022). This factor would promote KMC for innovation (Pratoom, 2022).

The results made a further extension of the comprehension of cross-level research on CE and TL at the lower organisational level of TL. This factor is employed by middle managers who are inclined to depend on a higher organisational level of contextual factors to promote a lower degree of CE at the unit level. Therefore, it was indicated that a unit with a more significant degree of innovation and new venture creation operations mainly focuses on cultivating a delegated surrounding or reinforced condition across the levels. Notably, this result was in line with previous research (Chang et al., 2017; Shafique & Kalyar, 2018), where the cross-level interaction impacts improve the lower-level leaders' knowledge. Subsequently, the leaders can employ transformational leaders to encourage a lower degree of innovation and new venture growth attributed to the firm-wide empowerment context.

Generally, policymakers and associated stakeholders in the UAE are suggested to take into account the promotion of CE in the healthcare sector with the assistance of leadership training and professional education. Considering the research results, the promotion of CE through the management method could provide an advantage to the organisational performance of healthcare centres. This research illustrated some primary implications benefiting the top leadership of healthcare centres for improved CE. TL is able to foster CE in healthcare centres in the UAE. To improve TL expertise, the key personnel of healthcare centres should be properly educated and trained. Besides the use of people equipped with expertise, healthcare institutions must regularly implement training sessions and workshops for the improvement of TL expertise and the sustainability of positive TL actions at the organisational level.

Healthcare centres are also able to collaborate with training institutions in training the managerial expertise of key management personnel. Besides its positive direct impact on CE, the positive association of TL with CE takes place through AC. In this research, the direct impact of AC on CE was found to have higher substantiality compared to the direct impact of TL on CE and its dimensions. Companies are able to improve their degree of AC through TL. The direct impact of AC in this research was more apparent in innovation and risk-taking, suggesting the importance for companies that could develop new innovations and venture to highlight AC in comparison to TL. Nevertheless, overlooking the favourable impact of TL on CE and workers' ability to gain knowledge is not recommended. TL also contributes to self-renewal, proactivity, and new business ventures. Moreover, a transformational leader shows a more direct impact on a new business venture. This situation indicates that companies emphasising new business ventures are able to strengthen their AC under the leadership of a transformational leader. It could be seen from the results of this research that transformation leadership impacts AC, including CE and its dimensions. Besides the wide range of management factors, the significance of leadership training for their management personnel should not be omitted by healthcare institutions.

9. Limitations and future research

Some limitations were present in this research. First, the association of TL with CE was examined through the mediating impact of AC. However, the check and balance of countervailing interests, impacts, and prominence that could prevent the majority's dictatorship and persecution over a minority still lacks TL. When moral rectitude is absent, it could be seen that TL could be employed for less favourable social ends. Therefore, the recommendation in examining new leadership methods, including authentical leadership and laissez-faire leadership methods on CE, is needed. In addition, an examination of the moderate function of moral rectitude on the association of TL with AC and CE is recommended, given that it provides a good understanding of the effectiveness of TL and vice versa. Second, this research was conducted on a sample of healthcare centres in the UAE, which had limitations. Thus, it is suggested that future studies make replication of this research and exploration of the importance of TL in other sectors. The sample of this study was gathered from the managerial level in which the managers of the departments and CEOs were the targeted sample. This action may affect the generalisability of the research findings. Therefore, the collected data from multi-level organisations including the managers and employees could improve the generalisability of the finding, which is also recommended for future research. Third, this research is a cross-sectional research associated with limitations. To illustrate this point, this research exposure and outcome were simultaneously assessed, which did not strongly prove the relationship between the exposure and outcome. For this reason, a longitudinal study could limit the weaknesses of the cross-sectional study. Finally, it is recommended to include the control effect of other variables such as the types and the sizes of healthcare institutions.

10. Conclusion

The aim of this study was to investigate the association between transformational leadership (TL), absorptive capacity (AC), and corporate entrepreneurship (CE) in healthcare institutions located in the United Arab Emirates (UAE). The study's findings showed that TL had a positive and significant relationship with both AC and CE. These results were consistent with prior research that has documented the beneficial impact of TL on organizational outcomes. Furthermore, the study also discovered that AC mediated the relationship between TL and CE. This finding implies that the positive influence of TL on CE can be partly attributed to the development of AC within the organization. By building their absorptive capacity, healthcare managers can enhance their organization's ability to recognize, integrate, and apply novel information and ideas to enhance their entrepreneurial activities. This can ultimately contribute to better performance, increased competitiveness, and better patient outcomes.

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