

The Influence of Transformational Leadership on Organisational Performance through Corporate Entrepreneurship and Absorptive Capacity

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Abstract

Transformational leaders exploit new innovations and opportunities, optimise risks, and create a dynamic working environment to organise and motivate employees towards a common goal. Such leadership has been regarded as an effective development approach to attain higher organisational performance. However, studies have revealed potential mediation effects of factors like corporate entrepreneurship and absorptive capacity on the relationship between leadership style and organisational performance. Studies on the mediation effects of such factors within the context of developing countries, particularly in the healthcare sector, have remained scarce.

Purpose: focusing on the healthcare sector, the current study examined the mediation effects of corporate entrepreneurship and absorptive capacity in the relationship between transformational leadership and organisational performance.

Design/methodology/approach: Using a two-step approach to structural equation modelling, the survey responses of 171 middle managers from various healthcare institutions in the UAE were analysed. The assessment of structural model in this study presented evidence on the significance of the hypothesised direct and indirect effects.

Findings: The empirical findings of the current study on how corporate entrepreneurship and absorptive capacity mediate the influence of transformational leadership and organisational performance

Contribution: The finding of this paper brings a new evidence on the mediate effect of corporate entrepreneurship, which extends the current knowledge base on the resource-based view of the firm theory.

Originality/value: This paper is one of few papers that explored the influence of absorptive capacity on the relationship between transformational leadership and corporate entrepreneurship in healthcare institutions, particularly in the UAE

Keywords: Transformational leadership; corporate entrepreneurship; absorptive capacity

Introduction

A leader who can effectively manage people, resources, and value creation processes from innovations to new ventures is a prerequisite for successful entrepreneurship (Al-Shami, Mamun, Sidek, & Rashid, 2020; Tseng & Tseng, 2019). Hence, it is pivotal for

entrepreneurship research to explore significant factors that influence the identification, evaluation, and exploitation of value creation opportunities (Chang, Chang, and Chen, 2017). Multifaceted theories from diverse contexts have been considered to explore entrepreneurship process given its complexities and sociodynamics (Zahra, Sapienza, and Davidsson, 2006). Meanwhile, the basis of leadership research is more developed, which can benefit entrepreneurs and assist their entrepreneurial process. In fact, top business leaders and entrepreneurs are generally similar in terms of leadership—a recent survey revealed that they shared 28 (out of 41) leadership qualities, including resiliency and novel thinking (Reid et al., 2018). The integration of entrepreneurship and leadership research may offer exclusive theoretical and practical insights to the relevant communities given the common attributes and models employed in both fields (Baron, 2002; Heavey et al., 2009). After all, the early development of entrepreneurship research often made use of leadership theories and constructs (Boukamcha, 2019).

Opportunities that emerge from the relationship between entrepreneurship and leadership have recently gained growing interest among scholars in both entrepreneurship and leadership research contexts. This has propelled more studies on the relationship between leadership style and the development of entrepreneurship (Reid et al., 2018; Yunis, Tarhini, & Kassar, 2018). As a mechanism that stimulates creativity, corporate entrepreneurship contributes to the development of new products, services, technologies, or organisational approaches and strategies. There have been growing demands for more creative firms today to come up with solid improvements that can effectively and efficiently address the challenges of the world (Yunis, Tarhini, and Kassar, 2018). However, leadership and corporate entrepreneurship, particularly within the context of developing countries, are explored separately (Chang et al., 2017). Most prior studies on corporate entrepreneurship and its various dimensions focused on large private organisations, while similar studies that involved public organisations, such as healthcare institutions, have remained limited (Morris, Kuratko, and Covin, 2016).

Adding to that, studies have highlighted transformational leadership as a strategic antecedent of knowledge absorption (Ferrerias Méndez, Sanz Valle, and Alegre, 2018) and absorptive capacity (Shafique and Kalyar, 2018), which contribute to the identification and exploitation of new knowledge and consequently promote corporate entrepreneurship. However, only a few studies explored the influence of absorptive capacity on the relationship between transformational leadership and corporate entrepreneurship in healthcare institutions, particularly in the UAE. Focusing on that, the current study specifically developed a model that links transformational leadership and organisational performance via corporate entrepreneurship and absorptive capacity.

Literature Review

Leadership

Leadership is a multidisciplinary domain with emphasis on wide-ranging human and organisational aspects across diverse disciplines: humanities (e.g. history and philosophy), social sciences (e.g. sociology and psychology), and theoretical and technological fields of

research (e.g. management and education). Organisational management is closely related to leadership. Numerous concepts of leaderships have been proposed. Despite the many definitions of leadership, there is no systematic concept of leadership, which calls for more studies (Anderson and Sun, 2017). Most past studies on innovation capabilities and competitive advantage of organisations highlighted the application of resource-based view (RBV). According to RBV, internal resources can affect the competitiveness of an organisation (X. Liu & Jie, 2020; Nguyen, Huynh, Lam, Le, & Nguyen, 2021; Rivard, Raymond, & Verreault, 2006). Through valuable and unique resources as well as skills or socially complex organisational processes, organisations can gain and sustain competitive advantage (Barney, 1991). An organisation possesses different forms of resources, such as attributes, capabilities, knowledge, know-hows, and processes, which are exploited to develop and implement competitive strategies (Puspita, Christiananta, & Ellitan, 2020; Zahra, 1996). Certain resources, such as capital, in-house knowledge of technology, skills of personnel, and efficiency of organisational procedures, have long-term effects on the organisation (Rivard et al., 2006; Bicharanloo et al, 2022). Based on the key standards of RBV (value, uniqueness, and feasibility), a leader's capabilities also serve as a form of organisational resources to gain competitive advantage and achieve higher organisational performance (Voola, Carlson, and West, 2004). Focusing on these three key features, this view postulates the competence of a leader as a potential source of competitiveness for an organisation.

Transformational Leadership

The effectiveness of transformational leadership, particularly in dealing with mercurial or unpredictable circumstances, has been widely acknowledged (Steinmann, Klug, and Maier, 2018). Considering that new entrepreneurs often encounter such circumstances, studies have explored opportunity recognition and demonstrated how charismatic leaders who can instil trust and cooperation among their followers are more capable of handling volatile environments (Felix, Aparicio, and Urbano, 2019). (Burns, 1978) originally defined the concept of transformational leadership as "leaders and followers improving one another towards a higher level of morality and inspiration". Following that, (B. . Bass, 1985) highlighted four dimensions of transformational leadership: individual consideration, intellectual stimulation, inspirational motivation, and idealised influence. Besides that, a few past studies (B. . Bass, 1985; R. R. Bass, 2006), described leadership as one's capability to lead, motivate, and inspire followers, create desirable experiences for followers, and judiciously articulate and communicate goals. Through an effective leader, values upheld by employees can be aligned with the standard organisational practices. A transformational leader is generally enthusiastic and optimistic and displays the capability to encourage employees at the individual and organisational levels towards a higher level of organisational performance through training, support, and motivation (Thu, Mia, Winata, and Chong, 2016). Besides that, only transformational leadership has been identified as a significant determinant of organisational performance, while transactional leadership has been noted as an unreliable predictor, especially within the context of sales (Winn and Ph, 2017). With that, the current study tested the following hypothesis (H1): Transformational leadership positively and significantly influences organisational performance of healthcare institutions.

In this highly competitive environment, followers under the leadership of a transformational leader are encouraged to make good use of opportunities that support new innovations and strategies. After all, executing a new concept at the organisational level requires one to take risk. Leaders define desires and beliefs at person and organization level through individual knowledge and skills. Leaders mentor and motivate employees, and ensure efficient contact for new business opportunities, which consequently promote individual growth (R. R. Bass, 2006). Helping their employees to achieve their desires and expectations contributes to the materialisation of personal and organisational goals. (García-Morales, Jiménez-Barrionuevo, and Gutiérrez-Gutiérrez, 2012) demonstrated the positive influence of transformational leadership on creativity through corporate awareness development procedures (Nonaka and Takeuchi, 1995). Studies have also demonstrated the positive relationship between transformational leadership and creativity through different functional dimensions (e.g. organisational thinking and communication) and their interrelationships (Lei, Slocum, and Pitts, 1999). In another study (Chang et al., 2017), the positive influence of transformational leadership on corporate entrepreneurship was reported based on the results of a survey that specifically involved 129 managers and 244 employees from 55 units of 27 manufacturing firms in China. Thus, the following hypothesis (H2) was proposed for testing: Transformational leadership positively and significantly influences corporate entrepreneurship of healthcare institutions.

Studies have also highlighted that top management leaders display transformational leadership (Shafique and Kalyar, 2018). The influence of such leadership style can be observed at the individual and organisational levels based on two plausible reasons (Wang, Tsui, and Xin, 2011): (1) a transformational leader at the top management level may be a role model for a lower-tier leader, which reflects cascading effect of transformational leadership; (2) leaders motivate employees to work towards a common organisational vision. Leaders at the top management level have significant influence over the organisation's strategies, cultures, systems, and practices. Considering that, studies have suggested transformational leadership as a strategic antecedent of absorptive capacity (in the forms of knowledge absorption and organisational learning processes) (Anderson & Sun, 2017; Donnellan & Rutledge, 2019). The incorporation and transfer of knowledge at the organisational level are said to be better under transformational leadership, as such leaders promote the organisational capacity to absorb knowledge from external sources (Ferrerias Méndez et al., 2018). A transformational leader communicates a vision that emphasises the importance of knowledge transfer and application and proposes a suitable model that encourages knowledge gain, which consequently promote absorptive capacity (Flatten, Adams, and Brettel, 2015). Despite the lack of empirical findings on the linkage between transformational leadership and absorptive capacity, there have been studies that highlighted the positive influence of transformational leadership on absorptive capacity (Anderson & Sun, 2017; Donnellan & Rutledge, 2019; Wang et al., 2011). Under transformational leadership, employees' absorptive potential are encouraged through the sovereignty and equality of adherents (Ferrerias Méndez et al., 2018). Thus, the current study tested the following hypothesis (H3): Transformational leadership positively and significantly influences absorptive capacity of healthcare institutions.

Corporate Entrepreneurship

Corporate entrepreneurship refers to an assemblage of organisational efforts to invent, invest, and restore (Zahra, 1996). In an analysis (Antoncic and Hisrich, 2001), four aspects of corporate entrepreneurship were identified: creativity, modern technology, self-renewal, and reactiveness. In general, there are three key outcomes of corporate entrepreneurship: business venturing, risk-taking, and self-renewal activities (Chang et al., 2017). The significance of corporate entrepreneurship in developing competitive advantage through organisational performance has been debated (Zahra, 1996). With that, the following hypothesis (H4) was tested in the current study: Corporate entrepreneurship positively and significantly influences organisational performance of healthcare institutions.

Although studies have proved that transformational leadership positively and significantly influences corporate entrepreneurship (Chang et al., 2017), the mediating role of corporate entrepreneurship in the relationship between transformational leadership and organisational performance has also been highlighted in studies (Bakar and Mahmood, 2014). Therefore, the following hypothesis (H4a) was proposed for testing: Corporate entrepreneurship mediates the relationship between transformational leadership and organisational performance of healthcare institutions.

Absorptive Capacity

In the past two decades, the concept of absorptive capacity has gained growing research interest. Based on these studies (Bakar & Mahmood, 2014), absorptive capacity has been reported to exhibit influence innovation (Tsai, 2001), business performance, intra-organisational transfer of knowledge (Lane & Lubatkin, 1998; Wenpin Tsai The, 2001) and inter-organisational learning (Lane & Lubatkin, 1998; Szulanski, 1996). In particular, absorptive capacity can be conceptualised as the capability of an organisation to determine, integrate, and make use knowledge from external sources (Schoch, Sung, Volkmannkohlmeier, Kohlmeier, & SPATAFORA, 2007). Through absorptive capacity, the accumulation and utilisation of knowledge are promoted. Considering the need to transform knowledge from external sources into a usable form (Zahra and George, 2002), the concept of absorptive capacity has been expanded from three dimensions (identify, assimilate, and exploit) to four dimensions (acquire, assimilate, transform, and exploit) instead.

Making use of absorptive capacity helps organisations to develop and improve their efficiency. (Levinthal and Administrative, 1990) shared similar views on how absorptive capacity involves the assimilation of new external capabilities and the ability to translate those capabilities into a source of revenue. Furthermore, having greater absorptive capacity potentially increases the chance of applying new capabilities to industrial applications, resulting in a higher level of exchange efficiency (Tsai, 2001). (Rhee, 2008) determined that the level of employees' AC is associated with efficiency new innovation development. In another study (H. Liu, Ke, Wei, and Hua, 2013), which focused on its dynamic potential, absorptive capacity was identified as a significant predictor of organisational efficiency. In view of the above, the current study hypothesised that absorptive capacity and organisational performance are positively linked; in other words, greater absorptive capacity may help

organisations to gather, transform, and apply knowledge from external sources towards attaining enhanced capabilities:

H5: Absorptive capacity positively and significantly influences organisational performance of healthcare institutions.

H5a: Absorptive capacity mediates the relationship between transformational leadership and organisational performance of healthcare institutions.

RBV has been utilised to interpret the mediation effect of absorptive capacity on the relationship between leadership style and organisational entrepreneurship. The resource-based framework was initially proposed to evaluate organisations based on their capital, which provided insights that differ from the conventional contexts (Wernerfelt, 1984). Establishing and maintaining absorptive capacity are vital for an organisation's long-term success and survival (Shafique and Kalyar, 2018), as absorptive capacity strengthens and stabilises the existing knowledge base of the organisation (H. Liu et al., 2013). Through absorptive capacity, organisations can gain and incorporate new knowledge (learning-by-doing) to enhance their performance (Al-Hakimi, Saleh, & Borade, 2021; Lane, Koka, & Pathak, 2006). Organisations with higher absorptive capacity have the capability to identify and incorporate new knowledge (from external sources) with their current knowledge base and gain new understandings of the market, technologies, competitiveness, and customer base (Zahra, Filatotchev, and Wright, 2009). Another study conducted a survey that involved small and medium-sized enterprises (SMEs) in Pakistan and confirmed the positive influence of absorptive capacity on corporate entrepreneurship, particularly in terms of innovation development, self-renewal, and new business ventures (Shafique and Kalyar, 2018). In view of the above, the following hypotheses were proposed for testing:

H6: Absorptive capacity positively and significantly influences corporate entrepreneurship of healthcare institutions.

H6a: Absorptive capacity mediates the relationship between transformational leadership and corporate entrepreneurship of healthcare institutions.

Methodology

Sample

Based on the review of literature, transformational leadership was hypothesised to provide healthcare institutions the needed competitive advantage through corporate entrepreneurship and absorptive capacity. This study focused on healthcare institutions in the UAE given the dynamic development and success of the healthcare sector in the Middle East region (Zahra et al., 2009). Considering the focus of this study, managerial employees and large institutions with higher absorptive capacity and the capability to pursue corporate entrepreneurship were targeted. Thus, large healthcare institutions represented the unit of analysis. According to the Federal Statistics and Competitive Authority (2020), a total of 247 large healthcare institutions, which consisted of 45 general and government hospitals, 98 private hospitals, and 98 advanced and specialist centres, were selected. In particular, managers and owners were selected for the

survey—they were deemed as the most appropriate informants to provide accurate feedback on the topic given their familiarity with the organisational strategies (Mahroum, 2018).

The survey was conducted in April 2020. Questionnaire sets were distributed to a total of 247 managers (representing 247 healthcare institutions). A total of 209 questionnaire sets were successfully gathered in July 2020, resulting in a response rate of 85%. Following the exclusion of invalid responses, 171 healthcare institutions represented the final sample of this study. The healthcare institutions are generally classified into (1) government hospitals, (2) private hospitals, and (3) specialist centres. As shown in Table 1, private hospitals represented the largest group (57.3%) in this study, followed by government hospitals (26.3%), and finally, specialist centres (16.37%).

Table 1: Distribution of healthcare institutions in this study

Healthcare Institutions	Frequency (n = 171)	Percentage (%)
Private hospitals	98	57.31
Government hospitals	45	26.32
Specialist centres	28	16.37

Measures

A 20-item Multifactor Leadership Questionnaire™ was adapted for this study to measure transformational leadership (Al-Neyadi, Abdallah, & Malik, 2018). In particular, transformational leadership in this study served as a second-order latent construct, which consisted of four first-order dimensions: individual consideration, intellectual stimulation, idealised influence, and inspirational motivation. As for corporate entrepreneurship, 13 items were adopted from previous studies (Donnellan & Rutledge, 2019). This construct served as a second-order latent construct, which consisted of three first-order dimensions: business venturing, risk-taking, and self-renewal. Third, we adopted 14 items scale developed by Absorptive capacity is measured by a 14-item scale that is developed by (Zahra and George, 2002) further refined (Shafique and Kalyar, 2018) by treating absorptive capacity as a latent second order construct with four first-order dimensions: acquisition, assimilation, transformation and exploitation. Lastly, 12 items were adopted from previous studies

(Avolio, Bass, & Jung, 1999) to measure organisational performance, which served as a second-order latent construct. This construct consisted of four first-order dimensions: financial performance, customer perspective, internal process perspective, and learning and growth perspective. A seven-point Likert scale, with the endpoints of “strongly disagree” (1) and “strongly agree” (7), was used in this study.

Data Analysis

For the testing of the proposed theoretical model, partial least squares (PLS) path modelling was conducted using SmartPLS 3 (Umrani, Kura, & Ahmed, 2018). It was selected as the main

analysis tool given its extensive application and appropriateness for analysis in management research and other related disciplines (Wu & Lu, 2012; Zahra, 1996), including the current study that focused on organisational performance (dependent variable) (Joe F Hair, Ringle, and Sarstedt, 2011). Moreover, PLS path modelling is generally the most developed variance-based SEM tool (McDonald, 1996).

Results

As highlighted, PLS path modelling was conducted in this study given its extensive application in research. Prior to the testing of model reliability and validity and structural paths, this study evaluated the assumptions of normality, multicollinearity, and common method bias (Zahra, 1996). A two-step approach to SEM, involving the assessment of measurement model and structural model, was performed. Following that, the obtained PLS-SEM results (Joseph F Hair, Sarstedt, Pieper, & Ringle, 2012) were evaluated and reported.

Assessment of Measurement Model

Item reliability, internal consistency, content validity, convergent validity, and discriminant validity were first evaluated (Joseph F Hair et al., 2012). Reliability can be examined based on the outer loadings of each construct (F. Hair Jr, Sarstedt, Hopkins, & G. Kuppelwieser, 2014). Referring to Table 2, the outer loadings of all items exceeded 0.5, which satisfied item reliability criterion (F. Hair Jr et al., 2014). Besides that, the composite reliability (CR) coefficients in this study ranged from 0.846 to 0.940; thus, suggesting adequate internal consistency reliability of the measures. Thirdly, the recorded average variance extracted (AVE) values for all constructs were more than the cut-off value of 0.50. These results reaffirmed adequate convergent validity (Chin, 1998).

Can report full validity and reliability assessment

Table 2: Loadings, average variance extracted, and composite reliability

Latent Indicators	Constructs and Standardised Loadings	AVE	CR
Idealised Influence		0.664	0.922
TFII1	0.740		
TFII2	0.852		
TFII4	0.885		
TFII5	0.797		
TFII6	0.850		
TFII7	0.756		
Individualised Consideration		0.626	0.87
TFIC1	0.805		
TFIC2	0.793		
TFIC3	0.758		
TFIC4	0.808		
Inspirational Motivation		0.826	0.934

Latent Indicators	Constructs and Standardised Loadings	AVE	CR
TFIM1	0.889		
TFIM3	0.937		
TFIM4	0.900		
Intellectual Stimulation		0.636	0.875
TFIS1	0.837		
TFIS2	0.777		
TFIS3	0.819		
TFIS4	0.755		
Business Venturing		0.713	0.925
CEBV1	0.854		
CEBV2	0.834		
CEBV3	0.839		
CEBV4	0.818		
CEBV5	0.876		
Risk-Talking		0.755	0.925
CERT1	0.845		
CERT2	0.893		
CERT3	0.882		
CERT4	0.854		
Self-Renewal		0.808	0.944
CECR1	0.900		
CECR2	0.886		
CECR3	0.917		
CECR4	0.892		
Acquisition		0.729	0.89
ACAC1	0.832		
ACAC2	0.857		
ACAC3	0.872		
Assimilation		0.648	0.846
ACAS2	0.843		
ACAS3	0.869		
ACAS4	0.692		
Exploitation		0.729	0.89
ACEX1	0.865		
ACEX2	0.817		
ACEX3	0.878		
Transformation		0.672	0.86
ACTR1	0.842		
ACTR2	0.837		
ACTR3	0.779		
Current Profitability		0.716	0.91

Latent Indicators	Constructs and Standardised Loadings	AVE	CR
CACP1	0.848		
CACP2	0.841		
CACP3	0.869		
CACP4	0.827		
Customer Satisfaction		0.652	0.882
CACS1	0.802		
CACS2	0.857		
CACS3	0.717		
CACS4	0.845		
Market Effectiveness		0.716	0.877
CAME1	0.807		
CAME2	0.803		
CAME3	0.827		
CAME4	0.766		

Discriminant validity, as suggested (Fornell, Larcker, and Modeling, 1981), was examined in this study to ensure the discrimination of measures of different constructs. As presented in Table 2, the AVE values for all latent constructs exceeded the cut-off value of 0.50. Referring to Table 3, the square root of these AVE values were found higher than the correlation coefficients between latent variables. In other words, all measures in this study demonstrated satisfactory discriminant validity.

Table 3: Correlations and square root of average variance extracted for all latent constructs

Constructs	TF	CE	AC	CA
TF	0.746			
CE	0.319	0.757		
AC	0.357	0.454	0.724	
CA	0.357	0.414	0.457	0.746

Notes: TF denotes transformational leadership; CE denotes corporate entrepreneurship; AC denotes absorptive capacity; CA denotes organisational performance.

As for the evaluation of multicollinearity, the outcomes of variance inflation factor (VIF) were examined. According to Hair Jr et al. (F. Hair Jr et al., 2014), tolerance value of 0.20 or lower or VIF value of 5 or higher suggest the presence of collinearity among the independent variables. For this study, minimum collinearity among the formative items was observed. In particular, the recorded VIF values for all items ranged from 1.133 to 2.391, which exceeded the threshold range of between 5 and 10. Thus, this study reaffirmed no multicollinearity issue.

Assessment of Structural Model

Following the suggestions of prior studies (Joseph F Hair et al., 2012), the standard bootstrapping procedure, with 500 bootstrap replications, were performed to evaluate the significance of path coefficients in this study. Table 4 and Figure 1 present the obtained PLS-SEM results for the assessment of structural model.

Table 4: Assessment of structural model with moderating variable (full-model)

Path	Path Coefficient	S.E	t-value	p-value
Direct effect				
TF → CA	0.190	0.074	2.574	0.010
TF → CE	0.189	0.089	2.144	0.032
TF → AC	0.330	0.089	3.703	0.000
CE → CA	0.219	0.086	2.543	0.011
AC → CA	0.295	0.085	3.463	0.001
AC → CE	0.392	0.081	4.819	0.000
Indirect effect				
TF → CE → CA	0.106		2.482	0.013
TF → AC → CA	0.126		3.195	0.001
TF → AC → CE	0.129		3.227	0.001

Notes: TF denotes transformational leadership; CE denotes corporate entrepreneurship; AC denotes absorptive capacity; CA denotes organisational performance.

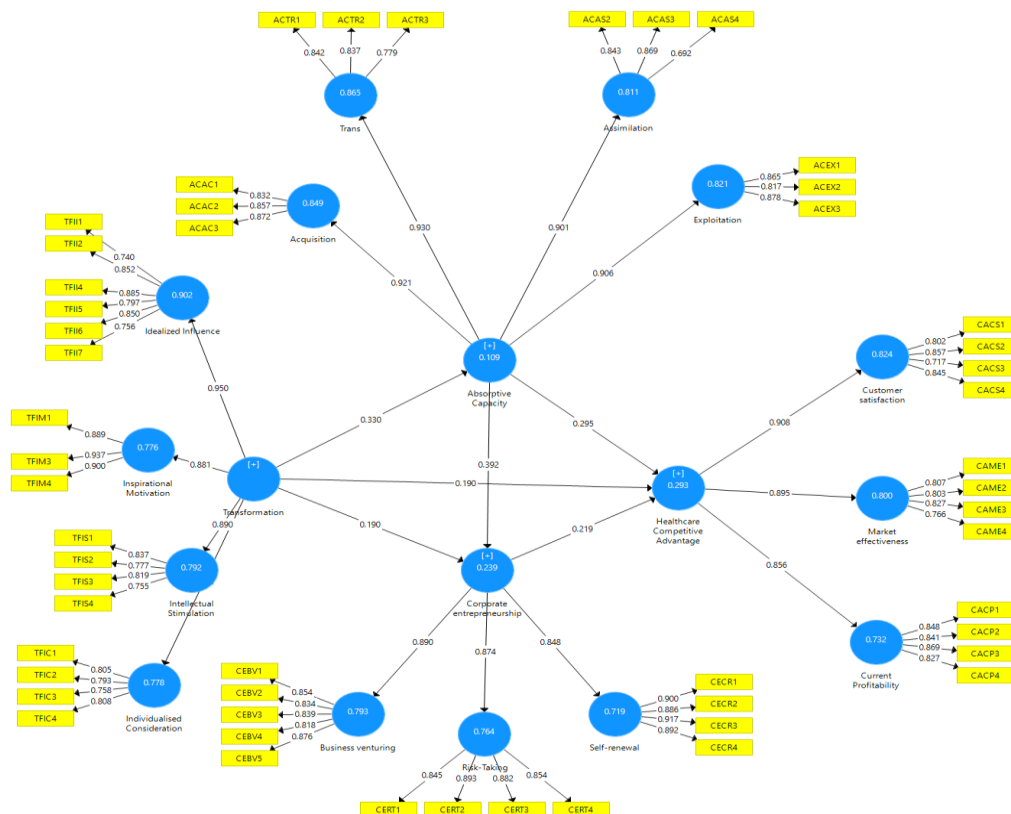


Figure 1: Measurement model

Firstly, the relationship between transformational leadership and organisational performance of healthcare institutions was found positive and significant ($\beta = 0.190$, $t = 2.74$, $p < 0.01$). In other words, H1 was accepted. Secondly, the relationship between transformational leadership and corporate entrepreneurship of healthcare institutions was also found positive and significant ($\beta = 0.189$, $t = 2.144$, $p < 0.05$). In other words, H2 was accepted. Besides that, the linkage between transformational leadership and absorptive capacity of healthcare institutions was found positive and significant ($\beta = 0.330$, $t = 3.703$, $p < 0.001$). In other words, H3 was accepted. Similarly, the influence of corporate entrepreneurship on organisational performance of healthcare institutions was found positive and significant ($\beta = 0.219$, $t = 2.54$, $p < 0.05$). Thus, H4 was accepted. Adding to that, the influence of absorptive capacity on organisational performance of healthcare institutions was found positive and significant ($\beta = 0.295$, $t = 3.46$, $p < 0.01$). Thus, H5 was accepted. Last but not least, the relationship between absorptive capacity and corporate entrepreneurship of healthcare institutions was found positive and significant ($\beta = 0.392$, $t = 4.8$, $p < 0.001$). Thus, H6 was accepted.

Furthermore, this study found adequate evidence on the mediation effect of corporate entrepreneurship on the relationships of transformational leadership and organizational performance ($\beta = 0.106$, $p = 0.013$). Thus, H4a was accepted. This study also found evidence on the mediation effect of absorptive capacity on the relationship between transformational leadership and organisational performance ($\beta = 0.126$, $p = 0.001$) and in the relationship between transformational leadership and corporate entrepreneurship ($\beta = 0.129$, $p = 0.001$). Thus, H5a and H6a were supported.

Meanwhile, coefficient of determination (R^2) was used in this study to explain the total variance in dependent variable caused by independent variable. A higher R^2 reflects the predictive ability of the structural model, while the complexity of the model and types of discipline influence the strength of R^2 (F. Hair Jr et al., 2014). For examples, R^2 for endogenous latent variables are evaluated as follows: 0.26 (substantial effect); 0.13 (moderate effect); 0.02 (weak effect) (Cohen, 1988), but in another study, R^2 of 0.10 and above is recommended to ensure adequate variance explained of a particular endogenous construct (Falk and Miller, 1992). Based on the obtained results of PLS analysis, transformational leadership was found to explain 10.9% of total variance in absorptive capacity. Transformational leadership and absorptive capacity were found to explain 23.9% of total variance in corporate entrepreneurship, while transformational leadership, absorptive capacity, and corporate entrepreneurship were found to explain 29.3% of total variance in organisational performance. Moreover, the recorded R^2 values in this study were above the cut-off value of 0.02. In other words, the predictive power of the proposed model for organisational performance was deemed adequate.

Discussion

The current study assessed the influence of transformational leadership, corporate entrepreneurship, and adaptive capacity on organisational performance of healthcare institutions, specifically in the UAE. In particular, corporate entrepreneurship and adaptive

capacity in this study were examined as mediators in the relationships of the constructs under study.

Firstly, this study found adequate evidence to support the positive and significant influence of transformational leadership on organisational performance of healthcare institutions in the UAE. For improved organisational performance, it is evident that organisations require transformational leaders. The underlying basis of transformational leadership style generally involves motivational process (Andriani, Kesumawati, and Kristiawan, 2018), in which employees are motivated to optimise their potential at work towards improving the performance of the organisation (Andriani et al., 2018; Balwant, Mohammed, & Singh, 2019).

This study also demonstrated the positive and significant relationship between transformational leadership and corporate entrepreneurship. This particular finding is consistent with the empirical findings of prior studies. For examples, transformational leadership among CEOs were found to positively and significantly influence corporate entrepreneurship in terms of business venturing, innovation, and strategic renewal (Soomro, 2022); transformational leadership in another study was found to positively and significantly affect corporate entrepreneurship in terms of pro-activeness, risk-taking, and innovativeness (Shafique and Kalyar, 2018). The positive and significant influence of transformational leadership on innovation, new business venturing (Chang et al., 2017), proactivity (Boukamcha, 2019), and risk-taking (Shafique and Kalyar, 2018) has been empirically demonstrated. A transformational leader stimulates employees' creativity through beliefs, expectations, and standards, and this contributes positive outcomes in the form of new innovations for the organisation (Afsar, Badir, Saeed, and Hafeez, 2017). Through the involvement of employees in the decision-making process at the organisational level, the top management can make use of employees' creativity for self-renewal and new business venturing. Furthermore, transformational leaders articulate the organisational mission and vision that appeal to employees through inspirational motivation. This encourages employees to be more proactive, which contributes to the organisation's proactivity. Nonetheless, a higher level of risk-taking is inevitable under transformational leadership, as leaders take risk based on the creative ideas or notions suggested by employees who are motivated by their leaders to take risk to be more creative. The positive and significant effect of transformational leadership for healthcare institutions at the individual and organisational levels have been widely reported (Afsar et al., 2017; Soomro, 2022).

The obtained results of this study revealed corporate entrepreneurship perceived by managers as a significant antecedent of organisational performance within the healthcare context. This study reaffirmed its significance to the organizational performance, as noted in literature (Ferreras Méndez et al., 2018; Olvera, Llorens, Acosta, & Salanova, 2017; Zahra, 1996). The consistencies of these findings have further strengthened the RBV in relation to organisational performance, which describes corporate entrepreneurship as unique, valuable, difficult to imitate, and hardly a substitution to entrepreneurial culture (Wernerfelt, 1984). The focus of RBV in elucidating the functions of resources in forming and sustaining competitive advantage is deemed highly significant (Umrani et al., 2018). Hence, organisations should

develop their own mechanisms that reflect corporate entrepreneurship to select resources that can significantly increase their organisational performance. One of the major implications of RBV on organizational performance lies in organisational capabilities. Organisational capabilities include skilful and capable human resources and experts, information, and specific processes to produce high-quality innovations (Amit and Schoemaker, 1993). Corporate entrepreneurship represents different processes that are substantially linked to leadership, which benefit the organisation in terms of performance (Umrani et al., 2018). Interestingly, organisational capabilities can increase the value of available resources, and these capabilities (Levinthal & Daniel, 1990; Puspita et al., 2020). The current study has successfully extended the current literature on RBV, particularly on the significance of corporate entrepreneurship as a key organisational capability with direct benefits on organisational performance and indirect benefits as a mediator in relation to transformational leadership. The current study also obtained empirical evidence on the influence of corporate entrepreneurship on organisational performance via transformational leadership. It is difficult for healthcare institutions, without being entrepreneurship, to expand and sustain its performance in this highly challenging environment. Considering that, it is recommended that policymakers and relevant stakeholders in the UAE to incorporate corporate entrepreneurship in the healthcare sector for higher organisational performance.

This study further demonstrated the mediation effect of absorptive capacity on the relationship between transformational leadership and corporate entrepreneurship (Shafique and Kalyar, 2018). This study has provided significant insights on the function of absorptive capacity as a key organisational mechanism that affects the relationship between transformational leadership and corporate entrepreneurship. A transformational leader improves employees' absorptive capacity and subsequently, empowers them. Through improved absorptive capacity, the challenges in knowledge transfer under transformational leadership can be effectively addressed, as such leaders transfer skills, know-hows, and knowledge for employees to acquire, translate, apply, and adopt new organisational practices and further improve in-house communication (Levinthal & Daniel, 1990). After all, absorptive capacity promotes the need to exploit and assimilate knowledge from external sources, which subsequently encourages corporate entrepreneurship (Zahra et al., 2009). Through absorptive capacity, organisations tend to engage in the development of novel products, processes, and networks, which are essential for their corporate entrepreneurship activities. The continuous search and use of novel business opportunities (which reflect corporate entrepreneurship) (Chang et al., 2017) translate new knowledge and resources from external sources into organisational processes (Zahra et al., 2009).

Theoretical Implications

In this 21st century, continuous innovation is necessary for organisations to improve and sustain their business performance, which involves continuous integration and application of knowledge, skills, and employees' creativity (Dess and Picken, 2000). Transformational leadership is clearly among the significant aspects for organisations to attain higher performance. Considering that leadership behaviour can be acquired and adapted (Patiar and Wang, 2016), healthcare institutions can nurture entrepreneurial activities through absorptive

capacity and transformational leadership. Leaders of healthcare institutions with limited resources (Scheunemann and White, 2011) need to acknowledge the significance of knowledge acquisition and absorption capacity in promoting continuous learning and entrepreneurial activities.

The influence of leadership on organisational performance have gained growing research interest among researchers and specialists. The questions of whether leadership and development can promote higher organisational performance and whether past performance is influenced by advancement and leadership have been topics of interest among researchers. A strong leadership that supports the same organisational vision is a prerequisite for a visionary organisation. With that, transformational leadership has been acknowledged as an effective development tool to improve organisational performance. However, most past studies had several limitations. Firstly, most of these past studies focused on profitable organisations in the industrial and services sectors, while only a few studies explored the healthcare sector (Sfantou et al., 2017), especially in the Middle East region. Secondly, most of these past studies assessed the relationship between transformational leadership and organisational performance without assessing how this relationship occurs (Ferrerias Méndez et al., 2018).

A few other studies addressed this gap by empirically testing the inclusion of corporation entrepreneurship (e.g. innovation capabilities, new business venturing, self-renewable, and risk-taking) in this direct relationship (Donnellan & Rutledge, 2019; Heavey et al., 2009; Winn & Ph, 2017). However, most of these studies focused on SMEs and large organisations. The influence of transformational leadership on organisational performance through corporate entrepreneurship within the healthcare context has been underexplored, particularly in the UAE, which propelled the focus of the current study. Thus, this study developed and tested a theoretical model to comprehend how transformational leadership, corporate entrepreneurship, and organisational performance of healthcare institutions in the UAE are linked. Firstly, specifically, the current study was among the few to prove the direct influence of unit-level transformational leadership on the pursuit of product innovation, new business ventures, and strategic renewal activities. These empirical findings support the view that studies on (transformational) leadership should distinguish the unit and firm level of analysis. This view on the integration of different levels of analysis is consistent with the recommendations of past studies (Chang et al., 2017).

Secondly, although studies have proposed the relationship between transformational leadership and the capability and effectiveness of unit-level employees in performing their job (Shamir, House, and Arthur, 1993), only a few studies explored this relationship at the lower level of organisations, such as units (Chang et al., 2017). The current study revealed the positive influence of unit-level transformational leadership on employees' effectiveness towards corporate entrepreneurship at the unit level through their collective abilities and munificence. With that, the findings on the inclusion of a functional mediator to explain how transformational leaders affect the lower level of organisations in this study have contributed to the current literature on leadership (Chang et al., 2017). This also extending previous leadership studies in that the effects of transformational leaders at different levels on growing phenomenon at different of generalization (Graves, Sarkis, and Gold, 2019).

Thirdly, the current study empirically proved the mediating role of absorptive capacity on the relationship between transformational leadership and corporate entrepreneurship at the unit level. Evidently, unit-level transformational leaders have the capacity to raise absorptive capacity of employees and subsequently empower them. Such leaders minimise the challenges of transferring skills, know-hows, and knowledge for employees to acquire, translate, apply, and adopt new organisational practices and further improve in-house communication (Shafique and Kalyar, 2018).

Managerial Implications

Essentially, policymakers and related stakeholders in the UAE should consider promoting corporate entrepreneurship of the healthcare sector with the help of professional education and leadership training. Based on the findings of the study, promoting corporate entrepreneurship through the management approach can benefit the organisational performance of healthcare institutions. The current study demonstrated several key implications that benefit the top management of healthcare institutions for enhanced corporate entrepreneurship. Transformational leadership can promote corporate entrepreneurship of the healthcare institutions in the UAE. In order to enhance transformational leadership skills, suitable education and training of key personnel of healthcare institutions are undoubtedly vital. Apart from employing skilled and qualified individuals, healthcare institutions should also consider implementing training sessions and workshops on a regular basis that can improve their transformational leadership skills and sustain good transformational leadership practices at the organisational level.

Besides that, healthcare institutions can also consider collaborating with training institutions to train the managerial skills of key management personnel. Apart from its positive direct influence on corporate entrepreneurship, the positive relationship between transformational leadership and corporate entrepreneurship occurs via absorptive capacity. The direct effect of absorptive capacity on corporate entrepreneurship in this study appeared to be more substantial than the direct effect of transformational leadership on corporate entrepreneurship and its dimensions. Organisations can enhance their level of absorptive capacity via transformational leadership. The direct effect of absorptive capacity in this study appeared to be more evident on innovation and risk-taking, which further suggests the need for organisations with the capability to create new innovations and take risk to emphasise absorptive capacity as compared to transformational leadership. Nonetheless, the positive influence of transformational leadership on corporate entrepreneurship and employees' capability to absorb knowledge should not be overlooked. Transformational leadership also yields proactivity, self-renewal, and new business ventures. A transformational leader exhibits more direct influence on new business venturing. In other words, organisations that emphasise new business venturing can improve their absorptive capacity under the leadership of a transformational leader. Based on the findings of this study, it is evident that transformation leadership influences absorptive capacity as well as corporate entrepreneurship and its dimensions. Apart from various management aspects, healthcare institutions should not overlook the importance of leadership training for their management personnel.

Limitations and Future Research

There were several limitations emerged in this study. Firstly, this study involved a limited sample of healthcare institutions in the UAE. It is recommended for future research to replicate this study and explore the significance of transformational leadership in other sectors. Secondly, this was a cross-sectional study with limitations, as compared to a longitudinal study. Thirdly, this study exclusively explored the influence of transformational leadership on corporate entrepreneurship of healthcare institutions, but the influence of other leadership styles and factors like financial strength, market reputation, and physical assets were not examined. Finally, this study did not examine the influence of resource availability that generally affects healthcare institutions. Under transformational leadership, organisations may still perform poorly due to unfavourable financial circumstances.

It is suggested to incorporate data from other service sectors. Besides that, as prior studies, including the current study, measured transformational leadership from the viewpoints of leaders or managers themselves, it is recommended for future research to consider insights from employees to measure these leaders' or managers' transformational leadership. Adding to that, considering that the current study was a cross-sectional study, only a specific situation at a specific time was involved in the analysis, not the overall conduct over time. Hence, it is recommended to consider the longitudinal approach in future research. Apart from addressing the limitations of this study, it is also recommended for future research to explore the relationships of different leadership styles, various processes of absorptive capacity, and corporate entrepreneurship. A few past studies proposed a more comprehensive analysis on these relationships and comparison between transformational and transactional leadership styles given the possible influence of different leadership styles on different components of absorptive capacity (Anderson & Sun, 2017; Wang et al., 2011). Last but not least, it is suggested to take into account the influence of environmental factors on the relationship of leadership style, absorptive capacity, and corporate entrepreneurship. Several previous studies concluded that transactional leadership style is more effective in a stable environment than in an environment with constant changes (Afsar et al., 2017).

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