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FOSTERING HIGH PERFORMANCE THROUGH LEADERSHIP AND ORGANIZATIONAL LEARNING: AN EMPIRICAL STUDY OF TOURISM SECTOR

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MANAGEMENT | RESEARCH ARTICLE

The role of leadership and organizational learning in fostering high performance of tourism firms in Vietnam

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Abstract: This study extends prior work by developing a comprehensive framework examining how leadership and organizational learning facilitate the achievement of high performance in organizations. Following quantitative approach, this study used survey questionnaire to collect data from leaders in the tourism sector. SmartPLS was applied to perform PLS-SEM statistical techniques with 638 responses collected. The findings revealed that high performance of tourism firms was directly and indirectly affected by leadership traits, leadership competencies, complexity leadership and organizational learning. This study has a significant contribution to leadership, organizational learning, and organizational high performance literature by providing a comprehensive framework of the relationships among these phenomena. Significant implications for both theory and practice were provided.

Subjects: Strategic Management; Strategic Management; Leadership

Keywords: Organizational high performance; leadership trait; leadership competence; complexity leadership; organizational learning

1. Introduction

Today's global business environment has been characterized as dynamic, competitive, complex, and multifaceted due to speedy changes in social, economic, and technological aspects. These

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PUBLIC INTEREST STATEMENT

Today's global business environment has been characterized as competitive and complex due to speedy changes in social, economic, and technological aspects. These changes have urged many organizations to shift the foundation of strategy and competition from traditional method of relying on physical and financial resources to modern approach of using intellectual assets. This study aims to investigate the relationship between different leadership and organizational high performance, mediated by organizational learning within the context of tourism firms in Vietnam. The findings from this study can be used to offer powerful and scientifically proven recommendations for leaders and policy makers towards the achievement of organizational high performance of tourism firms.

changes have urged many organizations to shift the foundation of strategy and competition from traditional method of relying on physical and financial resources to monitor and maintain daily operations, to modern approach of using intellectual assets to create more values for customers and achieve superior performance (Kamukama et al., 2010). Furthermore, many organizations have been stalled to a near standstill due to the COVID-19 pandemic and the questions of whether they can survive after the demise of the crisis is still unknown (Bartik et al., 2020, Falk et al., 2021). Given the current situation, organizations are increasingly in search for various methods and business strategies to capitalize on their accessible resources and competencies to maintain operational efficiency during the crisis, capture opportunities within the marketplace, achieve superior performance, and remain competitive (Obeidat, 2016).

Earlier scholars stated that a firm's resource-based view emphasizes achieving competitive advantage and superior long-term performance by utilizing the available resources such as knowledge, processes, and other capabilities (Barney, 1995; Wernerfelt, 1984). Added to this, Grant (1996) argued that a firm's knowledge-based view highlights the use of the knowledge base of a firm as a strategic resource to augment sustainable performance and gain competitive advantage. In the workplace, organizational learning has been found to affect the success and survival of businesses (Weldy, 2009). As reported in past findings (Narsa, 2019; Oh, 2018; Zhou et al., 2015), organizational learning contributes to several organizational outcomes and thus firms need to promote learning and give it a great priority. Besides, leadership is a critical function of management in all businesses since strong leadership facilitates the alignment of people and resources to accomplish organizational goals and objectives (Northouse, 2018). In this regard, leaders then face many difficulties in dynamically integrating internal resources into superior performance and transforming their firms to adapt with the current complex and unusual situations of the COVID-19 pandemic. Many attempts have been made to answer the question of how leaders lead their organizations toward desirable outcomes during the crisis (Lamprinou et al., 2021; Lee et al., 2021; Ngoma et al., 2021).

However, although previous studies have examined the relationship between leadership and organizational outcomes, the findings are still inconsistent and inclusive towards simple methods (questionnaires) and replications of familiar leadership approaches (Yukl, 2013). The problem is exacerbated by the fact that there is no clear answer to the question of which aspects (traits, competencies, or behaviors) of leaders are important to organizational outcomes. In addition, while notable research has investigated the association between leadership and organizational learning on organizational high performance independently, yet previous researchers infrequently integrated them to make a more comprehensive framework. Moreover, these Western-developed phenomena were not tested in the context of Vietnam—a developing country in Asia.

To resolve these puzzles, this study aims to investigate the relationship between different leadership components and organizational high performance, mediated by organizational learning within the context of tourism firms in Vietnam. In this direction, our study fills the identified gaps in the literature and provides several contributions. First, this study extends the theoretical and empirical studies on the influences of leadership on organizational learning and organizational high performance by incorporating multiple leadership theories (trait theory, competence theory, complexity leadership theory) as predictors. Second, complexity leadership concerns a flexible type of leadership style that a leader aims at enabling their firms to thrive in the environment full of uncertainty and adapt to chaotic environments (Marion & Uhl-Bien, 2002). It should be especially relevant in the current crisis and turbulent business context due to the recent COVID-19 pandemic but has so far remained an understudied leadership approach (Tourish, 2019). The current research contributes to the leadership literature by examining complexity leadership—an emergent leadership approach and its implication towards organizational learning and organizational high performance. Third, there is significantly scarce research on how organizational learning affect the achievement of high performance in tourism enterprises. This study would enrich the organizational learning literature and provide further insights to the knowledge-based view by clarifying the

role of organizational learning in engendering improved firm performance. Fourth, this study further examines whether organizational learning mediate the relationship between leadership and organizational high performance. This would help in offering further theoretical understanding of the mediating mechanism through which leadership influences organizational learning and ultimately result in superior performance of firms. Last but not least, the findings from this study can also be used to offer powerful and scientifically proven recommendations for leaders and policy makers towards the achievement of organizational high performance of tourism firms and the development of tourism industry in Vietnam.

2. Literature review and hypotheses development

2.1. Leadership

Leadership is defined as an influential process in which leaders empower their followers and facilitates the success of a group or an organization (Northouse, 2018; Yukl, 2013). Over decades, the evolution of this field is marked by the emergence of several leadership theories. Trait theory is the earliest theory on leadership, which assumes that effective leaders acquire specific innate personalities and attributes (Stogdill, 1948). Since studies on trait approach resulted in mixed results and skepticism due to the existence of various traits (Colbert et al., 2012), many attempts have been made to provide a unified personality framework, such as the five-factor model (Northouse, 2018). However, Bono et al. (2014) later argued that researchers should turn their attention to more traits that account for characteristics above and beyond the five-factor traits and are more relevant in the future business environment to advance the line of research on trait theory. To that end, Hiller and Beauchesne (2014) identified core self-evaluation, narcissism, need for achievement, and risk propensity as understudied traits that could provide a better conceptual explanation of leadership and how it predicts organizational-level outcomes such as strategy, culture, and performance. Recent literature showed that many researchers have expanded the domain of leaders' personality and employed core self-evaluation and narcissism (Ding & Lin, 2020; Resick et al., 2009; Wang & Xu, 2019), as well as need for achievement and risk propensity (Luo et al., 2016; Marco & John, 2013; Tang & Tang, 2007; Yu & Chen, 2016) in their studies.

Competence theory adopts a leader-centered perspective to leadership and suggests that leaders acquire certain skills and competencies to make them effective (Northouse, 2018). Leadership competencies refer to a group of "essential skills, knowledge, and personal characteristics" (Lucia & Lepsinger, 1999, p. 1) that enable leaders to achieve superior performance and gain the results they expected (Spencer & Spencer, 1993). According to Amedu and Dulewicz (2018), three clusters of leadership competencies that contribute greatly to leadership effectiveness and performance of organizations in a variety of contexts are results orientation, cognitive competence, and interpersonal competence.

Behavioral theory focuses on the behaviors of leaders rather than their inherent personalities (Northouse, 2018). Among several leadership behaviors (e.g., task-oriented, people-oriented, participative, ethical, spiritual, etc.), researchers have increasingly paid attention to study transformational leadership over the past decades (Antonakis & House, 2002). According to Burns (1978), transformational leaders identify personal values and vision that guide others' actions and initiate changes beneficial for the organizations. However, one limitation of transformational leadership lies in its failure to consider the organizational context and the advent of unpredictable leadership (Lord, 2008). Other scholars also stated that this approach overly relies on the leader-follower stereotype and thus failing to describe organizational learning processes (Gronn, 2002; Yukl, 1999).

Recognizing the limitations of transformational leadership and the abundance of existing empirical studies on the theory, future studies have turned the attention to more emerging conceptions of leadership such as complexity leadership (Yukl, 2013). According to Uhl-Bien and Arena (2017), complexity leadership refers to the structures, activities, and processes that enable organizations to thrive in the environment full of uncertainty. Hazy and Prottas (2018) stated that

complexity leadership involves two leadership behaviors. The first dimension is generative leadership, which is how leaders bring new information about conflicting perspectives into the knowledge sharing and encourage involved agents to experiment and learn from these perspectives. The second dimension is administrative leadership, which is how leaders "help to promote clarity of action and accountability and would thus contribute to value potential realized through efficacy" (Hazy & Prottas, 2018, p. 328). Although complexity leadership is said to remediate the limitations of earlier leadership approaches in explaining learning processes (Marion & Uhl-Bien, 2002; Uhl-Bien et al., 2007), research on this leadership approach is limited due to the impact of overly heroic and popular leadership models (Tourish, 2019).

Since leadership research is inconclusive and biased towards simple methods and replications of familiar topics, Yukl (2013) encouraged researchers to use multiple leadership theories and multiple research methods to provide better understand of leadership and its influences. This study acknowledges the importance and relevance of leadership traits (core self-evaluation, narcissism, need for achievement, and risk propensity), leadership competencies (cognitive, interpersonal, and results orientation), and the newly emerged complexity leadership in predicting organizational learning and organizational high performance of firms operating in the current complex and ambiguous environment.

2.2. Organizational learning

Organizational learning is defined as a process of gaining new knowledge that consequently influences individual and organizational outcomes (Fiol & Lyles, 1985; Huber, 1991). March (1991) described organizational learning as the exploitation and exploration of knowledge. Huber (1991) then postulated that organizational learning involves the acquisition, distribution, interpretation, and storage of information from a variety of sources. In the same vein, Pérez López et al. (2005) proposed that organizational learning pointed to how knowledge is acquired, distributed, interpreted, and stored within the organizations. Knowledge management is considered to be closely related to organizational learning (Vera & Crossan, 2003). Most definitions of knowledge management include the creation, transference, application, and storage of knowledge (Alavi & Leidner, 2001; Nonaka & Takeuchi, 1995). According to Pun and Balkissoon (2011), the concepts of organizational learning and knowledge management are integrated. Other studies found that organizational learning is a part of knowledge management (Fteimi & Lehner, 2016; Serenko, 2013), or even being absorbed by knowledge management (Castaneda et al., 2018). In this study, organizational learning is the main focus and is defined as the learning processes that facilitate organizations to achieve their goals (Fiol & Lyles, 1985; Huber, 1991).

2.3. Organizational high performance

The performance of an organization is defined as its actual output compared to its desired goals (Kotlar et al., 2018). Peters and Waterman (1982) used a term called "high performance" to describe organizations that have a strong alignment between structure, leadership, culture, strategy, and employees' capabilities. Following the seminal work of Peters and Waterman (1982), other scholars described high performance of an organization as how it effectively responses to the demand of the marketplace (Owen et al., 2001); or how it achieves better results than competitors over a longer period (De Waal, 2007). The importance of achieving organizational high performance has spurred the development of many approaches to accurately measure it. de Waal (2018a) reviewed existing literature on high performance measures and found that organizational high performance should be subjectively measured based on managerial perspectives, especially when "access to objective performance data is restricted or collection of the information is just not feasible" (p. 3). Based on the foregoing premises, in this study organizational high performance is defined as the achievement of satisfactory financial and non-financial results and is subjectively measured through the perception of leaders.

2.4. Hypotheses development

2.4.1. Leadership and organizational learning

Leaders play a significant role since they facilitate the collective improvement of organizational learning and decide strategies to respond to market demands. Matošková et al.'s (2018) study revealed strong significant positive relationships between leaders' characteristics and knowledge sharing in firms operating in the Czech Republic. Zhang et al. (2018) argued that core self-evaluation affects knowledge sharing and creativity at organizations. Besides, extant literature proved that healthy narcissism or grandiose narcissism can improve organizational outcomes (Huang et al., 2019; Kim, 2018; Reina et al., 2014; Yoo, 2016). This appreciation makes it essential to consider the positive influences of leaders' narcissistic personality on organizational learning. Need for achievement has long been found to positively relate to learning and speed of performance (Lowell, 1952). Risk propensity was found to be embedded in the concept of organizational learning capability with an assumption that organizational learning will be fostered when people take risks and accept mistakes (Alegre & Chiva, 2008; Onağ et al., 2014).

Amy's (2008) study revealed that leaders exhibit a variety of characteristics and competencies, which enable them to become facilitators of organizational learning. Previous studies showed that emotional intelligence contributes to learning at organizations (Bettis-Outland & Guillory, 2018; Ghosh et al., 2012). Jain and Jeppe Jeppesen (2013) found a positive influence of leaders' cognitive competences on the practices of managing knowledge in a thermal power generation firm. In addition, several studies have found that leaders' social or interpersonal intelligence plays a vital role in leadership performance, knowledge acquisition, innovation, and creative performance (Kong, 2015; Siswanti et al., 2018). Kong (2015) stated that social competencies contribute to the analysis, utilization, and deployment of knowledge, which are beneficial for the organizations.

In addition, through generative leadership, leaders encourage others to experiment and learn from varying viewpoint, which consequently generates new knowledge and promotes knowledge sharing within organizations (Arena & Uhl-Bien, 2016; Chowdhury, 2005; Hazy & Prottas, 2018). Džinić (2015) conducted a study in three Croatian city governments and found that administrative leadership has a significant positive relationship with organizational learning. Hence, the following hypotheses are proposed:

H1. Leaders' perceptions of their leadership traits, including core self-evaluation (*H1a*), narcissism (*H1b*), need for achievement (*H1c*), and risk propensity (*H1d*) are associated with organizational learning.

H2. Leaders' perceptions of their leadership competencies, including results-orientation (*H2a*), cognitive competence (*H2b*), and interpersonal competence (*H2c*) are associated with organizational learning.

H3. Leaders' perceptions of their complexity leadership, including generative leadership (*H3a*) and administrative leadership (*H3b*) are associated with organizational learning.

2.4.2. Leadership and organizational high performance

An empirical study by Peterson et al. (2003) concluded that leaders' characteristics ultimately affect firm performance. Using core self-evaluation scale developed by Judge and colleagues (2003), Simsek et al. (2010) found that the core self-evaluation of leaders has a connection with entrepreneurial orientation of organizations. Some researchers have pointed out that leaders' grandiose narcissism has a positive impact on firm performance (Huang, 2019; Reina et al., 2014; Yoo, 2016). Kim (2018) conducted a study on 30 public institutions and found that personal characteristics of executives (narcissism) positively affects the performance of these firms. Need

for achievement has also been acknowledged as a factor that positively affects organizational performance (Lee & Tsang, 2001). Relating risk propensity and firm performance, many studies suggested that leaders who are willing to take risks produced more desirable performance (Cain & Mckeon, 2012; Sidek & Zainol, 2011).

Earlier studies contended that leaders' competencies positively affect the performance and success of organizations (McClelland, 1973; Pickett, 1998). In a study of the Fly Emirates Airline in the UAE, Bass and Steidlmeier (1999) found that leaders' competencies play a vital role in the success of the airline firm. Sadler-Smith (2004) conducted research on small and medium-sized firms and noted a positive impact of leaders' intuitive style on both financial and non-financial performance. Cuéllar-Molina et al.'s (2019) study contended that emotional intelligence contributes to high performance practices. Almatrooshi et al. (2016) conducted a systematical review on determinants of firm performance and suggested that leadership competencies (cognitive, emotional, and social intelligence) have positive effects on both employee and organizational performance. Amedu and Dulewicz (2018) investigated three core clusters of leadership competencies (interpersonal, cognitive, and result orientation) and found that these competencies positively affected firm performance.

Nienaber and Svensson (2013) made a conceptual analysis of complexity science and introduced a framework facilitating an understanding of leadership-performance relationship. Hazy and Uhl-Bien (2015) asserted that generative leadership is positively associated with organizational capabilities and later with firms' performance and adaptability in a changing environment. Administrative leadership was found to help the organization "bring requisite resources, like raw materials, human resources, and financial capital into the organization" (Hazy & Prottas, 2018, p. 328). Therefore, it is hypothesized that:

H4. Leaders' perceptions of their leadership traits, including core self-evaluation (*H4a*), narcissism (*H4b*), need for achievement (*H4c*), and risk propensity (*H4d*) are associated with organizational high performance.

H5. Leaders' perceptions of their leadership competencies, including results-orientation (*H5a*), cognitive competence (*H5b*), and interpersonal competence (*H5c*) are associated with organizational high performance.

H6. Leaders' perceptions of their complexity leadership, including generative leadership (*H6a*) and administrative leadership (*H6b*) are associated with organizational high performance.

2.4.3. Organizational learning and organizational high performance

Organizations should strengthen learning to achieve high performance and supersede their competitors (Garvin, 1993). God et al.'s (2012) meta-analysis of 33 empirical studies on organizational learning and firm performance revealed a positive relationship between learning and both financial and non-financial performance of firms. Yuliansyah et al. (2021) analyzed 157 survey responses from financial service firms and found that organizational learning has a positive influence on organizational performance. Their research findings are consistent with earlier studies (Ur Rehman et al., 2019; Valdez-Juárez et al., 2019; Waqas et al., 2019; Zhao et al., 2009). Zgrzywa-Ziemak and Walecka-Jankowska (2021) carried out an empirical examination of the relationship between organizational learning and sustainable performance of 694 Polish and Danish companies. The findings from their research have shown a positive, statistically significant relationship between the two phenomena. Another recent cross-sectional study of Soomro et al. (2021) also revealed that organizational learning has a positive and significant impact on organizational performance. Therefore, this study hypothesizes that:

H7. Organizational learning has a relationship with organizational high performance.

2.4.4. Organizational learning as a mediator

According to Bryant (2003), leaders create favorable conditions to develop organizational learning, which consequently enhance the performance of organizations. V. J. García-Morales et al.'s (2008) research in 164 pharmaceutical companies in Europe and America revealed leadership influence firm performance through the mediation of organizational learning. Noruzy et al. (2012) also found that leaders foster organizational learning, which in turn strengthen long-term performance of manufacturing firms. In a similar vein, Sayyadi (2019) stated that leaders play a vital role in the creation and management of knowledge within organizations, which are important elements to foster high performance. Other studies also pointed to the notion that organizational learning acts as a mediator in the relationship between leadership and organizational high performance (Mallén et al., 2015; Para-González et al., 2018; Ur Rehman et al., 2019). In the tourism context, studies that examine the relationships between different leadership approaches, organizational learning, and organizational high performance simultaneously have been found lacking. However, the findings discussed previously are important evidence that the impact of leaders on organizational high performance are mediated by organizational learning. Therefore, the following hypotheses are proposed:

H8. Organizational learning mediates the relationship between leadership traits, including core self-evaluation (*H8a*), narcissism (*H8b*), need for achievement (*H8c*), and risk propensity (*H8d*), and high performance.

H9. Organizational learning mediates the relationship between leadership competencies, including results-orientation (*H9a*), cognitive competence (H9b), and interpersonal competence (*H9c*), and high performance.

H10. Organizational learning mediates the relationship between complexity leadership, including generative leadership (*H10a*) and administrative leadership (*H10b*), and high performance.

3. Methods

3.1. Survey instruments

As for leadership traits, core self-evaluation was measured based on the Core Self-Evaluation Scale (Henderson & Gardiner, 2019; Judge et al., 2003) and narcissism was measured based on the Narcissistic Personality Inventory (Ames et al., 2006; Raskin & Terry, 1988). Need for achievement and risk propensity measurement items were adopted from Sidek and Zainol (2011). The measurement scale of leadership competencies, including results orientation, cognitive and interpersonal competence was primarily adopted from Amedu (2016) and Amedu and Dulewicz (2018). Generative leadership and administrative leadership behaviors in complexity leadership were measured using the 10-item Complexity Leadership Interaction Modes developed by Hazy and Prottas (2018). Organizational learning was measured by five items adapted from V. García-Morales et al. (2012) and Jiménez-Jiménez and Sanz-Valle (2011). The measurement scale of organizational high performance was adopted from Arsezen-Otamis et al. (2015). In this study, all the constructs are reflective and are measured using a five-point Likert-type scale, ranging from 1—Strongly disagree to 5—Strongly agree. We also included age, tenure, experience in the industry, education, and gender as demographic data of the survey respondents. Before launching the survey, we conducted 10 pre-tests by interviewing five managers of tourism firms and five academics in the fields. The participants in the pre-tests were asked to help validate the questionnaire and evaluate if the survey questions were clearly understood.

Table 1. Demographic characteristics of the sample (N = 638)

		Number	Percentage
Gender	Male	428	67.10
	Female	210	32.90
Age Group	< 31	135	21.20
	31–40	301	47.20
	41–50	153	24.00
	>50	49	7.70
Education level	College	113	17.70
	Bachelor	389	61.00
	Master	134	21.00
	Doctor	2	0.30
Company type	Restaurant/bar	138	21.60
	Tourist attraction	62	9.70
	Hotel/Resort	218	34.20
	Retailing system for tourists	54	8.50
	Transportation company	84	13.20
	Travel agency	45	7.10
	Event company	37	5.80

3.2. Data collection and analysis

A randomly selected list of 1528 tourism firms in Vietnam, including tourist attractions, restaurants and bars, retailers for tourists, hotels and resorts, tourism event companies, travel agencies, and tourist transportation companies, were contacted via telephone, email, Zalo and Viber app. We delivered the questionnaires via mail and Google Forms to the leaders of these companies since they are reliable key informant and play a vital role in developing company policies, governing operating processes, and allocating resources (Jung et al., 2008). Finally, 638 questionnaires were fully completed and valid, representing a response rate of 42 percent. According to Hair et al. (2012), this sample is a good size for structural equation modeling analysis. Table 1 below illustrates the demographic characteristics of the sample in this study.

Smart-PLS software version 3.0 was used to process PLS-SEM for 638 cases. The non-parametric bootstrapping was measured with 1000 replications (Hair et al., 2013).

4. Results

4.1. Measurement model assessment

Composite Reliability (CR) is used to measure the internal consistency reliability. According to Hair et al. (2012), all the constructs with a minimum loading of 0.6 were accepted. In the current study, the factor loadings range from 0.684 to 0.825 (Table 2) so all scales are above 0.6 and each reliability items are appropriated. Table 2 also shows that the CR values of all the constructs range from 0.843 to 0.922. This is accepted with the rules of thumb for model evaluation by Hair et al. (2013) that the internal consistency reliability or composite reliability should be higher than 0.70 in exploratory research, and 0.60 to 0.70 is considered acceptable.

We evaluate the validity of items by testing convergent validity through the average variance extracted (AVE) to see if this value is higher than 0.50 or not (Hair et al., 2011). The results of AVE values show in Table 2 range from 0.518 to 0.641, which are higher than the indexes suggesting by Hair et al. (2011). Therefore, the convergent validity is confirmed.

Table 2. Measurement model evaluation

Items	Factor Loadings	Cronbach's Alpha	CR	(AVE)
Organizational High Performance (OHP)		**0.848**	**0.884**	**0.523**
OHP1 The profitability of the firm is satisfactory.	0.761			
OHP2 The sales of the firm is satisfactory.	0.697			
OHP3 The customers are satisfied with the firm.	0.713			
OHP5 Relative to the similar firms, market share of the firm is good.	0.713			
OHP7 We get the worth of our money, labor and time we spent for the firm.	0.739			
OHP8 Our firm can find credits easily when needed.	0.721			
Organizational Learning (OL)		**0.783**	**0.852**	**0.535**
OL1 The organization has acquired and shared much new and relevant knowledge that provided competitive advantage.	0.754			
OL2 The organization's members have acquired some critical capacities and skills that provided competitive advantage.	0.761			
OL3 Organizational improvements have been influenced fundamentally by new knowledge entering the organization.	0.726			
OL4 The organization is a learning organization.	0.701			
OL5 Databases are always kept up-to-date.	0.714			
Core Self-Evaluation (CSE)		**0.768**	**0.843**	**0.518**
CSE1 I am confident I get the success I deserve in life.	0.731			
CSE5 I complete tasks successfully.	0.717			
CSE7 Overall, I am satisfied with myself.	0.742			
CSE9 I determine what will happen in my life.	0.687			
CSE11 I am capable of coping with most of my problems.	0.721			
Narcissism (NAR)		**0.906**	**0.922**	**0.541**
NAR1 I know that I am good because everybody keeps telling me so.	0.703			
NAR2 I think I am a special person.	0.727			
NAR3 I like having authority over people.	0.723			
NAR4 I find it easy to manipulate people.	0.760			
NAR5 I am apt to show off if I get the chance.	0.684			
NAR6 I really like to be the center of attention.	0.755			
NAR7 People always seem to recognize my authority.	0.753			
NAR8 I can make anybody believe anything I want them to.	0.731			
NAR9 I am more capable than other people.	0.761			
NAR10 I am an extraordinary person.	0.758			
Need for achievement (NFA)		**0.796**	**0.860**	**0.551**
NFA1 I do my best work when my job assignments are fairly difficult.	0.714			
NFA3 I take moderate risks and stick my neck out to get ahead at work.	0.738			
NFA5 At work, I set high standards for myself and others.	0.780			
NFA7 I am highly motivated to succeed.	0.725			
NFA9 I turn plans into action at work.	0.753			
Risk propensity (RPR)		**0.857**	**0.893**	**0.582**
RPR1 With respect to my company, I believe that higher financial risks are worth taking for higher rewards.	0.761			

(*Continued*)

Table 2. (*Continued*)

Items	Factor Loadings	Cronbach's Alpha	CR	(AVE)
RPR2 I accept occasional new product failures as being normal.	0.761			
RPR3 In term of my business, I like to take big financial risks.	0.771			
RPR4 I encourage the development of innovative marketing strategies, knowing well that some will fail.	0.728			
RPR5 With respect to my business, I do not like to "play it safe".	0.785			
RPR6 I like to implement plans even though it is no evidence that it will work.	0.771			
Cognitive Competence (COG)		**0.892**	**0.912**	**0.537**
COG1 I can produce a clear and consistent picture of the long-term future state and character of the organization in relation to its environment.	0.712			
COG2 I am aware of the organization's strengths and weaknesses and of the impact of the board's decisions upon them.	0.738			
COG3 I am aware of the stakeholder, market, technological and regulatory factors which determine the organization's opportunities and threats.	0.704			
COG4 I generate and recognize imaginative solutions and innovations.	0.748			
COG5 I make sensible decisions or recommendations based on reasonable assumptions and factual information.	0.751			
COG6 I show a readiness to take decisions, make judgments, take action and make commitments.	0.697			
COG7 I identify problems, transforms and relates information from different sources and identifies possible or actual causes.	0.750			
COG8 I probe the facts, challenge assumptions, identify the disadvantages of proposals, provide counter arguments and ensure discussions are penetrating.	0.779			
COG9 I rise above the immediate problem or situation and see the wider issues and implications; relate disparate facts through an ability to perceive all relevant relationships.	0.713			
Interpersonal Competence (INT)		**0.860**	**0.899**	**0.641**
INT1 I make a strong positive impression on first meeting, have authority and credibility, and establish rapport quickly.	0.808			
INT2 I adopt a flexible (but not compliant) style when interacting with others.	0.798			
INT3 I show an understanding of the feelings and needs of others, and a willingness to provide personal support or to take other actions as appropriate.	0.825			
INT4 I inspire others to achieve goals by ensuring a clear understanding of what needs to be achieved; and by showing commitment, enthusiasm and support.	0.793			
INT5 I persuade others to give their agreement and commitment. In face of conflict, I use personal influence to achieve compromise and agreement.	0.778			
Results-Oriented Competence (ROR)		**0.896**	**0.916**	**0.547**
ROR1 I am alert and responsive to the need for change. I encourage new initiatives and the implementation of new policies, structures, and practices.	0.698			
ROR2 I am assertive and forceful when dealing with others. I am ready to take charge of a situation.	0.719			
ROR3 I show conspicuous levels of energy, vitality and output.	0.747			

(*Continued*)

Items	Factor Loadings	Cronbach's Alpha	CR	(AVE)
ROR5 I set high goals or standards of performance for self and for others, and am dissatisfied with average performance.	0.702			
ROR6 I stay with a position or plan of action until the desired objective is achieved or is no longer reasonably attainable, irrespective of setbacks and obstacles.	0.718			
ROR7 I identify those opportunities which will increase the organization's business advantage; select and exploit those activities which will result in the largest returns.	0.776			
ROR8 I allocate decision-making and other tasks appropriate subordinates to achieve desired goals. I organize all other resources efficiently and effectively.	0.795			
ROR9 I effectively organize the activities of colleagues and subordinates to achieve desired goals. I organize all other resources efficiently and effectively.	0.772			
ROR10 I establish priorities and take account of all relevant contingencies.	0.724			
Administrative Leadership (ALM)		**0.757**	**0.846**	**0.579**
ALM2 I set objective metrics of success or failure.	0.733			
ALM3 I quiet voices that distract from purpose.	0.801			
ALM4 I ask people to invest more time and energy.	0.781			
ALM5 I establish specific targets and deliverables.	0.726			
Generative Leadership (GLM)		**0.780**	**0.858**	**0.603**
GLM1 I support differences of opinion.	0.762			
GLM2 I provide resources and time to try new things.	0.819			
GLM3 I encourage learning visits to other organizations.	0.773			
GLM4 I encourage new approaches.	0.749			

CR: Composite Reliability; AVE: Average Variance Extracted

As for discriminant validity, Hair et al. (2011) suggested that "an indicator's loadings should be higher than all of its cross loadings". According to Fornell and Larcker (1981), "the square root of AVE of each latent variable should be greater than the correlations among the latent variables", and it can be used to establish discriminant validity. For example, the latent variable INT's AVE is 0.641 so the square root of AVE of INT became 0.801. This value was greater than the correlations among the latent variables in the Colum of INT (NAR: 0.532, NFA: 0.571, OHP: 0.565, etc.). Furthermore, the square root of AVE of INT also bigger than the correlation values in the row of INT (GLM: 0.575, CSE: 0.606, COG: 0.735). Other the latent variables were well established the discriminant validity (Table 3).

According to Henseler et al. (2015), the heterotrait-monotrait ratio of the correlations (HTMT) is considered better than Fornell-Larcker criterion. Table 4 below presents the HTMT ratio for discriminant validity in this study. The choice of the HTMT threshold values, either a conservative benchmark of 0.85, a more liberal cut-off value of 0.9, or even higher at 0.95 (Franke & Sarstedt, 2019; Henseler et al., 2015; Voorhees et al., 2016) should "be made against the background of how conservative the researcher wants to be in assessing discriminant validity and how confident (s)he is regarding the uniqueness of the constructs" (Roemer et al., 2021, p. 2640). In this study, all HTMT ratio values were below the 0.9 threshold, except for the HTMT ratio of ROR and COR (HTMT ratio value = 0.931). Although this ratio was a little bit higher than the 0.9 threshold, it can be acceptable.

Table 3. Discriminant validity (Formell and Lacker's criterion)

	Mean	SD.	CSE	NAR	NFA	RPR	COG	INT	ROR	ALM	GLM	OL	OHP
CSE	3.770	1.056	**0.720**										
NAR	3.821	1.046	0.679	**0.736**									
NFA	4.051	0.905	0.672	0.587	**0.742**								
RPR	3.918	1.045	0.535	0.700	0.585	**0.763**							
COG	4.260	0.751	0.698	0.534	0.662	0.488	**0.733**						
INT	4.271	0.780	0.606	0.532	0.571	0.457	0.735	**0.801**					
ROR	4.321	0.737	0.681	0.519	0.660	0.430	0.832	0.758	**0.740**				
ALM	4.343	0.721	0.557	0.460	0.556	0.375	0.684	0.625	0.717	**0.761**			
GLM	4.225	0.785	0.524	0.381	0.530	0.335	0.708	0.575	0.693	0.631	**0.776**		
OL	4.267	0.746	0.573	0.489	0.616	0.462	0.710	0.617	0.682	0.620	0.625	**0.732**	
OHP	4.211	0.831	0.629	0.534	0.542	0.442	0.601	0.565	0.639	0.541	0.449	0.612	**0.723**

Bold values represent the square root of AVEs

Table 4. Discriminant validity-heterotrait-monotrait ratio

	OHP	OL	CSE	NAR	NFA	RPR	COG	INT	ROR	ALM	GLM
OHP											
OL	0.740										
CSE	0.774	0.732									
NAR	0.595	0.568	0.806								
NFA	0.654	0.775	0.862	0.683							
RPR	0.509	0.559	0.658	0.798	0.701						
COG	0.683	0.847	0.843	0.586	0.783	0.551					
INT	0.657	0.751	0.745	0.596	0.688	0.526	0.837				
ROR	0.724	0.813	0.818	0.567	0.780	0.484	0.931	0.863			
ALM	0.667	0.804	0.721	0.539	0.712	0.452	0.830	0.771	0.871		
GLM	0.541	0.797	0.669	0.443	0.667	0.401	0.846	0.698	0.828	0.825	

4.2. Structural model assessment

We use variance inflation factor (VIF) to check the existence of multicollinearity. According to Hair et al. (2011), the acceptable criterion for each indicator of VIF value should be smaller than 5. The results of the collinearity statistics in our study show that the VIF values range from 1.390 to 4.633, in which outer VIF values are from 1.390 to 2.505 and inner VIF values are from 2.201 to 4.633. This indicates that multicollinearity is not a problem in our data.

The predictive power of structural model is examined, and the measurement model results are satisfactory. In this study, the coefficient of determination (R2) is 0.532 for OHP. This indicated that the nine latent variables (CSE, NAR, NFA, RPR, ROR, COG, INT, GLM, ALM) moderately explain 53.2% of the variance in OHP. Besides, the coefficient of determination (R2) is 0.589 for OL, which indicates that 9 latent variables (CSE, NAR, NFA, RPR, ROR, COG, INT, GLM, ALM) moderately explain 58.9% of the variance in OL. According to Hair et al. (2011), if the Stone-Gesser's values (Q2) is bigger than zero, the exogenous constructs are predictive relevance for the endogenous construct. In this study, Q2 value is 0.269 for the average cross-validated redundancy of OHP, and 0.305 for OL.

In this study, we use bootstrapping procedure with 1000 replications at the 97.5% confidence intervals. The critical t-values for a two-tailed test are larger than 1.96 and this value is acceptable (significance level = 5%, $p < 0.05$) (Hair et al., 2013). Table 5 depicts the results of structural model.

Hypothesis 1 is tested and the results show that two factors NFA ($\beta = 0.153$, $T = 3.248$, $P = 0.001 < 0.05$) and RPR ($\beta = 0.072$, $T = 1.959$, $P = 0.050 < 0.05$) are positively associated with OL at 99% and 95% confidence level. Therefore, hypotheses H1c and H1d are supported. Two factors CSE and NAR are not positively associated with OL and have no significant differences; therefore, hypothesis H1a and H1b are rejected. Hypothesis 2 is tested and the results show that only COG ($\beta = 0.239$, $T = 3.891$, $P = 0.000 < 0.05$) is positively associated with OL at 99% and confidence level. Therefore, hypothesis H2b is supported. Two factors ROR and INT are not positively associated with OL and have no significant statistics; therefore, hypotheses H2a and H2c are rejected. Hypothesis 3 is tested and the results show that all the path coefficients are statistically significant. GLM ($\beta = 0.164$, $T = 2.913$, $P = 0.004 < 0.05$) and ALM ($\beta = 0.128$, $T = 2.576$, $P = 0.010 < 0.05$) are positively associated with OL at 99% confidence level. Hypotheses H3a and H3b are fully supported.

Hypothesis 4 is tested and the results show that only CSE ($\beta = 0.245$, $T = 4.751$, $P = 0.000 < 0.05$) and NAR ($\beta = 0.100$, $T = 1.982$, $P = 0.048 < 0.05$) are positively associated with OHP at 95% and 99% confidence level. Therefore, hypotheses H4a and H4b are supported. Two factors NFA and RPR are

Table 5. Path coefficients and hypothesis testing

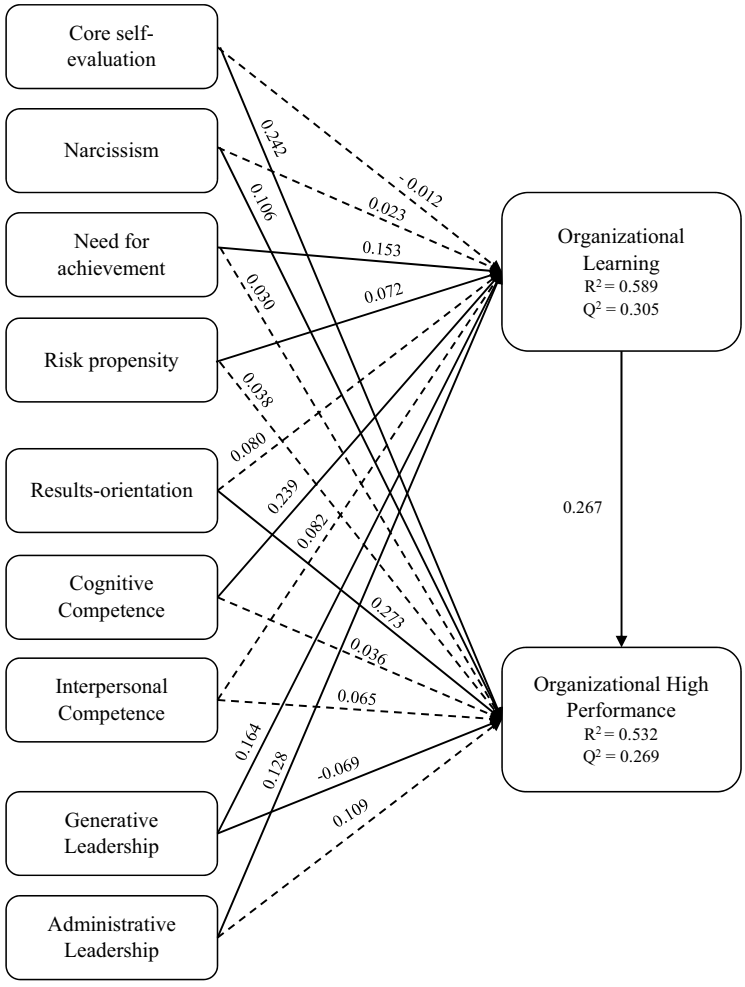
Hypotheses	Relationship	Path coefficients (β)	T-Values	P- Values	Decision
H1a	CSE → OL	−0.012	0.222	**0.825**	Rejected
H1b	NAR → OL	0.023	0.588	**0.557**	Rejected
H1c	NFA → OL	0.153	3.248	0.001	Supported
H1d	RPR → OL	0.072	1.959	0.050	Supported
H2a	ROR → OL	0.080	1.195	**0.232**	Rejected
H2b	COG → OL	0.239	3.891	0.000	Supported
H2c	INT → OL	0.082	1.724	**0.085**	Rejected
H3a	GLM → OL	0.164	2.913	0.004	Supported
H3b	ALM → OL	0.128	2.576	0.010	Supported
H4a	CSE → OHP	0.245	4.751	0.000	Supported
H4b	NAR → OHP	0.100	1.982	0.048	Supported
H4c	NFA → OHP	−0.011	0.178	**0.858**	Rejected
H4d	RPR → OHP	0.019	0.392	**0.695**	Rejected
H5a	ROR → OHP	0.252	3.439	0.001	Supported
H5b	COG → OHP	−0.027	0.398	**0.691**	Rejected
H5c	INT → OHP	0.043	0.844	**0.399**	Rejected
H6a	GLM → OHP	−0.112	2.250	0.025	Supported
H6b	ALM → OHP	0.075	1.461	0.144	Rejected
H7	OL → OHP	0.267	3.164	0.002	Supported
H8a	CSE → OL → OHP	−0.003	0.211	**0.833**	Rejected
H8b	NAR → OL → OHP	0.006	0.575	**0.565**	Rejected
H8c	NFA → OL → OHP	0.041	2.234	0.026	Supported
H8d	RPR → OL → OHP	0.019	1.721	**0.086**	Rejected
H9a	ROR → OL → OHP	0.021	1.105	**0.269**	Rejected
H9b	COG → OL → OHP	0.064	2.327	0.020	Supported
H9c	INT → OL → OHP	0.022	1.480	**0.139**	Rejected
H10a	GLM → OL → OHP	0.044	2.409	0.016	Supported
H10b	ALM → OL → OHP	0.034	1.720	**0.086**	Rejected

not positively associated with OHP and have no significant statistics; therefore, hypotheses H4c and H4d are rejected. Hypothesis 5 is tested and the results show that only ROR (β = 0.252, T = 3.439, P = 0.001 < 0.05) is positively associated with OHP at 99% confidence level. Therefore, hypothesis H5a is supported. Two factors COG and INT are not positively associated with OHP and have no significant statistics; therefore, hypotheses H5b and H5c are rejected. Hypothesis 6 is tested and the results show that only GLM (β = −0.112, T = 2.250, P = 0.025 < 0.05) is negatively associated with OHP at 97.5% confidence level. Therefore, hypothesis H6a is supported. The factor ALM is not significantly associated with OHP; therefore, hypothesis H6b is rejected.

Hypothesis 7 is tested and the results show that the path coefficient is statistically significant. OL (β = 0.267, T = 3.164, P = 0.002 < 0.05) is positively associated with OHP at 99% confidence level. Therefore, hypothesis H7 is fully supported.

Hypothesis 8 is tested and the results show that OL mediates the relationship between NFA and OHP (β = 0.041, T = 2.234, P = 0.026 < 0.05). Therefore, hypothesis H8c is supported. There is no statistically significant indirect relationship between CSE, NAR, RPR and OHP through the mediation

Figure 1. PLS-SEM results.



of OL. Therefore, hypotheses H8a, H8b, and H8c are rejected. Hypothesis 9 is tested and the results show that OL mediates the relationship between COG and OHP (β = 0.064, T = 2.327, P = 0.020 < 0.05). Therefore, hypothesis H9b is supported. There is no statistically significant indirect relationship between ROR, INT and OHP through the mediation of OL. Therefore, hypotheses H9a and H9c are rejected. Hypothesis 10 is tested and the results show that OL mediates the relationship between GLM and OHP (β = 0.044, T = 2.409, P = 0.016 < 0.05). Therefore, hypothesis H10a is supported. There is no statistically significant indirect relationship between ALM and OHP through the mediation of OL. Therefore, hypothesis H10b is rejected.

The results for the direct effects of the structural model are shown in Figure 1.

5. Discussion

The examination of the 10 hypotheses has brought forward several key issues. First, the results partially confirm the significant effects of different leadership traits, competencies, and behaviors on organizational learning. Out of the four leadership traits and four competencies, only need for achievement (*H1c*), risk propensity (*H1d*), and cognitive competence (*H2b*) exert significant positive effects on organizational learning; therefore, offering further evidence for previous studies (Jain & Jeppe Jeppesen, 2013; Lowell, 1952; Onağ et al., 2014). On the contrary, core self-evaluation (*H1a*), narcissism (*H1b*), results orientation (*H2a*), and interpersonal competence (*H2c*) do not have significant direct effects on organizational learning. These results contrasting the conclusions drawn by earlier research which supported the presumed relationships (Bettis-Outland &

Guillory, 2018; Siswanti et al., 2018; Zhang et al., 2018). One plausible reason could be that leaders who score high in these domains tend to be overconfident in every dimension of their work and just focus on building relationships, which, in turn, leads them to satisfy with the status quo and underestimate learning initiatives. Besides, although earlier studies have tangentially implied that generative and administrative leadership relates to knowledge acquisition (Hazy & Prottas, 2018; Džinić, 2015), our study is an early attempt to understand how these leadership behaviors help organizations achieve better organizational learning using the lens of the complexity leadership theory (*H3a, H3b)*. The explanation for this finding can be due to strong Confucianism culture in Vietnam, which encourages learning and sees it as a tool to help people explore their instinctive potentials and achieve higher performance (Viengkham et al., 2018).

Second, the results offer insightful discussion on how the leaders' traits, competencies, and behaviors affect organizational high performance. The results of this study support our contention that leaders' core self-evaluation (*H4a*), narcissism (*H4b*), and results-orientation (*H5a*) are important antecedents to firms' superior performance. This finding is consistent with earlier literature in the fields (Simsek et al., 2010; Kim, 2018). Some hypotheses (*H4c, H4d, H5b* and *H5c*) are not supported by the data although earlier works have helped in proposing these associations (Almatrooshi et al., 2016; Cain & Mckeon, 2012; Lee & Tsang, 2001). It appears that within the context of this research leaders who have high levels of need for achievement, risk propensity, cognitive competence, and interpersonal skills do not contribute to the performance of their organizations. This, in turn, provides new insights toward the extension of existing theoretical relationships and adds to the current debates from similarly published studies. Furthermore, previous studies have identified generative and administrative leadership as the behaviors related to firm performance (Hazy & Prottas, 2018; Hazy & Uhl-Bien, 2015; Nienaber & Svensson, 2013). In our study, the results are opposite to what earlier studies have discussed since generative leadership (*H6a*) was found to negatively relate to organizational performance and administrative leadership (*H6b*) was found to have no connection with organizational high performance. It seems that leaders within the context of this research rely on much on their personalities and competencies rather than their behaviors to lead their firms towards superior performance. Besides, tourism leaders perceived that the application of new ideas and forgiveness of mistakes could create problems in the performance of their organizations. This finding therefore reflects the contemporary nature of tourism sector, which requires accuracy and consistency in daily operation and delivery of services (Solakis et al., 2022). These findings open doors for future researchers to investigate how such leadership behaviors could be applied to foster high performance and calls for using complexity leadership theory to better explain for leadership effectiveness and organizational outcomes.

Third, although the leadership-related findings of this research are consistent with earlier studies, our work extends previous literature by investigating the role of organizational learning. The findings show a significant relationship between the organizational learning and the organizational high performance, which is consistent with previous studies (Yuliansyah et al., 2021; Soomro et al., 2021; God et al., 2012). As evidenced by the results, organizational learning acts as a prerequisite for organizational high performance of tourism firms in Vietnam, which contributes to tourism literature and supports the contention that these Western-developed phenomena can be applied in the context of developing economies in Asia.

Finally, results for mediating role of organizational learning represent that this factor is believed to mediate the impact need for achievement (*H8c*), cognitive competence (*H9b*), and generative leadership (*H10a*) have on organizational high performance. The findings confirm that the resource-based view theory and knowledge-based view concept can be used to examine and validate the relationship between these domains in the tourism industry. More precisely, this study concurs with earlier works proposing that organizational learning is a crucial mediator in firm's superior performance (V. J. García-Morales et al., 2008; Sayyadi, 2019). The results also extend the previous findings by reporting how organizational learning mediates the relationship

between leaders' traits, competencies, behaviors, and firm performance, in the context of tourism firms in Vietnam—a developing country in Asia. Furthermore, this study provides one of the first mediation investigations of the theory that organizational learning is important in firm's high performance to derive the best results from leaders with need for achievement, cognitive competence, and generative leadership behaviors.

6. Conclusion

This study aims to examine how leadership, organizational learning, and organizational high performance affect one another. The research findings revealed positive relationships between leadership factors (need for achievement, risk propensity, cognitive competence, generative behavior, and administrative behavior) and organizational learning. Besides, core self-evaluation, narcissism, result-oriented competence, and generative behavior of leaders have been found to affect organizational high performance. The study also proved that organizational learning is still an effective predictor of firm performance. Moreover, the mediating role of organizational learning found in this study enriches the content of resource-based view theory and knowledge-based view concept by revealing one of the mechanisms through which leadership affects organizational high performance. In addition, this study provides some culture-specific insights about how the findings reflect the contemporary nature of tourism sector and strong Confucianism culture in Vietnam.

6.1. Theoretical implications

This study has several theoretical contributions. First, existing studies on leadership and organizational outcomes seem to fit the metaphor of "the blind men and the elephant" with each research merely touching on a single leadership theory. Our study extends leadership literature by combining traits, competencies, and complexity leadership theories and demonstrating that leaders' characteristics and behaviors not only influence organizational learning, but also organizational high performance. Besides, despite decades of research and thousands of publications on leadership, the field has not yet arrived at a definitive knowledge about a comprehensive leadership profile of leaders in organizations. We hope that the findings in this study contribute another small piece to this large puzzle and provide a glimpse into the "black box" of leadership effectiveness.

Second, by integrating the concepts of leadership, organizational learning, and organizational high performance, this study develops an overarching and unique conceptual indicating the mediating role of organizational learning. In this regard, previous studies were looking at the relationship between leadership and organizational learning, organizational learning and organizational high performance, leadership and organizational high performance. Contrariwise, this study presents a combined and more comprehensive theoretical framework which examines how each variable affects one another.

Third, the current study contributes to the existent knowledge through its highlights on the role of organizational learning in stimulating organizational high performance and in positively mediating the relationship between leadership and organizational high performance. Furthermore, the present study presents an analysis of these domains in the context of tourism firms in Vietnam. Previous literature on the same concepts has focused on Western countries and well-developed knowledge economies (Amedu & Dulewicz, 2018; Matošková et al., 2018; Sayyadi, 2019; Soomro et al., 2021; Zgrzywa-Ziemak & Walecka-Jankowska, 2021), and thus, neglected developing countries and transitioning economies such as Vietnam. The findings into how tourism firms in Vietnam foster high performance through leadership and organizational learning represent a first step to establishing comparisons between regions and industries, which are potential research areas in the future.

6.2. Managerial implications

The current study makes several practical contributions. First, the results from this study can be used by practitioners, business owners, and human resources managers engaged in the field of recruitment and leadership development. In particular, the findings revealed two potential clusters

of personality traits and competencies including: (1) need for achievement, risk propensity, and cognitive competence that are significantly related to organizational learning, and (2) core self-evaluation, narcissism, and result-orientation that are significantly related to organizational high performance. These are personalities and competencies that leaders bring with them to work so that they can foster organizational learning and superior firm performance. Human resources managers can use these clusters of personality traits and competencies as a reference in selecting and training senior executives or potential leaders. The description of these traits can also be used in a survey as a pre-hiring or preliminary assessment to identify the presence of effective leadership personalities among potential applicants. Furthermore, human resource department in tourism firms should develop comprehensive training programs for their leaders to acquire and develop a skillset including cognitive and results orientation competences.

Second, the results suggest that both generative and administrative leadership behaviors are important for leaders to foster organizational learning. Ideally, leaders in tourism firms should be able to demonstrate both leadership behaviors since such behavioral flexibility is essential for leadership effectiveness. In tourism firms, if a leader is inclined toward only generative leadership behavior, another leader should focus on administrative leadership behavior to ensure effective implementation of organizational learning. In this regard, business owners and human resource department should nurture a working environment that values and rewards such behaviors. Added to this, tourism firms can train their leaders and managerial employees and encouraging them to exhibit complexity leadership behaviors through development programs combined with mentoring practices and a culture that reinforces such behaviors. For example, administrative leaders are trained to set specific goals, evaluation criteria, and expected deliverables at work. They also need to learn some influencing tactics that can be used in empowering employees to invest more time and energy to work. On the other hand, generative leaders will support and provide necessary resources for field trips and experiential learning programs, as well as the implementation of innovative ideas at work. Moreover, further training programs could be provided to help leaders be aware of the external environment and flexibly adjust their leadership behaviors (generative, administrative, or the combination of the two behaviors) to better fit changing contingencies and the prevailing environment faced by their organizations such as the COVID-19 pandemic.

Third, organizations cannot solely rely on leaders to foster high performance; therefore, other factors such as organizational learning must be in place. Business owners can work with human resource department to develop an organizational learning department within their firms. This department is responsible for collecting, assembling, and distributing employees' suggestions and new approaches on work performance so that these ideas are heard and considered for implementation continuously. Tourism firms can also assign this department to identify and implement necessary techniques and facilities to acquire and transfer knowledge (e.g., field trips, workshops, conferences, best practices sharing sessions, etc.) among different fields of activities. Moreover, the organizational learning department needs to strengthen communication and collaboration between departments in the organization and between the organization and its external partners so that they are integrated towards learning. The outcomes of organizational learning, for example, internal knowledge resources and databases, should be stored and kept up to date for future use. Added to this, in the current turbulent and uncertain environment during COVID-19 pandemic, business owners and managerial executives must also identify optimal strategies to successfully cultivate a favorable learning environment and foster a shared culture between organizational members. For example, leaders in tourism firms should focus efforts on initiatives that can result in the creation new knowledge (e.g., research and development activities, creative solutions competition, annual innovative ideas rewards) and in activities dedicated to disseminating and utilizing knowledge (e.g., application of new technologies in learning, group projects, meetings, etc.). Contents and criteria related to knowledge creation, sharing, application and storage should be included in the annual review and annual performance appraisal as act as a requirement for recognitions, rewards, and promotions.

6.3. Limitations and areas for future research

This study has several limitations. The first limitation is the use of a subjective measure for organizational high performance. Though this approach is not ideal, this is one of the most pragmatic constraints in doing research in Vietnam now due to the lack of valid and reliable sources of performance data for the variety of firms in our sample. Added to this, the leaders participating in this study might exhibit a self-serving bias and thus reducing the variance in performance across the tourism organizations. Future studies are encouraged to include other performance indicators to evaluate the leadership approaches and influences of leaders, for example, assessments from employees, customers, and the community. Finally, our research was conducted in a context where leaders seem to have great latitude for discretion due to cultural aspects. Future studies could explore the moderating or mediating effects of culture on the relationship between leadership and organizational outcomes.

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Correction

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LEADERSHIP COMPETENCIES, ORGANIZATIONAL LEARNING AND ORGANIZATIONAL PERFORMANCE OF TOURISM FIRMS: EVIDENCE FROM A DEVELOPING COUNTRY

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Abstract

Purpose – This study aims to investigate how leadership competencies (cognitive, interpersonal, and results-oriented competencies) and four dimensions of organizational learning (knowledge acquisition, knowledge distribution, knowledge interpretation, and organizational memory) contribute to organizational performance of tourism firms.
Design/Methodology – Data were collected from leaders working at various tourism establishments in Vietnam – a developing country in the Asia. Smart-PLS software was used to perform structural equation modelling of 638 valid responses.
Findings – The results showed that among the three proposed leadership competencies, only managers' result orientation exerted a significant influence on organizational performance. Knowledge acquisition and knowledge sharing were fully influenced by the three leadership competencies, while knowledge interpretation and organizational memory were facilitated by the cognitive and outcome-oriented competencies. Knowledge acquisition and knowledge interpretation were positively related to organizational performance. The mediating effect of organizational learning was supported by the existence of knowledge acquisition.
Originality of the research – Although the topics of leadership competencies, organizational learning, and organizational performance have received a great concern among worldwide academia, there is scarce research examining the relationships among these three phenomena together. This paper is among the first study that offers a more comprehensive model of the relationship between these domains.
Keywords Leadership, Organizational learning, Firm performance

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INTRODUCTION

Before the outbreak of COVID-19, tourism industry experienced a rapid upwards trend in the number of tourist and revenue generated. According to the Tourism Department, Ho Chi Minh City welcomed 17 million travelers from January to June 2019, earning approximately VND 73 trillion (US $3.15 billion) in tourism revenue. However, the severe effects of the pandemic have caused substantial loss for the industry. Specifically, restrictions on tourism activities have caused a reduction of 78.7% of tourists and 59,5% of revenue in the first quarter of 2020 compared to the same period in 2019, which led to temporary termination of operation or even business shutdown. Although Vietnamese government has made enormous efforts in controlling the spread of COVID-19, tourism firms have yet to recover and return to normal operation.

The situation of enduring crisis and environmental complexities has urged organizations to increasingly seek strategies to maintain normal operation and improve business performance. Leaders in these organizations then face many challenges to maintain efficient operations, integrate firm resources, and improve firm performance (DuBrin, 2018). For the past decades, the question of "how" leaders lead their organizations toward desirable outcomes has resulted in the thirst for research in leadership. Previous studies have identified some competencies of leaders that can help organizations overcome turbulent market conditions (Rimita et al., 2020; Wisittigars & Siengthai, 2019; Wooten & James, 2008). Dirani et al. (2020) highlighted the needs of leaders in maintaining communication with stakeholders and creating post COVID-19 resilience in the organization. Talu & Nazarov's (2020) study revealed that leaders need to exhibit emotional intelligence and goal-oriented behaviors in order to deal with economic uncertainty in the outburst of COVID-19. Besides, several organizations have concentrated on organizational learning to adapt to the new conditions and see it as an essential property for improving organizational performance and competitive advantage (Fiol & Lyles, 1985; Muneeb et al., 2019; Castaneda et al., 2018; Jiménez-Jiménez & Sanz-Valle, 2011). In the context of COVID-19, Alonazi (2021) found that the implementation of knowledge sharing activities among health practitioners strengthened decision making process and performance of organizations.

This study is conducted to investigate how leadership competencies (cognitive, interpersonal, and results-oriented competencies) and four dimensions of organizational learning (knowledge acquisition, knowledge distribution, knowledge interpretation, and organizational memory) contribute to organizational performance of tourism firms in Vietnam. The study is important for the following reasons. First, although existing studies have focused on the relationship between leadership and organizational performance (Nguyen & Luu, 2019; Amedu & Dulewicz, 2018), or between organizational learning and organizational performance (Tran, 2021; Ali et al., 2020; Hindasah & Nuryakin, 2020), the connections among these three variables have not yet to be adequately explored. This paper is among the first study to offer a more comprehensive model of the relationship between these domains. Second, since earlier studies on leadership, organizational learning, and organizational performance have been conducted in developed countries, this study is an attempt to validate the applicability of these Western and universal concepts to other parts of the world and add to body of knowledge on these phenomena. Third, although there have been several studies discussing the negative impacts of COVID-19 on tourism firms, studies focusing on how organizations overcome difficulties and adapt to the crisis are still lacking. The findings of this study provide practical implications for business leaders and policy makers to enhance their leadership performance, as well as organizational learning and business performance of their firms.

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

1.1. Theoretical foundation

The resource-based view theory suggests that "firms possess resources, a subset of which enables them to achieve competitive advantage, and a further subset which leads to superior long-term performance" (Wernerfelt, 1984, 108). This theory derives from two assumptions of immobility and heterogeneity of both tangible resources (e.g., facilities and equipment) and intangible resources (e.g., leaders' competencies) that improve the performance and competitive advantage of an organization (Ulrich, 1998; Barney, 1991; Saffu et al., 2008).

The knowledge-based view theory is an extension of the resource-based view theory, implying that knowledge is the most vital tool to achieve high performance and competitive edge (Grant, 1996). According to Magno et al. (2017), the performance of an organization is related to its abilities to create, disseminate, apply, and store knowledge. The knowledge-based view theory is "an important approach to organizational learning" and gives rise to the understanding that "firms should become learning organizations to maximize their knowledge base" and gain sustainable performance (Farzaneh et al., 2021, p. 657).

Originated in organizational psychology field, the Ability-Motivation-Opportunity theory suggests that Ability (competencies necessary for good performance), Motivation (individual's impetus to perform), and Opportunity (contextual and situational factors that enable performance) are core antecedents in explaining behaviors and performance (Appelbaum et al., 2000; Bailey et al., 2001). Argote et al. (2003) in their study identified ability, motivation, and opportunity as mechanisms of learning and concluded that these mechanisms have an impact on how knowledge is created, retained, and transferred. Recently, Soomro et al. (2021) and Vashdi et al. (2019) applied the Ability-Motivation-Opportunity theory to empirically examine the connection between leadership competencies and organizational learning. In these studies, each leadership competence could be classified as the ability, motivation, or opportunity mechanism which are related to organizational learning processes.

Drawing on the resource-based view and knowledge-based view theories, in this study leadership competencies and organizational learning were considered as internal intangible resources that foster superior performance of tourism organizations. In addition, this study also extends earlier work (Soomro et al., 2021; Vashdi et al., 2019; Argote et al., 2003) by using the Ability-Motivation-Opportunity theory to propose theoretical connections between leadership competencies and organizational learning dimensions.

1.2. Leadership competencies and organizational learning

In this study, three leadership competencies based on Board Assessment Scale (BAS) for Boards of Directors (Dulewicz & Gay, 1997), including cognitive, interpersonal, and result-oriented competencies would be adopted. Cognitive competencies refer to the ability of leaders to acquire and effectively utilize appropriate work-related knowledge (Cheetham & Chivers, 2005). Interpersonal competencies refer to the abilities of leaders regarding relationship management and understanding of social environment, for example, teamwork and empathy (Boyatzis, 2009). Results-oriented competencies relate to the ability of leaders to establish a high standard of excellence and strive for continuous improvement (Northouse, 2013).

Organizational learning has been defined as the process of acquiring and making sense of new knowledge through collective experiences within the organizations to catalyze better organizational outcomes (Huber, 1991; Slater & Narver, 1995). Various dimensions of organizational learning have been investigated for the past decades. In this study, organizational learning would be examined using four subprocesses identified by Huber (1991), including knowledge acquisition - the process of acquiring knowledge internally and externally, knowledge distribution - the process where information is shared among individuals and groups, knowledge interpretation – the process where organizations make sense of newly acquired/distributed information, and organizational memory - the process through which organizations store information for future use.

Earlier studies have investigated the role of leaders' competencies in strengthening organizational learning in organizations. In Amy's (2008) study, cognitive and interpersonal competencies of leaders were found to contribute to the development of organizational learning. Similarly, Domínguez Escrig et al. (2016) found that interpersonal competencies enabled leaders to foster organizational learning. Khalifa& Ayoubi (2015) found that result-oriented leaders who can communicate their vision and stay determined towards future goals could promote organizational learning in Syrian organizations. Muskat & Deery's (2017) study highlighted the role of leaders in knowledge transfer and organizational memory within organizations. Sayed & Edgar's (2019) study found that leaders' competencies played a crucial role in fostering learning climate at individual, group, and organizational levels. Recently, Swanson et al. (2020) in their study found the impact of leadership competencies on knowledge sharing within organizations. Therefore, the following hypotheses are proposed:

H1. Leadership competencies, including cognitive competence (H1a), interpersonal competence (H1b), and result-oriented competence (H1c), positively affect knowledge acquisition.

H2. Leadership competencies, including cognitive competence (H2a), interpersonal competence (H2b), and result-oriented competence (H2c), positively affect knowledge distribution.

H3. Leadership competencies, including cognitive competence (H3a), interpersonal competence (H3b), and result-oriented competence (H3c), positively affect knowledge interpretation.

H4. Leadership competencies, including cognitive competence (H4a), interpersonal competence (H4b), and result-oriented competence (H4c), positively affect organizational memory.

1.3. Leadership competencies and organizational performance

Organizational performance is commonly defined as the actual output of an organization as compared to its desired goals, including financial aspects such as profitability, return on sales, return on investment (Tubigi et al., 2013) and non-monetary aspects such as reputation, satisfaction, or quality (Arsezen Otamis et al., 2015).

Earlier studies have recognized leadership competencies as determinants of organizational performance (McGivern & Tvorik, 1997; Soebbing et al., 2015; Almatrooshi et al., 2016). Krupskyi & Grynko (2018) found that different cognitive styles of leadership are associated with the organization's capabilities to absorb knowledge and respond quickly to changes in the external and internal environment. Wisittigars & Siengthai's (2019) study revealed five leadership competencies required to help Thai organizations improve business performance: emergency preparedness, crisis communication, emotional intelligence, leadership skills, and problem-solving.

Interpersonal competencies have been considered as one of the most important competencies of effective leaders (Awan et al., 2015; Englefield et al., 2019). Mysirlaki & Paraskeva (2020) suggested that leaders could improve performance directly through their emotional intelligence and interpersonal competencies . In the context of COVID-19, Talu & Nazarov (2020) concluded that the leaders' interpersonal competencies were important for organizational performance and effective transformations during fluctuated economic situation.

In addition, findings of Talu & Nazarov's (2020) study stressed that leaders during the pandemic should be goal-oriented and seek for continuous improvement to sustain performance and gain competitive advantage. Amedu & Dulewicz (2018) utilized The Board Assessment Scale (BAS) to measure the influence of leaders' competencies on organizational performance and found that result-oriented behaviors strongly impacted all three aspects of organizational performance. Thus, hypothesis 5 was proposed:
H5. Leadership competencies, including cognitive competence (H5a), interpersonal competence (H5b), and result-oriented competence (H5c), positively affect organizational performance.

1.4. Organizational learning and organizational performance

Organizational learning has been recognized as an essential resource for an organization to achieve superior performance and sustain competitive advantages (Camps & Luna-Aroca, 2012; Muneeb et al., 2019; Castaneda et al., 2018; Brockmand & Morgan, 2003). Pérez López et al. (2005) study in 195 firms with over 200 employees in Spain found that organizational learning fostered both organizational performance and innovation. According to Skerlavaj et al. (2007), organizational learning could directly predict non-financial performance and indirectly predict the financial performance of organizations. Jiménez-Jiménez & Sanz-Valle (2011) also found a significant and positive relationship between organizational learning and organizational performance in their study.

Regarding the effects of four organizational learning subprocesses on organizational performance, earlier studies found that knowledge acquisition enhance organizational performance as the process allowed firms to explore solution and develop

products that meet the market demand (Yli-Renko et al., 2001; Bollinger & Smith, 2001). The process of knowledge acquisition also resulted in the frequency of strategies renewal and thus contributing to firm continuous performance in turbulent conditions (Shin & Pérez-Nordtvedt, 2020). Holsapple et al. (2015) found that knowledge acquisition activities positively influenced competitiveness of organizations. Literature also supported the influence of knowledge distribution on organizational performance (Keszey, 2018; Ali et al., 2019; Muhammed & Zaim, 2020). Keszey (2018) proposed the model to examine the impact of boundary spanners' knowledge sharing on new product development and firm performance with data collected from top 10% highest sale revenue company. A study by Abdelwhab Ali et al. (2019) found that knowledge distribution had a positive influence on both organizational tangible and intangible performance. This was in line with Lin's (2007) findings that knowledge distribution could lead to a culture of knowledge sharing and thus increasing firms' profitability. Besides, knowledge interpretation was also recognized as a vital element in the performance of an organization (Thomas et al., 2001). In the proposed framework of IT capability and organizational capability on firm performance, knowledge interpretation was categorized into the process of information synergy and was found to relate to various firm's performance aspects such as customer retention, sales growth, profitability and return on investment (Li et al., 2006). Gonzalez-Padron et al. (2010) indicated that knowledge interpretation had a positive impact on all three balanced scorecard variables, including innovation and learning performance, customer performance, and internal process performance. Besides, Lee et al. (2017) found a positive and direct relationship between organizational memory and firms' new product development performance. Nieves et al. (2014) conducted a study at 120 Polish organizations and concluded that organizational memory exerted positive influences on firm innovativeness and customer satisfaction. Aminu & Madmood (2016) also found that organizational memory positively related to overall performance of firms. Therefore, hypothesis 6 was proposed:

H6. Organizational learning factors, including knowledge acquisition (H6a), knowledge distribution (H6b), knowledge interpretation (H6c), and organizational memory (H6d), positively affect organizational performance.

1.5. The mediating roles of organizational learning processes

Although the mediating role of organizational learning processes in the relationship between leadership competencies and organizational performance has yet to be defined much in the literature, evidence for their roles in the relationship between leadership and organizational performance was presented. In the study of García-Morales et al. (2012), leadership was found to foster a learning culture and consequently enable the firms to achieve higher organizational performance. Choudhary et al. (2012) studied the effects of leadership on organizational outcomes and found that leadership positively affected organizational learning; thereby enhancing overall performance. According to Ur Rehman et al. (2019), organizational learning mediated the influences of leaders on both financial and non-financial performance of Malaysian firms. Therefore, we proposed the following hypotheses:

H7. Organizational performance is indirectly affected by cognitive competence (H7a), interpersonal competence (H7b), and result-oriented competence (H7c) through the mediating role of knowledge acquisition.

H8. Organizational performance is indirectly affected by cognitive competence (H8a), interpersonal competence (H8b), and result-oriented competence (H8c) through the mediating role of knowledge distribution.

H9. Organizational performance is indirectly affected by cognitive competence (H9a), interpersonal competence (H9b), and result-oriented competence (H9c) through the mediating role of knowledge interpretation.

H10. Organizational performance is indirectly affected by cognitive competence (H10a), interpersonal competence (H10b), and result-oriented competence (H10c) through the mediating role of organizational memory.

2. METHODOLOGY

2.1. Sample and data collection

In this study, we developed a survey questionnaire to collect data. After pilot testing with ten academics and tourism leaders, some modifications were made to the raw questionnaire. The final version of the questionnaire was sent to target respondents via Google Form due to social distancing during COVID-19. The list of large tourism organizations was developed using Governmental websites and personal contacts. Respondents are the owners, chief executive officers and managers of tourism firms who receive information on firm performance from various sources and govern operating processes of their organizations. To filter out the leaders who were not able to do so, a specific question asking about the respondents' strategic role in their organization was included at the beginning of the survey questionnaire. We applied convenience and snowball sampling to reach potential participants. Both face-to-face and online self-administered surveys were used due to the geographical distribution of the respondents and social distancing during the pandemic. A total of 638 valid responses were received for data analysis, which satisfied the minimum number of required for structural equation modelling (Hair et al., 2019). Sample characteristics in this study are shown in Table 1.

Table 1: **Respondents' demographic information**

Measure	Items	Number	Percentage
Gender	Male	428	67.1
	Female	210	32.9
Age	Under 31	135	21.2
	31-40	301	47.2
	41-50	153	24.0
	Over 50	49	7.7
Education level	College	113	17.7
	Bachelor	389	61.0
	Master	134	21.0
	Doctor	2	0.3
Major	Economics	149	23.4
	Humanities	60	9.4
	Tourism	290	45.5
	Management	139	21.8
Company type	Restaurant/bar	138	21.6
	Tourist attraction	62	9.7
	Hotel/Resort	218	34.2
	Retailing system for tourists	54	8.5
	Transportation company	84	13.2
	Travel agency	45	7.1
	Event company	37	5.8

2.2. Measures

Leadership competencies, including results-oriented competence, interpersonal competence, and cognitive competence were measured based on The Board Assessment Scale (BAS) developed by Dulewicz & Gay (1997). Organizational learning components, including knowledge acquisition, knowledge distribution, knowledge interpretation, and organizational memory were measured using scales adapted from Jiménez-Jiménez & Sanz-Valle's (2011) study. A scale developed by Arsezen-Otamis et al. (2015) was adopted to measure organizational performance in this study. Five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) was applied to measure dependent and independent variables.

2.3. Statistical methods

Partial Least Square method – SmartPLS was applied to analyze data (Ringle et al., 2015). SmartPLS would analyze both inner model (relationship between dependent variables and independent variables) and outer models (relationship between independent variables and its constructed items). This method is popular in testing casual models (Haenlein & Kaplan, 2004) and is well-suited for the purposes of this study for the following reasons. First, PLS-SEM has been applied in social science, evident by a variety of books and articles proposing PLS-SEM as a methodological extension in recent years (Hair et al., 2019). Second, researchers are encouraged to apply PLS-SEM "when the analysis is concerned with testing a theoretical framework from a prediction perspective" and "when the structural model is complex and includes many constructs, indicators and or model relationships" (Hair et al., 2019; p. 5).

3. RESULTS

3.1. Measurement model results

The construct of research model was analyzed in terms of reliability and validity. First, indicator reliability was assessed by calculating the square of each indicators' outer loadings. According to Hair et al. (2019), the index must be above 0.6 to be accepted and index above 0.7 is preferred. Overall, all indicators showed positive reflection as the index were greater than 0.6, except for OGP4, OGP6, ROR4. Secondly, reliability tests concerning composite reliability (CR) and Cronbach Alpha showed positive results with all indexes (Cronbach's alpha greater than 0.6 and CR greater than 0.7). Specifically, among measured

variables, their CR values ranged from 0.838 to 0.919 and their Cronbach Alpha values ranged from 0.711 to 0.902. Regarding convergent validity test, the average variance extracted (AVE) of each latent variable must score 0.5 or higher (Fornell and Larcker, 1981). In this study, all investigated variables satisfied this requirement, meaning that items in the same group could explain well the variables (Table 2).

Table 2: **Measurement Model Evaluation**

Constructs and items	***Outer loadings***	***Cronbach's alpha***	***rho_A***	***CR***	***AVE***
Threshold		**≥ 0.7**	**≥ 0.7**	**≥ 0.7**	**≥ 0.5**
Cognitive Competence (COG)		0.892	0.893	0.912	0.537
COG1 I can produce a clear and consistent picture of the long-term future state of the organization.	0.713				
COG2 I am aware of the firms' strengths and weaknesses and of the impact of the board's decisions upon them.	0.736				
COG3 I am aware of the factors (market, technology…) which determine the firm's opportunities and threats.	0.705				
COG4 I generate and recognize imaginative solutions and innovations.	0.748				
COG5 I make decisions based on reasonable assumptions and factual information.	0.752				
COG6 I show a readiness to take decisions and make judgments.	0.699				
COG7 I identify problems, transforms and relates information from different sources and identifies possible or actual causes.	0.749				
COG8 I identify the disadvantages of proposals and provide counter arguments.	0.778				
COG9 I can relate disparate facts and see the wider issues and implications.	0.712				
Interpersonal Competence (INT)		0.860	0.860	0.899	0.641
INT1 I make a strong positive impression on first meeting.	0.805				
INT2 I adopt a flexible style when interacting with others.	0.801				
INT3 I show an understanding of the feelings and needs of others, and a willingness to provide personal support.	0.826				
INT4 I inspire others to achieve goals.	0.793				
INT5 I persuade others to give their agreement and commitment.	0.778				
Results-Oriented Competence (ROR)		0.902	0.903	0.919	0.533
ROR1 I am responsive to the need for change and encourage the implementation of new initiatives.	0.699				
ROR2 I am assertive and ready to take charge of a situation.	0.711				
ROR3 I show conspicuous levels of energy, vitality and output.	0.736				
ROR5 I set high goals or standards of performance for self and for others.	0.698				
ROR6 I stay with a position or plan of action until the desired objective is achieved.	0.715				
ROR7 I identify those opportunities which will increase the organization's business advantage.	0.769				

Constructs and items	*Outer loadings*	*Cronbach's alpha*	*rho_A*	*CR*	*AVE*
Threshold		**≥ 0.7**	**≥ 0.7**	**≥ 0.7**	**≥ 0.5**
ROR8 I allocate all other tasks and resources efficiently and effectively.	0.783				
ROR9 I organize all other resources efficiently and effectively.	0.774				
ROR10 I establish priorities and take account of all relevant contingencies.	0.732				
ROR11 I am truthful and do not compromise on matters of moral principle or the law.	0.676				
Knowledge Acquisition (KNA)		0.779	0.782	0.872	0.694
KNA1 The employees attend fairs and exhibitions regularly.	0.849				
KNA2 There is a consolidated and resourceful R&D policy.	0.853				
KNA3 New ideas and approaches on work performance are experimented continuously.	0.796				
Knowledge Distribution (KND)		0.711	0.713	0.838	0.632
KND1 The company has formal mechanisms to guarantee the sharing of the best practices among the different fields of the activity.	0.815				
KND2 There are individuals within the organization who take part in several teams or divisions and who also act as links between them.	0.787				
KND3 There are individuals responsible for collecting, assembling and distributing internally employees' suggestions.	0.783				
Knowledge Interpretation (KNI)		0.738	0.740	0.851	0.657
KNI1 All the members of the organization share the same aim to which they feel committed.	0.818				
KNI2 Employees share knowledge and experiences by talking to each other.	0.822				
KNI3 Teamwork is a very common practice in company.	0.791				
Organizational Memory (ORM)		0.821	0.822	0.882	0.651
ORM1 The company has directories or e-mails filed according to the field they belong to, so as to find an expert on a concrete issue at any time.	0.773				
ORM2 The company has up-to-date databases of its clients.	0.836				
ORM3 There is access to organization's databases and documents through some kind of network.	0.797				
ORM4 Databases are always kept up-to-date.	0.821				
Organizational Performance (OGP)		0.848	0.850	0.884	0.522
OGP1 The profitability of the firm is satisfactory.	0.755				
OGP2 The sales of the firm is satisfactory.	0.689				
OGP3 The customers are satisfied with the firm.	0.713				
OGP5 Relative to the similar firms, market share of the firm is good.	0.715				
OGP7 We get the worth of our money, labour and time we spent for the firm.	0.744				
OGP8 Our firm can find credits easily when needed.	0.725				
OGP9 Our company is successful in general.	0.715				

Discriminant validity or the square root of AVE was then assessed to ensure that items in a same group must be closer related to each other than to items in other groups. In other words, this indicator demonstrates the uniqueness of a construct to others. The HTMT index was assessed in addition to Fornell & Larcker Criterion due to a dispute in cognitive competence and results-oriented competence construct. As can be seen in Table 3, the HTMT index of the construct was 0.933, which indicated a well-fitting model according to Garson (2016).

Table 3: **Heterotrait-Monotrait Ratio (HTMT)**

	COG	INT	KNA	KND	KNI	ORM	OGP	ROR
COG								
INT	0.837							
KNA	0.738	0.705						
KND	0.790	0.718	0.968					
KNI	0.738	0.655	0.757	0.871				
ORM	0.759	0.627	0.725	0.765	0.821			
OGP	0.683	0.657	0.725	0.714	0.656	0.574		
ROR	0.933	0.868	0.718	0.776	0.730	0.732	0.723	

Table 4 shows the specific results of discriminant validity. The means of all determinants of organizational performance are above 4. The highest variable was ROR (mean = 4.328), followed by ORM (mean = 4.291), INT (mean = 4.271), and COG (mean = 4.260). Components of organizational learning KNA, KND and KNI also have high mean values of 4.196, 4.248, and 4.282, respectively. Finally, the mean of OGP was 4.173, which also indicated a high level of agreement.

Table 4: **Discriminant validity coefficients (Fornell & Larcker Criterion)**

	Mean	SD	COG	INT	KNA	KND	KNI	ORM	OGP	ROR
COG	4.260	0.751	**0.733**							
INT	4.271	0.780	0.734	**0.801**						
KNA	4.196	0.771	0.617	0.579	**0.833**					
KND	4.248	0.790	0.635	0.567	0.721	**0.795**				
KNI	4.242	0.718	0.600	0.523	0.576	0.641	**0.810**			
ORM	4.291	0.737	0.651	0.529	0.578	0.586	0.639	**0.807**		
OGP	4.173	0.853	0.602	0.565	0.596	0.569	0.526	0.488	**0.723**	
ROR	4.328	0.731	0.838	0.765	0.603	0.626	0.597	0.630	0.640	**0.730**

Note: Square root of AVE in bold on diagonal

3.2. Common method bias assessment

We applied procedural and statistical approaches to reduce common method bias in this study (Kang et al., 2021; Podsakoff et al., 2012; Kock, 2015). Regarding procedural approach, we applied various methods to ensure response accuracy, namely changing the order of variables when designing the survey, conducting a pilot test of the survey to remove ambiguous and hard-to-understand items, and informing all respondents of the purpose of this study and instructions on how to answer the questions when carrying out the survey. Regarding statistical approach, we assessed common method bias using the values of variance inflation factor. This study is free of common method bias problem since the values of variance inflation factor are from 1.278 to 2.207 (lower than 3.3).

3.3. Structural model assessment

Coefficient of determination (R^2 value) measures how much a dependent variable can be explained by its independent variables. Statistics showed that three independent variables of leadership competencies (interpersonal competence, result-oriented competence, and cognitive competence) explain 0.423, 0.440, 0.393, 0.448 and 0.495 of knowledge acquisition, knowledge distribution, knowledge interpretation organizational memory and organizational performance, respectively. According to Hair et al. (2019), these results indicated a moderate predictive accuracy of the model. Regarding predictive relevance (Q^2 value), the index scores greater than zero for a certain endogenous latent variable, which indicated that the PLS path model has predictive relevance for this construct. As for the proposed model, the indexes for knowledge acquisition, knowledge distribution, knowledge interpretation, organizational memory, and organizational performance were 0.287, 0.270, 0.253, 0.286, 0.250, respectively. This implied that the construction of values was very good and that the model exogenous variables were predicted to be relevance to the endogenous variables.

Table 5: **Path Coefficients - Direct effect on KNA, ORM, KND, KNI, and OGP and Indirect effect on OGP**

Hypothesis	Relationship	Path Coefficient	T-value	P-value	Decision
H1a	COG → KNA	0.307	5.056***	0.000	Supported
H1b	INT → KNA	0.213	2.946**	0.003	Supported
H1c	ROR → KNA	0.183	2.341**	0.019	Supported
H2a	COG → KND	0.326	4.797***	0.000	Supported
H2b	INT → KND	0.140	2.402**	0.016	Supported
H2c	ROR → KND	0.246	3.472***	0.001	Supported
H3a	COG → KNI	0.308	4.596***	0.000	Supported
H3b	INT → KNI	0.090	1.326	*0.185*	Rejected
H3c	ROR → KNI	0.270	3.616***	0.000	Supported
H4a	COG → ORM	0.406	5.569***	0.000	Supported
H4b	INT → ORM	0.020	0.314	*0.753*	Rejected
H4c	ROR → ORM	0.274	3.485***	0.001	Supported
H5a	COG → OGP	0.054	0.746	*0.456*	Rejected
H5b	INT → OGP	0.072	1.206	*0.228*	Rejected
H5c	ROR → OGP	0.298	3.954***	0.000	Supported
H6a	KNA → OGP	0.232	4.235***	0.000	Supported
H6b	KND → OGP	0.087	1.499	*0.134*	Rejected
H6c	KNI → OGP	0.103	1.980**	0.048	Supported
H6d	ORM → OGP	-0.025	0.395	*0.693*	Rejected
H7a	COG → KNA → OGP	0.071	3.127**	0.002	Supported
H7b	INT → KNA → OGP	0.049	2.697**	0.007	Supported
H7c	ROR → KNA → OGP	0.043	1.950**	0.051	Supported
H8a	COG → KND → OGP	0.028	1.399	*0.162*	Rejected
H8b	INT → KND → OGP	0.012	1.232	*0.218*	Rejected
H8c	ROR → KND → OGP	0.021	1.373	*0.170*	Rejected
H9a	COG → KNI → OGP	0.032	1.749	*0.080*	Rejected
H9b	INT → KNI → OGP	0.009	1.069	*0.285*	Rejected
H9c	ROR → KNI → OGP	0.028	1.769	*0.077*	Rejected
H10a	COG → ORM → OGP	-0.010	0.386	*0.700*	Rejected
H10b	INT → ORM → OGP	-0.001	0.110	*0.912*	Rejected
H10c	ROR → ORM → OGP	-0.007	0.381	*0.704*	Rejected

** $p < 0.05$, *** $p < 0.001$ (one-tailed)
*Notes: COG = Cognitive Competence; INT = Interpersonal Competence; ROR = Results-Oriented Competence; KNA = Knowledge Acquisition; KND = Knowledge Distribution; KNI = Knowledge Interpretation; ORM = Organizational Memory; OGP = Organizational Performance.

Table 5 presents the results of hypothesis testing. The coefficient significance was tested through nonparametric bootstrap procedure, in which T-value were calculated via bootstrapping. The hypothesis showed supported results when its value is higher than 1.96 or P value < 0.05.

Hypothesis 1 was tested. Results showed that knowledge acquisition was positively impacted by all three leadership competencies with the largest influence rooting from COG ($\beta = 0.307$, $p < 0.001$), INT ($\beta = 0.213$, $p < 0.05$), and ROR ($\beta = 0.183$, $p < 0.05$). Therefore, hypotheses H1a, H1b, and H1c were fully supported. The same pattern applied for knowledge distribution with all three competencies demonstrated positive influences. Specifically, COG ($\beta = 0.326$, $p < 0.001$) exerted the greatest impact on KND, followed by ROR ($\beta = 0.246$, $p < 0.001$), and INT ($\beta = 0.140$, $p < 0.05$). Therefore, hypotheses H2a, H2b and H2c were fully supported. Hypothesis 3 was partially confirmed by H3a and H3c, in which COG ($\beta = 0.308$, $p < 0.001$) and ROR ($\beta = 0.207$, $p < 0.001$) positively affected KNI, while INT ($\beta = 0.090$, $p = 0.185$) showed no impact on KNI. Therefore, H3a, H3c were supported and H3b was rejected. Hypothesis 4 was tested and the results showed that INT ($\beta = 0.090$, $p = 0.753$) was the only factor that had no impact on the ORM, while COG ($\beta = 0.406$, $p < 0.001$) and ROR ($\beta = 0.274$, $p < 0.001$) showed significant effects on ORM. Therefore hypothesis 4 were partially supported by H4a and H4c.

Hypothesis 5 was tested to see the direct impact of three leadership competencies on organizational performance. The findings showed that only ROR ($\beta = 0.298$, $p < 0.001$) confirmed this direct effect, while COG ($\beta = 0.054$, $p = 0.456$) and INT ($\beta = 0.072$, $p = 0.228$) showed negative results, which led to the acceptance of H5c and rejection of H5a and H5b.

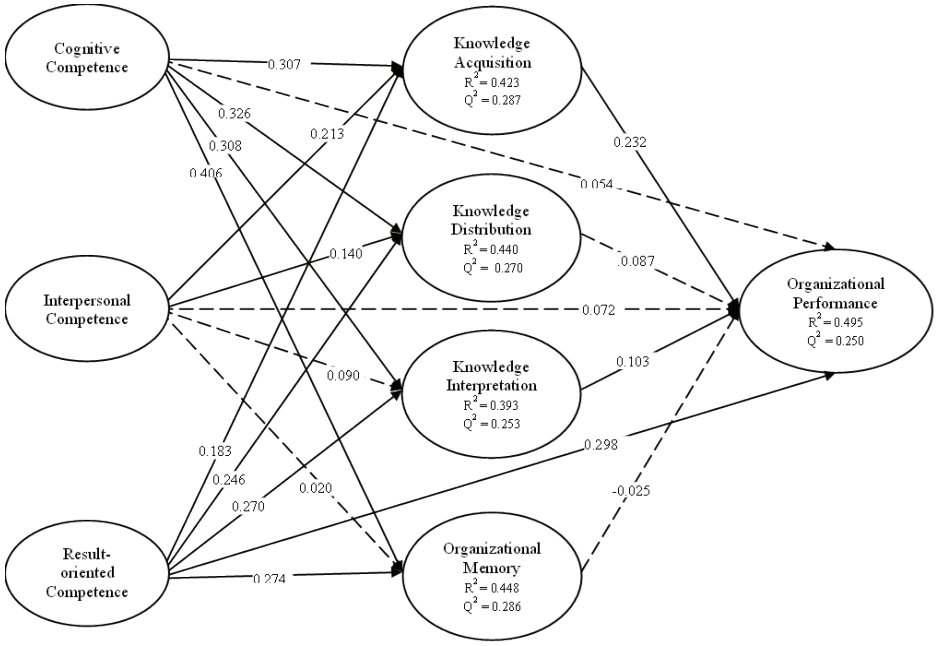
Hypothesis 6 refers to the direct impacts of organizational learning components on organizational performance. Result showed that KNA ($\beta = 0.232$, $p < 0.001$) and KNI ($\beta = 0.103$, $p < 0.05$) had positive impacts on OGP. In contrast, KND ($\beta = 0.087$, $p = 0.134$) and ORM ($\beta = -0.025$, $p = 0.693$) had no influences on OGP. Therefore, H6a and H6c are supported and H6b and H6d are rejected.

Finally, the mediating roles of four organizational learning components on the relationship between three leadership competencies and organizational high performance were investigated. As can be seen in Table 5, only knowledge acquisition had mediating effects on organizational performance through COG ($\beta = 0.071$, $p < 0.05$), INT ($\beta = 0.049$, $p < 0.05$) and ROR ($\beta = 0.043$, $p = 0.051$). Therefore, H7a, H7b and H7c were supported. Furthermore, full mediating impacts were demonstrated in the case of COG and INT. While the direct impacts of COG and INT on OGP were rejected, with the intervention of KNA, the relationship became significant. Other three organizational learning factors KND, KNI and ORM were tested and showed no effects on OGP as mediating factors. Thus, H8a, H8b, H8c, H9a, H9b, H9c, H10a, H10b and H10c were rejected.

The total effect on OGP would be calculated by the sum of direct and indirect effect of all constructs. Among three leadership competencies, ROR had the most significant impact on OGP with $\beta = 0.383$ ($p < 0.001$), followed by COG with $\beta = 0.175$ ($p < 0.05$), and INT with $\beta = 0.143$ ($p < 0.05$). As for four organizational learning components, KNA had greater total effects on OGP with $\beta = 0.232$ ($p < 0.001$) than KNI ($\beta = 0.103$, $p < 0.05$), while KND ($\beta = 0.087$, $p = 0.134$) and ORM ($\beta = -0.025$, $p = 0.693$) had negative influences on OGP.

Figure 1 depicts path coefficients of hypotheses testing.

Figure 1: **Path coefficients of hypotheses testing**



4. DISCUSSIONS

This study was conducted to investigate the relationship between leadership competencies , organizational learning, and organizational performance, as well as the mediating roles of organizational learning components in the relationship between leadership competencies and organizational performance. The findings revealed interesting insights regarding these relationships.

First, as for the role of leadership competencies in facilitating organizational learning, results showed that all three leadership competencies positively influenced knowledge acquisition and knowledge distribution with the strongest impact generated by cognitive competence. Knowledge interpretation and organizational memory were both generated by cognitive and results-oriented competencies with the more significant impact stemming from cognitive competence. The findings emphasize the significant impact of cognitive competence in all aspects of organizational learning, which implies that leaders engaging high level of related knowledge in problem solving could inspire and nurture learning culture in their organizations. Such findings were previously supported by Barr et al. (1992) who implied that any new problems required changes in managers mental model for better organizational adaptation.

Second, only knowledge acquisition ($\beta = 0.232$, $p < 0.05$) and knowledge interpretation ($\beta = 0.103$, $p < 0.05$) exerted positive influences on organizational performance. This finding is similar to the study of Shin & Pérez-Nordtvedt (2020), which supported the role of knowledge acquisition in organizational performance in 152 South Korean firms during turbulent business environment. Knowledge interpretation was found to have a positive relationship with organizational performance. This is correlated with Gonzalez-Padron et al. (2010) findings that the process of generating meanings for knowledge within an organization positively influenced customer performance, firm's innovation, learning performance and internal process performance.

Third, among three leadership competencies, only results-oriented competence ($\beta = 0.298$, $p < 0.05$) had positive influences on organizational performance. This outcome is in line with the findings of Amedu & Dulewicz (2018), which recognized results-oriented competence as the most critical competence of leaders in generating organizational performance compared with interpersonal and cognitive competencies . The result also correlates with Šparl et al. (2013) study which indicated that analytical and solution-oriented competencies were the most important competencies perceived by Slovenian and Austria leaders. However, with the rejection of interpersonal and cognitive competencies , the study goes against the findings that support the importance of these competencies in previous studies (Talu & Nazarov, 2020; Wisittigars and Siengthai, 2019).

In terms of indirect effect, among four organizational learning components, only knowledge acquisition mediated the influences leadership competencies have on organizational performance, with the strongest impacts generated by cognitive competence. The mediating roles of other organizational learning components were not supported in the context of Vietnamese tourism industry. The indirect effect results also encourage the implementation of knowledge acquisition in the path from cognitive and interpersonal competence to organizational performance since the direct impacts of the path were previously rejected in direct hypothesis testing.

5. IMPLICATIONS AND LIMITATIONS

5.1. Implications for theory

This study has several contributions to theory. First, the resource-based view, knowledge-based view and Ability-Motivation-Opportunity theories are applied in this study to explain the theoretical connections among leadership competencies , organizational learning, and organizational performance. The significant results of the impact of leadership competencies and organizational learning on organizational performance support the meaning of these theories.

Second, this study extends and enriches the literature of leadership, organizational learning, and organizational performance by integrating these domains and developing a unique and comprehensive conceptual model of their relationships. This study is also one of its kind since it is the first attempt to investigate the mediating roles of organizational learning components in the relationship between leadership competencies and organizational performance.

Third, this research adds new insights on the applicability of these Western concepts in the context of tourism industry in a developing country, which is known to suffer severely from COVID-19 pandemic. More importantly, the research contributes to the study of organizational performance of tourism firms in Vietnam, where the combined role of leadership competencies and organizational learning on overall performance has yet to be adequately addressed. Finally, by carrying out research during the pandemic situation, the study can be used as a reference for crisis leadership and crisis management in the future.

5.2. Implications for practice

In practice, the study provides some suggestion for tourism management in exhibiting appropriate leadership competencies to nurture organizational learning and improve firm performance.

First, tourism leaders and managers are encouraged to acquire and develop their results-oriented competence, including orienting towards change, delegating, organizing, planning, etc. to drive continuous organizational performance. Furthermore, leaders need to work on their results-oriented, cognitive, and interpersonal competencies to assist the process of creating and sharing new knowledge within their organizations. As for knowledge interpretation and organizational memory, leaders should set challenging goals, efficiently allocate resources, initiate new strategy, envision a long-term picture of the organization, recognize possible solutions, and encourage innovations to foster the sense making and utilization of knowledge. Tourism leaders and managers should pay attention to the process of knowledge acquisition in their organizations, which can be facilitated through catering fairs, workshops for employees, continuous implementation of new ideas and methods. Knowledge interpretation activities, such teamwork and information sharing sessions, are also worth considering in order to improve overall performance.

Second, in the current situation of COVID-19, tourism organizations can apply appropriate leadership competencies and organizational learning practices to overcome and recover from the crisis. Leaders need to articulate shared values, actively seek new opportunities, develop appropriate strategies for adaptation, and disseminate the information across the organization.

Leaders should also focus on the results and exhibit high cognitive intelligence to implement suitable knowledge-interpreting methods and expand the volume of knowledge property for future use as the end of the pandemic has yet to be defined and later crisis management may refer to such organizational memory for creating coping plans. Even though this study rejects the direct implementation of cognitive and interpersonal competencies on organizational performance, leaders should approach the final outcome indirectly through the intervention of knowledge acquisition. In other words, managers possessing high level of cognitive and human relation competencies can encourage the process of generating knowledge internally and externally, which could later contribute to the overall organizational performance.

5.3. Limitations and directions for future research

The study has some limitations. First, as the research restricts within Ho Chi Minh City in Vietnam, so it cannot satisfy the generalization of the results. Further studies should be carried out in other regions and countries. Second, leadership competencies were restricted to results-oriented, interpersonal, and cognitive competencies, which leaves a pool for later research in addressing more leadership competencies and investigating their influences on organizational outcomes. Third, further research should collect information on firm age and firm size and view them as control variables to further examine how they influence the connections among leadership, organizational learning, and organizational performance. Finally, in future research a sample difference test could be conducted to compare the means of the sample groups.

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The impact of leadership competences, organizational learning and organizational innovation on business performance

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Abstract

Purpose – This study aims to investigate the effects of leadership competences (cognitive, interpersonal, and results-oriented competences) on organizational learning, organizational innovation, and business performance.

Design/methodology/approach – Data were collected from owners, chief executive officers, top and middle management teams, and other managers of tourism and hospitality firms in Vietnam. A total of 638 valid responses was collected and processed using PLS-SEM technique.

Findings – The findings revealed that only results-oriented competence exerted significant influences on business performance. Organizational learning was affected by all three leadership competences, while only cognitive and interpersonal competences positively affected organizational innovation. The relationships among organizational learning, organizational innovation, and business performance were also confirmed. Moreover, the findings emphasized the mediating roles of organizational learning and organizational innovation in the relationship between leadership competences and business performance. Organizational learning and organizational innovation also acted as a mediator in the relationship between cognitive competence and business performance.

Practical implications – This study provided some suggestions for tourism and hospitality leaders in exhibiting appropriate leadership competences, strengthening organizational learning, and fostering organization innovation to enhance business performance.

Originality/value – Although the topics of leadership competences, organizational learning, organization innovation, and business performance have received a great concern among worldwide academia, there is scarce research examining the relationships among these four phenomena together. This paper is among the first study that offers a comprehensive model of the relationships among these domains.

Keywords Leadership, Leadership competence, Organizational learning, Organizational innovation, Business performance

Paper type Research paper

1. Introduction

Tourism and hospitality (T&H) sector has been known as one of the main contributors to economic development. This sector has witnessed an increasing trend over the years thanks to the inheritance of history, tourist attractions and high level of service providers. Vietnam has received a huge interest from both domestic and international tourists for the past 20 years and is expected to grow even more rapidly and prosperously in the future (Huynh *et al.*, 2021). However, the unexpected and severe effects of the COVID-19 pandemic have forced T&H businesses to temporarily close or even shut down, which led to several

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consequences, including decline in tourism revenue, severe loss of profit and human capital, and increase in unemployment rates (Quang *et al.*, 2022).

In the extant literature, many attempts have been made to search for novel strategies that help T&H firms overcome such harsh and turbulent situations. Various recent studies have also pointed to the role of leader in supporting T&H firms to achieve better outcomes during COVID-19 pandemic (Nazarian *et al.*, 2022; Ho *et al.*, 2022; Hahang *et al.*, 2022). For example, Talu and Nazarov (2020) found that leaders relied on their competences such as emotional intelligence and goal orientation to lead their tourism firms through economic uncertainty. In Giousmpasoglou *et al.*'s (2021) study, leadership was emphasized as a strategic tool T&H managerial executives can use to engage employees under social distancing and lockdown conditions. Although leadership emerges as an important topic in T&H research in recent years (Guchait *et al.*, 2020), debates continue as to which leadership competences "make the leader more effective in managing today's organizations" (Samul, 2020, p. 9). In addition to leadership, some businesses also paid attention to organizational learning and organizational innovation since these two concepts have been recognized as essential sources of competitive advantage and superior performance (Farooq Sahibzada *et al.*, 2021; Rehman and Iqbal, 2020). In a recent study, Christa and Kristinae (2021) considered organizational learning and innovation as antecedents for product excellence and superior business performance during COVID-19 pandemic. Similarly, Yuliansyah *et al.* (2021) found that organizational learning and innovation have positive effects on firm performance.

This study is conducted to investigate how to improve business performance through leadership competences, organizational learning, and organizational innovation in the context of T&H firms in Vietnam during COVID-19 crisis. Vietnam is a popular tourism destination in Southeast Asia and one of the 10 fastest-growing tourism nations worldwide. Besides, the way Vietnam responded to the COVID-19 pandemic "has been among the most effective in the world, and has attracted much attention from world leaders" (Quang *et al.*, 2022, p. 117). Therefore, Vietnam represents an interesting research setting to investigate the implications of leadership competences, organizational learning, and organizational innovation for sustaining superior business performance during uncertainty conditions.

The current research is important for the following reasons. First, the findings of this study will enrich theory of leadership, organizational learning, and organizational innovation by providing a better explanation of how T&H businesses can take advantage of these resources to improve business performance and respond to the effects of COVID-19. Second, since these concepts are universal (Chiva and Alegre, 2005; Bass, 1996) and have been examined in developed countries in the Western context (Migdadi, 2019; Lee and Trimi, 2020), it is necessary to validate their applicability to other parts of the world. The findings of this study are expected to explain how well these Western concepts fit the context of T&H firms in Vietnam, and to add to body of knowledge on these domains. Third, while there have been several studies discussing negative influences of COVID-19 on T&H firms (Huynh *et al.*, 2021; Quang *et al.*, 2022), empirical studies that focus on crisis response of these firms have been lacking. By revealing leadership competences, organizational learning, and organizational innovation as determinants of superior business performance, this research seeks to provide practical implications and organizational developmental policies for leaders in T&H firms to improve leadership competences and adopt these management practices in light of possible future crises.

2. Theoretical background and hypothesis development

2.1 Resource-based view and knowledge-based view theories

The resource-based view theory (RBV) was developed by Penrose (1959) in his work named "The Theory of Growth of the Firm" and then emerged in Wernerfelt's (1984) article, which suggested that "firms possess resources, a subset of which enables them to achieve competitive advantage, and a further subset which leads to superior long-term performance"

(p. 108). Barney (1991) stated that the RBV theory derives from two assumptions of heterogeneity and immobility of resources that foster superior performance of a firm. They can be tangible resources (e.g. facilities and equipment) or intangible resources embedded in the organizations such as competences of business owners and leaders (Ulrich, 1998; Saffu *et al.*, 2008). The RBV theory was frequently used to evaluate business performance (Newbert, 2007) and has gained enormous popularity in T&H research (Huy and Khin, 2016; Duarte Alonso, 2017). According to Kruesi and Bazelmans (2022), the RBV theory has been directly or indirectly invoked as the central theoretical grounding in several T&H studies.

As an extension of the RBV theory, the knowledge-based view (KBV) theory postulates that the knowledge of an organization is the most important source of superior performance and competitive advantage (Grant, 1996). According to Farzaneh *et al.* (2021), the KBV theory "is an important approach to organizational learning" and "has inevitably given rise to this general understanding that firms should become learning organizations to maximize their knowledge base" in order to gain sustainable competitive advantages and superior business performance (p. 657). In other words, business performance of firms is associated with its abilities to create, absorb, integrate, apply, manage, and store knowledge (Magno *et al.*, 2017). For the T&H sector, firms can capitalize on organizational learning and knowledge assets to gain competitive advantage (Cooper, 2015; Zaei and Zaei, 2014). The extant literature also extensively addresses KBV theory in exploring the impact of knowledge on business performance of T&H firms (Toylan *et al.*, 2020; Duarte Alonso *et al.*, 2020).

The implication of the RBV and KBV theories for T&H firms is that, for these firms to enhance business performance and competitive advantage, there is the need to strengthen their competencies and resources. As a result, this study considers leadership competences, learning and innovation as internal intangible resources that facilitate T&H firms to have a sustained business performance.

2.2 Leadership competences and business performance

In the extant literature, various leadership competences have been recognized as key determinants of business performance (McGivern and Tvorik, 1997; Almatrooshi *et al.*, 2016). Cognitive competence refers to the ability to acquire and effectively utilize appropriate work-related knowledge (Cheetham and Chivers, 2005). Li *et al.* (2020) revealed that cognitive competence of a chief executive officer (CEO) can positively influence firm's growth and corporate social responsibility. Similarly, Sarfraz *et al.* (2020) found that CEOs' cognitive competence contributes to the corporate performance of firm operating in turbulent environment. Interpersonal competence refers to how leaders treat others with respect and sensitivity and how leaders flexibly respond to situations (NCTC, 2010). This competence has been considered as one of the most important competences of effective leaders (Englefield *et al.*, 2019). In the study of de Waal *et al.* (2020), the findings showed that leaders who build leaders-members relationship and align employees' needs with organizational demand were able to foster high performance organization. According to Guo and Anderson (2005), leaders' interpersonal competence is important for enhancing service quality and profitability. During COVID-19 pandemic, Stefan and Nazarov (2020) found that leaders' interpersonal competence was the most important element of effective leadership in fluctuating economic situations. Results-oriented competence relates to the ability of leaders to establish a high standard of excellence and strive for continuous improvement (Northouse, 2013). Al-Touby (2012) found that results-oriented competence contributed to effective leadership. A recent study by Stefan and Nazarov (2020) revealed that leaders during COVID-19 pandemic should display goal-oriented vision and seek for continuous performance to help their organizations overcome challenges and generate competitive advantage. Therefore, hypothesis 1 was proposed:

H1. Leadership competences, including cognitive competence (H1a), interpersonal competence (H1b), and result-oriented competence (H1c), positively affect business performance.

2.3 Leadership competences and organizational learning

Organizational learning is the process of developing and making sense of new knowledge through collective experiences within the organizations to improve performance (Huber, 1991; Fiol and Lyles, 1985; Jerez-Gómez *et al.*, 2005). In the extant literature, several attempts have been made to investigate how leadership fosters organization learning. An earlier study of Amy (2008) showed that leaders with cognitive and emotional intelligence could influence organizational learning. Domínguez Escrig *et al.* (2016) found that leaders who recognize and understand subordinates' problems help promote learning within their firms. Regarding results-oriented competence, the findings from Khalifa and Ayoubi's (2015) study indicated that leaders who can articulate vision, communicate goals, stay positive and determined towards future achievement could encourage organizational learning in public and private organizations in Syria. Therefore, the following hypothesis is proposed:

H2. Leadership competences, including cognitive competence (H2a), interpersonal competence (H2b), and result-oriented competence (H2c), positively affect organizational learning.

2.4 Leadership competences and organizational innovation

According to Rogers (1995), innovation refers to "an idea, a product, or process, system or device that is perceived to be new to an individual, a group of people or firms, an industrial sector or a society as a whole" (p. 276). Baregheh *et al.* (2009) defined organizational innovation as a process that "organizations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace." (p. 1,334). Some researchers defined organizational innovation as the adoption of new products, processes, management styles, and administrative changes (Fay *et al.*, 2014; Migdadi, 2019). Literature has revealed various leadership competences that facilitate the adoption of organizational innovation within organizations. Krupskyi and Grynko (2018) found that cognitive competence of leaders positively affected the implementation of organization innovation. Middle managers' metacognitive culture intelligence was found to be a driver of firm's innovation in Berraies's (2019) study. Regarding interpersonal competence, leaders who strengthen bonds with employees, create ethical and fair working environment, cater for employees' needs would gain more commitment toward organizational innovation (Erkutlu and Chafra, 2015). Furthermore, good leader-member interpersonal relationship was found to improve satisfaction, commitment, and consequently firm's innovation (Szczepańska-Woszczyna, 2015). Therefore, we propose the following hypothesis:

H3. Leadership competences, including cognitive competence (H3a), interpersonal competence (H3b), and result-oriented competence (H3c), positively affect organizational innovation.

2.5 Organizational learning, organizational innovation, and organizational performance

The link between organizational learning and organizational innovation has received considerable attention from researchers (Lloréns Montes *et al.*, 2005; Liao *et al.*, 2017). According to Bolaji Bello and Olarewaju Adeoye (2018), organizational learning practices, including acquiring market intelligence, sharing or reflecting work experience, and

improving professional competences positively related to organizational innovation. Salim and Sulaiman's (2011) study revealed that small and medium-sized enterprises (SMEs) in Malaysia strengthened innovation performance by fostering a learning environment in which employees acquired skills and shared knowledge. Berraies (2019) highlighted the role of knowledge sharing in the development of new products and services. In a similar vein, Migdadi (2019) found that learning culture characterized by knowledge creation and sharing mechanism, interaction with external environment, and knowledge interpretation facilitated product, managerial, and marketing innovation. Recently, Gomes *et al.* (2022) conducted a study at 159 companies from Brazil and found that organizational learning acted as a facilitator of organizational innovation. Therefore, the following hypothesis is proposed:

H4. Organizational learning positively affects organizational innovation.

In addition, organizational learning has been considered as a catalyst of business performance in earlier and recent studies (Gomes *et al.*, 2022; Hooi, 2021; Shin and Pérez-Nordtvedt, 2020; Jiménez-Jiménez and Sanz-Valle, 2011). Gonzalez-Padron *et al.*'s (2010) study found that shared interpretation, knowledge acquisition, and knowledge distribution exerted positive influences on all three firm's balanced scorecard variables, including customer performance, innovation and learning performance, and internal process performance. Bolaji Bello and Olarewaju Adeoye (2018) later confirmed the significant impact of organizational learning on business performance, including products and services availability, human resource performance, customer satisfaction, and resources allocation. Shin and Pérez-Nordtvedt (2020) found that organizational learning contributed to firm's continuous performance in a turbulent environment. In tourism research, organizational learning acts as a strategic tool for T&H firms to create values, enhance performance, and cope with uncertain conditions (Kostadinović and Stanković, 2021; Lugosi and Bray, 2008; Bayraktaroglu and Kutanis, 2003). Kleefstra *et al.*'s (2020) in-depth interviews with 15 managers of Dutch hotels revealed a positive relation between organizational learning and business performance in T&H industry. Similarly, a recent study by Ubeda-Garcia *et al.* (2021) highlighted the role of knowledge and learning in enhancing business performance of 70 Spanish hotel chains. According to Bhaskara and Filimonau (2021), good organizational learning practices can aid T&H firms in developing the necessary organizational competences to withstand crises and future disasters. Therefore, we propose the following hypothesis:

H5. Organizational learning positively affects business performance.

Several studies addressed the essential role of organizational innovation on business performance (Kostadinović and Stanković, 2021; Pundziene *et al.*, 2022; Sarfraz *et al.*, 2020; Jiménez-Jiménez and Sanz-Valle, 2011). Garcia-Morales *et al.* (2007) acknowledged the indispensable role of organizational innovation on the performance of not only large organizations but also SMEs. Camisón and Villar-López's (2014) study revealed the positive effects of product innovation capabilities and new management practices on firm performance. Huang *et al.* (2016) examined organizational innovation as an antecedent of firm's competitive advantage and found that firms with innovated products and services could enhance their overall performance. Migdadi (2019) found that products, processes, managerial and marketing innovation positively affected firm's operational, financial, and knowledge performance. Stoffers *et al.* (2021) emphasized in their study that innovation is a primary approach for T&H firms in the Netherlands to enhance performance and remain economically sustainable. Recently, El Chaarani *et al.*'s (2022) study revealed positive effects of marketing innovation and processes innovation on business performance of 426 Lebanese companies during COVID-19 pandemic. Therefore, the following hypothesis is proposed:

H6. Organizational innovation positively affects business performance.

A study of organizational learning, innovation, and performance by Garcia Morales *et al.* (2007) confirmed that large enterprises and SMEs should foster learning environment since it engendered greater innovation capability and contributed to overall performance. Similar results were confirmed in the study of Garcia-Morales *et al.* (2012). Bolívar-Ramos *et al.* (2012) recognized the importance of learning in the achievement of innovation and superior performance. To highlight the mediating role of organizational innovation, the study of Migdadi (2019) unexpectedly showed that organizational learning yielded non-significant direct impact on business performance. However, with the existence of innovation, the relationship turned positive, which supported a full mediating effect of organizational innovation. Therefore, we propose the following hypothesis:

H7. Business performance is indirectly affected by organizational learning through the mediating role of organizational innovation.

2.6 The mediating roles of organizational learning and organizational innovation

The mediating roles of organizational learning and organizational innovation in the relationship between leadership competences and organizational performance have yet to be defined much in the literature. Unger *et al.* (2009) found that cognitive competence acted as a driver of business growth through the generation of entrepreneurial knowledge. In Choudhary *et al.*'s (2012) study, leaders who oriented towards goal achievement and encouraged followers to improve performance positively affected organizational learning and consequently enhanced firm performance. Swanson *et al.* (2020) recognized the full mediating role of knowledge sharing in the relationship between leadership competences and performance. Regarding the mediating role of organizational innovation, earlier studies revealed that leaders fostered innovation in order to enable firms to achieve superior business performance (Chen *et al.*, 2019; Arif and Akram, 2018). Thus, the following hypotheses are proposed:

H8. Business performance is indirectly affected by cognitive competence (H8a), interpersonal competence (H8b), and result-oriented competence (H8c) through the mediating role of organizational learning.

H9. Business performance is indirectly affected by cognitive competence (H9a), interpersonal competence (H9b), and result-oriented competence (H9c) through the mediating role of organizational innovation.

The mediating role of organizational learning in the relationship between leadership competences and organizational innovation was also highlighted in previous literature. Leaders' metacognitive culture intelligence was found to have a positive relationship with knowledge sharing environment and firms' innovation (Berraies, 2019). Kiss *et al.*'s (2019) study found that CEOs' cognitive flexibility supported the generation of new knowledge for exploratory and exploitative innovation. Similarly, the finding from Domínguez Escrig *et al.*'s (2018) study revealed that firm innovation was indirectly predicted by leadership through the mediation of learning. In the study of Liao *et al.* (2017), a full mediating impact of organizational learning in the relationship between leadership and innovation was recognized. With the support from previous literature, we propose the following hypothesis:

H10. Organizational innovation is indirectly affected by cognitive competence (H10a), interpersonal competence (H10b), and result-oriented competence (H10c) through the mediating role of organizational learning.

This study proposes a hypothesis demonstrating the combined effects of organizational learning and organizational innovation in the relationship between leadership competences and organizational performance. With the support from previous literature on the

relationship between organizational learning and organizational innovation (Jiménez-Jiménez and Sanz-Valle, 2011; Garcia-Morales *et al.*, 2012), as well as the mediating role of organizational innovation on the relationship between organizational learning and business performance (Garcia-Morales *et al.*, 2007; Bolívar-Ramos *et al.*, 2012), we hypothesized that leadership competences could strengthen organizational learning and organizational innovation and thereby enhancing business performance instead of merely relying on direct impact. Hence, the following hypothesis is proposed:

H11. Organizational performance is indirectly affected by cognitive competence (H11a), interpersonal competence (H11b), result-oriented competence (H11c) through the mediating role of organizational learning and organization innovation.

3. Methodology

3.1 Measurement of variables

In this study, results-oriented, interpersonal, and cognitive competences are measured with eleven, five, and nine items adapted from The Board Assessment Scale developed by Dulewicz and Gay (1997). Organizational learning and organizational innovation are measured with five and six items adapted from García-Morales *et al.* (2012). Five items used to measure business performance was adopted from Arsezen-Otamis *et al.* (2015). Five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) was applied for measuring dependent and independent variables. After drafting an initial questionnaire based on instruments from previous studies, we had it reviewed by 5 researchers and 5 T&H leaders. Face-to-face semi-structured interviews were conducted and each interview lasted 30–60 min. The respondents were asked to review and give constructive feedback on the relevance, readability, and clarity of all questionnaire items. We then reviewed their comments and adjusted the questionnaire. Afterward, a pilot test was carried out with 15 T&H leaders to evaluate the clarity and accuracy of the revised questionnaire. By doing so, we aimed to make the questionnaire better fit the T&H context in Vietnam and improve its reliability and validity.

3.2 Data collection and the sample

The target population of this study includes T&H organizations in Vietnam, including travel agencies, tourist attractions, tourist transportation companies, event companies, retailing system, food and beverage, and accommodation. This population was chosen because these types of organizations have long been industrial elements and functional sectors of T&H that contributed greatly to the development of the industry (Leiper, 1979). The owners, chief executive officers, top and middle management teams, and other managers of T&H firms in Vietnam were target sample of the population. These people receive information on business performance from various sources and play an important part in governing operating processes, evaluating workplace issues, developing company policies, and deciding proper strategies (Jung *et al.*, 2008).

Convenience sampling and snowball sampling were applied to contact potential participants (Neuman, 2014). This study followed Hair *et al.*'s (2014) 5:1 ratio in determining minimum sample size. Based on the number of the measurement items in the survey, the minimum sample size for the current research is $44 \times 5 = 220$. The data collection lasted from June 2020 till February 2021. Government websites and personal contacts were used to develop a list of T&H firms and potential respondents. In addition to face-to-face approach, considering the geographical distribution of the target population and social distancing during COVID-19 pandemic, online self-administered surveys were sent to

potential participants via email. There was a total of 638 valid responses returned, which satisfied the minimum number of required respondents to ensure reliability and generalizability (Hair *et al.*, 2019).

3.3 Statistical methods

Partial least square structural equation modeling (PLS-SEM) method developed by Ringle *et al.* (2015) was used for data analysis. SmartPLS software was applied to analyze both inner model and outer models. The current research took advantage of the PLS-SEM method to assess the structural model for the following reasons. According to Hair *et al.* (2019), PLS-SEM has recently widely applied in a variety of social science disciplines such as organizational management, strategic management, and hospitality management, evident by an increase in the number of textbooks and publications using PLS-SEM or proposing methodological extensions in recent years. Besides, Hair *et al.* (2019) also suggested researchers to utilize PLS-SEM "when the analysis is concerned with testing a theoretical framework from a prediction perspective"; "when the structural model is complex and includes many constructs, indicators and or model relationships"; and "when a small population restricts the sample size" (PLS-SEM still works well with large sample sizes)" (p. 5).

4. Results

4.1 Sample characteristics

In this study, male participants took up most responses with 67.1%, compared to 32.9% of female participants. Half of the participants were between 31 and 40 (47.2%), followed by 41–50 (24%), under 31 (21.2%), and over 50 (7.7%). There were 61.0% of respondents owning bachelor's degrees, 21.0% owning master's degrees, 17.7% graduating from college, and 0.3% owning doctoral degrees. Respondents from small companies accounted for 45.9%, followed by medium companies (32.6%), large companies (13.2%), and super small companies (8.3%). Regarding company type, there are 218 valid surveys returned from hotels and resorts, 138 from restaurants and bars, 84 from transportation companies, 62 from tourist attractions, 54 from retailing system for tourists, 45 from travel agencies, and 37 from event companies.

4.2 Measurement model results

We evaluated all constructs by testing their reliability and validity. First, indicator of reliability, which is the square of outer loadings, must be above 0.6 to be accepted. In this study, all items showed reliability with indexes exceeding the threshold of 0.6. Besides, Cronbach's Alpha and Composite reliability (CR) were used to measure internal consistency. Results showed that Cronbach's Alpha values ranged from 0.782 to 0.902 and CR values ranged from 0.851 to 0.919, which were greater that the acceptable threshold score of 0.6 and 0.7, respectively. Average variance extracted (AVE) was used to test convergent validity and this value must be equal or above 0.5 to ensure that items in the same group of variables can explain that factor well (Fornell and Larcker, 1981). Statistically, all items in the construct model satisfied the criteria. Table 1 summarizes the results of reliability and validity assessment for the measurement model.

Regarding discriminant validity, the square root of AVE was assessed to ensure that items in a same group must be closer related to each other than to items in other groups. As can be seen in Table 2, discriminant validity of all items was above 0.7, which satisfied the Fornell–Larcker criterion (Fornell and Larcker, 1981). In addition, the HTMT index was used due to a dispute in the constructs of cognitive competence and results-oriented competence. The HTMT index of the construct was 0.933 (below 1.0), which indicated a well-fitting model

Variables Threshold	Outer loadings	Cronbach's alpha ≥0.6	rho_*A* ≥0.7	CR ≥0.7	AVE ≥0.5
Cognitive competence (COC)		0.892	0.893	0.912	0.537
COC1 – I can produce a clear and consistent picture of the long-term future state of the organization	0.711				
COC2 – I am aware of the firms' strengths and weaknesses and of the impact of the board's decisions upon them	0.737				
COC3 – I am aware of the factors (market, technology . . .) which determine the firm's opportunities and threats	0.704				
COC4 – I generate and recognize imaginative solutions and innovations	0.747				
COC5 – I make decisions based on reasonable assumptions and factual information	0.749				
COC6 – I show a readiness to take decisions and make judgments	0.697				
COC7 – I identify problems, transforms and relates information from different sources and identifies possible or actual causes	0.750				
COC8 – I identify the disadvantages of proposals and provide counter arguments	0.781				
COC9 – I can relate disparate facts and see the wider issues and implications	0.716				
Interpersonal competence (INC)		0.860	0.860	0.899	0.641
INC1 – I make a strong positive impression on first meeting	0.809				
INC2 – I adopt a flexible style when interacting with others	0.798				
INC3 – I show an understanding of the feelings and needs of others, and a willingness to provide personal support	0.826				
INC4 – I inspire others to achieve goals	0.792				
INC5 – I persuade others to give their agreement and commitment	0.778				
Results-oriented competence (ROC)		0.902	0.903	0.919	0.533
ROC1 – I am responsive to the need for change and encourage the implementation of new initiatives	0.697				
ROC2 – I am assertive and ready to take charge of a situation	0.711				
ROC3 – I show conspicuous levels of energy, vitality and output	0.734				
ROC5 – I set high goals or standards of performance for self and for others	0.698				
ROC6 – I stay with a position or plan of action until the desired objective is achieved	0.716				
ROC7 – I identify those opportunities which will increase the organization's business advantage	0.771				
ROC8 – I allocate all other tasks and resources efficiently and effectively	0.782				
ROC9 – I organize all other resources efficiently and effectively	0.774				
ROC10 – I establish priorities and take account of all relevant contingencies	0.731				

(*continued*)

Table 1.
Measurement model evaluation

Variables Threshold	Outer loadings	Cronbach's alpha ≥0.6	rho_A ≥0.7	CR ≥0.7	AVE ≥0.5
ROC11 – I am truthful and do not compromise on matters of moral principle or the law	0.677				
Organizational learning (OGL)		0.783	0.784	0.852	0.535
OGL1 – The organization has acquired and shared much new and relevant knowledge that provided competitive advantage	0.758				
OGL2 – The organization's members have acquired some critical capacities and skills that provided competitive advantage	0.762				
OGL3 – Organizational improvements have been influenced fundamentally by new knowledge entering the organization	0.730				
OGL4 – The organization is a learning organization	0.700				
OGL5 – Databases are always kept up-to-date	0.706				
Innovation (INO)		0.837	0.840	0.880	0.552
INO1 – Organization's emphasis on developing new products or services	0.735				
INO2 – Rate of introduction of new products or services into the market.	0.735				
INO3 – Organization's spending on new product or service development activities	0.812				
INO4 – Number of new products and services added by the organization and already on the market.	0.782				
INO5 – Number of new products or services that the organization has introduced for the first time	0.688				
INO6 – Investment in developing proprietary technologies	0.698				
Business performance (BUP)		0.782	0.788	0.851	0.534
BUP1 – The profitability of the firm is satisfactory	0.716				
BUP2 – The sales of the firm are satisfactory	0.726				
BUP3 – The customers are satisfied with the firm	0.786				
BUP4 – We present enough new products/menus/ services for the customers	0.711				
BUP5 – Relative to the similar firms, market share of the firm is good	0.711				

Table 1.

	Mean	SD	COC	INC	ROC	OGL	INO	BUP
COC	4.260	0.751	*0.733*					
INC	4.271	0.780	0.735	*0.801*				
ROC	4.328	0.731	0.838	0.765	*0.730*			
OGL	4.267	0.746	0.709	0.617	0.695	*0.732*		
INO	4.249	0.778	0.658	0.611	0.627	0.706	*0.743*	
BUP	4.292	0.798	0.593	0.556	0.639	0.620	0.600	*0.731*

Table 2. Discriminant validity coefficients (Fornell and Larcker criterion)

Note(s): Square root of AVE in italic on diagonal

(Garson, 2016). Besides, all factors were well adopted by the participants with mean value above 4. The highest rated variable was ROC (mean = 4.328), followed by BUP (mean = 4.292), INC (mean = 4.271), and COC (mean = 4.260). Finally, means of INO and OGL were 4.249 and 4.267 respectively, which also indicated a high level of agreement.

4.3 Structural model assessment

Coefficient of determination and predictive relevance were examined to measure the model fit (Hair *et al.*, 2019). Coefficient of determination (R^2) measures how much a dependent variable can be explained by independent variables. The results showed that three independent variables of leadership competences could explain 0.542, 0.563 and 0.494 of organizational learning, organizational innovation, and business performance, respectively. According to Hair *et al.* (2019), this indicated a moderate predictive accuracy of the model. Regarding predictive relevance, the Q^2 values of organizational learning, organizational innovation, and business performance were 0.285, 0.304, and 0.255, respectively. This demonstrated very good construction of values and implied that the model's exogenous variables were predicted to be relevance to the endogenous variables.

Table 3 showed results of hypothesis testing. The coefficient significance was tested through nonparametric bootstrap procedure, in which *T*-value were calculated via bootstrapping. Hypothesis 1 was tested and the results showed that only ROC ($\beta = 0.321$, $p < 0.001$) positively affected business performance, while COC ($\beta = -0.014$, $p = 0.847$) and INC ($\beta = 0.050$, $p = 0.395$) had no impact on the variable. Consequently, only H1c was supported. Hypothesis 2 investigated the relationship between leadership competences and organizational learning. Results showed that all three variables showed positive influences on organizational learning with COC ($\beta = 0.387$, $p < 0.001$) exerting the highest impacts, followed by ROC ($\beta = 0.280$, $p < 0.001$) and INC ($\beta = 0.118$, $p < 0.05$). Therefore, hypothesis 2 was fully supported by H2a, H2b and H2c. Hypothesis 3, on the other hand, was partially supported by H3a and H3b, while H3c was rejected due to ROC ($\beta = 0.014$, $p = 0.832$) expressing non-significant impact on organizational innovation. COC ($\beta = 0.198$, $p < 0.05$)

Hypothesis	Relationship	Path coefficient	*T*-value	*p*-value	Decision
H1a	COC → BUP	−0.014	0.193	*0.847*	*Rejected*
H1b	INC → BUP	0.050	0.851	*0.395*	*Rejected*
H1c	ROC → BUP	0.321	4.042	0.000***	Supported
H2a	COC → OGL	0.387	6.500	0.000***	Supported
H2b	INC → OGL	0.118	2.159	0.031**	Supported
H2c	ROC → OGL	0.280	4.493	0.000***	Supported
H3a	COC → INO	0.198	2.864	0.004**	Supported
H3b	INC → INO	0.179	2.568	0.010**	Supported
H3c	ROC → INO	0.014	0.212	*0.832*	*Rejected*
H4	OGL → INO	0.447	6.021	0.000***	Supported
H5	OGL → BUP	0.220	3.611	0.000***	Supported
H6	INO → BUP	0.222	3.371	0.001**	Supported
H7	OGL → INO → BUP	0.099	2.411	0.016**	Supported
H8a	COC → ORL → BUP	0.085	3.355	0.001**	Supported
H8b	INC → ORL → BUP	0.026	1.783	*0.075*	*Rejected*
H8c	ROC → ORL → BUP	0.062	2.657	0.008**	Supported
H9a	COC → INO → BUP	0.044	2.410	0.016**	Supported
H9b	INC → INO → BUP	0.040	2.067	0.039**	Supported
H9c	ROC → INO → BUP	0.003	0.205	*0.837*	*Rejected*
H10a	COC → OGL → INO	0.173	4.906	0.000***	Supported
H10b	INC → OGL → INO	0.053	1.977	0.048**	Supported
H10c	ROC → OGL → INO	0.125	3.450	0.001**	Supported
H11a	COC → OGL → INO → BUP	0.038	2.520	0.012**	Supported
H11b	INC → OGL → INO → BUP	0.012	1.537	*0.124*	*Rejected*
H11c	ROC → OGL → INO → BUP	0.028	1.913	*0.056*	*Rejected*

Note(s): $^{**}p < 0.05$, $^{***}p < 0.001$

Table 3. Path coefficients–direct and indirect effect results

generated greater impact on dependent variable than INC ($\beta = 0.179$, $p < 0.05$). Finally, OGL, INO, and BUP showed correlations with one another. Specifically, statistics showed a positive link between ORL and INO ($\beta = 0.447$, $p < 0.001$). These two variables also had positive impact on BUP with a slightly greater impacts generated by INO ($\beta = 0.222$, $p < 0.001$) than that of OGL ($\beta = 0.220$, $p < 0.001$). Therefore, H4, H5 and H6 were supported.

Hypothesis 8 and 9 tested the mediating roles of ORL and INO in the relationship between leadership competences and BUP. Results showed that only INC ($\beta = 0.026$, $p = 0.075$) had non-significant impact on BUP through the intervention of ORL, while COC ($\beta = 0.085$, $p < 0.001$) and ROC ($\beta = 0.062$, $p < 0.05$) yielded positive connections. Therefore, H8 was partially supported by H8a and H8c. In the route through INO, only ROC ($\beta = 0.003$, $p = 0.837$) had negative result on BUP, whereas COC ($\beta = 0.044$, $p < 0.05$) and INC ($\beta = 0.040$, $p < 0.05$) supported the mediating role of INO on BUP. Consequently, H9a and H9b were confirmed. Next, the mediating role of ORL was also fully expressed in the relationship between COC ($\beta = 0.173$, $p < 0.001$), INC ($\beta = 0.099$, $p < 0.05$), ROC ($\beta = 0.125$, $p < 0.001$) and INO. Therefore, hypothesis 10 was supported. Hypothesis testing results also pointed out that INO mediated the relationship between OGL and BUP. Therefore, hypothesis 7 was supported. Finally, the combined mediating influence of ORL and INO was supported only by the implementation of COC ($\beta = 0.038$, $p < 0.05$), while INC ($\beta = 0.012$, $p = 0.124$) and ROC ($\beta = 0.028$, $p = 0.056$) showed no impact on BUP through ORL and INO. As a result, hypothesis 11 was only supported by H11a.

The total effect on BUP was calculated by the sum of direct and indirect effects of all constructs. Statistically, all three leadership competences variables yielded positive results on BUP with the greatest impacts generated by ROC ($\beta = 0.413$, $p < 0.001$), followed by COC ($\beta = 0.153$, $p < 0.05$), and INC ($\beta = 0.128$, $p < 0.05$). The path coefficient values of 0.319 and 0.222 for ORL and INO also indicated their total significant impact on BUP. Figure 1 illustrates the path coefficients of hypothesis testing.

5. Discussions, implications and limitations

5.1 Discussion

This study aims to investigate the impact of leadership competences on organizational learning, organizational innovation, and business performance; as well as discloses the mediating roles of organizational learning and organizational innovation in the relationship between leadership competences and business performance.

In term of direct effects, the findings showed that only result-oriented competence yielded positive impact on business performance (H1c), while interpersonal and cognitive competences exerted no effect (H1a, H1b). This finding supported Amedu and Dulewicz's (2018) study, which recognized results-oriented as the most essential competences of leaders in generating organizational performance compared with interpersonal and cognitive competences. Besides, all three leadership competences showed positive influences on organizational learning (H2a, H2b, H2c) with the strongest impact from cognitive competence. Regarding organizational innovation, the findings revealed that cognitive competence had the most significant impact on organizational innovation, followed by interpersonal competence (H3a, H3b), which are correlated with earlier studies (Krupskyi and Grynko, 2018; Berraies, 2019; Sayed and Edgar, 2019). Surprisingly, result-oriented competence yielded no impact on organizational innovation (H3c). One plausible reason could be that leaders who scored high in result-oriented competence just concentrated on getting the results, which, in turn, led them to less focus on innovation initiatives. In addition, the correlations among organizational learning, organizational innovation, and business performance are all supported (H4, H5, H6), which strengthens the findings of earlier studies (Garcia-Morales *et al.*, 2007; Migdadi, 2019; Shin and Pérez-Nordtvedt, 2020).

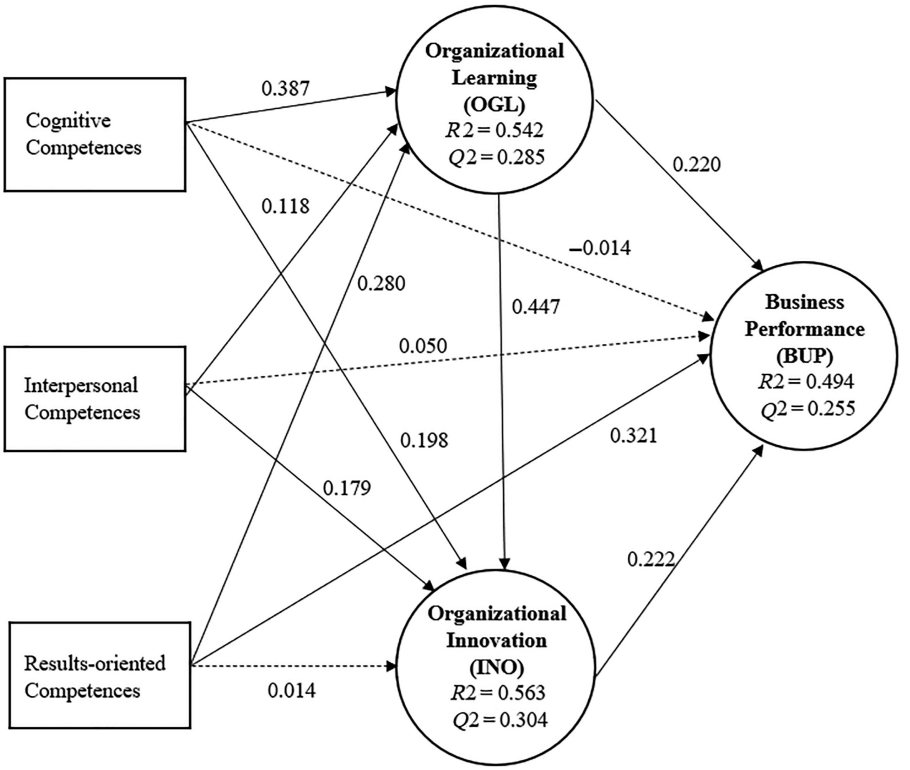

Figure 1.
Path coefficients of hypothesis testing

The current study also supports previous research (e.g. Garcia-Morales *et al.*, 2007a; Garcia-Morales *et al.*, 2012; Bolívar-Ramos *et al.*, 2012) by confirming the mediating role of organizational innovation in the relationship between organizational learning and business performance (H7). In this study, business performance with the intervention of organizational learning was positively affected by both cognitive competence and result-oriented competence (H8a, H8c), while interpersonal competence still expressed non-significant influence (H8b). One plausible reason could be that leaders who scored high in interpersonal competence tended to be overconfident in using relationship building to improve business performance, which, in turn, led them to underestimate learning initiatives. The findings also revealed a full mediating impact of organizational learning on the relationship between cognitive competence and business performance as the direct impact between these two variables was previously rejected. With the intervention of organizational innovation, cognitive competence still had strongest impact on business performance, followed by interpersonal competence (H9a, H9b). However, organizational learning did not mediate the relationship between result-oriented competence and business performance (H9c). It appeared that within the context of this research leaders who focused on results and achievements did not capitalize on learning to foster superior performance. This, in turn, provided new insights toward the extension of existing theoretical relationships and added to the current debates from similarly published studies (Amedu and Dulewicz, 2018).

Moreover, all three leadership competences showed significant influences on organizational innovation through organizational learning with the strongest impact coming from cognitive competence, followed by results-oriented and interpersonal

competences (H10a, H10b, H10c). Although the mediating roles of organizational learning in fostering innovation has been well-researched over decades, the results in this research gave a promising signal that leaders in T&H firms in Vietnam were aware of and using organizational learning as a strategic tool to strengthen organizational innovation and remain competitive in contemporary business setting full of competition, uncertainty, and complexity. Regarding the sequence effect of organizational learning and organizational innovation on the link between leadership competences and business performance, only cognitive competence could generate its influence on the business performance through these two mediators (H11a), while interpersonal and result-oriented competences could not (H11b, H11c). This study provided one of the first mediation investigations of the theory that organizational learning and innovation are important in business performance to derive the best results from leaders with cognitive competence. The finding also extended previous findings and opened doors for future researchers to investigate how these management practices support leader in fostering superior business performance.

5.2 Theoretical implications

This study has several contributions to theory. First, although earlier studies have discussed the contribution of resources and knowledge to tourism development in Western and other advanced economies, there is still scarce research into the combination of RBV and KBV theories in Vietnam as well as from the context of Asian T&H industry (Kruesi and Bazelmans, 2022; Duarte Alonso *et al.*, 2020). The findings of this study supported the meaning of these theories and demonstrated the usefulness of leadership competences, organizational learning, and organizational innovation in enhancing business performance of T&H firms in Vietnam – an emerging Asian economy. Second, despite decades of research on leadership, there is still no definitive knowledge about leadership effectiveness in organizations. The findings of how leadership competences positively affect organizational outcomes in this study provided a glimpse into the "black box" of leadership effectiveness, especially in turbulent times. Third, this study extended and enriched theory of leadership, organizational learning, organizational innovation, and business performance by integrating these domains and developing an overarching conceptual model of their relationships. Fourth, the current study contributed to the existent knowledge by highlighting the role of organizational learning and organizational innovation in stimulating business performance and in positively mediating the relationship between leadership and business performance. Finally, previous studies have focused on Western countries, and thus, neglected developing countries such as Vietnam and other countries in Asia. The present study presented an analysis of leadership, organizational learning, organizational innovation, and business performance in the context of T&H firms in Vietnam. By doing so, this study represented a first step to establishing comparisons between regions and industries, which are potential research areas in the future.

5.3 Practical implications

The findings of this study provide some suggestions for T&H leaders and managerial executives in leading their organizations and enhancing their business performance, especially in uncertain conditions. First, T&H leaders need to improve their competences related to planning, organizing, and goal setting in order to drive their businesses towards superior performance. They should also work on competencies related to understanding followers' demand, providing support, and expressing appropriate behaviors in dealing with specific situations to foster learning, innovation, and high performance within their organizations. Besides, the findings of this study revealed potential clusters of competencies (e.g. interpersonal, and cognitive competences) that are significantly related to organizational

learning, organizational innovation, and business performance. These are competencies that T&H leaders bring with them to work so that they can engender better outcomes. Human resources managers can use these clusters of competencies as a reference in recruiting and training senior executives and future leaders. Second, T&H leaders are encouraged to support organizational learning processes and the development of new products and services by developing a culture supporting learning and innovative ideas. T&H firms can form a learning and innovation department within their organizations. This department is in charge of compiling employees' suggestions and innovative approaches, as well as identifying and implementing necessary techniques to foster learning and innovation (e.g. field trips, workshops, innovative ideas competition, best practices sharing sessions, etc.). By doing so, they can enable their firms to achieve better performance and gain create competitive advantage over their competitors.

5.4 Limitations and future research directions

The study encounters with some limitations. First, as the research restricts itself to T&H firms in Vietnam, it cannot satisfy the generalization of the results in other contexts. Future researchers are encouraged to test the final model and establish comparisons between regions and industries. Second, the independent variables in this study were restricted to results-oriented, interpersonal, and cognitive competences, which leaves a pool for future studies in addressing more leadership competencies and investigating their relationships with organizational outcomes. Third, the data was collected from different leadership levels and company scales to generate an overall picture of how T&H sector in Vietnam enhances business performance. Further research should view leadership levels and company scales as control variables and further investigate how they affect the relationship among studied variables in the study. Finally, this study was conducted in a context where leaders have great latitude for discretion due to personal background and cultural aspects. Future research could investigate the mediating/moderating impact of culture on how leaders affect business outcomes and further examine how personal background variables affect the results.

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The impact of leadership traits and organizational learning on business innovation

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ABSTRACT

The severe impact of the COVID-19 pandemic has forced many organizations to close or even shut down temporarily. In the literature, previous attempts have pointed to the role of leaders and learning in supporting firms to innovate and overcome such harsh and turbulent situations. This study investigates how different leadership personality traits affect business innovation both directly and indirectly through organizational learning. A total of 638 samples were collected from leaders working at tourism firms in Vietnam and analyzed using a quantitative approach and the partial least squares-SEM technique. The findings revealed that leadership personality traits, such as core self-evaluation, narcissism, the need for achievement, and risk propensity, have direct or indirect effects on business innovation. Moreover, knowledge acquisition, knowledge distribution, and knowledge interpretation are three organizational learning subprocesses that play mediating roles in the relationship between leadership traits and business innovation. Based on these findings, this study makes recommendations for tourism businesses to recover and develop sustainably following the pandemic.

Introduction

Tourism is one of the fastest-growing industries that contributes a significant amount to GDP of different countries worldwide. However, the COVID-19 pandemic has caused serious business losses and brought tremendous challenges for tourism firms. In Vietnam, total tourism receipts in 2020 dropped to 321 trillion VND, a decrease of 58.7% compared to the previous year (VNAT, 2020). To maintain normal operations and survive the pandemic, it is necessary for tourism firms in Vietnam to develop and implement novel and innovative strategies.

In the extant literature, leadership and organizational learning have received increasing attention of scholars due to their profound impact on organizational innovation (Chaithanapat et al., 2022; García-Morales et al., 2012; Hsiao & Chang, 2011; Jung et al., 2003; Noruzy et al., 2013; Tandon, 2021). For example, Van et al. (2018) found that leadership fostered innovation through mediating role of all four sub-processes of organizational learning, namely, knowledge acquisition, knowledge distribution, and knowledge interpretation and organizational memory.

This study investigates how different leadership personality traits affect business innovation both directly and indirectly through organizational learning. The current research is important for several reasons. First, previous studies in the fields of leadership have focused on transformational leadership theories (Van et al., 2018; Zagoršek et al., 2009; Vashdi et al., 2019; Uddin et al., 2017) in explaining how transformational and transactional leadership behaviors affect organizational learning and innovation. Therefore, not much is known about the effects of leaders' personalities on such organizational outcomes. This paper aims to provide new insights into how leaders' characteristics (core self-evaluation, narcissism, need for achievement, and risk propensity) influence firm learning and innovation. Second, because leadership, learning, and innovation are universal phenomena (Bass, 1996; Chiva & Alegre, 2005) and previous research on these concepts was primarily conducted in the Western context, their applicability in other parts of the world must be validated. This study adds a more comprehensive model that illustrates the relationships between these concepts and explains how well they fit the context of Vietnam, an Asian developing country. Third, this study provides recommendations for tourism firms to

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withstand and recover from the COVID-19 pandemic and proposes suggestions for the government and local authorities to implement proper policies that support sustainable tourism development in the long term.

Literature review

Resource-based view and knowledge-based view theories

The resource-based view theory, developed by Penrose (1959), holds that "firms possess resources, a subset of which enables them to achieve competitive advantage, and a further subset of which leads to superior long-term performance" (Wernerfelt, 1984, 108). This theory posits that tangible resources (e.g, facilities and equipment) or intangible resources (e.g., managerial executives' personalities), play an important role in fostering a firm's superior performance and competitive advantage (Barney, 1991; Ulrich, 1998; Saffu et al., 2008).

Grant (1996) defined the knowledge-based view theory as an extension of resource-based view theory, which identifies knowledge as the most important source of innovation, improved performance, and competitiveness. As an important approach to organizational learning, this theory "has inevitably given rise to this general understanding that firms should become learning organizations to maximize their knowledge base" and gain competitive advantage through innovative and sustainable performance (Magno et al., 2017; Farzaneh et al., 2021, 657).

The resource-based view and knowledge-based view theories have gained enormous popularity among researchers in the tourism field (Huy & Khin, 2016; Duarte Alonso, 2017; Utami et al., 2017; Toylan et al., 2020). The resource-based view and knowledge-based view theories are used in this study to explain how leadership traits and organizational learning (firm's internal resources) contribute to business innovation (organizational outcome and competitiveness of firms).

Business innovation

Business innovation (BI) is defined as "the intentional introduction and application within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organization or wider society" (West & Farr, 1990, 209). Schumpeter (1961) classified BI as new products, new manufacturing methods, new sources of supply, new market exploitation, and new business organization methods. According to Gumusluoglu and Ilsev (2009), BI refers to how an organization generates new ideas and improves existing products. Moreover, Carmeli et al. (2010) stated that BI includes the stimulation of new initiatives and the provision of clear and sufficient performance evaluation.

Leadership is one of the most important factors that plays a key role in firms' innovation (Cummings & O'Connell, 1978). Leaders have positively influenced innovation within organizations by fostering inspiration and intellectual stimulation (García–Morales et al., 2008) and by strengthening management practices, processes, and structures (Vaccaro et al., 2012). Earlier research has found a positive direct relationship between leadership and BI (Jung, 2003; García-Morales et al., 2008; Gumusluoglu & Ilsev, 2009; Vaccaro et al., 2012). According to Jung (2003), top-level leaders promote BI by creating an organizational culture in which employees are encouraged to share and implement new ideas. Recently, findings from Chaithanapat et al.'s (2022) study revealed that leadership positively affects the innovation quality and performance of 283 small- and medium-sized enterprises in Thailand.

Leadership traits (LET)

Leadership is an influencing process between leaders and followers to achieve team or organizational goals (Hogan et al., 1994). Leadership theories have gradually evolved over decades, focusing primarily on the traits and behaviors of leaders (Gregoire & Arendt, 2004). According to Solaja (2016), personality traits of leaders include locus of control, authoritarianism, self-esteem, Machiavellianism, self-monitoring, and risk-taking. Sidek and Zainol (2011) considered the need for achievement, risk-taking propensity, and internal locus of control as three important traits of leaders that profoundly impact business performance. Judge et al. (2009) categorized leadership traits into "bright side" and "dark side." The "bright side" refers to Big Five traits (i.e., conscientiousness, extraversion, agreeableness, openness, and neuroticism), core self-evaluations, intelligence, and charisma. Meanwhile, the "dark side" involves socially undesirable traits such as narcissism, hubris, dominance, and Machiavellianism. Similarly, Hiller and Beauchesne (2014) identified core self-evaluation, narcissism, need for achievement, and risk propensity as some notable leadership traits that better explain how leaders' characteristics predict organizational outcomes such as innovation and performance.

Core self-evaluation (CSE)

CSE is defined as individual assessment of their own capability, competences, and values (Judge et al., 1998). Judge et al. (1997) proposed the CSE model that includes self-esteem, generalized self-efficacy, neuroticism, emotional stability, and locus of control. Previous studies have pointed to the positive effects of CSE on employee motivation, life satisfaction, job satisfaction, and job performance (Judge et al., 1998, 2003). Hu et al.'s (2012) study also revealed a positive relationship between leaders' CSE and their leadership behavior. Leaders with a high CSE are more likely to gain trust to easily inspire and motivate their followers, thereby enhancing their motivation and creativity at work (Chiang et al., 2014). Zhang et al. (2020) found that CSE of leaders affects knowledge sharing and creativity in organizations. In this study, we analyzed the CSE of leaders through the lens of two dimensions, namely, self-esteem and locus of control. According to Coopersmith (1967, 4–5), Self-esteem (SE) is defined as "the evaluation which the individual makes and customarily maintains concerning himself: it expresses an attitude of approval or disapproval and indicates the extent to which the individual believes himself capable, significant, successful, and worthy. In short, self-esteem is a personal judgment of worthiness expressed in the individual's attitudes." SE refers to self-evaluation of an individual that is measured by the degree he or she agrees with different appreciations about himself or her (Baumeister & Tice, 1985). Previous studies have found that SE affects individual and organizational outcomes such as job satisfaction, turnover, absence intentions, organization commitment, and innovation success (Norman et al., 2015; Matzler et al., 2015). Locus of Control (LC) is defined as the awareness of individuals regarding their own abilities and how they can monitor events and situations occurring in their lives (Rotter, 1966). Individuals who link their achievements to their abilities and efforts belong to the internal LC type, while those who believe that they can gain something thanks to external forces such as luck belong to the external LC type. Several studies have examined the influence of LC on organizational outcomes. For example, LC was found to positively affect job performance in Rambe et al.'s (2018) study. Akyürek & Guney (2018) proved the positive effects of internal LC on rational and intuitive decision-making leadership styles. Recently, Qurrahtulain et al. (2022) found that internal LC plays a moderating role in the relationship between inclusive leadership and vigor at work.

Narcissism (NAR)

NAR is defined as extreme self-love, admiration, and concern about the self and has become an important psychological personality among top leaders (Emmons, 1987). Narcissistic leaders highly appreciate their values and achievements and therefore, are strongly affected by recognition and acknowledgment. NAR is examined through the lens of cognition and motivation (Judge et al., 2006). Regarding cognitive aspects, narcissists strongly believe in their superiority and capabilities. Regarding the motivational aspect, narcissists desire superiority and recognition from colleagues. Narcissistic leaders are positively associated with a firm's strategy development and performance (Chatterjee & Hambrick, 2007). Reina et al. (2014) also found a positive effect of narcissistic leaders on firm performance. Besides, while earlier studies have revealed that vulnerable narcissism inhibits learning in organizations (Godkin & Allcorn, 2009; Liu et al., 2019), empirical evidence for the positive influence of grandiose narcissism on learning is lacking.

Need for achievement (NFA) and risk propensity (RPR)

NFA is a personality trait of individuals who tackle difficulties in achieving success and improved performance (McClelland, 1961). NFA has exerted both direct and indirect influences on entrepreneurial intention (Kusumawijaya, 2019), growth in profit (Tajeddini & Tajeddini, 2008), and firm success (Sengupta & Debnath, 1994). NFA is closely related to risk-taking propensity because firms seeking superior performance tend to take more risks than those with a lower need for achievement (Chen et al., 2012). RPR is defined as an individual's orientation to avoid or take risks (Tang & Tang, 2007). The RPR of the top management team relates to their readiness to capitalize on valuable opportunities (Luo et al., 2018). Several studies have been conducted to investigate the impact of RPR on firm performance and other organizational outcomes (Tang & Tang, 2007; Ghotnian et al., 2013). Yu and Chen (2016) found a positive relationship between RPR and firm innovation. Recently, Liu et al.'s (2019) study revealed a relationship between entrepreneurs' risk-taking and venture performance. NFA and RPR have long positively affected learning within organizations (Lowell, 1952; Onağ et al., 2014).

Organizational learning (ORL)

ORL relates to generating, disseminating, interpreting, and storing knowledge that is crucial to improving firm performance (Rehman et al., 2019). ORL plays an essential part in the development of every organization operating in a highly competitive environment. In Zagoršek et al.'s (2009) study, ORL was categorized into information acquisition, information distribution, interpretation, and behavioral changes. Recently, Vashdi et al. (2019) examined ORL through four components: information acquisition; information distribution; information interpretation and organizational memory.

Knowledge Acquisition (KNA) refers to how knowledge is created from either inside or outside organizations (Pérez López et al., 2005; Zagoršek et al., 2009). Leaders play an important role in this process since they inspire and motivate employees to learn and upgrade their skills and abilities (Vashdi et al., 2019). KNA is also found to play a mediating role in the relationship between leadership and innovation capability in Van et al.'s (2018) study.

Organizational Memory (ORM) refers to the retention and retrieval processes of knowledge or the storage of knowledge for future use (Walsh & Ungson, 1991; Pérez López et al., 2005; Van et al., 2018; Vashdi et al., 2019). According to Walsh & Ungson (1991), ORM has three main roles in firms: informational role (housing information for decision making in the future), control function (cut down transaction cost for new decision). and political role (serving information as means of maintaining or improving power). Similar to KNA, ORM has been found as a mediator in the relationship between leadership and BI (Van et al., 2018).

The knowledge distribution (KND) is a process of sharing new information among members and departments within an organization (Pérez López et al., 2005; Vashdi et al., 2019). According to Van et al. (2018), KND plays a greater mediating role in the correlation between leadership and BI than the other three ORL subprocesses.

Knowledge interpretation (KNI) is the process by which new information is gathered and shared (Pérez López et al., 2005; Vashdi et al., 2019). In Zagoršek et al.'s (2009) study, there are no direct correlations between leadership and KNI. The relationships are instead mediated by KNA and KND. KNI was discovered to positively mediate the relationship between leadership and BI (Van et al., 2018).

Previous research looked not only at the role of leadership in ORL (Zagoršek et al., 2009; Uddin et al., 2017; Vashdi et al., 2019; Rehman et al., 2019), but also at the significant influences of ORL processes on organizational innovation (Hsiao & Chang, 2011; García-Morales et al., 2012; Noruzy et al., 2013). ORL also serves as a bridge between leadership and innovation, particularly new product development (Sattayaraksa & Boon-itt, 2016). ORL has been found to have a stronger impact on innovation in small, old, and turbulent service firms (Jiménez-Jiménez & Sanz-Valle, 2011).

Based on the above discussion, we propose the following hypotheses:

Hypothesis 1. Factors of Leadership Traits (LET): SE **(H1a)**, LC **(H1b)**, NAR **(H1c)**, NFA **(H1d),** and RPR **(H1e)** positively affect Knowledge Acquisition (KNA).

Hypothesis 2. Factors of Leadership Traits (LET): SE **(H2a)**, LC **(H2b)**, NAR **(H2c)**, NFA **(H2d),** and RPR **(H2e)** positively affect Organizational Memory (ORM).

Hypothesis 3. Factors of Leadership Traits (LET): SE **(H3a)**, LC **(H3b)**, NAR **(H3c)**, NFA **(H3d)**, and RPR **(H3e)** positively affect Knowledge Distribution (KND).

Hypothesis 4. Factors of Leadership Traits (LET): SE **(H4a)**, LC **(H4b)**, NAR **(H4c)**, NFA **(H4d),** and RPR **(H4e)** positively affect Knowledge Interpretation (KNI).

Hypothesis 5. Factors of Leadership Traits (LET): SE **(H5a)**, LC **(H5b)**, NAR **(H5c)**, NFA **(H5d),** and RPR **(H5e)**; as well as Organizational Learning (ORL): KNA **(H5f)**, ORM **(H5g)**, KND **(H5h),** and KNI **(H5i)** positively affect BI.

Hypothesis 6. BI is indirectly affected by SE **(H6-1a; H6-2a; H6-3a, H6-4a)**, LC **(H6-1b; H6-2b; H6-3b, H6-4b)**, NAR **(H6-1c; H6-2c; H6-3c, H6-4c)**, NFA **(H6-1d; H6-2d; H6-3d, H6-4d),** and RPR **(H6-1e; H6-2e; H6-3e, H6-4e)** through the mediating role of KNA, ORM, KND, and KNI.

Methodology

Measurement of constructs

This study uses a quantitative approach and uses a structured survey questionnaire to collect data. Measures of constructs was developed based on a comprehensive literature review and qualitative interviews with researchers and leaders of tourism firms. The questionnaire is divided into three sections: respondent demographics, LET independent variables (SE, LC, NAR, NFA, and RPR), and ORL dependent variables (KNA, ORM, KND, and KNI) and BI. All questions are rated on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." LET scales (SE, LC, NAR, NFA, and RPR) were adapted from Judge et al. (2003), Ames et al. (2006), and Sidek & Zainol (2007). ORL (KNA, ORM, KND, and KNI) were calculated using a scale adapted from Jiménez-Jiménez and Sanz-Valle (2011). BI measures were adapted from the study of García-Morales et al. (2012).

Data collection and the sample

The study's data collection was carried out from December 2019 to December 2020 during the COVID-19 pandemic. Respondents were sent questionnaires in two ways: directly to their companies and online via Google form via email, Zalo, and Viber apps. Respondents in this study are leaders from tourism-related organizations such as travel agencies, bars, hotels, and restaurants. This study's sample size adheres to Hair et al.'s (1995) rule of thumb, which states that it must be at least five times the observed variables. Because there are 51 observed variables in this study, the minimum sample size is 51 × 5 = 255. Data collection yielded 638 valid responses that met the criteria for reliability and generalizability.

Statistical methods

To test the hypotheses, the current study used PLS-SEM with Smart-PLS software version 3.0. To investigate main factors and complex structural relationships among variables, the PLS technique is used (Hair et al., 2011). In this study, the data are analyzed in two steps (Hair et al., 2013). First, the measurement model was examined to determine the construct's reliability and validity using factor loadings, composite reliability, and average variance. The structural equation model is then examined to see if there is any correlation between the latent constructs.

Results

Sample characteristics

Most respondents gained bachelor's degree (61%), followed by a Master's degree (21%), college degree (17.7%), and doctorate degree (3%). In terms of company size, most of the respondents (54.2%) are working at small and medium enterprises (SMEs), compared with large companies (45.8%). Regarding types of organizations, respondents in this study worked at hotels and resorts (34.2%), bars and restaurants (21.6%), transportation companies (13.2%), tourist attractions (9.7%), retailing systems for tourists (8.5%), travel agency (7.1%), and event companies (5.8%).

Measurement model assessment

To evaluate all constructs in the research model, we examined the reliability and validity of constructs. First, the reliability of all scales was tested by using composite reliability (CR). According to Hair et al. (2011), the minimum CR of 0.6 was acceptable. As shown in Table 1, the CR of all constructs ranged from 0.838 to 0.950, which was following the rule of Hair et al. (2011). All constructs in the study were found to reflect a model with high internal consistency reliability. Next, average variance extracted (AVE) is examined to test convergent validity and divergent validity. Fornell and Larcker (1981) proposed that the criteria and cross-loadings, square root of a separate construct of AVE, should be greater than 0.5 to ensure convergent validity. In Table 1, AVE values ranged from 0.518 to 0.759, indicating a sufficient level of convergent validity of all constructs.

To assess discriminant validity, Fornell–Larcker criterion stated that the loading of an indicator should be larger than all of its cross-loadings (Fornell & Larcker, 1981), and those factors' outer loadings should be greater than 0.7 (Hulland, 1999). Hair et al. (2011) suggested that "the AVE of each latent construct should be higher than the construct's highest squared correlation with any other latent construct." From Table 2, discriminant validity varied from 0.720 to 0.871, which satisfied the above rules. BI was highly rated by respondents (mean = 4.249). Regarding factors of LET mean values for NFA, SE, RPR, NAR, and LC were 4.149, 4.095, 3.918, 3.822, and 3.385, respectively. In terms of ORL, ORM was highly rated by respondents (mean = 4.291), followed by KND (mean = 4.248), KNI (mean = 4.242), and KNA (mean = 4.196).

Structural model assessment

To analyze endogenous variable variance of ORL and BI, we applied the structural equation model. R^2 weight of endogenous constructs was measured to evaluate the research model. Next, a predictive relevance measure was used to test the model fit (Stone, 1974; Geisser, 1975). This study used cross-validated redundancy and Q^2 value to evaluate clarity indicators of hidden constructs. Q^2 value was calculated to evaluate the constructs' predictive relevance (Stone, 1974; Geisser, 1975) through the blindfolding technique conducted by the PLS technique. The Q^2 value was greater than zero so that an endogenous variable display acceptable fit, and the model was confirmed to have predictive relevance (Hair et al., 2016). Specifically, cross-validated redundancy was 0.264 for KNA, 0.230 for ORM, 0.226 for KND, 0.189 for KNI, and 0.343 for BI. A high predictive relevance was concluded for factors of ORL and BI that show the model fit. The "nonparametric bootstrapping" method of Hair et al. (2016) was used with 2000 replications to evaluate the structural model with a confidence interval level of 97.5%. Table 3 illustrates the structural model performance conducted by the Smart-PLS analysis.

From Table 3, all results of hypothesis testing are shown. Hypothesis 1 was tested and the results revealed that KNA had a positive and direct relationship with four factors of LET (SE, LC, NAR and NFA). The highest effect was found on NFA (β = 0.270, p = 0.000), followed by NAR (β = 0.184, p = 0.003), SE (β = 0.171, p = 0.003), and LC (β = 0.170, p = 0.000). The findings revealed that each standard deviation change in NFA, NAR, SE, and LC increases 0.270, 0.184, 0.171, and 0.170 standard deviations in KNA. Therefore, H1a, H1b, and H1d were partially supported. In contrast, PRP did not affect KNA so H1e was rejected. The R^2 coefficient of KNA was 0.391, meaning that NFA, NAR, SE, and LC can significantly explain 39.1% the variance of KNA.

Hypothesis 2 was tested and the results revealed that ORM had a positive and direct relationship with three factors of LET (SE, LC and NFA). The highest effect was found on NFA (β = 0.321, p = 0.000), followed by SE (β = 0.232, p = 0.000), and LC (β = 0.084, p = 0.026). The findings revealed that each standard deviation change in NFA, SE, and LC increases 0.321, 0.232, and 0.084 standard deviations in ORM. Therefore, H2a, H2b, and H2d were partially supported. In contrast, NAR and PRP did not affect KNA, meaning that H2c and H2e were rejected. The R^2 coefficient of ORM was 0.362, which implies that NFA, SE, and LC can significantly explain 36.2% the variance of ORM.

Hypothesis 3 was tested and the results revealed that KND had a positive and direct relationship with three LET factors (SE, LC and NFA). The highest effect was found on NFA (β = 0.271, p = 0.000), followed by SE (β = 0.190, p = 0.002), and LC (β = 0.190, p = 0.000). The findings revealed that each standard deviation change in NFA, SE, and LC increases 0.271, 0.190, and 0.190 standard deviations in KND. Therefore, H3a, H3b, and H3d were partially supported. In contrast, NAR and PRP did not affect KNA, meaning that H3c and H3e were rejected. The R^2 coefficient of KND was 0.371, thus NFA, SE, and LC can significantly explain 37.1% the variance of KND.

Hypothesis 4 was tested and the results revealed that KNI had a positive and direct relationship with three LET factors (SE, NFA and RPR). The highest effect was found on SE (β = 0.272, p = 0.000), followed by NFA (β = 0.194, p = 0.004), and RPR (β = 0.130, p = 0.017). The findings revealed that each standard deviation change in SE, NFA, and RPR increases 0.272, 0.194, and 0.130 standard deviations in KNI. Therefore, H4a, H4d, and H4e were partially supported. In contrast, LC and NAR did not affect KNI, meaning that H4b and H4c were rejected. The R^2 coefficient of KNI was 0.300, which means that SE, NFA, and RPR can significantly explain 30% the variance of KNI.

Hypothesis 5 was tested and the results revealed that BI had a positive and direct relationship with two factors of LET (LC and RPR)

Table 1
. Measurement model evaluation.

Constructs	Items	Factor loadings	Cronbach's alpha	CR	AVE
Business Innovation (BI)	Company develops new products and services	0.731	0.837	0.880	0.552
	Company introduces new products and services into market	0.729			
	Company spends on new product and service development practices	0.811			
	Company adds new products and services already on the market	0.784			
	Company adds new products and services the first time on the market	0.683			
	Company pioneers technology in the industry	0.712			
Knowledge Acquisition (KNA)	Subordinates attend fairs and exhibitions regularly	0.851	0.779	0.872	0.694
	R&D policy is consolidated and resourceful	0.846			
	New ideas and approaches on work performance are tested continuously	0.801			
Organizational Memory (ORM)	Company has directories or e-mails filed based on the field they belong to to find an expert of a specific issue at any time	0.777	0.821	0.882	0.651
	Company has updated databases about clients	0.836			
	Organization's databases and documents are accessed through some kind of network (Lotus Notes, intranet, etc.)	0.797			
	Databases are usually kept updated	0.817			
Knowledge Distribution (KND)	Company has formal mechanisms to ensure the sharing of best practices among various fields of activity	0.831	0.711	0.838	0.633
	Members within the organization take part in several teams or divisions and also act as links between them	0.788			
	There are members responsible for collecting, assembling, and distributing subordinates' suggestions internally	0.766			
Knowledge Interpretation (KNI)	All members in the organization share the same aim to which they feel committed	0.831	0.738	0.851	0.656
	Subordinates share knowledge and experiences by talking to each other	0.815			
	Teamwork is often implemented in the company	0.783			
Self-esteem (SE)	I believe I achieve the success I deserve in life	0.728	0.768	0.843	0.518
	I accomplish tasks successfully	0.727			
	Overall, I feel satisfied with myself	0.728			
	I determine what will come in my life	0.696			
	I have the ability of coping with most of my problems	0.719			
Locus of Control (LC)	Sometimes, I feel disappointed	0.884	0.936	0.950	0.759
	Sometimes, I feel worthless because of my failures	0.852			
	Sometimes, I cannot control my work	0.891			
	I am filled with uncertainty about my competence	0.842			
	I cannot control my success in my career	0.888			
	Sometimes, I feel things are pretty bleak and hopeless	0.868			
Narcissism (NAR)	I believe I am good because my colleagues keep telling me so	0.702	0.906	0.922	0.542
	I believe I am special	0.729			
	I want authority over others	0.723			
	It is easy to control others	0.761			
	I have the ability to show off if I have a chance	0.683			
	I really like to receive attention from others	0.757			
	I feel others always recognize my authority	0.751			
	I can persuade others to believe in what I want them to	0.732			
	I have more abilities than others	0.759			
	I am extraordinary	0.759			
Need for Achievement (NFA)	I do my job assignments best when they are difficult	0.714	0.796	0.860	0.551
	I take moderate risks and dare to get ahead at work	0.750			
	I set high standards for myself and others at work	0.781			
	I have strong motivation to succeed	0.713			
	I make plans at work	0.753			
Risk Propensity (RPR)	The higher the financial risks my company takes, the higher the rewards the risks are worth	0.770	0.857	0.893	0.582
	I normally accept occasional failures of new products	0.758			
	I pursue big financial risks in my business	0.773			
	I stimulate innovative marketing development strategies, of which some fail	0.728			
	I dislike to "play it safe" in my business	0.781			
	I like to implement plans even without assurance that they will work	0.765			

CR: Composite Reliability; AVE: Average Variance Extracted.

and three components of ORL (KNA, KND and KNI). The largest effect was found for KNA (β = 0.277, p = 0.000), followed by KND (β = 0.162, p = 0.002), RPR (β = 0.117, p = 0.005), LC (β = 0.110, p = 0.000), and KNI (β = 0.100, p = 0.031). The findings revealed that each standard deviation change in KNA, KND, RPR, LC, and KNI increases 0.277, 0.162, 0.117, 0.110, and 0.100 standard deviations in BI. Therefore, H5b, H5e, H5f, H5h, and H5i were partially supported. In contrast, SE, NAR, NFA, and ORM did not affect BI so H5a, H5c, H5d, and H5g were rejected. The R^2 coefficient of BI was 0.300, meaning that LC, RPR, KNA, KND, and KNI can significantly explain 30% the variance of BI.

Table 4 demonstrates the indirect relationship between factors of LET and BI through ORL subprocesses. As shown in Table 4, there were mediating effects of KNA on four factors of LET (SE with β = 0.047, T = 2.680, p = 0.007; LC with β = 0.047, T = 3.241, p = 0.001; NAR with β = 0.051, T = 2.425, p = 0.015, and NFA with β = 0.075, T = 3.247, p = 0.001). This result indicated that the relationships between SE, LC, NAR, and NFA with BI are mediated by KNA. In other words, KNA acted as a mediator between SE and BI (H6-1a), LC and BI (H6-1b), NAR and BI (H6-1c), NFA and BI (H6-1d). Similarly, SE, LC, NAR, and NFA had positive and indirect effects on BI via KNA; therefore, hypotheses H6-1a, H6-1b, H6-1c, and H6-1d were supported. Since RPR did not affect BI via KNA, hypothesis H6-1e was rejected.

The findings also revealed no indirect relationship between factors of LET and BI through ORM since SE, LC, NAR, NFA, and RPR did not affect BI via ORM. Therefore, H6-2a, H6-2b, H6-2c, H6-2d, and H6-2e were rejected. However, the mediating influences of KND on

Table 2
Discriminant validity coefficients.

	Mean	SD	BI	KNA	KND	KNI	LC	NAR	NFA	ORM	RPR	SE
BI	4.249	0.778	**0.743**									
KNA	4.196	0.771	0.697	**0.833**								
KND	4.248	0.790	0.667	0.725	**0.795**							
KNI	4.242	0.718	0.584	0.578	0.638	**0.810**						
LC	3.385	1.304	0.372	0.330	0.346	0.210	**0.871**					
NAR	3.822	1.047	0.538	0.494	0.450	0.414	0.163	**0.736**				
NFA	4.149	0.799	0.614	0.550	0.537	0.479	0.293	0.588	**0.743**			
ORM	4.291	0.737	0.579	0.579	0.587	0.639	0.257	0.425	0.557	**0.807**		
RPR	3.918	1.045	0.515	0.413	0.395	0.408	0.134	0.698	0.589	0.420	**0.763**	
SE	4.095	0.841	0.590	0.532	0.518	0.499	0.286	0.677	0.673	0.523	0.537	**0.720**

Square root of AVE in bold on diagonal

Table 3
Path coefficients - Direct effect on KNA, ORM, KND, KNI, and BI.

Hypotheses	Relationship	Path Coefficient-β	p-Value	Decision
H1a	SE → KNA	0.171	0.003	Supported
H1b	LC → KNA	0.170	0.000	Supported
H1c	NAR → KNA	0.184	0.003	Supported
H1d	NFA → KNA	0.270	0.000	Supported
H1e	RPR → KNA	0.011	0.843	Rejected
H2a	SE → ORM	0.232	0.000	Supported
H2b	LC → ORM	0.084	0.026	Supported
H2c	NAR → ORM	−0.002	0.971	Rejected
H2d	NFA → ORM	0.321	0.000	Supported
H2e	RPR → ORM	0.097	0.075	Rejected
H3a	SE → KND	0.190	0.002	Supported
H3b	LC → KND	0.190	0.000	Supported
H3c	NAR → KND	0.109	0.053	Rejected
H3d	NFA → KND	0.271	0.000	Supported
H3e	RPR → KND	0.032	0.527	Rejected
H4a	SE → KNI	0.272	0.000	Supported
H4b	LC → KNI	0.056	0.153	Rejected
H4c	NAR → KNI	0.016	0.805	Rejected
H4d	NFA → KNI	0.194	0.004	Supported
H4e	RPR → KNI	0.130	0.017	Supported
H5a	SE → BI	0.077	0.137	Rejected
H5b	LC → BI	0.110	0.000	Supported
H5c	NAR → BI	0.040	0.390	Rejected
H5d	NFA → BI	0.117	0.070	Rejected
H5e	RPR → BI	0.117	0.005	Supported
H5f	KNA → BI	0.277	0.000	Supported
H5g	ORM → BI	0.060	0.198	Rejected
H5h	KND → BI	0.162	0.002	Supported
H5i	KNI → BI	0.100	0.031	Supported

Table 4
Indirect effect on BI.

Hypotheses	Relationship	Path Coefficient-β	p-Value	Decision
H6-1a	SE → KNA → BI	0.047	0.007	Supported
H6-1b	LC → KNA → BI	0.047	0.001	Supported
H6-1c	NAR → KNA → BI	0.051	0.015	Supported
H6-1d	NFA → KNA → BI	0.075	0.001	Supported
H6-1e	RPR → KNA → BI	0.003	0.846	Rejected
H6-2a	SE → ORM → BI	0.014	0.233	Rejected
H6-2b	LC → ORM → BI	0.005	0.277	Rejected
H6-2c	NAR → ORM → BI	0.000	0.978	Rejected
H6-2d	NFA → ORM → BI	0.019	0.250	Rejected
H6-2e	RPR → ORM → BI	0.006	0.388	Rejected
H6-3a	SE → KND → BI	0.031	0.032	Supported
H6-3b	LC → KND → BI	0.031	0.013	Supported
H6-3c	NAR → KND → BI	0.018	0.099	Rejected
H6-3d	NFA → KND → BI	0.044	0.012	Supported
H6-3e	RPR → KND → BI	0.005	0.550	Rejected
H6-4a	SE → KNI → BI	0.027	0.048	Supported
H6-4b	LC → KNI → BI	0.006	0.296	Rejected
H6-4c	NAR → KNI → BI	0.002	0.818	Rejected
H6-4d	NFA → KNI → BI	0.019	0.097	Rejected
H6-4e	RPR → KNI → BI	0.013	0.138	Rejected

three factors of LET (SE with β = 0.031, T = 2.146, p = 0.032; LC with β = 0.031, T = 2.481, p = 0.013; and NFA with β = 0.044, T = 2.529, p = 0.012) were found. In other words, KND acted as a mediator between SE and BI (H6-3a), LC and BI (H6-3b), and NFA and BI (H6-3d). SE, LC, and NFA had positive and indirect effects on BI via KND; therefore, hypotheses H6-3a, H6-3b, and H6-3d were supported. However, since NAR and RPR did not affect BI via KND, hypotheses H6-3c and H6-3e were rejected.

Regarding KNI, the results showed that KNI had mediating influence on factors of LET (SE with β = 0.027, T = 1.982, p = 0.048). This indicated that the relationship between SE and BI was mediated by KNI (H6-4a). SE had a positive and indirect effect on BI via KNI; therefore, hypothesis H6-4a was supported. However, since LC, NAR, NFA, and RPR did not affect BI via KNI, hypotheses H6-4b, H6-4c, H6-4d, and H6-4e were rejected.

Overall, hypotheses H1 to H6 measured both direct and indirect and the total effects on BI are related to the total direct and indirect influences of all variables (Hair et al., 2016). The greatest effect was found in KNA, with a path coefficient of 0.277, followed by NFA with 0.274, LC with 0.199, SE with 0.196, KND with 0.162, and RPR with 0.144. NAR and KNI had the lowest total effects on BI, with 0.110 and 0.100, respectively.

Discussion, implications, and limitations

The current study is being conducted to investigate LET factors that affect BI both directly and indirectly via ORL. The findings revealed that leadership personality traits such as CSE, narcissism, the NFA, and risk propensity have direct or indirect effects on BI. Knowledge acquisition, knowledge distribution, and knowledge interpretation are three organizational learning subprocesses that play mediating roles in the relationship between leadership traits and BI (Fig. 1).

Implications for the theory

This study has several theoretical implications. First, this study relied on resource-based view and knowledge-based view theories to explain how companies gain innovation through their internal and intangible resources. The findings revealed significant effects of LET and ORL on BI, supporting the meaning and extending these theories (Wernerfelt, 1984; Grant, 1996).

Second, the study looked into LET factors that influence four ORL processes. The findings add empirical evidence to the body of knowledge on leadership and organizational learning. The four dimensions of ORL were discovered to have a positive relationship with LET. Except for RPR, all LET factors have a positive effect on KNA, which is consistent with previous research on the effect of leadership on KNA (Van et al., 2018; Vashdi et al., 2019). NFA has the greatest influence on KNA because leaders who place a high value on success and efficiency always encourage learning to improve knowledge and capabilities. Because RPR had no effect on KNA, whether leaders encourage

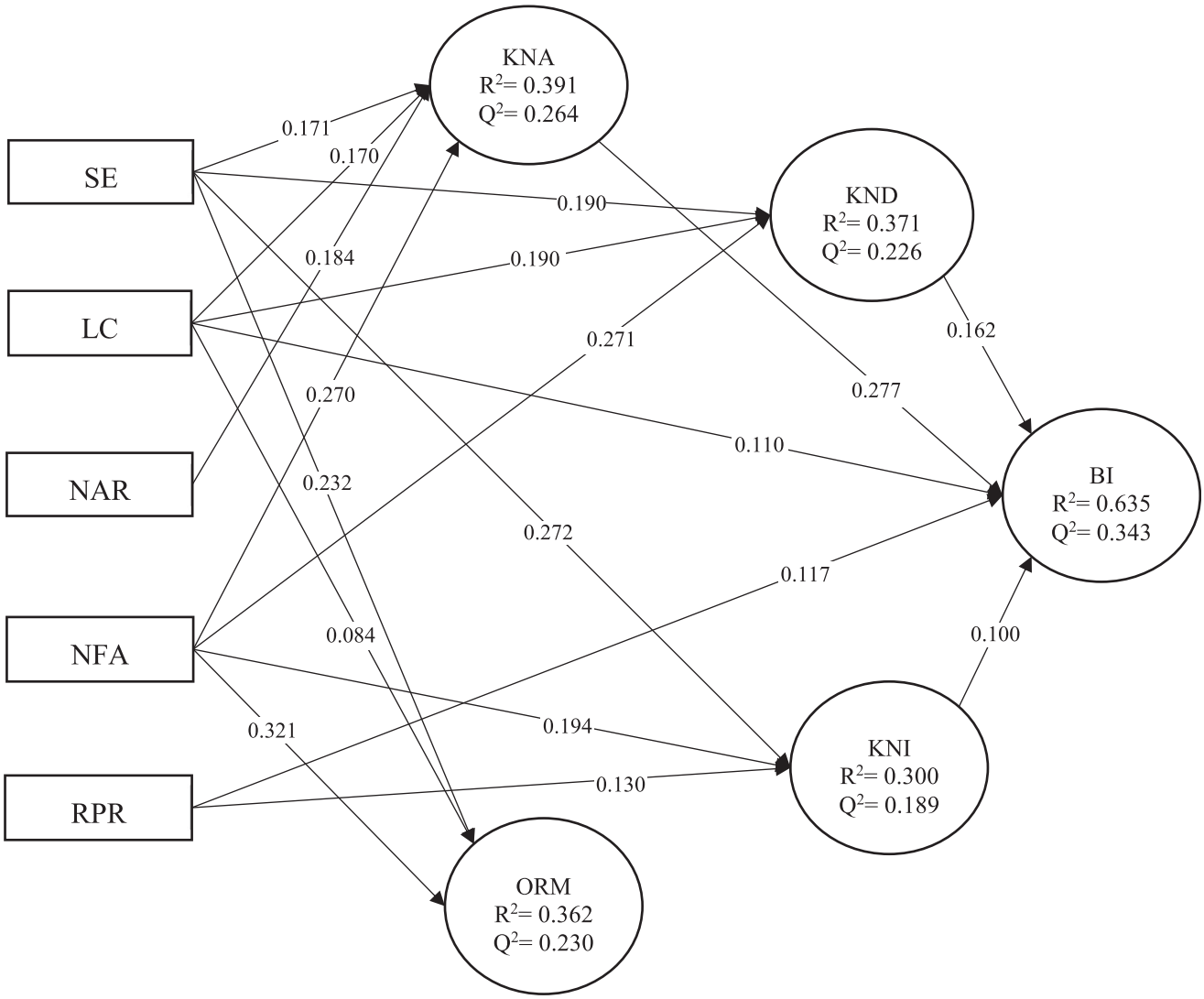

Fig. 1. Path coefficients of hypotheses testing.

knowledge acquisition within their organizations was unrelated to their risk tolerance levels. Furthermore, while leadership research confirmed the relationship between leaders' traits and leadership behavior (Hu et al., 2012), empirical findings on the effects of leaders' traits on organizational outcomes were lacking. The current study bridged that gap by demonstrating that leaders' SE, LC, and NFA positively affect ORM. The greater leaders' confidence in their abilities, values, and demand for improved job performance, the greater their concern for developing their firms' knowledge database system. NFA, like KNA, had the greatest impact on KND, followed by CSE. NAR and RPR were discovered to have no significant effect on KND. Finally, SE, NFA, and RPR of leaders improve KNI, which supports previous findings of other researchers (Van et al., 2018; Vashdi et al., 2019). RPR was discovered to affect KNI; thus, how much risk leaders accept determines how information and knowledge are spread and interpreted in organizations.

Third, the study shed light on the positive effects of LET and ORL on BI, demonstrating that LET and ORL are two critical strategies for tourism and hospitality firms to recover and survive following the COVID-19 pandemic. While previous research found a significant relationship between ORL and BI (Jiménez-Jiménez & Sanz-Valle, 2011; Hsiao & Chang, 2011; Garca-Morales et al., 2012; Van et al., 2018), little research has been conducted to investigate the effects of each ORL subprocess on BI. This study bridged the gap by focusing on the effects of three ORL subprocesses on BI. Among three subprocesses, KNA had the largest effect on BI, followed by KND. Therefore, how organizations create and share information is important to BI. ORM displayed no effect on BI, which goes against the findings of Van et al. (2018). In terms of LET, the study confirmed the influences of all factors of LET on BI. RPR showed a higher effect on BI, which agreed with the findings of Yu and Chen (2016). The study also provided empirical evidence of both direct and indirect effects of LC on BI, as well as the indirect influences of SE, NAR and NFA on BI through three ORL subprocesses.

Finally, the study demonstrated the importance of ORL subprocesses as mediators of the association between LET and BI. These correlations were in accordance with previous research that supported ORL's influence on leadership and innovation capability of organizations (Hsiao & Chang, 2011; García–Morales et al., 2012; Noruzy et al., 2013; Van et al., 2018). As Uddin et al. (2017) stated, leadership could bring 18% of ORL in organizations. These leaders set up an effective learning environment and motivate employees to learn and improve their performance (Sattayaraksa & Boon-itt, 2016). Regarding the relationship between ORL and BI, Noruzy et al. (2013, 1081) revealed that "the level of organizational learning in organizations is going to be one of the substantial criteria for determining their development and success." Manufacturing firms that are successful in embracing learning can easily succeed in innovating their

businesses. Therefore, leadership has both direct and indirect effects on BI through ORL (García−Morales et al., 2012; Sattayaraksa & Boon-itt, 2016).

Implications for practice

The study proposed recommendations for leaders of companies, state agencies and local authorities in the tourism industry. After the coronavirus pandemic, innovation has become an effective solution for tourism enterprises to develop and generate sustainable advantages. Tourism firms can improve BI through ORL (KNA, KND, and KNI) and through LC and RPR of leaders. First, leaders in tourism firms should build a learning environment that allows employees to frequently learn new skills and accumulate knowledge relevant to their firms' objectives. Three subprocesses KNA, KND, and KNI, should be considered to establish a complete learning process from generating and sharing, to interpret new information and knowledge. For example, cultural tourism is evaluated as a potential and novel orientation for tourism companies. Historical sites, national arts and intangible cultures can be used to design unique tourism programs. In this regard, tourism linked with culture has become popular in sustainable development strategies, and this requires employees to learn new knowledge and be well-trained. Second, leaders in tourism firms should exhibit a high degree of SE, LC, NFA, NAR, and RPR to stimulate a learning spirit among employees. For example, leaders with high internal LC can adapt to changing environments and flexibly turn difficulties into opportunities, fostering BI within their organizations. Similarly, leaders with high-risk perception can enhance BI in tourism organizations. They should encourage employees' risk acceptance by empowering employees to take mistakes as lessons.

Limitations and future research directions

This research has some limitations. First, because the current study analyzes cross-sectional data, the results may differ in other contexts. As a result, future studies should be expanded to include more types of organizations, industries, and countries, and longitudinal data. Second, in this study, the components of leadership personalities were limited to CSE, narcissism, NFA, and risk propensity. Future research should look into other leadership characteristics and their links to organizational learning and innovation. Finally, no boundary conditions or moderating variables were included in the research model in this study. Because situational factors can amplify the effects of leadership traits on organizational outcomes (e.g., organizational culture), this is an area for future research.

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Declaration of Competing Interest

The authors declare that they have no known competing for financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Fostering organisational high performance through leadership and organisational learning: evidence from tourism firms in Vietnam

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Abstract: The restrictions of the COVID-19 pandemic have threatened the survival of tourism organisations in developing countries. Previous research has explored the role of leaders and learning in supporting organisations' enhanced performance and response to the crisis. This paper endeavoured to investigate how complexity leadership and organisational learning contribute to the achievement of high performance in tourism firms in Vietnam, using a quantitative approach with 474 survey responses collected from tourism firms in Vietnam and Smart-PLS to perform partial least squares structural equation modelling statistical techniques. The findings revealed that complexity leadership and factors of organisational learning both directly and indirectly affect organisational high performance. This study contributes to research on leadership, organisational learning and high performance by offering a comprehensive model that combines these fields. As conceptual and empirical studies are lacking in these areas, this paper offers important theoretical and managerial implications for industry leaders, researchers and policymakers alike.

Keywords: high performance; high performance organisation; complexity leadership; organisational learning; Vietnam.

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1 Introduction

Tourism is a fast-growing sector that makes significant contributions to the GDP of nations worldwide; however, the severity of coronavirus (COVID-19) threatened the survival of many organisations and prompted countries to implement multiple restrictions (e.g., community lockdowns, quarantines and international travel bans) to slow down the pandemic (Gössling et al., 2020). These measures and changes in tourists' perceptions of security and travel severely affected the global tourism industry, with a dramatic decrease in international tourist arrivals and extreme losses of profit and human capital (Do et al., 2021).

Organisations operating in the globalisation and crisis context, which inherently includes uncertainty and competition, must seek strategies to enable the achievement of organisational high performance and competitive advantage (Barney, 1991; Vargas, 2015). In previous literature, leadership and organisational learning have been recognised as critical factors of organisational high performance (Abubakar et al., 2018; Ahmad et al., 2020; Buranakul et al., 2017; Mintzberg, 1973; Nguyen et al., 2021; Garg et al., 2003; Weldy, 2009). An earlier study by Rajagopalan and Spreitzer (1997) asserted that leaders have a vital role in formulating and executing corporate strategies that enable firms to enhance performance and remain competitive in the market. More recent studies have found that leadership really matters for the achievement of superior performance (Gong et al., 2021; Fontoura and Coelho, 2020; Para-González et al., 2018; Jing et al., 2019). Notably, Uhl-Bien (2021) postulated that previous leadership theories fail to 'capture the lived experience of navigating leadership in a complex world' when the COVID-19 pandemic occurred, which 'raises many new questions related to complexity and adaptability'. Aligning with earlier scholars (Diesel and Scheepers, 2019; Dinh et al., 2014), Uhl-Bien (2021) called for the application of complexity leadership to explain how leadership can enable firms' achievement of superior performance and prosperity in the current era full of ambiguity and uncertainty. In addition, many recent studies have shown growing interest in organisational learning, emphasising that organisations should promote continuous learning to achieve improved performance (Zgrzywa-Ziemak and Walecka-Jankowska, 2021; Narsa, 2019; Oh, 2018).

Although Vietnam has benefited from the increasing interest of both domestic and international tourists in the past decades, total tourism receipts of the country severely declined due to the COVID-19 pandemic (Do et al., 2021). The significant and unpredictable influences of the pandemic generated tremendous challenges for tourism firms to strategically respond to the crisis and remain competitive.

Accordingly, this paper aims to investigate how complexity leadership and organisational learning contribute to the achievement of high performance in tourism firms in Vietnam in the COVID-19 era. This study endeavours to answer the following research questions:

RQ1 To what extent does complexity leadership influence organisational learning and organisational high performance?

RQ2 To what extent does organisational learning affect organisational high performance?

RQ3 To what extent does organisational learning mediate the relationship between complexity leadership and organisational high performance?

Our research contributes to the existing literature as follows. First, research on leadership has resulted in inconclusive empirical findings due to the conceptual weaknesses of existing leadership theories (Yukl, 1989). Earlier studies adopted a narrow focus, merely using constructs related to well-known leadership theories (e.g., transformational leadership, servant leadership) to examine leadership, failing to build comprehensive leadership models or provide fresh insights into this phenomenon in organisations (Uhl-Bien et al., 2007). According to Tourish (2019), since complexity leadership 'has been hampered by the ongoing influence of overly heroic models of leadership', empirical studies on this topic are scarce. Accordingly, this study provides empirical evidence regarding how complexity leadership facilitates organisational learning and high performance. Second, while the correlations between leadership, organisational learning and high performance have been examined by several authors (Para-González et al., 2018; Ur Rehman et al., 2019), empirical studies that further explore the connections between these phenomena simultaneously in a specific context remain lacking. This study contributes a comprehensive framework and provides a broader understanding of how complexity leadership directly and indirectly relates to organisational high performance through organisational learning in the context of Vietnam's tourism industry. Moreover, since earlier studies in these fields have almost exclusively been conducted in Western or developed nations, the findings of this research will demonstrate the feasibility of applying these concepts to Vietnam, a developing country in Asia. Finally, globalisation, technological advancement and the COVID-19 pandemic are changing the dynamics in organisations, rendering previously established theories and practices no longer relevant (Tyssen et al., 2013). The findings from this study also offer powerful and evidence-based recommendations for promoting high performance in tourism firms and supporting the development of the tourism industry as the world navigates the post-pandemic era.

2 Literature review and hypotheses development

2.1 Resource-based view and knowledge-based view theories

Developed by Wernerfelt (1984, p.108), the resource-based view theory of firms acknowledges the importance of developing resources rather than products, contending that "firms possess resources, a subset of which enables them to achieve competitive advantage and a further subset which leads to superior long-term performance." According to Barney (1991), the resource-based view theory stems from two assumptions of heterogeneity and immobility of resources that foster firms' improved performance and competitive advantage. Such resources can also be defined as capabilities, assets, knowledge, processes and other features (e.g., facilities and equipment, managerial executives' abilities) that enable firms to achieve and sustain effectiveness, competitiveness and continuing high performance (Barney, 1995; Galbreath, 2005; Saffu et al., 2008). The resource-based view theory has been frequently applied to evaluate firm performance (Newbert, 2007), gaining enormous popularity in tourism research (e.g., Duarte Alonso, 2017; Huy and Khin, 2016).

The resource-based view theory is said to have given rise to the knowledge-based view theory. This theory postulated that a firm's knowledge base is the most critical source of sustainable performance and competitive edge (Grant, 1996). According to Darroch (2005), knowledge capabilities of a firm drive performance. Recently, Farzaneh et al. (2021, p.657) described the knowledge-based perspective as 'an important approach to organisational learning' that gives rise to the understanding that "firms should become learning organisations to maximise their knowledge base" and achieve superior organisational performance.

Drawing on both resource- and knowledge-based view theories, this study considers complexity leadership and organisational learning as internal intangible resources of tourism firms, thereby contributing to their achievement of organisational high performance.

2.2 Complexity leadership and organisational high performance

The concept of leadership refers to a process by which leaders influence their followers to accomplish common goals (Yukl, 1989). Over decades, the evolution of leadership research has generated various theories. The concept of complexity leadership was recently introduced, drawing upon complexity theory and the construct of complex adaptive systems. According to Uhl-Bien et al. (2007), complexity leadership involves structures, activities and processes that enable organisations to thrive in an environment full of uncertainty. Previous studies have found that complexity leadership remediates the limitations of earlier leadership theories in explaining the learning process that enable firms to adapt to contemporary knowledge-driven and complex environments (Uhl-Bien et al., 2007; Burchell, 2009; Mendes et al., 2016). According to the complexity leadership interaction modes developed by Hazy and Prottas (2018), complexity leadership has two separate sub-dimensions of generative and administrative leadership. Generative leadership refers to how leaders share knowledge regarding the latest information and conflicting perspectives and encourage involved actors to experiment and learn from these perspectives. Administrative leadership refers to how leaders "help to promote

clarity of action and accountability and would thus contribute to value potential realised through efficacy" (p.328).

Accurate measurement of organisational performance has captured the attention of both managers and academics and remains one of the most controversial concepts debated among scholars and theorists (Jenatabadi, 2015). Organisational performance is commonly defined as an organisation's actual output in comparison to its desired goals (Kotlar et al., 2018; Škrinjar et al., 2008). In the face of a dynamic and complex business environment generated by exponential social and economic changes, the concept of performance has evolved remarkably. According to de Waal (2007, p.180), organisational high performance refers to how an organisation "achieves financial results that are better than those of its peer group over a longer period of time by adapting well to changes and reacting quickly, by managing for the long-term, by setting up an integrated and aligned management structure, by continuously improving its core capabilities and by truly treating the employees as its main asset." Vagadia (2014) described high-performing organisations as guerrilla enterprises in which decision making and development of new strategies are expedient to ensure survival and organisational flourishing in competitive and complex environments. Although many different terms have been used in the literature (e.g., sustainable performance, high-performing organisation and high performance), an overview of previous attempts to define high performance reveals some similarities in previous studies, as the definitions of high performance are rendered in terms of antecedents and outcomes. Based on the foregoing premises, this study adopts the term 'organisational high performance' and defines it as the achievement of satisfactory financial results, responsiveness to market needs, competitiveness in the business environment and improved performance in comparison to competitors. Regarding the tourism industry, Arsezen-Otamis et al. (2015) postulated that tourism firms' performance should be measured using both traditional financial ratios and non-financial measures (e.g., reputation and quality). Recently, de Waal (2021) reviewed previous studies measuring high performance and found a strong correlation between the leaders' perception of firms' high performance and actual performance. The author then recommended that future studies should measure organisations' high performance subjectively based on leaders' perspectives. Accordingly, the assessment of organisational high performance in this study includes both financial and non-financial performance and is subjectively measured through the perspectives of leaders in tourism organisations.

Nienaber and Svensson (2013) conducted a conceptual analysis of complexity science, introducing a framework to facilitate an understanding of the leadership-performance relationship. Hazy and Uhl-Bien (2015) asserted that generative leadership is positively associated with organisational capabilities and later with firms' performance and adaptability in a changing environment. Administrative leadership was found to help organisations "bring requisite resources, like raw materials, human resources and financial capital into the organisation" [Hazy and Prottas, (2018), p.328]. Therefore, it is hypothesised that:

H1 Administrative leadership has a positive relationship with organisational high performance.

H2 Generative leadership has a positive relationship with organisational high performance.

2.3 Complexity leadership and organisational learning

The concept of organisational learning dates back to the 1960s, with the seminal work of Cangelosi and Dill (1965) on individual and organisational learning and significantly expanded after the book *Organizational Learning: A Theory of Action Perspective* by Argyris and Schön (1978). Scholars have defined organisational learning as a process of gaining new insights from experiences that have an impact on individual behaviours and organisational dynamics (Fiol and Lyles, 1985; Huber, 1991). Other scholars referred to organisational learning as a process of creating, retaining and transferring knowledge (Argote, 2011) or a process of creating, sharing and using knowledge to enhance firm performance and outcomes (Real et al., 2014).

Earlier notable research on organisational learning includes Hedberg's (1981) study on learning and unlearning, Fiol and Lyles' (1985) research on organisational learning levels, March's (1991) publication on knowledge exploration and exploitation and Huber's (1991) work on four components of organisational learning (knowledge acquisition, distribution, interpretation and organisational memory). Drawing on previous organisational learning studies, Pérez López et al. (2005) proposed four components of organisational learning that include knowledge acquisition – the process by which knowledge is generated from either inside or outside the organisation; knowledge distribution – the process by which information is transferred among members of the organisation to create new knowledge or facilitate understanding; knowledge interpretation – the process by which an organisation makes sense of the information acquired and organisational memory – the process by which organisations store information for future use. These four processes are purported to cover previous conceptualisations of organisational learning and have been frequently used as a measure of organisational performance (Jiménez-Jiménez and Sanz-Valle, 2011; Pérez López et al., 2005). For these reasons, this study conceptualises organisational learning as the acquisition, distribution, interpretation and retrieval of knowledge.

Leaders have a significant influence, as they facilitate the collective improvement of organisational learning and determine strategies for responding to market demands. Through generative leadership, managers encourage employees to experiment and learn from various perspectives, consequently generating new knowledge and increased knowledge sharing within organisations (Arena and Uhl-Bien, 2016; Hazy and Protttas, 2018; Chowdhury, 2005). Džinić (2015) conducted a study of three Croatian city governments, finding administrative leadership style to have a significant positive relationship with organisational learning. Other studies have examined the effects of leadership on components of organisational learning (Pasamar et al., 2019; Asif, 2019; Park and Kim, 2018; Vashdi et al., 2019). Hence, the following hypotheses are proposed:

H3 Administrative leadership has a positive relationship with components of organisational learning, including knowledge acquisition (H3a), knowledge distribution (H3b), knowledge interpretation (H3c) and organisational memory (H3d).

H4 Generative leadership has a positive relationship with components of organisational learning, including knowledge acquisition (H4a), knowledge distribution (H4b), knowledge interpretation (H4c) and organisational memory (H4d).

2.4 Organisational learning and organisational high performance

In a knowledge-based economy and rapidly changing environments, it is critical to strengthen organisational learning for organisations to maintain responsiveness and competitiveness (Chadwick and Raver, 2015). Earlier studies argued that organisations should leverage organisational learning as an internal asset to achieve high performance and competitiveness (Shaw and Perkins, 1991; Kirkman et al., 1999; DeGues, 1988). According to Garvin (1993), organisations can adopt an organisational learning perspective to improve performance at both individual and firm levels. Goh et al.'s (2012) meta-analysis of 33 empirical studies revealed that organisational learning has a strong relationship to both financial and non-financial organisational performance, which aligns with Brockman and Morgan's (2003) findings that organisational learning is a key factor in improving organisational high performance. In addition, several researchers have provided evidence of the relationship between components of organisational learning and high performance in the last five years (Waqas et al., 2019; Valdez-Juárez et al., 2019; Narsa, 2019; Bolaji Bello and Adeoye, 2018; Oh, 2018). Therefore, this study hypothesises that:

H5 Components of organisational learning, including knowledge acquisition (H5a), knowledge distribution (H5b), knowledge interpretation (H5c) and organisational memory (H5d), have a positive relationship with organisational high performance.

2.5 The mediating role of organisational learning

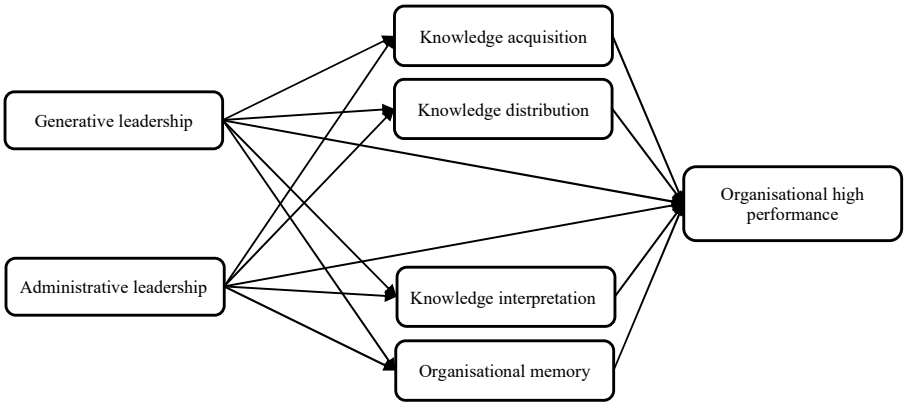
Bryant (2003) noted that leaders invest time and resources to develop organisational learning mechanisms, which enhance firms' effectiveness. Consequently, scholars have found organisational learning to have a mediating influence on the relationship between leadership and organisational high performance (Camps and Rodríguez, 2011; Mallén et al., 2015; Theodorakopoulos and Figueira, 2012). García-Morales et al. (2008) conducted a study in Europe and America, finding that organisational learning mediates the connection between leadership and performance of 164 pharmaceutical firms. Similarly, García-Morales et al. (2012) found organisational learning to mediate the connection between leadership and organisational high performance. Leaders engage in and promote organisational learning by eliminating barriers that restrict the learning process, which consequently enables organisations to improve performance and responsiveness to uncertainties and technological shifts in the contemporary business environment. In recent research, Sayyadi (2019) found leadership to enhance organisational high performance through knowledge and learning management within organisations. In the tourism context, studies that examine the relationships between leadership, organisational learning and high performance simultaneously are lacking; however, previous findings suggest that the impact of leadership on organisational high performance is mediated by organisational learning. For these reasons, the following hypotheses are proposed:

H6 Components of organisational learning, including knowledge acquisition (H6a), knowledge distribution (H6b), knowledge interpretation (H6c) and organisational memory (H6d), positively mediate the relationship between administrative leadership and organisational high performance.

H7 Components of organisational learning, including knowledge acquisition (H7a), knowledge distribution (H7b), knowledge interpretation (H7c) and organisational memory (H7d), positively mediate the relationship between generative leadership and organisational high performance.

The following conceptual framework of this study, supported by the research reviewed, is proposed for empirical validation (Figure 1).

Figure 1 Proposed conceptual framework of the study



3 Methodology

3.1 Measures

Complexity leadership, including constructs of generative and administrative leadership, was measured based on the ten-item complexity leadership interaction modes scale developed and validated by Hazy and Prottas (2018). The measurement scale of organisational learning, including knowledge acquisition, distribution and interpretation and organisational memory, was primarily adopted from the 13-item scale developed by Jiménez-Jiménez and Sanz-Valle (2011). Organisational high performance was measured using a nine-item scale adopted from Arsezen-Otamis et al. (2015). The constructs in this study are measured with a five-point Likert-type scale, ranging from 1 – strongly disagree to 5 – strongly agree. We also include age, tenure, education and gender as participants' demographic information.

After developing a draft questionnaire based on the measures adapted from previous studies, we conducted face-to-face and semi-structured interviews with four leaders in four tourism firms and four experts in these fields to elicit their recommendations on the wording, translation and relevance of the measures for the research context. Before launching the survey, we conducted ten pre-tests by interviewing five leaders of tourism firms and five academics in the field. The participants in the pre-tests were requested to help validate the questionnaire and evaluate whether the survey questions were clear. Afterwards, we refined the questionnaire and completed the final version (see Appendix).

3.2 Sample and data collection

We selected a sample from the tourism industry, including travel agencies, tourist transportation companies, tourist attractions, retailers, restaurants/bars, hotels/resorts and tourism event companies in Vietnam, developing a list of companies based on information from governmental websites.

As the unit of analysis of this study is leaders in tourism firms and organisational-level variables of organisational learning and high performance were measured, the target sample of the population included company owners, chief executive officers, top management teams and other leaders of tourism organisations in Vietnam. These respondents are presumed to represent their organisation and "are assumed to either have relevant knowledge or have the leverage to secure inputs from appropriate individuals within their organisation" [Montabon et al., (2018), p.37]. We determined that the minimum sample size for the study was 32 × 5 = 160 based on Hair et al.'s (2013) 5:1 ratio. Convenience sampling and snowball sampling techniques were used to reach the potential participants and collect data from them.

Table 1 Demographic characteristics of the sample (N = 474)

		Number	*Percentage*
Gender	Male	351	74.1
	Female	123	25.9
Age group	<31	90	19.0
	31–40	225	47.5
	41–50	131	27.6
	>50	28	5.9
Education level	College	43	9.1
	Bachelors	308	65.0
	Masters	121	25.5
	Doctorate	2	0.4
Current position	Top-level manager	73	15.4
	Mid-level manager	183	38.6
	Low-level manager	218	46.0
Company size	Super small	17	3.6
	Small	184	38.8
	Medium	194	40.9
	Large	79	16.7
Company type	Restaurant/bar	115	24.3
	Tourist attraction	20	4.2
	Hotel/resort	204	43.0
	Retailing system for tourists	18	3.8
	Transportation company	77	16.2
	Travel agency	25	5.3
	Event company	15	3.2

We conducted data collection from June 2020 till November 2020. Due to the geographical distribution of tourism firms and the social distancing policies during COVID-19 pandemic, we used both face-to-face approaches and online self-administered surveys through Google Forms to send the survey questionnaire to participants. To manage common method bias in data collection, we protected respondents' anonymity, encouraging them to answer questions as honestly as possible, as there were no right or wrong answers. Among the 963 questionnaires sent, we deemed 474 questionnaires to be fully completed and valid, representing a response rate of 49%. Table 1 presents the demographic information of the survey respondents.

4 Data analysis and results

We applied the partial least squares structural equation modelling (PLS-SEM) method to analyse the data for the following reasons. Scholars have widely applied PLS-SEM in various disciplines (e.g., strategic management, organisational management and hospitality management), with an increasing number of publications using PLS-SEM (Hair et al., 2019). According to Hanafiah (2020, p.876), PLS-SEM is a prediction-oriented approach to SEM that is suitable for both exploratory and confirmatory research, particularly for "causal-predictive analysis in situations of high complexity and low theoretical information availability." Similarly, Hair et al. (2019, p.5) suggested that researchers use PLS-SEM "when a small population restricts the sample size, when the structural model is complex and includes many constructs, indicators and or model relationships, when the analysis is concerned with testing a theoretical framework from a prediction perspective and when the path model includes one or more formatively measured constructs."

We used Smart-PLS software version 3.0 to perform PLS-SEM for the 474 cases, with non-parametric bootstrapping using 2,000 replications (Hair et al., 2013). Our analyses included inner and outer sub-models. The inner model explains the relationships between the exogenous and endogenous latent variables and the outer model explains the relationships between the latent variables and their observed indicators. The SEM was used to test the hypotheses by evaluating the inner model (β) path coefficient sizes and significance.

4.1 Measurement model evaluation

We assessed the reflective measurement model for seven latent variables with 28 indicators, using composite reliability (CR) to measure internal consistency. According to Hair et al. (2011), CR values of 0.60 to 0.70 are considered acceptable; therefore, all constructs with a minimum loading of 0.6 were accepted, as all scales were above 0.6 and their reliability was appropriate. Table 2 demonstrates that the CR of all constructs ranged from 0.819 to 0.876, which was acceptable.

We then evaluated convergent validity. According Bagozzi and Yi (1988), it is acceptable if the value of average variance extracted (AVE) is 0.5 or higher. The AVE values shown in Table 2 ranged from 0.510 to 0.653, higher than the suggested values, convergent validity was confirmed.

Table 2 Measurement model evaluation (see online version for colours)

Constructs	*No. items*	*Factor loadings*	*Cronbach alpha*	*rho_A*	*CR*	*AVE*
Organisational high performance (OHP)	*6*	0.685–0.752	0.810	0.815	0.863	0.512
Knowledge acquisition (KNA)	*3*	0.777–0.828	0.734	0.734	0.850	0.653
Knowledge distribution (KND)	*3*	0.740–0.802	0.668	0.670	0.819	0.601
Knowledge interpretation (KNI)	*3*	0.757–0.824	0.693	0.701	0.830	0.619
Organisational memory (ORM)	*4*	0.773–0.834	0.811	0.813	0.876	0.639
Administrative leadership (ALM)	*4*	0.672–0.788	0.724	0.731	0.828	0.547
Generative leadership (GLM)	*5*	0.672–0.751	0.759	0.762	0.839	0.510

Notes: CR: composite reliability; AVE: average variance extracted.

Regarding discriminant validity, Hair et al. (2011) suggested that "an indicator's loadings should be higher than all of its cross loadings" Fornell and Larcker (1981) stated "the square root of AVE of each latent variable should be greater than the correlations among the latent variables" and it can be used to establish discriminant validity in case the square root of AVE value is larger than other correlation values among the latent variables. For example, the latent variable KNA's AVE was found to be 0.653 (see Table 2); therefore, the square root of AVE of KNA is 0.808, which was greater than the correlations among the latent variables in the KNA column (KND: 0.688; KNI: 0.527; OHP: 0.583; ORM: 0.566). In addition, the square root of AVE of KNA is also larger than the correlation values in the KNA row (0.535). The results presented in Table 3 indicates that the discriminant validity was supported for all of the constructs, ranging from 0.714 to 0.808.

Table 3 Discriminant validity based on Fornell and Larcker's (1981) criterion

	Mean	*SD*	*ALM*	*GLM*	*KNA*	*KND*	*KNI*	*ORM*	*OHP*
ALM	4.343	0.721	*0.740*						
GLM	4.225	0.785	0.620	*0.714*					
KNA	4.195	0.771	0.535	0.528	*0.808*				
KND	4.248	0.790	0.556	0.593	0.688	*0.775*			
KNI	4.242	0.717	0.549	0.570	0.527	0.596	*0.787*		
ORM	4.290	0.737	0.623	0.680	0.566	0.600	0.629	*0.799*	
OHP	4.211	0.831	0.527	0.495	0.583	0.573	0.472	0.523	*0.715*

Notes: Square root of AVE in ital on diagonal.

4.2 Structural model evaluation

We used variance inflation factor (VIF) to assess multicollinearity. According to Hair et al. (2017), the acceptable criterion for VIF is smaller than 4. If the VIF value is larger than 5, the problem of multicollinearity exists in predictor variables. Based on the collinearity statistics, VIF values range from 1.983 to 2.482, indicating that multicollinearity is not a problem in the data of this study.

The explanation of the target endogenous variable (organisational high performance, knowledge acquisition, knowledge distribution, knowledge interpretation and organisational memory) variance was used to investigate the predictive model. We used the coefficient of determination (R^2) weight of endogenous constructs to test the predictive power of the structural model, which was also used to measure the extent of model fit (Hair et al., 2013). In this study, the R^2 for organisational high performance was 0.443, indicating that the six latent variables (knowledge acquisition, knowledge distribution, knowledge interpretation, organisational memory, administrative leadership and generative leadership) moderately explain 44.3% of the variance in organisational high performance. The coefficient of determination (R^2) was 0.349 for knowledge acquisition, indicating that the two latent variables (administrative and generative leadership) moderately explain 34.9% of the variance in knowledge acquisition. The coefficient of determination (R^2) for knowledge distribution was 0.409, indicating that the two latent variables (administrative and generative leadership) moderately explain 40.9% of the variance in knowledge distribution. The coefficient of determination (R^2) was 0.387 for knowledge interpretation, indicating that the two latent variables (administrative and generative leadership) moderately explain 38.7% of the variance in knowledge interpretation. Finally, the coefficient of determination (R^2) for organisational memory of 0.528 indicated that the two latent variables (administrative and generative leadership) substantially explain 58.2% of the variance in organisational memory.

We used blindfolding to measure predictive relevance. Since the Stone-Gesser's value Q^2 is higher than zero, the exogenous constructs had predictive relevance for the endogenous construct. The results in this study gained 0.217 for the average cross-validated redundancy of organisational high performance, 0.216 for knowledge acquisition, 0.240 for knowledge distribution, 0.233 for knowledge interpretation and 0.331 for organisational memory. As all endogenous variables were above zero, the model presented a satisfactory fit and valid prediction capabilities.

Table 4 Path coefficients and hypotheses testing (direct effects)

Hypotheses	*Relationship*	*Path coefficients (β)*	*t-values*	*p-values*	*Decision*
H1	ALM → OHP	0.167	2.160	0.031	Supported
H2	GLM → OHP	0.053	0.858	*0.391*	*Rejected*
H3a	ALM → KNA	0.338	4.559	0.000	Supported
H3b	ALM → KND	0.305	5.550	0.000	Supported
H3c	ALM → KNI	0.317	4.476	0.000	Supported
H3d	ALM → ORM	0.326	6.314	0.000	Supported
H4a	GLM → KNA	0.318	4.903	0.000	Supported
H4b	GLM → KND	0.404	7.409	0.000	Supported
H4c	GLM → KNI	0.373	5.412	0.000	Supported
H4d	GLM → ORM	0.478	8.663	0.000	Supported
H5a	KNA → OHP	0.259	3.650	0.000	Supported
H5b	KND → OHP	0.187	2.898	0.004	Supported
H5c	KNI → OHP	0.038	0.644	*0.520*	*Rejected*
H5d	ORM → OHP	0.100	1.510	*0.131*	*Rejected*

Table 4 presents the path coefficients and hypotheses testing, revealing that most of the path coefficients were statistically significant. Notably, there were no significant differences in scores for generative leadership with organisational high performance, knowledge interpretation with organisational high performance or organisational memory with organisational high performance. All hypotheses were supported excluding H2, H5c and H5d.

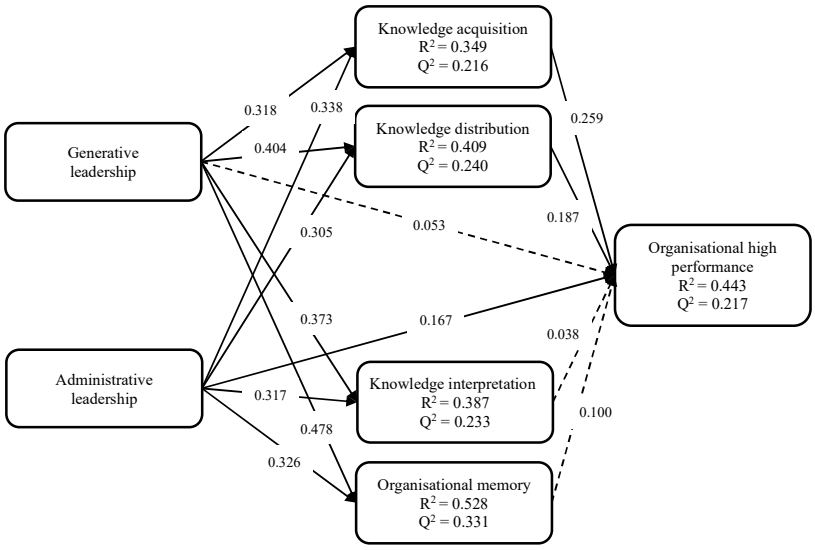
The results for H1 indicated that administrative leadership has a significant and positive relationship with organisational high performance at a 95% confidence level with ALM ($\beta = 0.167$, $p = 0.031$). The results for H3 indicated that administrative leadership has a significant and positive relationship with organisational learning at a 100% confidence level, with ALM affecting KNA ($\beta = 0.338$, $p = 0.000$), ALM affecting KND ($\beta = 0.305$, $p = 0.000$), ALM affecting KNI ($\beta = 0.317$, $p = 0.000$) and ALM affecting ORM ($\beta = 0.326$, $p = 0.000$); thus supporting H3a, H3b, H3c and H3d. The results also indicated that administrative leadership (ALM) had the highest influence on knowledge acquisition (KNA). The results for H4 indicated that generative leadership has a significant and positive relationship with organisational learning at a 100% confidence level, with GLM affecting KNA ($\beta = 0.318$, $p = 0.000$), GLM affecting KND ($\beta = 0.404$, $p = 0.000$), GLM affecting KNI ($\beta = 0.373$, $p = 0.000$) and GLM affecting ORM ($\beta = 0.478$, $p = 0.000$), supporting hypotheses H4a, H4b, H4c and H4d. The results also indicated that generative leadership (GLM) had the highest influence on knowledge acquisition (ORM). The results for H5 indicated that knowledge acquisition and knowledge distribution have a significant and positive relationship with organisational high performance at a 100% and 96% confidence level, respectively, with KNA affecting OHP ($\beta = 0.259$, $p = 0.000$) and KND affecting OHP ($\beta = 0.187$, $p = 0.004$); thus supporting hypotheses H5a and H5b. The results also indicated that knowledge acquisition (KNA) had the highest influence on organisational high performance (OHP).

Table 5 Path coefficients and hypothesis testing indirect effects

Hypotheses	*Relationships*	*Path coefficients (β)*	*t-values*	*p-values*	*Decision*
H6a	ALM → KNA → OHP	0.088	3.132	0.002	Supported
H6b	ALM → KND → OHP	0.057	2.429	0.015	Supported
H6c	ALM → KNI → OHP	0.012	0.652	*0.515*	*Rejected*
H6d	ALM → ORM → OHP	0.033	1.424	*0.155*	*Rejected*
H7a	GLM → KNA → OHP	0.082	2.779	0.005	Supported
H7b	GLM → KND → OHP	0.076	2.739	0.006	Supported
H7c	GLM → KNI → OHP	0.014	0.617	*0.537*	*Rejected*
H7d	GLM → ORM → OHP	0.048	1.508	*0.132*	*Rejected*

As demonstrated in Table 5, H6a, H6b, H7a and H7b were partially supported; however, H6c, H6d, H7c and H7d were not supported. Regarding the mediating effect of organisational learning, it can be concluded that the two exogenous constructs of administrative and generative leadership had indirect impact on organisational high performance through the mediation of organisational learning, including knowledge acquisition and knowledge distribution. The results for the direct effects of the structural model are presented in Figure 2.

Figure 2 PLS-SEM results



5 Discussion, implications and limitations

5.1 Discussion

This paper endeavoured to highlight how tourism firms' organisational high performance is influenced by complexity leadership and organisational learning. By incorporating a dual construct of complexity leadership (generative and administrative leadership) and four components of organisational learning (knowledge acquisition, distribution and interpretation and organisational memory), we provide a more comprehensive view of the leadership components related to firms' organisational high performance with data collected from tourism enterprises in Vietnam.

We posited that both administrative leadership (H1) and generative leadership (H2) are significant elements for predicting organisational high performance; however, the survey results only supported H1, indicating that administrative leadership behaviours can enable tourism firms to achieve superior organisational performance, which aligns with Hazy and Prottas' (2018) findings. H2 was not supported, meaning that the generative leadership behaviour of leaders in tourism firms did not apply in advancing firms' organisational high performance. This result contradicts to the proposition of Hazy and Uhl-Bien (2015) that generative leadership positively affects firms' performance and adaptability. In this study, leaders perceived that generative leadership behaviours, which promotes implementation of new approaches and forgiveness of failure, would result in issues in service delivery and consequently the performance of their firms. The result therefore reflects the contemporary nature of tourism industry's demand for consistency and accuracy in service delivery to customers (Solakis et al., 2022).

The influences of administrative leadership (H3) and generative leadership (H4) on the four factors of organisational learning were positive and statistically significant. The

survey results supported and confirmed H3 and H4, suggesting that both leadership behaviours foster knowledge creation, distribution, interpretation and storage within tourism firms (Arena and Uhl-Bien, 2016; Hazy and Protttas, 2018; Chowdhury, 2005; Džinić, 2015). Our study provides one of the first direct investigations of the theory that both behaviours of complexity leadership are needed to facilitate learning processes in organisations.

Organisational high performance was found to be influenced by only the knowledge distribution and interpretation components of organisational learning (Waqas et al., 2019; Valdez-Juárez et al., 2019). The results supported and confirmed H5a and H5b; however, H5c and H5d were not supported, meaning that tourism leaders did not consider knowledge interpretation (H5c) and organisational memory (H5d) to improve firms' performance.

We posited that all four components of organisational learning mediate the relationship between administrative leadership and organisational high performance (H6); however, only knowledge acquisition (H6a) and knowledge distribution (H6b) were found to mediate the relationship, whereas knowledge interpretation (H6c) and organisational memory (H6d) were not supported. The results were similar regarding the relationship between generative leadership and organisational high performance (H7). This suggests that the creation and distribution of knowledge within organisations will support leaders' generative and administrative leadership behaviour to achieve firms' superior organisational performance. This study provided one of the first mediation tests of the theory that organisational learning is required in organisational high performance to elicit the best outcomes from leaders' complexity leadership behaviours.

5.2 Research contributions

This study contributes to the literature of complexity leadership, organisational learning and organisational high performance in numerous ways. First, we contribute to the complexity leadership literature by exploring emerging perspectives regarding the importance of both generative and administrative leadership in fostering organisational learning and high performance. As Tourish (2019) indicated, complexity leadership has been understudied due to the ongoing influence of other leadership theories and requires further research. Our study offers fresh insights into how complexity leadership aids in the achievement of organisational learning and superior performance, answering the calls of earlier researchers (Tourish, 2019; Uhl-Bien et al., 2007; Yukl, 1989). Second, while scholars have previously examined leadership and organisational learning as strong predictors of firm performance (e.g., Para-González et al., 2018; Ur Rehman et al., 2019), no prior study has integrated these three phenomena and examined their relationships in a specific context. With this study, we provide valuable conceptual and empirical insights into complexity leadership, organisational learning and organisational high performance. The findings indicate that the generative and administrative behaviours of leaders in tourism firms can foster the creation and distribution of knowledge within organisations, which consequently contributes to the achievement of superior organisational performance.

5.3 Managerial implications

This study provides essential managerial implications for the achievement of firms' organisational high performance in the contemporary business environment. First, the findings suggest that firms should engage in organisational learning to achieve superior organisational performance. In particular, managers should create favourable conditions for knowledge creation, absorption and dissemination within organisations. Managers must continually encourage employees to regularly participate in training workshops, industrial fairs and exhibitions to gain novel ideas and fresh insights into their work. Research and development policies should be developed and updated to facilitate continuous experimentation of innovative ideas and approaches to improve work performance. In addition, it is imperative for top management and managers to carefully execute multiple initiatives to promote the distribution of knowledge in firms. For example, tourism firms can establish a collaborative network in which every member from different departments can share their knowledge and best practices. Managers can also assign key employees to take part in various teams or divisions to act as links between them. A team or a separate department could be established to collect, assemble and internally distribute employees' insights and suggestions. Such initiatives can permit managers in tourism firms to regularly foster dialogue with employees, enabling firms to rapidly disseminate internal knowledge and promote organisational learning.

Second, it is worthwhile for managers in tourism firms to be aware that administrative and generative leadership are the key factors of effective organisational learning. For example, managers could establish specific targets and deliverables, as well as incorporating objective metrics and explicit evaluation standards to ensure the quality of work performance and drive accountability. Moreover, managers can also strive to quiet voices that distract from common purpose and motivate every firm member to invest more time, energy and innovation into their work. In addition, given the significant role of generative leadership for advancing organisational learning, managers can use this behaviour by supporting learning from different perspectives and providing resources for current ideas and approaches to be implemented.

In sum, we believe that the findings from our research can stimulate additional systematic investigations of organisational high performance and will assist tourism managers in improving their leadership effectiveness and developing strategies for firms' learning and performance.

5.4 Limitations and areas for future research

The current study has some limitations. The first limitation refers to the non-probabilistic sample. Since the data for this study were collected randomly from tourism firms in Vietnam in only one specific year, future studies are encouraged to collect more data from different tourism firms in different years to increase the generalisability of the results. Additionally, the measures of organisational high performance involved both financial and non-financial performance considerations. Our study only collected survey data from one side of the participants in tourism, tourism leaders. Future researchers could design other performance measures and survey additional stakeholders to elicit perspectives on tourism firms' organisational high performance. Finally, future research should develop more complex models, including expanding leadership theories to examine the interplay and degree of influence of multiple leadership approaches.

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Appendix

Variables	*Code*	*Items*	*Sources*
Independent variables			
Administrative leadership mode	ALM1	I drive accountability.	Hazy and Prottas (2018)
	ALM2	I set objective metrics of success or failure.	
	ALM3	I quiet voices that distract from purpose.	
	ALM4	I ask people to invest more time and energy.	
	ALM5	I establish specific targets and deliverables.	
Generative leadership mode	GLM1	I support differences of opinion.	Hazy and Prottas (2018)
	GLM2	I provide resources and time to try new things.	
	GLM3	I encourage learning visits to other organisations.	
	GLM4	I encourage new approaches.	
	GLM5	I forgive failure.	
Mediating variables			
Knowledge acquisition	KNA1	The employees attend fairs and exhibitions regularly.	Jiménez-Jiménez and Sanz-Valle (2011)
	KNA2	There is a consolidated and resourceful R&D policy.	
	KNA3	New ideas and approaches on work performance are experimented continuously.	
Knowledge distribution	KND1	The company has formal mechanisms to guarantee the sharing of the best practices among the different fields of the activity.	
	KND2	There are individuals within the organisation who take part in several teams or divisions and who also act as links between them.	
	KND3	There are individuals responsible for collecting, assembling and distributing internally employees' suggestions.	
Knowledge interpretation	KNI1	All the members of the organisation share the same aim to which they feel committed.	
	KNI2	Employees share knowledge and experiences by talking to each other.	
	KNI3	Teamwork is a very common practice in company.	

Organisational memory	OGM1	The company has directories or e-mails filed according to the field they belong to, so as to find an expert on a concrete issue at any time.	
	OGM2	The company has up-to-date databases of its clients.	

Appendix (continued)

Variables	*Code*	*Items*	*Sources*
Mediating variables			
Organisational memory	OGM3	There is access to organisation's databases and documents through some kind of network.	Jiménez-Jiménez and Sanz-Valle (2011)
	OGM4	Databases are always kept up-to-date.	
Dependent variables			
Organisational performance	OGP1	The profitability of the firm is satisfactory.	Arsezen-Otamis et al. (2015)
	OGP2	The sales of the firm are satisfactory.	
	OGP3	The customers are satisfied with the firm.	
	OGP4	We present enough new products/services for the customers.	
	OGP5	Relative to the similar firms, market share of the firm is good.	
	OGP6	Our firm has a competitive advantage.	
	OGP7	We get the worth of our money, labour, and time we spent for the firm.	
	OGP8	Our firm can find credits easily when needed.	
	OGP9	Our company is successful in general.	

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Review of Empirical Research on Leadership and Firm Performance

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Abstract

This review aims to present a systematic review of empirical research on leadership and firm performance (FP) in order to synthesize the fragmented knowledge and propose a unifying framework for future research. To achieve this purpose, this research adopts systematic literature review methodology. A total of 60 empirical papers published during the period 2002 to 2021 was retrieved through exhaustive manual searches of online databases. A matrix table was developed to extract and organize information from the retrieved articles. The findings revealed four main key themes. First, the topic of leadership and FP has been mostly quantitatively examined in many countries and industries. Second, different leadership approaches have been found to ameliorate FP and transformational leadership remains the most commonly used approach. Third, innovation, learning, and culture were the most common mediators of the leadership-FP relationship. Fourth, support for innovation, competitive intensity, firm size, leaders' trust, and justice orientation have been found to moderate the effect of leadership on FP.

Keywords

financial performance, firm performance, leadership, leadership styles, organizational performance

Introduction

The emergence of globalization and industrial 4.0 has resulted in tough competition and economic turbulence in business environment. In response to these challenges, organizations have no other option but to accelerate firm performance (FP) in order to sustain their competitive advantage. In the extant literature, leadership has been recognized as one of the most critical factors that drives FP (Garg et al., 2003; Mintzberg, 1973). Drawing on dynamic capabilities theory (Teece et al., 1997), previous researchers have characterized leadership as a dynamic capability and acknowledged the importance of leaders in managing resources and outcomes in organizations (Iqbal & Ahmad, 2021; Overstreet et al., 2013; Pavlou & El Sawy, 2011; Zahari et al., 2022). Rajagopalan and Spreitzer (1997) stressed that leaders play a vital role in formulating and executing corporate strategies that enable firms to enhance their performance and remain responsive in the market. Recent studies on FP have found that leadership really matters to FP (Ali & Tang, 2016; Jing et al., 2019; Para-González et al., 2018; D. Wang et al., 2015; Zhang, Bao, et al., 2021).

Leadership has been defined as the process of influence and facilitation between leaders and their followers toward mutual goals (Northouse, 2018; Yukl, 2013). Earlier studies have highlighted the role of leadership in enabling organizations to maintain daily operation and achieve superior performance (Fiedler, 1996; Mintzberg, 1973). For example, Rajagopalan and Spreitzer (1997) highlighted the role of leaders in formulating and executing strategies that enable organizations to strengthen their FP and responsiveness. Findings from recent studies revealed that leadership really matters to FP in different contexts (Gürlek & Çemberci, 2020; Jing et al., 2019; Para-González et al., 2018; Rehman & Iqbal, 2020; Saeidi et al., 2021) such as Pakistan, Turkey, Malaysia, etc. In this regard, leaders dynamically integrate existing resources and transform their firms to achieve higher FP and adapt to the contemporary business setting.

Given the growing importance of leadership in organizations and its critical relationship with FP, a plethora of research has been conducted in this field. The earliest theory on leadership (frequently referred to as "trait theory")

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assumed that successful leaders acquire innate personalities and attributes that differentiate them from non-leaders (Stogdill, 1948). Different from trait theories, behavioral theories concentrated on the behaviors and styles of leaders, for example, task-focused and relationship-focused (Blake & Mounton, 1968). Since trait and behavioral theories failed to recognize the critical role of situations and contexts in determining effective leaders, contingency theory was developed. This theory stressed that leaders need to be context sensitive and flexibly adopt an appropriate behavior requisite for each circumstance (Hersey & Blanchard, 1969). Burns (1978) developed transactional and transformational leadership. While the former is contractual process in which leaders provide rewards in exchange for employees' performance, the latter is an influence process in which leaders catalyze greater motivation from followers by articulating an inspiring vision. Recently, scholars argued that transformational leadership is limited in its ability to explain how learning and creativity take place in organizations (Marion & Uhl-Bien, 2002). This limitation, combined with the increasingly complex nature of the current business environment, have given rise to the development of complexity leadership theory. It is defined as a combination of structures, activities, and processes that enable organizations to thrive in the turbulent and competitive environment (Clarke, 2013; Uhl-Bien et al., 2007).

However, research on leadership has produced inconclusive findings and biases due to replications of common topics and overreliance on quantitative methods alone (Yukl, 2013). Moreover, while previous findings showed that theories and research on leadership have evolved over the past decades, the question regarding what leadership approaches are most influential in augmenting FP remains unanswered. In practice, the identification of an appropriate leadership approach that can ameliorate FP are also essential for human resource department and the leaders themselves. Besides, previous researchers argued that studies on leadership-performance relationship produced many inclusive findings, which hindered our understanding of precisely how leadership fosters performance (Bartram & Casimir, 2007; Jing & Avery, 2008). To deal with the foregoing issue, scholars recommended that future studies identify potential mediators/moderators of the relationship between the two phenomena (Boerner et al., 2007; Yukl, 1999). The above-mentioned two issues represent important research gaps in the current literature.

To address these gaps, this paper aims to present a systematic review of empirical research on leadership and FP in order to synthesize the fragmented knowledge and propose a unifying framework for future research.

This review aims to answer the following questions:

RQ1. How was the relationship between leadership and FP empirically investigated in terms of context and methodology?

RQ2. What leadership approaches have been recognized as drivers of FP?

RQ3. Are there any mediators/moderators that play a role in the relationship between leadership and FP?

The remainder of this review is organized as follows. In the next section, we specify the methodology and describe the literature search process. We then present and discuss our findings. Finally, we provide concluding remarks, implications for theory and practice, limitations, and areas for future studies.

Methodology

The study aims to take stock of the existing literature on the connection between leadership and FP in systematic, transparent, reproducible, and scientific way. To achieve this aim, we followed guidelines for systematic literature review in the leadership and management disciplines (Elkhwesky et al., 2022; Frangieh and Yaacoub, 2017; Tranfield et al., 2003; Webster & Watson, 2002).

We followed the literature review process suggested by Vom Brocke et al. (2009) to perform a comprehensive and unbiased search for relevant empirical studies of leadership and FP. Recent reviews have demonstrated that guidelines from Vom Brocke et al. (2009) enable researchers to ensure the relevance, quality, and methodological rigor of their research (Dreyer et al., 2019; Manfredi Latilla et al., 2018).

In the first step, we define the scope of the review. The inclusion criteria include empirical studies on leadership and FP that were peer-reviewed and published in English during the period 2002 to 2021.

The second step is identification of keywords. Since there are different terminologies of FP in the literature, we asked for advice from five researchers that have experience in the fields of leadership and FP. Based on their suggestions, we formulated the following search string: ("leadership") AND ("firm performance" OR "organizational performance" OR "business performance" OR "corporate performance" OR "financial performance").

The third step is literature search. To conduct computerized searches for relevant publications, we relied on several large databases: Scopus, Emerald Insight, Science Direct, JSTOR, Taylor and Francis, and Google Scholar.

The initial search uncovered 293 potentially relevant publications. We then screened the title and abstract to remove duplicates, literature review articles, and articles that did not focus on leadership and FP as key subject areas or did not examine the relationship between leadership and FP. These exclusion criteria are developed in accordance with the research purposes and questions of this study. After this filtering, 105 articles remained. Next, the main body of the remaining publications were read and evaluated using similar inclusion and exclusion criteria defined earlier. The set of

papers was reduced to 58 after the full text examination. Besides, to ensure that all potentially relevant publications are included in the review, we snowballed from the reference lists of the retrieved articles, which located 2 additional articles for a final set of 60 articles. Each filtering process was conducted independently by three researchers. In case of differences in the results, we cross-referenced and discussed untill agreement was reached.

In the last two steps, we developed a matrix table using guidelines from Garrard (2004). This table enables us to extract and organize information from 60 articles based on the following features: authors and publication year, region and sector, methodology employed, type of respondents, leadership approaches, FP indicators, and relationship between leadership and FP (Table 1). Based on the findings from the review, a unifying framework on the relationship between leadership and FP was proposed.

Findings

This study aims to provide a review on how leadership and FP have been examined in the extant literature. The synthesis of the retrieved articles in this review revealed the following findings.

Descriptive Findings

The year-wise frequency of studies about the relationship between leadership and FP is presented in Figure 1. Two earlier publications were from Elenkov (2002) and Koene et al. (2002). While Elenkov (2002) examined the effect of transformational and transactional leadership behaviors on business objectives achievement of Russian firms, Koene et al. (2002) studied how leaders' charismatic leadership and initiating structure behaviors affect financial performance of service organizations in the Netherlands. The topics of leadership and performance of firms garnered the greatest attention in 2020 ($n=12$) and 2021 ($n=10$), while only three articles were published during the 2016 to 2018 period. Of the 60 studies, 5 were published in 2019, of which one study was located in the *Journal of Business Research*. The upward trend in the figure illustrates that the impact of leadership on FP is an emerging issue and it is a right time to assess how far the field has come.

Empirical studies on leadership-FP relationship have been conducted in 24 countries. Regarding country-wise distribution, approximately half of the studies were published from China ($n=14$), Malaysia ($n=6$), Turkey ($n=5$), and the USA ($n=4$). Multi-sector studies occupy a considerable portion ($n=17$), followed by manufacturing ($n=6$), service ($n=4$), and banking ($n=4$) industries. It is noticeable that research on new venture or small and medium-sized enterprises is scarce, with only one paper published in 2012 about technology start-up in the USA and one paper published in 2014 about new venture in China.

As for methodology adopted in the reviewed articles, quantitative approach accounted for 93% of the total studies ($n=56$). Among 56 quantitative articles, structural equation modeling ($n=30$), multiple regression ($n=10$), and hierarchical regression ($n=7$) were the most common data analysis techniques employed. Interviews were used in one qualitative study. There were three mix-method papers which employed both interviews and hierarchical linear models/regression analysis/PLS-SEM to study the effect of participative leadership, transformational leadership, and blue ocean leadership on FP (Jensen et al., 2020; Kim & Schachter, 2015; Loh & Yusof, 2020). The majority of the reviewed articles used chief executive officers and managers as key respondents ($n=35$), while a smaller amount concentrated on employees ($n=14$) or gathered information from both managers and employees ($n=11$).

In examining the relationship between leadership and FP, most studies ($n=53$) relied on interviews and surveys to gather subjective data on FP. There was one article that combined data from both perceived organizational performance and objective organizational performance for evaluating FP of banks in the Nederland (see Wilderom et al., 2012). Besides, financial indices were the focus of 15 studies, while non-financial measures were solely used in 10 studies. The rest ($n=35$) attempted to provide a comprehensive picture of FP by employing both financial and non-financial measurement.

In total, 22 financial indicators and 38 non-financial indicators of FP were extracted from the reviewed articles. The most used financial indices were market share, return on assets, return on sales, and growth in sales. Some indices such as customer satisfaction, employee satisfaction, and reputation were frequently applied to evaluate non-financial FP. The non-financial indicators identified in the reviewed articles can be classified into five groups of consumer-oriented, organization-oriented, market-oriented, employee-oriented, and product-oriented.

The Effects of Different Leadership Approaches on FP

Leaders differ from one another in their leadership approaches, which results in varying influences on FP. Among 60 reviewed papers, 24 leadership approaches were found to positively affect FP. Of that, 30 articles focused on the impact of transformational leadership, and among those 21 articles, 15 examined multiple approaches to leadership. In particular, six articles focused on how transactional and transformational leadership drive performance (e.g., Elenkov, 2002; Ur Rehman et al., 2019; Yıldız et al., 2014), while eight articles compared the effects of three leadership styles (transactional, transformational, and laissez-faire) on FP (e.g., Abasilim et al., 2019; Anh & Nhàn, 2021; Mekhum, 2020; Saeidi et al., 2021; Sethibe, 2018). One paper by Min et al. (2011) studied the role of transformational leadership and paternalistic leadership on performance of private firms.

Table 1. Literature Review Matrix Table.

Authors	Country/sector	Methods	Respondent	Leadership approaches	FP measures	Relationship between leadership and FP
Elenkov (2002)	Rusia/multi-sector	Quantitative/hierarchical regression	CEOs and Managers	TA, TF	Subjective NF: Business objectives achievement	Positive, direct TF has more impact on FP than TA Moderator: Support for innovation
Koene et al. (2002)	Netherlands/service	Quantitative/hierarchical regression	Employees	Charismatic leadership, Initiating structure	Objective FI: Net profit, Controllable costs, Total sales	Positive, direct (Charismatic leadership) Moderator: Firm size
García-Morales et al. (2008)	Europe and America/ pharmacy	Quantitative/SEM	CEOs	TF	Subjective FI: ROA, ROE, ROS, Market share, Sales growth	Positive, both direct and indirect Mediators: Organizational innovation, Organizational learning
Lee and Liu (2008)	Not identified/not specified	Quantitative/SEM	Employees	TA, TF	Subjective NF: Innovation performance	Positive, direct TF has more impact on FP than TA
Carmeli et al. (2010)	Not identified/not specified	Quantitative/regression analysis	Managers	Innovation leadership	Subjective FI: ROA, Sales growth NF: Management-employees relations, Employee relations, Product quality, Product development	Positive, both direct and indirect Mediator: Strategic fit
Chan (2010)	Malaysia/banking	Qualitative/interviews	Managers and Employees	Leadership Expertise and Experience	Subjective FI: Repayment rates, Portfolio at risk, Costs, Drop-out rates NF: Membership growth, Operating self-sufficiency	Positive, direct
Jian-xun et al. (2010)	China/multi-sector	Quantitative/hierarchical regression	CEOs	TA	Subjective FI: Net profit margin, ROS, ROA NF: Market performance	Positive, direct
C. Huang et al. (2011)	Taiwan/multi-sector	Quantitative/CFA	CEOs	TF	Subjective FI: Cost savings, Employee productivity, ROI, ROS NF: Accuracy, Timeliness, Efficiency, Effectiveness	Positive, direct
Min et al. (2011)	China/not specified	Quantitative/SEM	Managers	TF, Paternalistic leadership	Subjective NF: Employee job satisfaction, Organizational commitment, Organizational communication	Positive, direct (TF) Moderator: Trust to leadership
Özsahin et al. (2011)	Turkey/manufacturing	Quantitative/regression analysis	Managers	Change-oriented leadership, Task-oriented leadership, Relation-oriented leadership	Subjective FI: Profitability, Sale income, Liquidity level NF: Employee job satisfaction, Reputation	Positive, indirect (task-oriented, relation-oriented) Mediator: Learning orientation
H. Wang et al. (2011)	China/not specified	Quantitative/SEM	CEOs	Task-focused, Relationship-focused	Subjective FI: Profitability, Sales growth, Asset growth, Market share NF: Competitive status	Positive, direct (task-focused) Positive, indirect (relationship-focused) Mediator: Employee's attitude
Zehir et al. (2011)	Turkey/multi-sector	Quantitative/regression analysis	Employees	Supportive leadership, Participative leadership, TA	Subjective FI: Sales, Market share NF: Defect level of products, Customer satisfaction	Positive, both direct and indirect Mediator: Organizational culture
García-Morales et al. (2012)	Spain/automotive, chemical	Quantitative/SEM	CEOs	TF	Objective FI: ROA, ROE, ROS, Market share	Positive, indirect Mediators: Organizational innovation, Organizational learning
Peterson et al. (2012)	the USA/technology	Quantitative/SEM	CEOs	Servant leadership	Objective FI: ROA	Positive, direct
Samad (2012)	Malaysia/logistics	Quantitative/regression analysis	Managers	TF	Subjective NF: Employee satisfaction, Customer satisfaction	Positive, direct
Wilderom et al. (2012)	Nederland/banking	Quantitative/SEM	Employees	Charismatic leadership	Objective and Subjective FI: Profit, Return on capital, Operating costs, Depreciation NF: Efficiency, Customer satisfaction, Managerial behavior, Professional behavior, Service quality, Contact with clients, Market position, Reputation	Positive, direct
Zehir et al. (2012)	Turkey/multi-sector	Quantitative/regression analysis	Employees	TA, TF, Laissez-faire leadership	Subjective FI: Operation NF: Quality, Employee	Positive, both direct and indirect (TF and Laissez-faire) Mediator: Supervisory commitment
Arslan and Staub (2013)	Turkey/manufacturing	Quantitative/regression analysis	Managers	Theory X and Theory Y	Subjective FI: Turnover, Cost NF: Innovation	Positive, direct (Theory Y)
Noruzy et al. (2013)	Iran/multi-sector	Quantitative/SEM	Managers	TF	Subjective FI: Profitability, Sales growth NF: Customer satisfaction, Overall performance	Positive, indirect Mediators: Organizational learning, Organizational innovation, Knowledge management
Overstreet et al. (2013)	North American/ motor carrier	Quantitative/SEM	Managers	TF	Subjective FI: ROI, Profit, Profit growth, ROS, Operating ratio NF: Operation performance	Positive, both direct and indirect Mediator: Innovativeness

(continued)

Table 1. (continued)

Authors	Country/sector	Methods	Respondent	Leadership approaches	FP measures	Relationship between leadership and FP
Birasnav (2014)	Bahrain/service	Quantitative/hierarchical regression	Managers	TA, TF	Subjective NF: Overall performance compared to competitors	Positive, both direct and indirect TF has more impact on FP than TA Mediator: Knowledge application
S. Huang et al. (2014)	China/new venture	Quantitative/Hierarchical regression	Managers	Entrepreneurial leadership	Subjective FI: ROA, ROS, ROE, Cash flow, Gross profit margin NF: Growth	Positive, both direct and indirect Mediator: Innovation
Yıldız et al. (2014)	Istanbul/service and industry	Quantitative/SEM	Managers and Employees	TA, TF	Subjective FI: Profitability, Sales, Market share NF: Customer satisfaction, Reputation	Positive, direct TF has more impact on FP than TA
Zumitzavan and Udchachone (2014)	Thailand/hospitality	Quantitative/hierarchical regression	Employees	TA, TF, Laissez-faire leadership	Subjective FI: Financial results	Positive, both direct and indirect Mediator: Organizational innovation
Alagaraja et al. (2015)	The USA/service	Quantitative/path analysis	Managers	Leadership and People Management	Subjective NF: Productivity, Employee morale, Customer satisfaction	Positive, direct
Harsanto and Roelfsema (2015)	Indonesia/multi-sector	Quantitative/SEM	CEOs	TA, TF, Laissez-faire leadership	Subjective FI: Sales growth	Positive, direct (Laissez-faire) Laissez-faire has more impact on FP than TF Negative, direct (TA)
Kim and Schachter (2015)	The USA/not specified	Mixed/interview / Hierarchical linear models	Employees	Participative leadership	Subjective FI: Productivity NF: Work quality, Customer service orientation, Managerial effectiveness	Positive, both direct and indirect Mediator: Followership
Mutahar et al. (2015)	Saudi Arabia/ telecommunication	Quantitative/SEM	Employees	TF	Subjective FI: ROE, ROA, ROS, Market share, Sales growth NF: job satisfaction (salary, physical working conditions, cooperation & teamwork, experience)	Positive, both direct and indirect Mediator: Organizational learning
Salehzadeh et al. (2015)	Iran/hospitality	Quantitative/SEM	Managers	Spiritual leadership	Subjective FI: Cash flow, Sales growth, Operating income, Market share, ROE NF: Customer, Internal process, Learning and growth	Positive, direct
D. Wang et al. (2015)	China/not specified	Quantitative/SEM	CEOs	Ethical leadership	Subjective FI: Sales growth, Profit growth, ROA, ROI, Market share growth, ROS NF: Efficiency of operations, Social performance	Positive, direct Moderator: Leader justice orientation
J. Huang et al. (2016)	China/hospitality	Quantitative/regression analysis	CEOs and Managers	Servant leadership	Subjective FI: Profit, Sales, Growth of assets, Sales growth, Market share NF: Employee morale, Competitive positioning	Positive, both direct and indirect Mediator: Service climate Moderator: Competitive intensity
Para-González et al. (2018)	Spain/manufacturing	Quantitative/partial least squares	Managers	TF	Subjective FI: Profitability, Benefits NF: Productivity	Positive, indirect Mediators: High-performance human resource practices, Organizational learning, Organizational innovation
Sethibe (2018)	South Africa/not specified	Quantitative/SEM	CEOs	TA, TF, Laissez-faire leadership	Subjective NF: Customer satisfaction, Productivity, Product innovation	Positive, direct (TA and TF)
Berraies and Bchini (2019)	Tunisia/knowledge-intensive	Quantitative/SEM	Managers	TA, TF	Subjective FI: ROA, Net profit margin, Profitability, ROI, Sales growth, Market share growth	Positive, both direct and indirect (TF) Mediator: Innovation
Chen et al. (2019)	China/multi-sector	Quantitative/SEM	Managers	TF	Subjective FI: ROI, ROE, ROA, ROS, Profitability	Positive, both direct and indirect Mediator: Innovation
Jing et al. (2019)	Australia/pharmacy	Quantitative/SEM	Managers and Employees	Leadership paradigms	Subjective FI: Net profits, Sales turnover, Controllable business costs NF: Customer satisfaction, Employee satisfaction	Positive, indirect Mediators: Vision communication/sharing, organizational climate, leader–follower trust
Ur Rehman et al. (2019)	Malaysia/not specified	Quantitative/SEM	Managers	TA, TF	Subjective FI: Profit, Sales volume, ROI, Market share NF: New products, Market development, Product quality, Employee commitment, Employee productivity, Personal development, Employee job satisfaction	Positive, both direct and indirect Mediators: Organizational learning, Innovative culture
Abasilim et al. (2019)	Nigeria/service	Quantitative/regression analysis	Employees	TA, TF, Laissez-faire leadership	Subjective NF: Employees' commitment	Positive, direct (TF)
Hartnell et al. (2020)	The USA/banking	Quantitative/path analysis	Employees	Servant Leadership	Objective FI: Branch deposit volume	Positive, both direct and indirect Mediators: Goal achievement climate, Organizational citizenship behavior
Katsaros et al. (2020)	Greek/delivery	Quantitative/SEM	Employees	Autocratic, Democratic, Laisser-Faire leadership	Subjective FI: ROA, ROE, Net Profit Margin, Efficiency Ratio and Total Asset Turnover	Positive, both direct and indirect Mediator: Readiness to change

(continued)

Table 1. (continued)

Authors	Country/sector	Methods	Respondent	Leadership approaches	FP measures	Relationship between leadership and FP
Kittikunchotiwut (2020)	Thailand/multi-sector	Quantitative/SEM	Managers	TF	Subjective FI: Revenue income, sales growth rates, asset after-tax returns, and overall profitability	Positive, both direct and indirect Mediators: Learning orientation, Firm innovativeness
Son et al. (2020)	China/multi-sector	Quantitative/SEM	Managers and Employees	TF	Subjective FI: ROI, ROA, ROS, Average profitability, Profit growth, Sales growth NF: Quality development, Customer satisfaction, Responsiveness, Productivity, Cost management	Positive, both direct and indirect Mediator: Knowledge sharing
Hanaysha (2020)	Malaysia/banking	Quantitative/SEM	Employees	Authentic leadership	Subjective FI: Sales growth, Market share, Profit growth, ROI	Positive, direct
Jensen et al. (2020)	The USA and the EU/ multi-sector	Mixed/interviews, regression analysis	CEOs	Transformational leadership	Objective FI: Net profit margin. ROA	Positive, direct
Loh and Yusof (2020)	Malaysia/automotive vendors	Mixed/Interviews, PLS-SEM	Managers and Employees	Blue ocean leadership	Subjective FI: Effective cost management NF: Customer satisfaction, Internal Process, Learning and growth	Positive, direct
Mekhum (2020)	Thailand/pharmacy	Quantitative/PLS-SEM	Managers and Employees	TA, TF, Laissez-faire leadership	Subjective FI: Not specified NF: Not specified	Positive, indirect Mediator: Personal Knowledge Management Moderator: Competitive tension
Siagian et al. (2020)	Indonesia/ manufacturing	Quantitative/PLS-SEM	Managers	Affective leadership	Subjective FI: Sales, Operating costs reduction NF: Customer satisfaction, Ability to meet customer needs.	Positive, Direct
Su et al. (2020)	China/agriculture	Quantitative/SEM	Managers and Employees	Environmental leadership	Subjective FI: Market share, ROI, Competitive advantage, New market NF: Environmental image, Environmental impact, Green innovation practice outcomes	Positive, both direct and indirect Mediator: Green innovation practices
Rehman and Iqbal (2020)	Pakistan/education	Quantitative/SEM	Employees	Knowledge-based leadership	Subjective NF: Satisfaction, Development, Responsiveness, Productivity, Ranking	Positive, both direct and indirect Mediators: Knowledge management, Innovation
Gürlek and Çemberci (2020)	Turkey/technology	Quantitative/PROCESS	Managers	Knowledge-based leadership	Subjective FI: Market share, Sales volume, Profitability. Prestige	Positive, both direct and indirect Mediators: Knowledge management, Innovation
Anh and Nhàn (2021)	Vietnam/multi-sector	Quantitative/SEM	Managers and Employees	TA, TF, Laissez-faire leadership	Subjective FI: Financial results NF: Customers, Internal processes, Training-Development	Positive, direct (TA and TF) Negative (Laissez-faire leadership)
Munawaroh et al. (2021)	Indonesia/ manufacturing	Quantitative/PLS-SEM	Employees	Strategic Leadership	Subjective FI: Not specified NF: Not specified	Positive, direct
Li et al. (2022)	China/not specified	Quantitative/regression analysis	CEOs	Leadership characteristics	Objective FI: Revenue growth, ROA	Positive, direct
Y. Zhang and Wei (2021)	China/multi-sector	Quantitative/SEM	Managers	Change leadership	Subjective FI: Not specified	Positive, direct
Y. Zhang and Wei (2021)	China/manufacturing	Quantitative/PROCESS	Managers	Charismatic leadership	Subjective FI: Sales growth, Profit growth, Market share growth	Positive, both direct and indirect Mediator: Environmental performance
Nguyen et al. (2021)	Vietnam/multi-sector	Quantitative/PLS-SEM	Managers	Ethical leadership	Subjective FI: Market share, Sales growth, Sales revenue, Profitability NF: Customer satisfaction, Customer retention	Positive, indirect Mediators: Corporate Social Responsibility, Firm Reputation
Saeidi et al. (2021)	Malaysia/multi-sector	Quantitative/SEM	Managers	TA, TF, Laissez-faire leadership	Subjective FI: ROE, ROI, ROA, ROS, Market share growth, Sale growth, Net profit margin NF: Customer satisfaction, Internal business processes, Growth and learning	Positive, both direct and indirect Mediator: Corporate Social Responsibility
Yi et al. (2021)	China/not specified	Quantitative/SEM	Managers and Employees	Empowering leadership, Directive leadership	Subjective FI: Sales growth, Profitability, ROI, ROA. NF: Efficiency, Quality of innovations, Productivity	Positive, direct
Zhang, Bao, et al. (2021)	China/multi-sector	Quantitative/regression analysis	Managers and Employees	TF	Subjective FI: Sales growth, Revenue growth, Net profit margin NFI: Growth in the number of employees; Product/service variety/ quality/innovation, Process innovation, New technology, Customer satisfaction.	Positive, both direct and indirect Mediator: Entrepreneurial information bricolage
Le and Le (2021)	Vietnam/multi-sector	Quantitative/SEM	Managers and Employees	TF	Subjective FI: Capability in using assets to generate revenues	Positive, both direct and indirect Mediator: Change capability

Note. SMEs = small and medium-sized enterprises; SEM = structural equation modeling; CEO = chief executive officer; TF = transformational leadership; TA = transactional leadership; FP = firm performance; NI = non-financial indicators; FI = financial indicators; ROE = return on equity; ROI = return on investment; ROA = return on assets; ROS = return on sales.

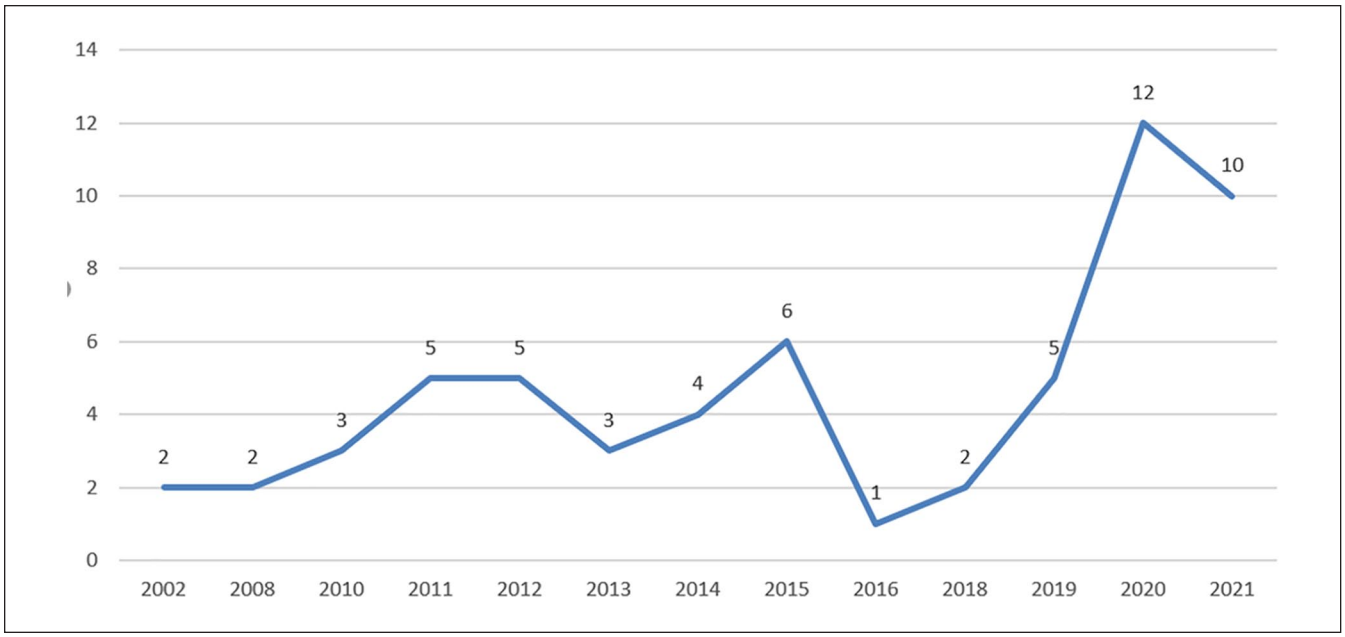

Figure 1. Year-wise publication of publication on leadership and firm performance.

This demonstrates that transformational leadership remains the most frequently used leadership approaches in the past 18 years (2002–2019). In addition, other leadership approaches were reported to have positive influence on FP such as servant leadership, charismatic leadership, participative leadership, etc. The findings on each leadership approach and its reported relationship with FP are presented as follows.

Transformational leadership. García-Morales et al. (2008) conducted a study in Europe and America about transformational leadership's impact on FP in the pharmaceutical industry. They found that transformational leaders provide directions, rules, plans, and systems that enable the firms to increase organizational performance and respond to the market. García-Morales et al. (2012) extended their previous work by confirming the impacts of transformational leadership on FP, both directly and indirectly through organizational learning and innovation. Chan (2010) conducted a qualitative study on the influence of leadership expertise and experience on FP during three phases in Malaysia. This author found that all the leadership styles during three periods fit Burns' (1978) definition of transformational leadership. C. Huang et al. (2011) examined dimensions of transformational leadership (intellectual stimulation, individual consideration, and charisma) and found a direct and positive relationship between the charisma of transformational leaders and FP. Samad (2012) also examined how dimensions of transformational leadership influence the performance of Malaysian logistics companies. However, the findings revealed that all dimensions of transformational leadership positively and directly affect employee satisfaction and customer satisfaction of those firms. Similar findings on the direct and positive impact of transformational leadership and FP have been found in recent studies (e.g., Chen et al., 2019; Kittikunchotiwut, 2020; Le & Le, 2021; Son et al., 2020; Zhang, Chen, et al., 2021).

Transactional and transformational leadership. Previous scholars found that (i) both transactional and transformational leadership have direct and positive influences on FP; and (ii) the impact of transformational leadership on FP was more significant than that of transactional leadership (e.g., Birasnav, 2014; Elenkov, 2002; Lee & Liu, 2008; Ur Rehman et al., 2019; Yıldız et al., 2014). A recent finding from Berraies and Bchini (2019) may be of more interest. Berraies and Bchini (2019) in their study in knowledge-intensive companies in Tunisia found that transformational leadership plays a significant role in enlarging the businesses' financial performance, whereas transactional leadership style is not significantly associated with financial performance.

Transactional, transformational, and laissez-faire leadership. Studies of the effect of these three leadership approaches on FP reported mixed findings. In Zehir et al.'s (2012) study, they found significant, positive, and direct effects of transformational leadership and laissez-faire leadership on firm's financial/nonfinancial FP. However, their findings showed that the relationship between transactional leadership and FP is not supported. Zumitzavan and Udchachone (2014) found that both transactional and transformational leadership have the direct and positive impacts on the hotels' financial

performance, while laissez-faire leadership exerts no influence. Similarly, Sethibe (2018) reported direct and positive influences of only transactional and transformational leadership on the firms' non-financial performance in terms of customer satisfaction, productivity, and product/service innovation. Anh and Nhàn (2021) found that both transformational and transactional leadership have significant positive influences on FP, while laissez-faire leadership exhibited the adverse effects. Contrary to most research, Harsanto and Roelfsema (2015) found that only laissez-faire leadership has significant direct effect on the growth in sales of Indonesia firms. Surprisingly, their findings indicated an "Asian value" that transformational leaders in Asian have significantly less influence than those who practiced the laissez-faire style. In addition, transactional leadership is found to have negative influence on the firms' performance, especially sales growth. Recent studies revealed contradictory results. Abasilim et al. (2019) reported a significant medium positive association between transformational leadership and FP, whereas transactional leadership had an insignificant small negative connection with FP. By contrast, Laissez-faire leadership was found to exert an insignificant small positive relationship with FP.

Other leadership approaches. Two papers from Peterson et al. (2012) and J. Huang et al. (2016) reported a positive and direct relationship between servant leadership and FP. Other two articles compared task-oriented, relation-oriented, and change-oriented leadership's effects on FP. While Wan H. Wang et al. (2011) highlighted a significant, direct, and positive relationship between only task-focused leadership behaviors and firm performance; Özsahin et al. (2011) found that task-oriented and relation-oriented leadership indirectly impact FP through learning orientation. Charismatic leadership was found to have direct and positive effect on FP in Wilderom et al.'s (2012) and Koene et al.'s (2002) studies. Arslan and Staub (2013) examined the relationship between leadership, which was constructed based on the Theory X and Theory Y, and FP. The result showed that the styles of the leaders in Turkish firms could be illustrated by leadership X, leadership Y, and "indecisive group" - a small group of people who scored the same in both Theory X and Theory Y. In addition, the result only proved the influences of the leaders who have leadership Y on turnover rate and performance of firms. Zehir et al. (2011) explored the impact of supportive leadership, participative leadership, and transactional leadership on FP. Their findings demonstrated that these leadership approaches had direct and positive influences on FP. Kim and Schachter (2015) employed mixed method to study the connection between participative leadership and FP. The findings of quantitative data analysis revealed a direct and positive relationship between participative leadership and FP. The findings of qualitative data analysis demonstrated that the followers of participative leaders displayed proactiveness and honesty, which in turn helped the firm achieve its goals and enhance its performance. Charismatic leadership, spiritual leadership, ethical leadership, innovation leadership, entrepreneurial leadership, and leadership and people management were also found as drivers of FP in studies conducted by Y. Zhang and Wei (2021), Nguyen et al. (2021), Salehzadeh et al. (2015), D. Wang et al. (2015), Carmeli et al. (2010), S. Huang et al. (2014), and Alagaraja et al. (2015), respectively. Jing et al. (2019) investigated the connection between leadership paradigms (classical, transactional, visionary, and organic) and FP. They found that leadership indirectly affected FP through leader–follower trust, organizational climate, and vision communication/sharing. Recently, Rehman and Iqbal (2020) and Gürlek and Çemberci (2020) reported direct and positive relationship between knowledge-oriented leadership and FP, mediated by knowledge management and innovation. Loh and Yusof (2020) found that blue ocean leadership significantly and positively affected FP automotive vendors in Malaysia. Su et al. (2020) found that environmental leadership had a positive relationship with both environmental performance and financial performance aspects of agricultural products corporations in China.

Mediating Mechanism in the Relationship Between Leadership and FP

Mediating variables assist in explaining the relationship between leadership (independent variable) and FP (dependent variable). Among 60 studies, 35 studies examined how a variety of mediators, among which organizational learning, organizational innovation, and organizational culture were the most common, extend current understanding of the leadership-FP connection.

Organizational learning. It has been suggested that the presence of organizational learning contributes to an improvement in FP. García-Morales et al. (2008, 2012) tested this mediator and found that organizational learning mediated the connection between transformational leadership and FP. In particular, transformational leaders engaged and promoted organizational learning by eliminating the barriers that restricted learning processes. Based on this process, firms can improve organizational performance and expertise to respond to uncertainties and technological changes within the industries. According to Noruzy et al. (2013), transformational leaders stimulated organizational learning, which in turn fostered long-term performance and competitive advantage of manufacturing firms. Similar results were found in recent studies (e.g., Kittikunchotiwut, 2020; Para-González et al., 2018; Ur Rehman et al., 2019)

Organizational innovation. In their studies, García-Morales et al. (2008, 2012) found a positive mediating impact of organizational innovation on the relationship between transformational leadership and organizational performance.

Transformational leaders were found to engage in the innovation diffusion and create a climate that fostered the creative ideas, which ultimately enabled their firms to handle challenges and achieve success. Similarly, Noruzy et al. (2013) contended that transformational leaders used inspirational motivation and intellectual stimulation to generate innovation. Then, firms with higher level of innovation could gain the capabilities needed to enhance performance and sustain competitiveness. In the same vein, the findings from studies of Overstreet et al. (2013), Zumitzavan and Udchachone (2014), and Para-González et al. (2018) revealed that the impact of leadership on FP was mediated by organizational innovation. Besides, S. Huang et al. (2014) examined the mediating effects of exploratory and exploitative innovation in the relationship between entrepreneurial leadership and the new ventures' performance. They found that entrepreneurial leaders were critical drivers of the venture's success and survival due to their abilities to generate both exploitative and exploratory innovation. Similarly, results from Berraies and Bchini's (2019) study confirmed the mediating impact of both exploitative and exploratory innovations on the connection between transformational leadership and firm's financial performance. Chen et al. (2019) presented an interesting finding. In their research, since the mediating effects of exploratory innovation on the relationship between transformational leadership and FP were inverted U-shaped, transformational leadership had negative and indirect influence on FP. In particular, firms that placed a strong emphasis on transformational leadership generated too much strategic shifts or exploratory innovation, which led these firms to huge danger of declined performance. In two recent studies of Rehman and Iqbal (2020) and Gürlek and Çemberci (2020), organizational innovation was found to mediate the relationship between knowledge-oriented leadership and FP in firms operating in Pakistan and Turkey.

Organizational culture. According to Zehir et al. (2011), organizational culture (competitive, bureaucratic, and community culture) mediated the relationships between leadership and FP. The findings from Ur Rehman et al.'s (2019) study also confirmed the mediating role of culture in the relationship between leadership and performance within Malaysian small and medium-sized enterprises. Leaders in these firms were found to exert their influence in developing an organizational culture, which in turn helped the firm become successful in the market.

Other mediators. In Carmeli et al.'s (2010) study, leaders enforced the interaction between functions and divisions within the firms to create a strategic fit that improved organizational adaptation capabilities and performance outcomes. Özsahin et al. (2011) found that learning orientation played a meditating role in the relationship between task-oriented leadership, relation-oriented leadership, and FP. Zehir et al. (2012) found that supervisory commitment mediated the relationship between leadership and performance of Turkish firms. Birasnav (2014) emphasized knowledge management as an essential factor that transformational leaders should focus on to improve FP. However, their findings showed that only knowledge application had significant impact on the relationship between the transformational leadership and FP. In other studies, while Kim and Schachter (2015) found that followership mediated the relationship between participative leadership and FP, J. Huang et al. (2016) highlighted a full mediating effect of service climate on the leadership-FP relationship within hospitality context. Recently, Para-González et al. (2018) explored the mediating role of high-performance human resources practices system on the relationship between transformational leadership and FP. Jing et al. (2019) studied how leadership paradigms affected FP through a variety of mediators including leader–follower trust, organizational climate, and vision communication/sharing. Findings from Su et al.'s (2020) study indicated that green innovation strategy and actions mediated the connection between environmental leadership and FP. Recently, Le and Le (2021) investigated and confirmed the mediating role of organizational change capability on the effect of transformational leadership on both operational and financial performance of Vietnamese firms. Nguyen et al. (2021) and Saeidi et al. (2021) found similar findings related to the meditating effect of corporate social responsibility on the relationship between ethical leadership and FP.

Moderating Mechanism in the Relationship Between Leadership and FP

Moderator variables affects the direction and/or extent of influence of the relationship between leadership (independent variable) and FP (dependent variable). Among 60 studies, 6 studies utilized moderators in their research, which provided insights into the boundary conditions in which leadership operated and influenced FP. Koene et al. (2002) found that store size moderated the relationship between charismatic leadership and financial performance of stores in the Netherlands. According to Min et al. (2011), the relationship between transformational leadership and FP was moderated by both emotional and cognitive trust to leaders. Leader justice orientation was found to positively moderate the relationships between ethical leadership and FP in D. Wang et al.'s (2015) study. In a study of 92 hotels in China, J. Huang et al. (2016) found that competitive intensity moderated how servant leadership indirectly affected FP through service climate. In other words, when competitive intensity was high, the indirect relationship between servant leadership and FP became stronger. This finding was in line with that of a recent study by Y. Zhang and Wei (2021), which highlighted the moderating role of competitive tension in the relationship between leadership and FP in pharmaceutical firms in Thailand. In particular, the positive influence of

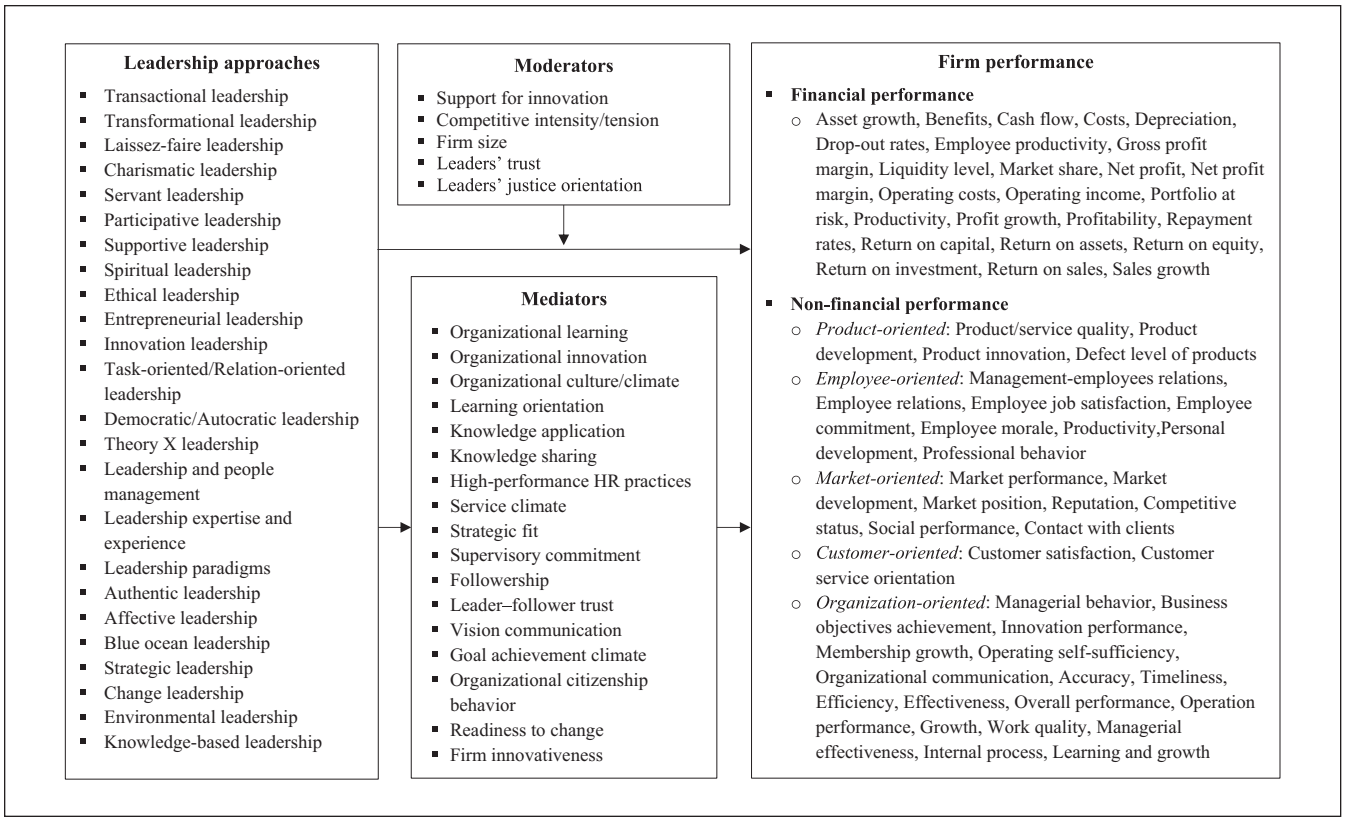

Figure 2. Model of the relationship between leadership and firm performance.

change leadership on FP was strengthened in the presence of perceived competitive tension.

Toward a Unifying Framework on the Relationship Between Leadership and FP

A review of previous research on leadership and FP revealed that most empirical studies on this topic have focused on how different leadership approaches influence FP (both financial and non-financial) and the mediating/moderating mechanisms that explain these connections. Figure 2 below presents an overarching view of these relationships.

Discussion and Areas for Future Research

This review aims to synthesize extant literature on leadership-FP relationship. The findings suggested that research on leadership and FP has been burgeoning in the past 20 years, with a plethora of quantitative articles conducted in various contexts. Among reviewed articles, transformational leadership approach was dominant in the studies related to FP. These findings confirmed Yukl's (2013) argument that leadership research is being held back since scholars overly relied on quantitative method and a popular leadership approach in their studies. In response, this study provides some recommendations for future research into this area.

Research Design Advancement

Compared to quantitative methodology, qualitative and mixed-method approaches in leadership research enabled the researchers to explore leaders' traits and competences or provide in-depth understanding of the effect of a certain leadership style. For example, Chan (2010) used qualitative approach to examine the effects of leadership expertise and experience on FP. The findings revealed that the behaviors of leaders found in the study fit Burns' (1978) definition of transformational leadership. Moreover, Chan (2010) found that the success or failure of a firm ultimately depended on leaders' traits and competencies. These findings have added to current understanding of the impact of leaders' traits and competences on FP. Future studies are encouraged to quantitatively investigate the effects of leaders' traits and competencies in comparison to leaders' behaviors (transformational or complexity leadership) to provide better insights and build more useful theories. Similarly, Kim and Schachter's (2015) mixed-method study helped further explain the impact of participative leadership on employees' followership and performance of public organizations. In designing future studies

on leadership and FP, researchers should combine quantitative and qualitative designs. Case studies and interviews can be used to refine the survey questionnaire or explore the influences of leadership on FP.

Examination of Understudied Leadership Approaches

Empirical studies reviewed in this study demonstrated that various leadership approaches ameliorated both financial and non-financial performance; therefore, there are possibilities that some uncovered leadership approaches have similar impact on FP. In the literature, complexity leadership has been found to share some similarities with transformational leadership and can be used in firms operating in volatile and globalized markets (Burchell, 2009). According to Marion and Uhl-Bien (2002), complexity leadership can remediate the restriction of transformational leadership in clearly explaining the processes through which firms adapt to the environment. Since the relationship between complexity leadership and FP is less examined in the literature, there are plenty of opportunities for future research on this topic.

Inclusion of Emerging Intervening and Boundary Variables

This review presents some factors that mediate/moderate the relationship between leadership and FP (e.g., organizational learning, organizational innovation, organizational culture, etc.) which can be used as a reference for future studies. However, in addition to these variables, we acknowledge the importance of other mediators/moderators that has not been empirically tested. Therefore, researchers should investigate emerging mediators/moderators and compare their incremental variance with the variables outlined in this study.

Conclusion

This paper aims to present a systematic review of the relationship between leadership and FP in order to synthesize the fragmented knowledge and propose a unifying framework for future research. The review revealed three main key themes related to the relationship between leadership and FP. First, the topic of leadership and FP has been mostly quantitatively examined in many countries and industries. Second, different leadership approaches have been found to ameliorate FP and transformational leadership remained the most used approach. Third, organizational innovation, organizational learning, and organizational culture were the most common factors that mediated the relationship between leadership and FP. Fourth, support for innovation, competitive intensity, firm size, trusts to leaders, and leader's justice orientation have been found to moderate the effect of leadership on FP.

This review offers several implications to theory and practice. The findings provide an overall picture on how different leadership approaches affect FP, which contributes to the development of leadership and FP theory. Moreover, this study provides a framework consisting of different leadership approaches, mediators, moderators, and different indices of FP for empirical validation in future studies. For practicing managers, this study shows that FP can be enhanced through several different leadership approaches. The findings of this study can be used by leaders and human resources managers in identifying suitable leadership approaches that improves their FP in the current turbulent environment.

Finally, the scope of this systematic review focuses only on studies published in the English language. In the future, researchers are encouraged to cast a wider net and include publications in other languages. Besides, given the interest in investigating the relationship between leadership and FP and advancing knowledge in these fields, the current research just focused on scholarly and empirical articles. Future systematic reviews would benefit from exploring practical leadership perspectives and consultant views on leadership and FP retrieved from the vast amount of practitioner publications.

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Organizational learning and firm performance: a systematic review

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Abstract

Purpose – This study aims to systematically review empirical research on the relationship between organizational learning (OL) and firm performance (FP) to evaluate how far the field has come.

Design/methodology/approach – This study follows a systematic, transparent and replicable approach suggested by Vom Brocke *et al.* (2009) to conduct a systematic review. A total of 52 empirical studies published over the years 1999–2019 was retrieved and analyzed.

Findings – Three key themes related to the OL–FP relationship have emerged from the review. First, research on OL and FP has been quantitatively conducted in a variety of countries and sectors. Second, dimensions of OL foster both financial and non-financial performance of firms through their combinations and interactions. Third, the relationship between OL and FP is mediated by organizational innovation.

Research limitations/implications – The literature search returned only quantitative studies on OL and FP, which was accepted within the scope of this review. Future studies are encouraged to systematically examine case studies and qualitative research on OL and FP.

Practical implications – This review demonstrates that FP can be improved through different dimensions of OL. Based on our findings, managers wanting to enhance the performance of their firms can analyze the demand for OL and develop those OL dimensions.

Originality/value – This is among the first systematic literature reviews on OL and FP. The findings of this study also contribute to the previously scattered understanding of OL and FP.

Keywords Organizational learning, Learning organization, Firm performance, Organizational performance, Financial performance

Paper type Literature review

1. Introduction

The dynamics of Industry 4.0, globalization and economic turbulence have urged organizations to learn and adapt to accelerate performance and remain competitive. Business leaders are seeking strategies to ensure that their organizations thrive in chaotic hypercompetitive environment. In the extant literature, knowledge and learning have been identified as critical resources for organizations to sustain success and competitive advantage (Chandler, 1992; Friesen and Johnson, 1995; Weldy, 2009). Senge (1996, p. 413) stated that "over the long run superior performance depends on superior learning." Many recent studies have shown growing interest in organizational learning (OL), emphasizing that organizations have to promote learning to achieve improved performance (Jain and Moreno, 2015; Zhou *et al.*, 2015; Oh, 2018; Hooi, 2019; Narsa, 2019).

The strong emphasis placed on OL as a primary determinant of firm performance (FP) has encouraged scholars to pursue lines of research in this area. An initial discussion on OL dated back to the work of Cangelosi and Dill (1965) on individual learning and OL. OL then became popular in the 1980 and 1990s, marked by a number of seminal contributions to the field such as Hedberg (1981), Fiol and Lyles (1985), Argote and Epple (1990), March (1991) and Huber (1991). Senge (1990) coined the concept learning organization and popularized it in his best-selling book *The Fifth Discipline: The Art and Practice of the Learning Organization*. Despite considerable debate about OL and learning organization (Örtenblad, 2001; Sun and Scott, 2003; Easterby-Smith *et al.*, 2000), strong bias and confusions still exist about the use of both

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concepts (Nevis *et al.*, 1995; Wang and Ahmed, 2003). According to Easterby-Smith *et al.* (1999), OL provides a description of individual and collective learning processes in the organizations, whereas learning organizations propose a combination of disciplines and practices to foster learning. This study focuses on the OL and defines it as learning activities that are of benefit to FP (Shaw and Perkins, 1991; Hodgkinson, 2000).

The concept of OL has been broadly discussed by scholars. In the 1980s, Argyris and Schön (1978) conceptualized OL as single- and double-loop learning. The former considers changes to the firm's expected outcomes, whereas the latter challenges and redefines these changes and expectations. Single- and double-loop learning can also be considered as adaptive and generative learning (Senge, 1990). Earlier studies have assumed that adaptive learning is suitable for firms operating in a slow-changing environment, and generative learning is essential for firms operating dynamic markets (Wijnhoven, 2001). March (1991) categorized learning processes into exploitation of existing routines from previous knowledge and exploration for new routines and knowledge. Huber (1991) addressed some deficiencies in earlier OL approaches and postulated four constructs of information systems in organizations. Information acquisition is about learning from a variety of sources such as experiences within the organizations, experiences of other organizations and knowledge from internal and external environment. Information distribution deals with the sharing of knowledge across the organization. Information interpretation is how organizations make sense of acquired and shared information. Organizational memory refers to the storage and retrieval of information. Besides, previous scholars advocated a notion that OL occurs at different levels (individual, group, organization), and the learning outcomes are facilitated by two types of learning flows called feedforward and feedback (Crossan *et al.*, 1999; Di Milia and Birdi, 2009; Lloria and Moreno-Luzon, 2014).

FP is a controversially discussed concept among scholars (Jenatabadi, 2015). It has been defined as the actual output of an organization as compared to its desired goals (Kotlar *et al.*, 2018; Škrinjar *et al.*, 2008). The literature shows that there has been a diversity of performance concepts and measures. Financial performance is the narrowest conception of performance and has been dominant in empirical studies (Venkatraman and Ramanujam, 1986; Hofer, 1983). Typical financial performance indicators involve sales growth, return on investment, earnings per share and so on (Venkatraman and Ramanujam, 1986). However, the use of financial ratios is insufficient to measure the potential influences of learning on FP (Prieto and Revilla, 2006; Baldwin and Danielson, 2002). Neely (2002) suggested that non-financial performance indicators such as learning and customer satisfaction should be used to measure FP. As a result of several discussions about measures of FP, a variety of approaches that encompass both financial perspectives with the non-financial perspectives have been provided. For example, Weerakoon (1996) introduced a multi-model performance framework involving productivity, market performance, employee motivation and societal impact.

Earlier studies contain implicit assumptions that organizations should adopt learning to achieve superior performance and outperform their competitors (Stata, 1989; Shaw and Perkins, 1991; DeGues, 1988). Interestingly, FP is embedded in one of the three key aspects of learning organization: learning, change and improvement (Garvin, 1993). According to this author, firms can enhance both individual and firm-level performance based on learning. Besides, the knowledge-based view theory of the firm, which was built upon the resource-based view theory, posits that the capability of a firm to create and apply knowledge is a key driver of its performance improvement (Grant, 1996). Despite this phenomenal growth, empirical literature on the field was virtually absent until validated instruments for measuring OL were reported in 1997 (Goh *et al.*, 2012). Since then, there has been a growing number of empirical evidences in OL and its influences on FP. Van Deusen's (1999) study revealed that subsequent performance on acquisitions can be improved by increasing the levels of both exploration and exploitation learning activities. Prieto and Revilla (2006)

conducted an empirical research on 111 Spanish companies found a positive relationship between learning and non-financial performance. On the other hand, Goh and Ryan (2008) examined financial performance of listed organizations and found that they demonstrate strong long-term financial performance compared with their closest competitors. Previous scholars also provided excellent reviews of OL (Örtenblad, 2002; Bapuji and Crossan, 2004; Cavaleri, 2004; Argote, 2011; Goh *et al.*, 2012). Notably, Goh *et al.* (2012) conducted a meta-analysis on 33 empirical studies that link learning capability with both financial and non-financial indices of organizational performance. Their research findings indicate a positive connection between learning and FP, with stronger influences for objective than perceptual measures.

However, despite its growing momentum over the past 50 years, there is no clear consensus on a consistent measure of FP and its relationship to different conceptualizations of OL. Moreover, when an extensive body of relevant literature has been marshalled, there is no unifying framework to integrate the fragmented research on OL and FP across different contexts. To address the foregoing gaps, this study aims to examine whether OL systematically affects FP.

The rest of this paper has the following structure. The next section specifies the methodology and literature selection process, followed by the presentation and discussion of research findings. Finally, concluding remarks, implications and limitations are provided.

2. Methodology

The study aims to recap the existing literature on the relationship between OL and FP in a scientific and systematic manner. To that end, a systematic literature review method was preferred because it is transparent, replicable and offers a clear structure for the review process (Bakker, 2010; Tranfield *et al.*, 2003). The literature review process of this study follows the approach suggested by Vom Brocke *et al.* (2009) to ensure quality, relevance and methodological rigor (Manfredi Latilla *et al.*, 2018; Greer and Lei, 2012).

2.1 Definition of the scope/inclusion criteria of the review

In the first phase, we define the scope or inclusion criteria of the review. The scope of this review was delimited to peer-reviewed empirical papers written in English that studied the relationship between OL and FP. Besides, papers with financial and non-financial metrics of FP were included because previous literature has used both of these indices.

2.2 Identification of keywords

The second phase is the selection of keywords. According to Örtenblad (2001), "almost everyone once used the terms organizational learning and learning organization interchangeably." Moreover, different authors adopt different approaches and terminologies of FP in the literature. Therefore, based on a confrontation with five experienced scholars in the field of organizational behavior, a list of keywords is formulated: "organizational learning," "learning organization," "organizational performance," "firm performance," "financial performance" and "business performance."

2.3 Literature search

2.3.1 Initial search. Several computerized searches for relevant literature were performed using Emerald Insight, Scopus, ScienceDirect, JSTOR and Google Scholar databases. Using the keyword-based search technique, we applied the following search string to titles, abstracts and keywords: ("organizational learning" OR "learning organization") AND ("organizational performance" OR "firm performance" OR "financial performance" OR

"business performance"). No restrictions were imposed concerning publication date. We only chose to exclude newspaper articles, book reviews and dissertations from the search results. After the first search attempt, the results were filtered to include only the papers relevant to the scope of this review, producing 637 articles.

2.3.2 Publications excluded based on the title. The title of these articles was screened to remove duplicates and those that did not fulfill the inclusion criteria. The number of articles was then shortlisted to 325 after article title limitation.

2.3.3 Publications excluded based on the abstract. Afterwards, adopting the same filtering criteria to examine the abstract of the remaining papers, we reduced the publication pool to 91 papers.

2.3.4 Publications excluded based on the full text. The full texts of the potentially relevant articles were then read carefully, and 42 studies that are not relevant to the domain of interest of this review were filtered out. The majority of excluded articles includes literature reviews and conceptual papers ($n = 16$), papers that found non-significant connection between OL and FP ($n = 7$), papers that studies indirect OL–FP link ($n = 8$) and papers that fall outside the definition of OL and FP in this study ($n = 11$). The full text examination yielded 49 qualified publications.

2.3.5 Publications included based on snowballing from the reference lists. To make sure that all relevant literature is included in the study, we continued to conduct a forward search (review of sources in the selected papers) and a backward search (review of references of the papers provided). The snowballing from the reference lists increased the final number of included papers to 52.

2.4 Analysis of the results obtained and future streams of research

In the last two phases, a literature review matrix was developed to analyze and synthesize the results obtained from 52 papers, from which useful directions can be offered for future studies. The following information was abstracted in the review matrix: authors, country and sector, methodology, OL dimensions, FP measures and findings (Table 1). Literature search outcomes and ideas useful for future research are presented in the next sections.

3. Findings and discussion

This review seeks to present a comprehensive view on how OL and FP have been examined in various contexts. The following findings have emerged from the synthesis of selected empirical literature.

3.1 Distribution of publications

Figure 1 presents the year-wise frequency of articles published on the current topic during 1999–2019. In line with the findings of Goh *et al.* (2012), this study confirms that empirical research on OL and FP began in the early 2000s. In the past ten years, the number of articles increased drastically, albeit with some fluctuations. This upward trend demonstrates that OL is an emerging area of research on FP, and this is a timely point to assess these fields.

Of the 52 papers, 42 were published in 35 SCOPUS-indexed journals. Notably, *Journal of the Academy of Marketing Science*, a premier journal in marketing, business and international management field, published three articles. We also observe publications in journals related to computer science and information system fields, *Journal of Strategic Information Systems* and *Industrial Management and Data Systems*. This indicates a diverse distribution of publications on the current topic over a range of high-quality data analytics and social science journals.

Table 1.
Literature review matrix table

Authors	Country/sector	Methods	Survey respondent	OL variables	FP measures	Findings
Baker and Sinkula (1999a)	Not identified/multi-sector	Quantitative/ structural equation modelling (SEM)	Managers	Commitment to learning, shared vision, open-mindedness	Subjective/FI: sales revenue, market share, profit	Learning has a direct effect on FP
Baker and Sinkula (1999b)	The USA/multi-sector	Quantitative/ ordinary least squares regression	Managers	Commitment to learning, shared vision, open-mindedness	Subjective/NI: new product success, overall performance	Learning has a positive relationship to overall performance
Tippins and Sohi (2003)	Not identified/ manufacturing	Quantitative/ SEM	Employees	Information acquisition, information dissemination, shared interpretation, declarative memory, procedural memory	Subjective/NI: customer retention/ FI: profitability, return on investment, sales growth	The relationship between OL and FP is significant
Choe (2004)	Korea/manufacturing	Quantitative/ correlation analysis	CEOs	Interaction and communication among group members, job rotation and experience	Subjective/NI: product quality, supply flexibility and dependability/FI: low cost	The provision of information in organizations has a relationship with effective learning and improved performance
Lloréns Montes *et al.* (2005)	Spain/not specified	Quantitative/ SEM	Managers	OL (unidimensional construct)	Subjective/NI: comparisons of self with competitors/FI: return on assets	FP is improved through OL
Pérez López *et al.* (2005a)	Spain/multi-sector	Quantitative/ SEM	Managers	Acquisition internal, acquisition external, distribution, interpretation, organizational memory	Subjective/NI: innovation, competitiveness/FI: economic and financial results	OL has a positive connection with economic/financial results of the organizations
Pérez López *et al.* (2005)	Spain/not specified	Quantitative/ SEM	CEOs	Acquisition internal, acquisition external, distribution, interpretation, organizational memory	Subjective/FI: profitability, sales growth, profit per sales margin	There is a significant association between OL and FP
Hanvanich (2006)	Not identified/ logistics	Quantitative/ SEM, *post hoc* analysis	Managers	Learning orientation, organizational memory	Subjective/NI: overall performance	When environmental turbulence is low, learning orientation and organizational memory are useful predictors of FP. Under high environmental turbulence, only learning orientation impacts FP

(*continued*)

Table 1.

Authors	Country/sector	Methods	Survey respondent	OL variables	FP measures	Findings
Aragón-Correa *et al.* (2007)	Spain/multi-sector	Quantitative/ SEM	CEOs	OL (unidimensional construct)	Subjective/NI: overall performance	There is a positive and significant relationship between OL and FP
Birdi *et al.* (2007)	UK/multi-sector	Quantitative/ partial correlations and multiple regressions	Managers	Individual learning, team learning	Subjective/NI: human capital performance, quality performance, innovation performance/FI: growth in sales and income	Learning at individual level has a stronger connection with performance in non-profit firms, whereas learning at team level is more significant in for-profit firms
García-Morales *et al.* (2007)	Spain/not specified	Quantitative/ SEM	CEOs	OL (unidimensional construct)	Subjective/NI: overall performance	OL influences FP positively, both directly and indirectly through OI
Lin and Kuo (2007)	Taiwan/education	Quantitative/ SEM	Managers	Inquiry climate, learning practices, information sharing patterns, achievement mindset	Subjective/NI: human resource performance/FI: market performance	OL has direct and significant effects on FP
Škerlavaj *et al.* (2007)	Slovenia/not specified	Quantitative/ SEM	CEOs and senior managers	Information acquisition, information interpretation, behavioral and cognitive changes	Subjective/NI: employee performance, relationships with suppliers and customers/FI: return on assets, value added per employee	OL has a positive direct influence on every aspect of non-financial performance (performance from the employee customer and supplier). OL has a positive impact on financial performance, but indirect through non-financial performance from the employee perspective
Jiang and Li (2008)	Germany/multi-sector	Quantitative/ SEM	Managers	OL (unidimensional construct)	Subjective/FI: sales growth, profitability, return on investment, return on assets	OL has a significant, positive and strong connection with financial performance
Bell *et al.* (2009)	Not identified/retail stores	Quantitative/ CFA and RPM	Managers	Organizational memory, shared understanding, experimentation	Subjective/NI: customer value, customer satisfaction, customer loyalty, overall performance	OL is positively and significantly related to store performance
Di Milia and Birdi (2009)	Australia/multi-sector	Quantitative/ regression analysis	Employees	Individual learning, group learning, OL	Subjective and objective/FI: sales plus other revenue per number of employees, productivity, revenue, employee number, profitability, growth in sales per income, labor productivity, market share	There is a positive relationship between learning at organizational level and financial performance (using both subjective and objective measures)

(*continued*)

Table 1.

Authors	Country/sector	Methods	Survey respondent	OL variables	FP measures	Findings
Garrido and Camarero (2009)	British, French and Spanish/museum	Quantitative/ SEM	Managers	OL (unidimensional construct)	Subjective/NI: social results/FI: financial performance	There is a significant relationship between learning and FP
Zhao *et al.* (2009)	China/manufacturing	Quantitative/ SEM	Top managers	Experimental learning, acquisitive learning	Subjective/FI: market share, sales volume, market reputation, operating profits, asset size	Experimental learning fully mediates the knowledge obtained from acquisitive learning. Acquisitive learning has limited usefulness in improving FP. This finding supports resource-based view theory that greater value stems from internal knowledge base of organizations
Jiménez-Jiménez and Sanz-Valle (2011)	Spain/multi-sector	Quantitative/ SEM	N/A	Knowledge acquisition, information distribution, information interpretation, organizational memory	Subjective/NI: open-internal model results (quality product, internal process coordination, company and products' image), human relations model results (turnover, absenteeism)/FI: rational model results (market share, profitability, productivity)	OL contributes positively to FP
Kuo (2011)	Taiwan/technology	Quantitative/ SEM	Employees	Inquiry climate, learning practices, information sharing patterns, achievement mindset	Subjective/NI: product quality, product innovation, employee attraction, employee retention, customer satisfaction, management–employee relation, employee relations	OL has a positive effect on FP
Salge and Vera (2011)	UK/hospital	Quantitative/ SEM	Non-specialists	Incremental learning capabilities (unidimensional construct)	Subjective/NI: service quality	Incremental learning is positively related to FP
Bolívar-Ramos *et al.* (2012)	Spain/technology	Quantitative/ SEM	CEOs	OL (unidimensional construct)	Subjective/NI: overall performance	OL has a direct and positive influence on FP

(*continued*)

Table 1.

Authors	Country/sector	Methods	Survey respondent	OL variables	FP measures	Findings
Çömlek *et al.* (2012)	Turkey/metal	Quantitative/ regression Analysis	Managers	System orientation, climate for learning orientation, knowledge acquisition and utilization orientation, information sharing and dissemination orientation	Subjective/NI: innovative performance	Two dimensions of OL (system orientation and knowledge acquisition-utilization orientation) have a positive relationship with FP
Ellis *et al.* (2012)	Not identified/ banking	Quantitative/ SEM	Managers	Information gathering and analysis, information dissemination, information storage and retrieval	Subjective/NI: customer satisfaction	Organizations that use OL mechanisms intensively gain greater performance in terms of customer satisfaction
García-Morales *et al.* (2012)	Spain/multi-sector	Quantitative/ SEM	CEOs	OL (unidimensional construct)	Subjective/NI: overall performance	OL has a direct and positive influence on FP
Hao *et al.* (2012)	Australia and China/ not specified	Quantitative/ SEM	N/A	OL (unidimensional construct)	Subjective/NI: public relationship/ FI: profits, efficiency, growth, market	There is a positive effect of OL on FP
Noruzy *et al.* (2012)	Iran/manufacturing	Quantitative/ SEM	Leaders	OL (unidimensional construct)	Subjective/NI: customer satisfaction, overall performance/ FI: profitability, sales growth	OL has a positive effect on FP
Real *et al.* (2012)	Spain/industrial	Quantitative/ SEM	CEOs	Individual learning, group learning, OL, feedback-learning flow, feedforward learning flow	Subjective/NI: individual-level performance, group-level performance, organizational-level performance	There is a positive effect of OL on perceived FP
Abbasi and Zamani-Miandashti (2013)	Iran/education	Quantitative/ SEM	Employees	Creation and achieving of knowledge, dissemination and sharing knowledge, applying of knowledge	Subjective/NI: internal qualitative efficiency, external qualitative efficiency	Agricultural faculty should concentrate on the creation, acquisition and sharing of knowledge to promote strong FP
Kitapçi and Çelik (2013)	Turkey/not specified (SMEs)	Quantitative/ regression analysis	Leaders	System orientation, climate for learning orientation, knowledge acquisition and utilization orientation, information sharing and dissemination orientation	Subjective/NI: workers efficiency/ FI: productivity, efficient use of capital	Firms can use OL to improve their productivity performance
Barba Aragón *et al.* (2014)	Spain/not specified	Quantitative/ SEM	CEOs	Individual learning, group learning, OL	Subjective/FI: return on assets, profit per employee, profit margin, return on equity	There is a positive connection between OL and FP

(*continued*)

Authors	Country/sector	Methods	Survey respondent	OL variables	FP measures	Findings
Kitapçi and Çelik (2014)	Turkey/not specified (SMEs)	Quantitative/ regression analysis	Managers	System orientation, climate for learning orientation, knowledge acquisition and utilization orientation, information sharing and dissemination orientation	Subjective/NI: quality performance	Firms can use OL to improve their quality performance
Akgün *et al.* (2014)	Turkey/banking	Quantitative/ SEM	Leaders	Managerial commitment, systems perspective, openness and experimentation, knowledge sharing and integration	Subjective/NI: knowledge performance/FI: return on equity, return on asset, Tobin's q, market value added	Only openness and experimentation and knowledge sharing and integration of OL have positive and significant connection with FP
Zhou *et al.* (2015)	China/multi-sector	Quantitative/ SEM	Managers	Learning orientation, learning processes, learning leadership	Subjective and objective/NI: perceptual innovation capability/ FI: return on asset	Dimensions of OL have a positive correlation with both objective financial performance and perceptual innovation indices of FP
Jain and Moreno (2015)	India/manufacturing	Quantitative/ SEM	Managers	Collaboration and team learning, performance management, autonomy and freedom, reward and recognition, sponsorship, achievement orientation	Subjective/NI: knowledge creation/FI: turnover, profitability, cost, productivity	Six dimensions of OL (collaboration and team learning, performance management, autonomy and freedom, reward and recognition, sponsorship and achievement orientation) have a significant relationship with two dimensions of FP (knowledge creation and financial performance)
Chahal *et al.* (2016)	India/ telecommunication	Quantitative/ SEM	Employees	Knowledge acquisition, distribution, interpretation, organizational memory	Subjective/NI: employee satisfaction, service quality/FI: profitability	There is a positive effect of OL on FP

(*continued*)

Table 1.

Table 1.

Authors	Country/sector	Methods	Survey respondent	OL variables	FP measures	Findings
Öztürk *et al.* (2016)	Turkey/design	Quantitative/ SEM	Employees	Individual, project, firm learning	Subjective/NI: staff satisfaction, client satisfaction, future performance, team performance, teamwork, team contribution, future strategies and high-performing staff/FI: financial success	Learning at the firm level is found to govern the performance of the firms, while learning at individual and project levels has an indirect impact
Pedroche *et al.* (2017)	Spain/tourism	Quantitative/ SEM	Managers	OL (unidimensional construct)	Subjective/NI: operating results, customer loyalty, improvement in quality, business competencies	OL can be used to improve performance in hotels
Susanty and Salwa (2017)	Indonesia/not specified (state-owned enterprises)	Quantitative/ SEM	Managers	Management commitment, continuous learning	Subjective/NI: operational excellence, customer intimacy, product leadership/FI: financial achievement	There is a significant relationship between OL and FP
Modarres and Pezeshk (2017)	Iran/food	Quantitative/ SEM	Managers	Management commitment, system perspectives, organizational experiment, knowledge transfer initiative	Subjective/NI: employee satisfaction, customer satisfaction, environmental performance, social responsibility performance	OL is positively and significantly related to FP
Wahda (2017)	Not identified/ education	Quantitative/ SEM	Employees	OL (unidimensional construct)	Subjective/NI: overall performance	OL plays an important role in achieving FP
Canessa-Terrazas *et al.* (2017)	Chile/not specified	Quantitative/ SEM	Top managers	IT system for exploration, IT system for exploitation	Subjective/NI: customer satisfaction, business processes performance, quality of products, employee satisfaction	Using information technology (IT) for exploitation learning has a positive impact on FP
Esendemir and Zehir (2017)	Istanbul/education	Quantitative/ SEM	Managers	OL (unidimensional construct)	Subjective/NI: school performance, employee performance	OL has a significant influence on FP
Oh (2018)	Korea/multi-sector	Quantitative/ SEM	Employees	Individual learning, group learning, OL, feedback learning flow, feedforward learning flow	Subjective/NI: service and product quality, customer satisfaction, corporate reputation/FI: growth in sales, profitability	Feedforward and feedback learning flows strongly mediate the relationship between learning stocks and FP
Oh and Han (2018)	Korea/not specified	Quantitative/ SEM	Managers	Individual learning, group learning, OL, feedback learning flow, feedforward learning flow	Subjective/NI: service and product quality, customer satisfaction, corporate reputation/FI: growth in sales, profitability	OL improves FP

(*continued*)

Table 1.

Authors	Country/sector	Methods	Survey respondent	OL variables	FP measures	Findings
Bolaji Bello and Adeoye (2018)	Nigeria/ manufacturing	Quantitative/ correlation analysis	Employees	OL (unidimensional construct)	Subjective/NI: overall performance	There is a positive connection between OL and FP
Mohammad (2019)	Nigeria/banking	Quantitative/ SEM	Managers	OL (unidimensional construct)	Subjective/FI: financial performance	FP is positively and strongly affected by OL
Pham and Hoang (2019)	Vietnam/not specified	Quantitative/ SEM	Employees	Managerial commitment, systems perspective, openness and experimentation, knowledge sharing and integration	Subjective/NI: market performance, operational performance	Two out of four dimensions of OL, namely, management commitment to learning and knowledge transfer and integration, have positive influences on FP
Ur Rehman *et al.* (2019)	Malaysia/not specified (SMEs)	Quantitative/ SEM	Managers	OL (unidimensional construct)	Subjective/NI: new product development, market development, quality of product and services, employee commitment and productivity, personnel development, employee satisfaction/FI: profit, sales volume, return on investment	OL boosts up FP of Malaysian SMEs
Valdez-Juárez *et al.* (2019)	Mexico/not specified (SMEs)	Quantitative/ SEM	Managers	OL (unidimensional construct)	Subjective/FI: increase in profits, sales increase, increase in contribution margin, increase in market share, increase in pre-tax benefits	OL has a positive and significant effect on financial performance
Waqas *et al.* (2019)	Pakistan/textile	Quantitative/ SEM	Managers	Explorative learning, exploitative learning	Subjective/NI: overall performance/FI: profitability, sales growth, overall financial performance	OL positively affected perceived FP
Narsa (2019)	Indonesia/ manufacturing	Quantitative/ partial least square analysis	Managers	OL (unidimensional construct)	Subjective/NI: improved new products and services, employee satisfaction, customer satisfaction/ FI: sales goals, net profit goals,financing company activities	OL has a positive and significant impact on FP

Note(s): OL = organizational learning; FP = firm performance; NI = non-financial indicators; FI = financial indicators; SMEs = Small and medium-sized enterprises; CFA = confirmatory factor analysis; RPM = random-parameters modeling; SEM = structural equation modeling

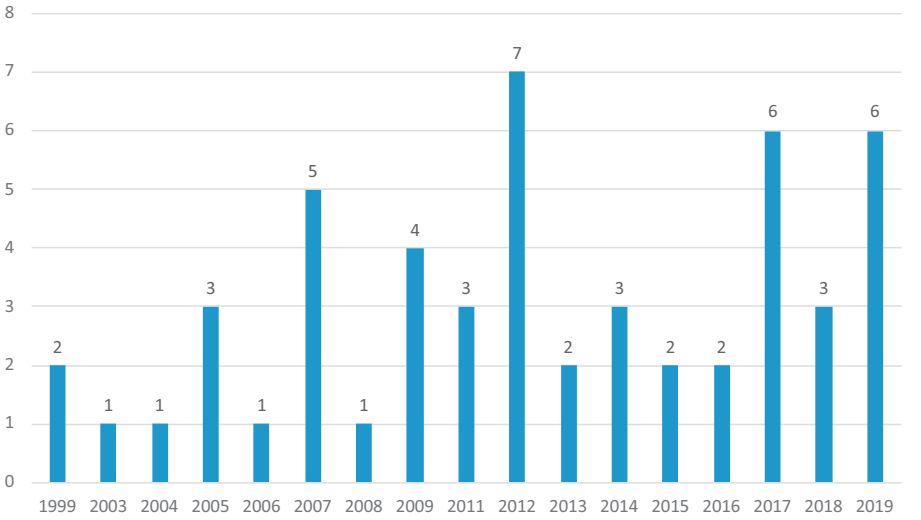

Figure 1.
Year-wise distribution of publications on OL and FP

3.2 Scope and methodology

The reviewed articles were conducted in 22 countries, the majority of them were in Spain (n = 11) and Turkey (n = 5). The literature also covered studies undertaken in major transition economies such as Vietnam, Taiwan, Indonesia and Malaysia. As for sectors, there is an appreciable bias toward the manufacturing sector (n = 7). Besides, mixed sector studies occupy a significant portion (n = 11) and clearly favor manufacturing and service industries. It is also worth noting that small and medium-sized enterprise (SME) research is scarce and only appears recently.

The adopted methodology in all reviewed articles is quantitative approach, most of these employed structural equation modeling (n = 41) and regression analysis (n = 4) as main statistical analysis techniques. Surprisingly, no studies used qualitative or mixed methods. Most of the research surveyed the chief executive officers (CEOs), managers and leaders of the establishments (n = 39), with a smaller number focusing on employees (n = 11). Besides, two publications did not specify the respondent type.

3.3 Organizational learning dimensions

Of the final 52 studies, there are 34 studies (65%) that measured OL as a multidimensional construct. The rest combined OL dimensions to a one-dimensional construct. Table 2 depicts 12 dimensions of OL that have been mentioned in most studies on the relationship between OL and FP. As we can see, the majority of the retrieved publications utilized Huber's (1991) four-construct OL model comprising information acquisition, information dissemination, information interpretation and organizational memory (e.g. Chahal *et al.*, 2016; Tippins and Sohi, 2003). Another stream of literature examined multi-level OL (individual, group/team and organization) and learning flows (e.g. Oh and Han, 2018; Real *et al.*, 2012). In addition, past studies have adopted some additional OL dimensions such as climate for learning orientation, system perspective, experimentation and management commitment to study their influences on FP (e.g. Modarres and Pezeshk, 2017; Pham and Hoang, 2019; Kitapçi and Çelik, 2014). Therefore, we grouped the identified OL dimensions into three groups and examined the contents of these dimensions to provide more information on their correlation and contribution to the conceptualization of OL. Besides these 12 dimensions, other dimensions have also been examined in some publications: interaction and communication among group

Authors and year	IA	ID	II	OM	CL	SP	IL	GL	OL	LF	MC	EX
Abbasi and Zamani-Miandashti (2013)	X	X	X									
Chahal *et al.* (2016)	X	X	X	X								
Jiménez-Jiménez and Sanz-Valle (2011)	X	X	X	X								
Tippins and Sohi (2003)	X	X	X	X								
Pérez López *et al.* (2005)	X	X	X	X								
Pérez López *et al.* (2005)	X	X	X	X								
Ellis *et al.* (2012)	X	X	X	X								
Bell *et al.* (2009)			X	X								X
Barba Aragón *et al.* (2014)							X	X	X			
Di Milia and Birdi (2009)							X	X	X			
Öztürk *et al.* (2016)							X	X				
Birdi *et al.* (2007)							X	X	X	X		
Oh and Han (2018)							X	X	X	X		
Real *et al.* (2012)							X	X	X	X		
Oh (2018)							X	X	X	X		
Kitapçi and Çelik (2014)	X	X			X	X						
Kitapçi and Çelik (2013)	X	X			X	X						
Çömlek *et al.* (2012)	X	X			X	X						
Modarres and Pezeshk (2017)		X				X					X	X
Pham and Hoang (2019)		X				X					X	X
Akgün *et al.* (2014)		X				X					X	X

Note(s): IA = information acquisition; ID = information dissemination; II = information interpretation; OM = organizational memory; CL = climate for learning orientation; SP = system perspective; IL = individual learning; GL = group learning; OL = organizational learning; LF = learning flow; MC = management commitment; EX = experimentation

Table 2. Summary of OL dimensions

members, autonomy and freedom, reward and recognition, etc. However, Table 2 did not include these dimensions because they are mentioned in one or two papers.

3.3.1 Learning processes (information acquisition, information dissemination, information interpretation and organizational memory). Information acquisition is the acquisition of new information from both internal and external sources (Chahal *et al.*, 2016; Abbasi and Zamani-Miandashti, 2013). Tippins and Sohi (2003) stated that firms can acquire information through internal and external experience (e.g. process improvement and market research), experience of others (discussions with customers) and memory mechanisms. Information dissemination is the transferring or sharing of the acquired information (Pérez López *et al.*, 2005; Jiménez-Jiménez and Sanz-Valle, 2011), which "provides a considerable advantage as different perspectives come into play and a sense of shared meaning begins to form" (Tippins and Sohi, 2003, p. 749). Information interpretation refers to shared understanding and coordination of information for mutual understanding on the meaning of information and effective decision-making (Tippins and Sohi, 2003; Pérez López *et al.*, 2005). According to Slater and Narver (1995), shared interpretation is fundamental for organizations to acquire and analyze information in the future. Organizational memory is the storing of information for future use (Chahal *et al.*, 2016; Jiménez-Jiménez and Sanz-Valle, 2011). Different from other studies, the research of Tippins and Sohi (2003) categorized organizational memory into declarative and procedural memory. The former refers to information related to facts and events, while the latter contains information about processes, procedures and business routines.

3.3.2 Learning levels and learning flows (individual learning, group/team learning, organizational learning and learning flows). Individual learning refers to motivation to learn of individuals (Real *et al.*, 2012). It is also the development of competencies and capabilities for the

required job facilitated by a variety of training (Di Milia and Birdi, 2009). At individual level, learning outcomes can be in the form of tacit or explicit knowledge (Oh, 2018). Group/team learning refers to group knowledge or a shared mental model created as a result of shared understanding (Real *et al.*, 2012; Oh, 2018). Barba Aragón *et al.* (2014) contended that dialog and joint actions play a vital role in information dissemination within groups. OL is the internalization or institutionalization of knowledge in the organization's systems, strategy and procedures (Oh, 2018; Barba Aragón *et al.*, 2014). Di Milia and Birdi (2009) referred to learning at organizational level as how firms generate, share and retain information. Learning flows involves feedforward learning and feedback learning. The former is the transfer of learning from individual to group and organization, while the latter refers to the use of institutionalized knowledge (Real *et al.*, 2012). Oh (2018) defined feedforward learning as the capability of firms to seek new possibilities in the knowledge transfer process from individuals to groups and organizations, and feedback learning as the capability to enhance current competencies in the knowledge distribution process from organizations to groups and individuals.

3.3.3 Learning strategy and capability (climate for learning orientation, management commitment, system perspective and experimentation). Climate for learning orientation is considered as an organizational culture that provides organizational development and fosters continuous learning (Çömlek *et al.*, 2012; Kitapçi and Çelik, 2013, 2014). Management commitment refers to how management recognizes the relevance of learning, makes necessary interventions to promote learning, makes employees engaged into the achievement of learning and removes obstacles to learning (Akgün *et al.*, 2014; Jerez-Gomez *et al.*, 2005). System perspective entails the connection of organization's members as a system through knowledge sharing and integration (Jerez-Gomez *et al.*, 2005). It is said to involve employees' understanding of the firm's strategic direction, divisional participation to achieve mutual goals and cross-departmental communication (Modarres and Pezeshk, 2017). Experimentation refers to how employees are empowered to take initiatives, best practices and experiments in improving their work (Akgün *et al.*, 2014; Modarres and Pezeshk, 2017). Jerez-Gomez *et al.* (2005) highlighted that experimentation requires a climate of openness that values new ideas and a culture that supports creative, enterprising and risk-taking behavior.

3.4 Measures of firm performance

A wide range of FP measures are used in 52 articles, with 22 of the studies focusing on non-financial measures of FP. Eight studies employed only financial indicators to measure FP. Several studies ($n = 23$) attempted to make the picture of FP more complete by making use of both financial and non-financial indices. This demonstrates a lack of agreement in FP measures, as scholars assessed FP from several perspectives and interpretations.

Financial indicators appeared in 31 studies. Some measures such as sales growth, profitability, market share, profit, return on asset and return on investment were frequently used to measure financial performance. On the other hand, non-financial performance measures were included in almost every study ($n = 44$) to measure the relationship between OL and FP. The most commonly employed factors were quality of products and services, performance and satisfaction of employees, overall FP and innovation, team performance and customer satisfaction. The non-financial variables identified in this review can be arranged into five categories of product-oriented, employee-oriented, team-oriented, customer-oriented and organization-oriented.

Besides, the majority of studies ($n = 50$) utilized subjective approach to measure FP, derived from interviews or survey responses of managers or employees. Only two studies combined both subjective and objective approaches for assessing FP (e.g. Di Milia and Birdi, 2009; Zhou *et al.*, 2015). Objective information on FP is provided by the database of the companies. Zhou *et al.* (2015) recognized that there are advantages in utilizing objective

measures, but accounting calculation in financial metrics are limited in terms of managerial discretion and evaluation of intangible resources. Earlier scholars also contended that financial data cannot sufficiently reflect the performance of organizations (Dess and Robinson, 1984; Phillips, 1999). Similarly, subjective or perceptual data on FP can surmount the issues of unavailable financial data (Wall *et al.*, 2004); however, they are biased regarding the accuracy of managers' perceptions (Starbuck and Mezias, 1996). In this review, two studies that employed both objective and subjective measures of FP found that OL has a positive correlation with both objective and perceptual indices of FP. This indicates that both are equally valid and reliable approaches to measure FP, which is in line with previous literature (Wall *et al.*, 2004). Besides, both financial and non-financial indices identified in the reviewed literature bear resemblance to factors in the multi-model performance framework introduced by Weerakoon (1996) (e.g. productivity, market performance, employee motivation and societal impact).

3.5 The interactions of the organizational learning on firm performance

There are 52 studies that investigated the relationship between OL and FP in the period between 1999 and 2019 (20 years). The results of these studies are summarized in Table 1. According to the findings, the majority of them indicates that different OL dimensions positively relate to several types of FP. We discuss the details of their interactions as follows.

3.5.1 Organizational learning dimensions improve firm performance through their combinations and interactions. As mentioned earlier, 18 studies combined OL dimensions as a one-dimensional construct to examine its relationship with FP. Their findings suggest that OL has a positive effect on FP (e.g. Garrido and Camarero, 2009; García-Morales *et al.*, 2012; Wahda, 2017; Bolaji Bello and Adeoye, 2018; Narsa, 2019). Studies that employed multi-dimensional OL construct found similar results. In Çömlek *et al.*'s (2012) study, regression analysis results revealed that both system perspective ($\beta = 0.171$, $p < 0.05$) and knowledge acquisition and utilization ($\beta = 0.524$, $p < 0.01$) have a significant and positive relationship with FP. Jain and Moreno (2015) reported that six dimensions of OL in their study, e.g. collaboration and team learning, reward and recognition, performance management, achievement orientation, autonomy and freedom and sponsorship, have significant and positive connections with FP. Also, positive influences between OL dimensions and FP are found in Pham and Hoang's (2019) study. Specifically, management commitment to learning is the OL dimension that has the highest degree of positive relationship with FP, followed by knowledge transfer and integration.

Few studies in this review pointed out the interactions between OL dimensions. Zhao *et al.* (2009) argued that experimental learning fully mediates knowledge obtained from acquisitive learning. Their findings revealed that experimental learning occurs and generates knowledge inside the organizations. In experimental learning, organizations use its existing internal knowledge through knowledge exploitation and application. On the other hand, acquisitive learning refers to the acquisition and internalization of knowledge that enable the firm to develop new competencies and achieve radical innovations. In acquisitive learning, organizations use its new external knowledge through knowledge exploration and generation. In a similar fashion, Oh (2018) provided evidence that feedforward and feedback learning flows strongly mediate the relationship between different levels of OL (individual, group and organization) and FP. This is congruent with previous studies describing the roles of learning flows in enabling multi-level learning (Crossan *et al.*, 1999; Di Milia and Birdi, 2009; Lloria and Moreno-Luzon, 2014).

3.5.2 Organizational learning improves both financial and non-financial performance of firms. A positive relationship between OL and financial performance is found in several studies. In their study of industrial and services companies in Spain, Pérez López *et al.* (2005a)

found that OL has a positive connection with economic and financial results of these companies (standardized value = 0.2). Jiang and Li (2008) focused on sales growth, profitability, return on investment, return on asset as financial indices and found a significant, positive and strong connection between OL with financial performance ($\beta = 0.431$, $p < 0.001$). Similarly, Mohammad's (2019) study revealed a strong and significant association between OL and financial performance of banks in Nigeria ($\beta = 0.435$, $p < 0.05$). An improvement on financial performance of organizations through OL was also recorded by Di Milia and Birdi (2009) and Valdez-Juárez *et al.* (2019). The regression analyses in Di Milia and Birdi's (2009) study showed a positive relationship between OL and financial performance of companies in Australia, using both subjective and objective measures. Valdez-Juárez *et al.* (2019) performed the estimation of the structural equations and found that OL "exerts a positive and significant influence on the results of financial performance of SMEs according to the beta value of 0.361 $p < 0.001$" (p. 12). In general, it can be concluded that OL is likely to have a positive effect on financial performance of firms. This is in line with the findings from Goh and Ryan's (2008) study that organizations that concentrate on learning demonstrate strong financial performance.

OL is also a positive predictor of non-financial performance of firms in the studies of Abbasi and Zamani-Miandashti (2013) and Kitapçi and Çelik (2014). Using the random-parameters modeling technique to analyze manager responses from 124 stores of a retail firm, Bell *et al.* (2009) found that OL has a positive and significant influence on store performance relative to their competitors ($\beta = 0.550$, $p < 0.001$). Kuo (2011) found that OL has positive impact on various perceptual measures of FP such as product quality, product innovation, employee attraction, employee retention, customer satisfaction, management–employee relation and employee relations. Salge and Vera (2011) found a positive and significant relationship between incremental learning and service quality of hospitals in the UK. According to Ellis *et al.* (2012), organizations that use OL mechanisms intensively gain greater performance in terms of customer satisfaction. These findings support the notion that OL positively affects non-financial performance of firms, which is congruent with the results of Neely's (2002) and Prieto and Revilla's (2006) studies in the past.

The impact of OL on FP is found to be positive when both financial and non-financial indicators are applied. Both Zhou *et al.* (2015) and Jain and Moreno (2015) contended that dimensions of OL have a significant relationship with both dimensions of FP. Interestingly, Škerlavaj *et al.* (2007) found that OL has a positive impact on financial performance, but indirect through non-financial performance. These findings support the conclusion of Goh *et al.*'s (2012) meta-analysis that learning capability of firms relates to both financial and non-financial performance.

3.5.3 Mediating mechanism. Mediators are variables that explains the connection between independent variable (OL) and dependent variable (FP). Among 52 studies, there are five studies that use organizational innovation (OI) as a mediating factor in the relationship between OL and FP. Empirical proof from these studies revealed that OL affects FP positively, both directly and indirectly through OI (Aragón-Correa *et al.*, 2007; García-Morales *et al.*, 2007, 2012; Bolívar-Ramos *et al.*, 2012; Noruzy *et al.*, 2012). An explanation of the incorporation of OI into the OL–FP model could rely on the increasing complexity of the environment. The ultimate goal of OI is the creation of new knowledge and practical applications that catalyzed organizational improvements and capabilities to adapt to changing environments. In this regard, firms operating in turbulent and competitive environments often utilize OI as the key determinant of FP (Gronhaug and Kaufman, 1988). As earlier studies have confirmed a positive relationship between OL and FP, these five studies aim to demonstrate how the effect of OL on FP is strengthened by the generation of OI, thereby advancing knowledge and facilitating theory development in these fields. Additionally, OL and OI are important capabilities that enable firms to improve FP. However,

many firms simply concentrate on the direct interrelations and neglect the indirect influences between these capabilities. To that end, these five studies seek to examine how OL affects FP through OI to foster the organizational synergy between them.

Overall, the majority of the retrieved empirical studies reveals that both financial and non-financial performance of firms are fostered through the combinations and interactions of the OL dimensions. Therefore, it seems that firms with high overall OL are able to achieve better financial and non-financial performance. OI is a mediating factor that helps us to understand how OL affects FP. Models of cause–effect relationships between OL and FP can be established based on the findings presented above (Figure 2).

4. Areas for future studies

In synthesizing the literature on the relationship between OL and FP, we found that initial attempts have been made to advance knowledge in these fields, but as the findings revealed, there are still research gaps and areas for future studies. In response, we provide some areas for future studies on OL and FP.

First, the findings from our review show that existing studies of OL and FP have focused on manufacturing and service sectors, leaving other important but understudied industries like hospitality and tourism as promising areas for further research. Moreover, as SMEs play a critical role in economic growth, social cohesion, job creation and innovation (OECD, 2010), future research should be conducted in SMEs and entrepreneurship to investigate whether FP can be improved through OL in these settings.

Second, content analysis of retrieved articles revealed an overreliance on quantitative-based cross-sectional design, single-source data and survey measures. According to Podsakoff *et al.* (2003), such designs create common method biases in behavioral research. Therefore, more rigorous and diverse methods must be used, including diverse samples, multiple data sources, implicit measures, experimental designs and a combination of cross-sectional and longitudinal designs. We also encourage researchers to conduct their research using qualitative methods (e.g. interviews, focus groups, narrative/discourse analysis of

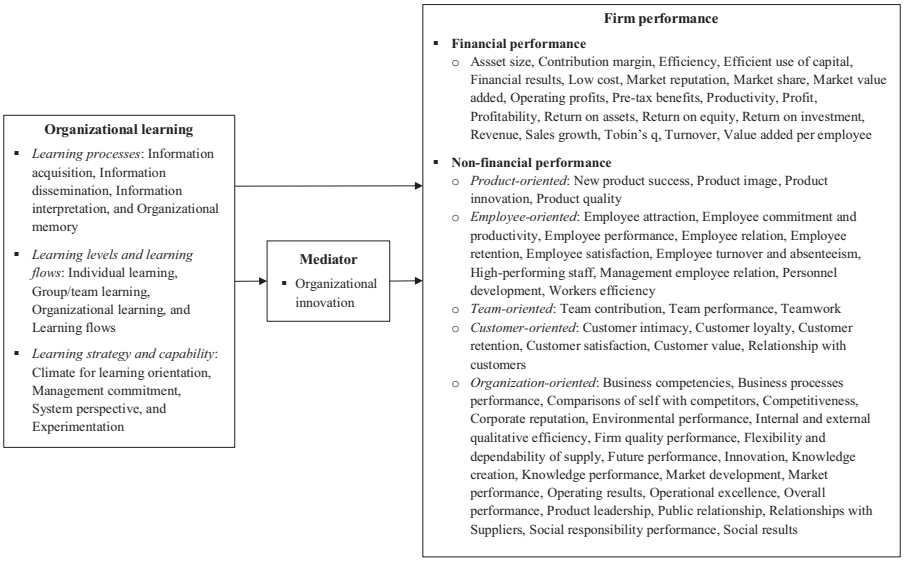

Figure 2.
Model of the relationship between OL and FP

speeches and case studies) to explore the relationships between OL dimensions and FP. By doing so, such studies can provide more insights into the how OL dimensions manifest across different contexts and how they improve FP through their combinations and interactions.

Third, to advance the knowledge of the relationship between OL and FP, future studies should include more competing factors and boundary variables in their research model. In addition, researchers should examine new intervening variables (mediators) and compare their incremental variance with OI – a mediator outlined in this review.

5. Conclusion, implications and limitation

This study aims to provide a systematic review of the relationship between OL and FP to evaluate how far the field has come. Three key themes related to the OL–FP relationship have emerged from the review. First, research on OL and FP has been quantitatively conducted in a variety of countries and sectors. Second, OL dimensions foster both financial and non-financial performance of firms through their combinations and interactions. Third, the relationship between OL and FP is mediated by OI.

This study has several theoretical and practical implications. The findings from this study outline a variety of OL dimensions and different measures of FP (financial and non-financial), which contribute to the development of the OL and FP theory. Moreover, a model of the cause–effect relationship between OL and FP, with OI as a mediating variable, is outlined for future empirical validation and refinement. Throughout this review, we also identified research gaps and directions for future research, from which recommendations for enhancing OL and FP research are provided. For practicing managers, this review demonstrates that FP can be improved through several different dimensions of OL. Managers wanting to enhance the performance of their firms should analyze the demand for OL and develop those OL dimensions. On the development of OL system, managers may have a chance to evaluate both financial and non-financial performance to figure out whether OL dimensions can actually foster these performance outcomes.

Finally, the literature search returned only quantitative studies on OL and FP, which were accepted within the scope of this review. Therefore, researchers are encouraged to systematically examine qualitative research and case studies on OL and FP in the future. Another potential direction for future studies could be to conduct systematic reviews on the relationship between OL and FP in a specific sector to see whether the research findings vary across diverse contexts.

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*Indicates a source that was included in the systematic review.

Further reading

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Klammer, A. and Gueldenberg, S. (2019), "Unlearning and forgetting in organizations: a systematic review of literature", *Journal of Knowledge Management*, Vol. 23 No. 5, pp. 860-888.

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Review of empirical research on leadership and organizational learning

Thanh Tung Do and Ngoc Khuong Mai

Abstract

Purpose – *This paper aims to investigate how the relationships between different leadership approaches and organizational learning have been examined in the literature, from which future research areas can be recommended.*

Design/methodology/approach – *This systematic literature review applies matrix method to examine major literature in leadership and organizational learning. A total of 57 peer-reviewed English publications from 45 journals were selected and analyzed.*

Findings – *The synthesis of these empirical studies revealed as follows: the relationship between leadership and organizational learning has been mostly quantitatively investigated in many countries and sectors; multiple leadership styles have been identified to ameliorate processes, levels and capabilities of organizational learning and transformational leadership still remains the most commonly used style; there are mediating mechanism and boundary conditions in the relationship between leadership and organizational learning.*

Research limitations/implications – *The literature search in this study was mainly focused on English articles only; therefore, some papers in other languages may have not been included.*

Practical implications – *This review offers an overall picture of the existing knowledge of organizational learning and leadership that will be fruitful for practitioners to understand and replicate these concepts.*

Originality/value – *There are little systematic literature reviews on the relationship between leadership and organizational learning. This paper is among the first systematic reviews to analyze how leadership has been associated with organizational learning and provide potential research directions.*

Keywords *Organizational learning, Leadership, Leadership styles*

Paper type *Literature review*

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1. Introduction

Organizational learning progresses and enables organizations to gain competitive edge (Weick, 1991). According to Noruzy *et al.* (2012), organizations that have higher-level organizational learning can address today's challenges such as innovation and organizational performance. Therefore, it is quite understandable why both industry and academia have paid increased attention to understanding the learning processes and capabilities, as well as the most favorable conditions for organizational learning (Lähteenmäki *et al.*, 2001).

Unfortunately, there are various approaches to organizational learning and most of them were stretched to fit the interpretations of each scholar. According to Wang and Ahmed (2003), the existence and interchangeable usage of multiple conceptualizations of organizational learning have caused strong bias and definitional confusion for researchers. As the poor conceptualization leads to incomplete understanding and difficulties to find synthesis (MacKenzie, 2003), there is urgent need to create a holistic framework that encompasses different aspects of organizational learning.

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Besides, earlier scholars have identified the important role of leadership in fostering learning in organizations (Senge, 1990; Amitay *et al.*, 2005). However, the rapid growth of leadership research has revealed fundamental concerns about study designs and replications of familiar leadership approaches such as transactional and transformational leadership (Yukl, 2013; Tourish, 2019). Added to this, as leadership theories have evolved dramatically and resulted in various leadership approaches in the past decade (Day *et al.*, 2014), it is difficult to develop a comprehensive model that encompasses the leadership approaches requisite for organizational learning. To date, no successful attempts to create a unifying framework for synthesizing and expanding this research node have been accomplished. For example, Vera and Crossan (2004) conducted a literature review to synthesize literature on strategic leadership theory and organizational learning. Their findings revealed that transformational and transactional behaviors of leaders stimulate both exploration and exploitation of organizational learning. However, the scope of Vera and Crossan's (2004) study was limited to only transformational and transactional approaches of leadership at strategic level.

To address these gaps within the literature, we believe an updated systematic review of the relationship between leadership and organizational learning is needed. In this study, we evaluate how far the field has come by exploring how the relationship between leadership and organizational learning has been empirically investigated in terms of distribution of publications, research context and research methodology. We will also review multiple leadership approaches that have been recognized as drivers of different conceptualizations of organizational learning. Furthermore, our review will provide a more nuanced conceptual model showing the relationship between leadership and organizational learning and present potential research directions for future studies.

This review is important because it synthesizes the available knowledge and adds structure to the scattered literature on leadership and organizational learning. The paper also makes an important methodological contribution by applying systematic review method originating from the medical field to the leadership and organizational learning studies field, where concepts are poorly conceptualized and there are little systematic studies. This study also has managerial contributions, helping practitioners and businesses that focus on organizational learning development to ensure that they invest and develop the right leadership.

The paper is structured as follows: in the Section 2 we present a review of organizational learning, leadership and their relationship. Section 3 describes the research method and literature search strategy. After a presentation of the results in Section 4, the remaining include discussion and recommendation for future research in Section 5, implications for research and practice in Section 6. Finally, concluding remarks in Section 7.

2. Theoretical background

2.1 Organizational learning

The concept of organizational learning dated back to the 1960s by the work of Cangelosi and Dill (1965) on individual and organizational learning and then expanded significantly after the book by Argyris and Schön (1978), *Organizational learning: A Theory of Action Perspective*. Over decades, many concepts and definitions of organizational learning have flourished in the literature. Organizational learning was commonly defined as processes of gaining new insights from experiences that consequently impact individual behaviors and organizational dynamics (Fiol and Lyles, 1985; Huber, 1991). Another related concept is learning organization. By definition, learning organization is a new kind of successful organization whose environment promotes constant learning through creating, acquiring, transferring knowledge and modifying behaviors (Senge, 1990; Garvin, 1993). According to Örtenblad (2001, p. 125), "a learning organization was simply an organization that learned." Some scholars have distinguished between organizational learning and learning organization, arguing that learning organization is an organizational form that requires efforts to be developed, whereas organizational learning is

learning activities or processes that effortlessly exist in organizations (Tsang, 1997). There are also quite a few scholars who considered organizational learning "as a special case – or a version – of learning organization" (Örtenblad, 2018, p. 152) and also those who thought the opposite (Easterby-Smith, 1997). As "organizational learning" and "learning organization" are used interchangeably, both terminologies are considered as compatible with the aim of this review. However, this review focuses on the concept of organizational learning and does not include literature that relates to learning organization, for example, how to build a learning organization.

The conceptualizations of organizational learning have been broadly discussed in the literature. Organizational learning was first conceptualized as single-loop and double-loop learning in a seminal study by Argyris and Schön (1978). Single-loop learning refers to changes to the anticipated results of the firms, whereas double-loop learning challenges and refines these changes. Adaptive and generative learning were postulated by Senge (1990). The former is suitable for organizations operating in a slow-changing markets, while the latter is essential for organizations operating in dynamic environments (Wijnhoven, 2001). March (1991) conceptualized organizational learning into learning processes consisting of exploitation from previous knowledge and exploration for new knowledge. Afterward, to address the deficiencies in the earlier conceptualizations, Huber (1991) introduced four learning processes. Information acquisition is how organizations learn from experiences within the organizations and also from external environment. Information distribution refers to how knowledge is shared across the organizations. Information interpretation deals with how organizations make sense of the acquired and shared knowledge. Organizational memory is how information is stored and retrieved to be used in the future. In addition, some scholars advocated a notion that organizational learning includes learning at different levels (individual, team and organization) and two learning flows (feedforward and feedback) (Crossan *et al.*, 1999; Di Milia and Birdi, 2010). A few authors referred to organizational learning as learning capabilities used to create knowledge and allow an organization to learn (Limpibunterng and Johri, 2009; Mallén *et al.*, 2015).

No matter how advanced these conceptualizations of organizational learning are, the concept of organizational learning still remains vague and not much has been gained regarding theory or terminology clarification (Lähteenmäki *et al.*, 2001). Therefore, Lähteenmäki *et al.* (2001) suggested that a model encompassing different conceptualizations of organizational learning is urgently needed.

2.2 Leadership

According to Caulfield (2013), leadership exists to profoundly connect people in achieving the common good. There have been various definitions of leadership, ranging from the roles played by individuals to catalyze better individual and organizational outcomes (Jogulu, 2011), the process where leaders influence their followers toward a common goal (Northouse, 2018), to the process where leaders facilitate the achievement of mutual goals and enables firms to overcome future challenges (Yukl, 2013).

A plethora of leadership research covers a wide range of theories, moving from leaders' traits and behaviors to more complex and multifaceted concepts recently. Marked by the work of Stogdill (1948), the trait theory assumes that powerful leaders possess innate attributes. Behavioral theories, on the other hand, focus on the behaviors of leaders such as task-oriented, people-oriented and change-oriented (Blake and Mouton, 1968; Yukl, 2013). Contingency theory emphasizes that leaders have to adjust their behaviors to match the environment (Hersey and Blanchard, 1969). Afterward, transactional and transformational leadership was articulated by Burns (1978). He defined transformational leadership as a process of eliciting greater motivation from followers by envisioning a clear and inspiring future. In contrast, transactional leadership refers to a contractual process in which leaders determine employees' expectations and offer rewards in exchange for their performance. Complexity leadership theory was introduced recently, positing that leadership involves structures, activities and processes that

help the firms thrive in the environment full of uncertainty (Clarke, 2013). This leadership approach is said to share some similarities with transformational leadership and can be used in firms operating in volatile and globalized markets (Burchell, 2009). Moreover, complexity leadership has been found to remediate the limitations of transformational leadership in explaining knowledge, creativity and learning processes that enable organizations to adapt to today's knowledge-driven, complex and competitive environment (Marion and Uhl-Bien, 2002). Unfortunately, as complexity leadership "has been hampered by the ongoing influence of overly heroic models of leadership," publications on complexity leadership are mostly theoretical work and empirical studies on this topic are scarce (Tourish, 2019, p. 233).

According to Yukl (2008), leaders can influence the performance and effectiveness of an organization through a variety of leadership approaches. However, leadership research is inconclusive and biased toward simple methodology and replications of single and familiar leadership styles (Yukl, 2013). Therefore, more comprehensive studies that use multiple leadership theories, multiple methods and multilevel analysis to provide better understanding of leadership and its influences are needed. In the same vein, Day *et al.* (2014, p. 63) stated that future studies should "goes far beyond merely choosing a particular leadership theory and training people in behaviors related to that theory." Instead, a model conceptualizing different leadership theories needs to be put forward and empirically validated.

2.3 Leadership and organizational learning

According to Waldman *et al.* (2009), leadership has played an important role in organizational learning, as the economy has become more knowledge-based. In the past, some attempts have been made to understand the correlation between leadership and organizational learning. Earlier scholars emphasized the role of leadership in fostering psychological safety requisite for organizational learning (Edmondson, 1999), while some others described leaders as facilitators of organizational learning (Macneil, 2001). Moreover, leadership is embedded in the concept of learning organization and acts as a building block that reinforces learning (Senge, 1990). According to Garvin *et al.* (2008), leaders prompt dialogue and entertain diverse viewpoints, thereby encouraging people to learn and offer new ideas. When people in power articulate a shared vision, provide necessary resources – and thereby act as a learning architect – people in the organizations feel empowered to learn (Hitt, 1995). Leaders also promote team learning (Macneil, 2001) and transform organizational culture to facilitate organizational learning (Popper and Lipshitz, 2000).

In addition, leadership and organizational learning are multifaceted concepts, thereby attracting the attention of researchers to combine these different but closely related scientific fields. In recent studies, leadership has been found to be a driver of learning in organizations (Khurosani, 2018; Nyukoron, 2016). Vashdi *et al.*'s (2018) study of nine organizations in Israel also revealed that each component of organizational learning was influenced by different leadership behaviors.

Although there are implicit assumptions and empirical evidence on the relationship between leadership and organizational learning, researchers only deal with selective number of leadership and organizational learning variables. With the study of leadership and organizational learning gaining growing attention from scholars, it is important to systematically understand the impact leadership has on organizational learning.

3. Methodology

To ensure a holistic, scientific, transparent and reproducible review we apply one of the most widely accepted methods called systematic literature review (Thomé *et al.*, 2016). This is particularly important considering our main aim was to synthesize existing literature and identify opportunities for future studies on leadership and organizational learning. Systematic literature review was first developed in the medical field and has also been adopted in the management

and leadership research (Frangieh and Yaacoub, 2017). This method differs from traditional literature review because it is comprehensive and includes rigorous evaluation criteria, which can help researchers mitigate bias and filter out inappropriate content (Tranfield *et al.*, 2003).

3.1 Search strategy

Pertinent papers on leadership and organizational learning were identified through exhaustive manual searches of web of Science, Emerald, Science Direct, Google Scholar and ProQuest databases. The authors used keywords comprising "leadership," "leadership styles," "organizational learning," "learning organization," and "learning capability" and confined the search to peer-reviewed academic journal articles published in the English language. No restriction was imposed on the year of publication. This initial search yielded 497 potentially relevant papers. The publication pool was then reduced to 331 papers after duplicates, book reviews, editorials and essays had been eliminated.

Afterwards, standards for inclusion were developed. For papers to be included, they had to be quantitative, qualitative or mixed method empirical studies of leadership and organizational learning. The abstracts of the retrieved articles were read to evaluate their relevance to the aims of this study and the inclusion criteria. After this preliminary assessment, the set of papers was reduced to 146. The remaining studies were then read in full and 61 papers that do not focus on the relationship between leadership and organizational learning were filtered out. For example, the study by Atwood *et al.* (2010) aims to evaluate leadership and organizational learning but focuses on examining a leadership program that promotes leadership and learning of employees.

Besides, we removed 18 literature reviews and 12 articles about learning organization, which fall outside the definition of organizational learning in this study. For example, the studies by Chang and Lee (2007) and Delić *et al.* (2017) addressed leadership and learning of organizations but they focus on the development and operation of learning organizations rather than the organizational processes or capabilities within organizations.

All filtering processes were carried out independently by each author. Slight differences in the results at each stage were discussed till consensus was reached. To include all relevant literature in our study, we also reviewed the reference lists of the selected publication and located two additional articles. In total, 57 publications satisfied the inclusion criteria and were chosen for further analysis.

3.2 Analysis of the retrieved articles

A literature review matrix was created based on Garrard's (2004) guidelines to extract and organize information from 57 papers. Reflecting on the objectives of this review, the following information was abstracted: authors, journal titles, region and industry, research method, leadership styles and instrument, organizational learning level and instrument and findings (Table 1).

4. Findings

This study seeks to provide a comprehensive view on how leadership and organizational learning have been examined in various contexts. The synthesis of these empirical studies revealed the following findings.

4.1 Distribution of publications

The year-wise distribution of publications on leadership and organizational learning has been shown in Figure 1. An earlier paper on leadership and organizational learning was from Jack Lam *et al.* (2002), who quantitatively examined the relationship between

Table 1 Literature review matrix table

Authors	*Journal titles*	*Region/sector*	*Method*	*LS/instrument*	*OL level/instrument*	*Findings*
Jack Lam *et al.* (2002)	*International Journal of Educational Management*	Taiwan/ education	Quantitative/ MR	TF/ Leithwood and Jantzi (1998)	Organizational/ self-developed	TF is an internal condition of OL
Amitay *et al.* (2005)	*The Learning Organization*	Israel/ healthcare	Quantitative/ correlation	TA and TF/MLQ	Organizational/ Ellis and Globerson (1996)	TF has a positive relationship with OL
Aragón-Correa *et al.* (2005)	*Industrial Marketing Management*	Spain/ multi-sector	Quantitative/ SEM	TF/ Podsakoff' *et al.* (1990)	Organizational/ combined scale	Leadership has a strong and significant effect on OL
Lloréns Montes *et al.* (2005)	*Technovation*	Spain/ not specified	Quantitative/ SEM	Support leadership/ combined scale	Organizational/ Kale *et al.* (2000)	Support leadership positively influenced OL
Siebenhüner and Arnold (2007)	*Business Strategy and the Environment*	Germany/ not specified	Qualitative/ case study	Participatory leadership/ N/A	Organizational/ N/A	Participatory leadership motivates employees and supports the diffusion of information and new knowledge
García-Morales *et al.* (2008)	*Journal of Organizational Change Management*	Europe, America/ pharmaceutical	Quantitative/ SEM	TF/ Podsakoff *et al.* (1990)	Organizational/ combined scale	Leaders reinforce OL by encouraging system thinking and stimulating an environment of dialogue
Swift and Hwang (2008)	*The Learning Organization*	USA/ manufacturing	Qualitative/ casesStudy	Generic leadership/ N/A	Organizational/ N/A	Executive leadership offers strong support for capturing and sharing information
Limpibunterng and Johri (2009)	*The Learning Organization*	Thailand/ service	Quantitative/ SEM	Leadership tasks/ self-developed	Organizational/ self-developed	Collaborative leadership tasks significantly impact the development of OL
Nemanich and Vera (2009)	*The Leadership Quarterly*	USA/ not specified	Quantitative/ SEM	TF/ MLQ	Team/ combined scale	TF fosters a learning culture that positively relates to the exploration and exploitation of learning
Zagoršek *et al.* (2009)	*Journal for East European Management Studies*	Slovenia/ not specified	Quantitative/ SEM	TA and TF/ MLQ	Organizational/ combined scale	TF directly affects information acquisition and behavioral/cognitive changes, but indirectly affects information distribution and interpretation
Kurland *et al.* (2010)	*Journal of Ed ucational Administration*	Israel/ education	Quantitative/ MR	TA and TF/ MLQ	Organizational/ Kurland and Hertz-Lazarowitz (2006)	TF can predict organizational vision and learning processes
Millward and Timperley (2009)	*Journal of Educational Change*	New Zealand/ education	Qualitative/ case study	Instructional leadership/ N/A	Organizational/ N/A	Instructional leaders support the development of cognitive systems and organizational memory, thereby improving the schools' learning capacity
Rijal (2010)	*International Journal of Management and Information Systems*	Nepal and India/ pharmaceutical	Quantitative/ MR	TF/ Podsakoff *et al.* (1990)	Organizational/ Marquardt (1996)	TF and organizational culture positively affect the development of OL
Singh (2010)	*Benchmarking: An International Journal*	India/ high-tech	Quantitative/ MR	Directive, supportive, consulting, delegating/ Pareek (2003)	Organizational/ Pareek (2003)	Consulting and delegating leadership positively affect the processes of OL. In contrast, directive and supportive leadership have negative relationship with OL processes
Camps and Rodríguez (2011)	*Personnel Review*	Costa rica/ education	Quantitative/ SEM	TF/ Podsakoff *et al.* (1990)	Individual/ Chiva *et al.* (2007)	TF has a positive influence the organization's learning capability
Camps and Torres (2011)	*Systems Research and Behavioral Science*	Costa rica/ education	Quantitative/ SEM	TA/ Podsakoff *et al.* (1990)	Individual/ Chiva *et al.* (2007)	Contingent reward behavior of leaders positively relates to the learning capability of organization
Hsiao and Chang (2011)	*Asia Pacific Education Review*	Taiwan/ education	Quantitative/ SEM	TF/ MLQ	Organizational/ combined scale	TF has a significant and positive relationship with OL
Mirkamali *et al.* (2011)	*Procedia– Social and Behavioral Sciences*	Not identified/ manufacturing	Quantitative/ MR	TF/ MLQ	Organizational/ N/A	Each TF factor has a positive and meaningful connection with OL. Idealized influence behavior is the most important predictor of OL
Bhat *et al.* (2012)	*Team Performance Management: An International Journal*	India/ manufacturing	Quantitative/ MR	TA and TF/ MLQ	Team/ Pareek (2003)	TA has a significant and positive connection with OL
García-Morales *et al.* (2012)	*Journal of Business Research*	Spain/ multi-sector	Quantitative/ SEM	TF/ McColl-Kennedy and Anderson (2002)	Organizational/ combined scale	TF designs and drives systems of sharing and transferring information in organization
Nafei *et al.* (2012)	*Journal of Management and Strategy*	Saudi Arabia/ banking	Quantitative/ MR	TA and TF/ MLQ	Organizational/ Senge *et al.* (1994)	TA and TF have a significantly direct impact on OL
Noruzy *et al.* (2012)	*International Journal of Advanced Manufacturing Technology*	Iran/ multi-sector	Quantitative/ SEM	TF/ Podsakoff *et al.* (1990)	Organizational/ García-Morales *et al.* (2007)	TF directly influences OL processes of collecting, analyzing and disseminating information

(*continued*)

Table 1

Authors	Journal titles	Region/sector	Method	LS/instrument	OL level/instrument	Findings
Theodorakopoulos and Figueira (2012)	*Thunderbird International Business Review*	UK/ high-tech	Qualitative/ case study	Strategic leadership/ N/A	Organizational/ N/A	Strategic leadership positively affects the development of OL processes
Abbasi and Zamani-Miandashti (2013)	*Higher Education*	Iran/ education	Quantitative/ SEM	TF/ MLQ	Organizational/ self-developed	TF has a significantly positive influence on faculties' OL
Choudhary *et al.* (2013)	*Journal of Business Ethics*	Pakistan/ multi-sector	Quantitative/ SEM	TF, Servant leadership/ combined scale	Organizational/ García-Morales *et al.* (2008)	TF has more influence on OL than servant leadership
Alsalami *et al.* (2014)	*Journal of Applied Management and Entrepreneurship*	Dubai/ not specified	Quantitative/ CFA	TF/ Singh and Krishnan (2007)	Organizational/ N/A	TF strongly relates with OL in both the public and private firms
Aydin *et al.* (2015)	*American Journal of Educational Studies*	Turkey/ education	Quantitative/ MR	Strategic leadership/ Pisapia (2009)	Multi-level/ Marsick and Watkins (2003)	Transforming behaviors of leaders are the most significant predictor of OL, followed by ethical, political and managing behaviors
Berson *et al.* (2015)	*Personnel Psychology*	Israel/ education	Quantitative/ SEM	Charismatic leadership/ MLQ	Multi-level/ Bontis *et al.* (2002)	Charismatic leadership affects OL through trust within the team
Džinić (2015)	*Ekonomska misao i praksa*	Croatia/ government	Quantitative/ correlation	Administrative leadership/ combined scale	Multi-level/ combined scale	Administrative leadership facilitates the processes of OL in administrative firms
Imamoglu *et al.* (2015)	*Journal of Global Strategic Management*	Turkey/ industrial	Quantitative/ MR	Participative, supportive, instrumental leadership/ Ogbonna and Harris (2000)	Organizational/ Jerez-Gomez *et al.* (2005)	Participative, supportive and instrumental leadership have positive connections with OL capability
Khalifa and Ayoubi (2015)	*International Journal of Educational Management*	Syria/ education	Quantitative/ MR	TA and TF/ MLQ	Organizational/ Lopez *et al.* (2004)	Contingent reward (TA) and inspirational motivation (TF) have significant effects on OL
Mallén *et al.* (2015)	*International Journal of Manpower*	Spain/ for-profit firms	Quantitative/ SEM	Altruistic leadership/ Barbuto and Wheeler (2006)	Organizational/ Chiva *et al.* (2007)	Altruistic behaviors of leader enhance the learning capability of organization
Molodchik and Jardon (2015)	*The Learning Organization*	Russia/ manufacturing	Quantitative/ SEM	TF/ self-developed	Organizational/ combined scale	There is a positive relationship between TF and OL
Mutahar *et al.* (2015)	*International Journal of Economics and Financial Issues*	Saudi Arabia/ tele-communication	Quantitative/ SEM	TF/ Garci¨a-Morales *et al.* (2012)	Organizational/ Garci¨a-Morales *et al.* (2012)	TF is found to positively influence OL
Golmoradi and Ardabili (2016)	*Procedia– Social and Behavioral Sciences*	Iran/ healthcare	Quantitative/ SEM	Participative, supportive, instrumental leadership/ Combined scale	Organizational/ Lopez *et al.* (2004)	Leadership style has greater impact on OL than social capital
Imran *et al.* (2016)	*The Learning Organization*	Pakistan/ banking	Quantitative/ MR	TF/ Carless *et al.* (2000)	Organizational/ Bess *et al.* (2010)	TF has a significant and positive impact on OL
Rosmaniar and Marzuki (2016)	*Higher Education Studies*	Indonesia/ education	Quantitative/ MR	Instructional leadership/ N/A	Organizational/ N/A	Instructional leadership is found to improve the school's OL processes
Hasson *et al.* (2016)	*Journal of Workplace Learning*	Sweden/ forest	Quantitative/ intervention	TF/ N/A	Organizational/ combined scale	TF encourages learning and feedback systems in organization, thereby improving OL
Sattayaraksa and Boon-itt (2016)	*Leadership and Organization Development Journal*	Thailand/ manufacturing	Quantitative/ SEM	TF/ combined scale	Organizational/ combined scale	TF sets vision of effective OL, motivates employees to learn and influences the organizational processes of acquiring and managing information
Liao *et al.* (2017)	*Leadership and Organization Development Journal*	Taiwan/ multi-sector	Quantitative/ SEM	TA and TF/ MLQ	Organizational/ Jerez-Gomez *et al.* (2005)	Leadership has a significant and positive correlation with OL
Megheirkouni (2017)	*International Journal of Organizational Analysis*	UK/ sport	Quantitative/ hierarchical regression	TA and TF/ MLQ	Organizational/ Lopez *et al.* (2004)	Management by exception – active (TA) and idealized leadership (TF) have equal impact on the facilitation of OL
Salas-Vallina *et al.* (2017)	*Personnel Review*	Spain/ hospital	Quantitative/ SEM	TF/ Rafferty and Griffin (2004)	Organizational/ Chiva *et al.* (2007)	TF fosters organizational learning and ultimately improves happiness at work
Shao *et al.* (2017)	*Information and Management*	China/ software	Quantitative/ SEM	TA and TF/ MLQ	Organizational/ March (1991)	TF has a strong effect on OL and this connection is mediated by culture. TA has a weak but direct relationship with OL
Uddin *et al.* (2017)	*IIUC Studies*	Bangladesh/ education	Quantitative/ MR	TA and TF/ MLQ	Organizational/ Lopez *et al.* (2004)	Contingent reward (TA) and idealized influence and individualized consideration (TF) have significant and positive impact on OL
Ha *et al.* (2018)	*Journal of Management and Strategy*	Vietnam/ SMEs	Quantitative/ SEM	TF/ Podsakoff *et al.* (1990)	Organizational/ Aragón-Correa *et al.* (2005)	TF has a positive and significant influence on OL
Khurosani (2018)	*Advanced Science Letters*	Indonesia/ creative sector India/ multi-sector	Quantitative/ SEM	TF/ MLQ	Organizational/ combined scale	Transformational leaders significantly and positively impact OL

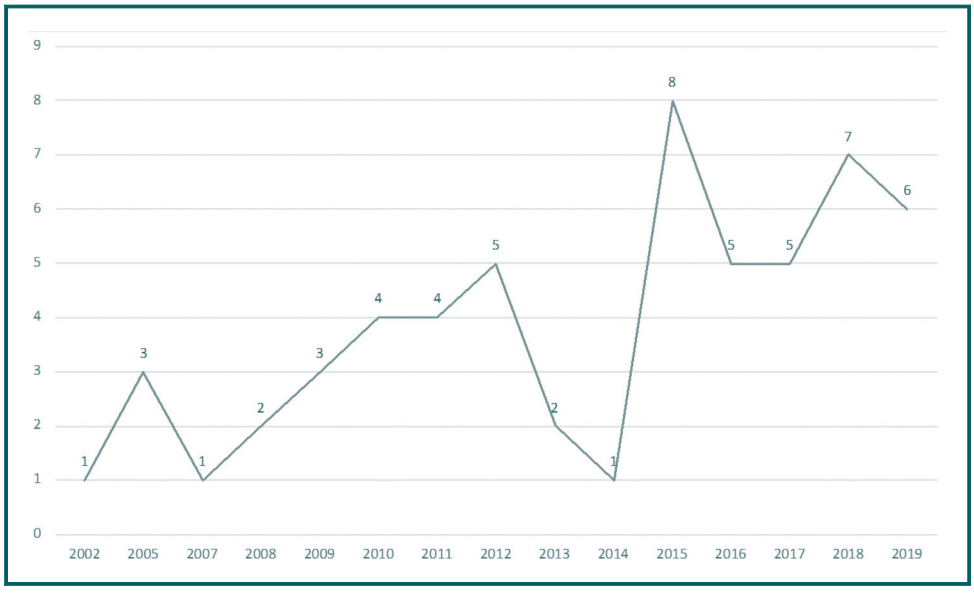
(*continued*)

Table 1

Authors	*Journal titles*	*Region/sector*	*Method*	*LS/instrument*	*OL level/instrument*	*Findings*
Naqshbandi and Tabche (2018)	*Technological Forecasting and Social Change*		Quantitative/ hierarchical regression	Empowering leadership/ Zhang and Bartol (2010)	Organizational/ Marsick and Watkins (2003)	Empowering leaders create an effective learning culture that supports the creation, exchange and utilization of new information
Park and Kim (2018)	*Journal of Knowledge Management*	Korea/ manufacturing	Quantitative/ SEM	TF/ Podsakoff *et al.* (1990)	Organizational/ García-Morales *et al.* (2012)	TF has an indirect impact on OL through knowledge climate and behavior and interpersonal trust
Salas-Vallina and Alegre (2018)	*Leadership and Organization Development Journal*	Spain/ banking	Quantitative/ CFA	Altruism/ Barbuto and Wheeler (2006)	Organizational/ Chiva *et al.* (2007)	Altruism in leaders significantly impacts OL capability
Van *et al.* (2018)	*International Journal of Business Administration*	China/ multi-sector	Quantitative/ SEM	TF/ Podsakoff *et al.* (1990)	Organizational/ Lopez *et al.* (2011)	TF plays an important role in enhancing knowledge dissemination and OL
Vashdi *et al.* (2018)	*The Learning Organization*	Israel/ multi-sector	Quantitative/ hierarchicalmodeling	TF/ Rafferty and Griffin (2004)	Organizational/ Lopez *et al.* (2005)	Vision and intelle ctual stimulation and supportive leadership are found to directly affect information distribution. Inspirational communication and personal recognition is found to be related to information interpretation
Pasamar *et al.* (2019)	*European Journal of Management and Business Economics*	Spanish/ manufacturing	Quantitative/ SEM	TA and TF/ combined scale	Organizational/ combined scale	TF has a direct and positive correlation with exploitation learning
Hanh Tran and Choi (2019)	*Journal of Pacific Rim Psychology*	Vietnam/ service	Quantitative/ SEM	Inclusive leadership/ Carmeli *et al.* (2010)	Organizational/ Yang *et al.* (2004)	Inclusive leadership has a positive influence on OL
Mohsin *et al.* (2019)	*International Business Management*	Arab/ government	Quantitative/ SEM	Strategic leadership/ N/A	Organizational/ N/A	Strategic leadership significantly affects OL culture
Ur Rehman *et al.* (2019)	*Journal of Global Entrepreneurship Research*	Malaysia/ SMEs	Quantitative/ SEM	TA and TF/ combined scale	Organizational/ Hult (1998)	Components of TA and TF have a significant influence on OL
Muafi and Uyun (2019)	*International Journal for Quality Research*	Indonesia/ SMEs	Quantitative/ SEM	Leadership agility/ Joiner and Josephs (2007)	Organizational/ Marquardt (1996)	Leadership agility encourages employees to be more innovative, thus contributing greatly to the improvement of OL
Kim and Park (2019)	*International Journal of Manpower*	Korea/ manufacturing	Quantitative/ SEM	TF/ Podsakoff *et al.* (1990)	Organizational/García-Morales *et al.* (2007)	TF has a direct relationship with OL

Notes: LS = leadership styles; OL = organizational learning; SMEs = small and medium-sized enterprises; MR = multiple Regression; SEM = structural equation modeling; TA = transactional leadership; TF = transformational leadership; MLQ = multifactor leadership questionnaire

Figure 1 Year-wise distribution of publications on leadership and organizational learning



leadership and organizational learning. Besides, most publications on leadership and organizational learning were published in recent years (2012-2019). Despite some fluctuations, the distribution of publications shows a gradual increase in the number of work on these fields. This trend has indicated that there exist increasing interests in the current topic and more papers on this will appear in the future.

Due to the interdisciplinary nature of leadership and organizational learning, research on these fields has been published in a wide variety of outlets (n = 45). Among 57 papers, there are 44 articles that were published in 34 SCOPUS-indexed journals. We were unsurprised that the top contributors include *Journal of Knowledge Management*; it is a premier journal for research on knowledge and organizational learning. Other prestigious journals that feature significantly in the review include *The Learning Organization* (n = 6) and *Leadership and Organization Development Journal* (n = 3). Notably, one paper written by Nemanich and Vera (2009) appeared in a top journal *The Leadership Quarterly*. These findings also revealed that research on leadership and organizational learning has increasingly distributed over a range of business management, education and social science journals.

4.2 Research context and methodology

The relationship between leadership and organizational learning was investigated in different regions and industries. The samples of 57 articles were found in 31 countries, in which Spain ranking first with 6 papers, followed by Israel (n = 4). The wide geographical distribution is indicative that studies on leadership and organizational learning have gained increasing attention worldwide. Besides, while most studies were conducted in education (n = 12) and manufacturing (n = 8) industry, research on small and mid-size enterprises (SMEs) has been scarce (n = 3).

There are two research methodologies used, in which quantitative approach accounted for 93% and qualitative approach constituted of only 7%. Among 53 quantitative studies, structural equation modeling (n = 32) and multiple regression (n = 12) are among the most popular data analysis techniques. Cases studies were used in 4 qualitative studies. No mixed-method research was found.

4.3 The relationship between leadership and organizational learning

Given the developmental and multifaceted nature of organizational learning, it is not surprising that organizational learning is identified to be related with a board range of leadership styles. Our review shows that transformational leadership is the most frequently used approach, while there is a limited coverage of other styles such as strategic, altruistic and empowering leadership. Most papers focused on transformational leadership and its application in fostering organizational learning (n = 24); while some publications discussed a simultaneous application of both transactional and transformational leadership (n = 12). Notably, studies on transactional leadership and organizational learning have yielded contradictory perspectives. For example, Amitay *et al.* (2005) studied healthcare organizations in Israel and found that transactional leadership negatively associated with organizational learning. However, Uddin *et al.*'s (2017) research findings indicated that contingent rewards in transactional leadership positively affects organizational learning. The instruments used in these studies were mostly the Multifactor Leadership Questionnaire (n = 14) and Podsakoff *et al.*'s (1990) leadership behavior inventory (n = 9). Besides, other leadership styles have been found to reinforce organizational learning, for example, generic leadership (Golmoradi and Ardabili, 2016), strategic leadership (Theodorakopoulos and Figueira, 2012), instructional leadership (Millward and Timperley, 2009) and altruistic leadership (Salas-Vallina and Alegre, 2018). Our review also found three papers that combined different leadership theories, for example, transformational leadership and servant leadership in Choudhary *et al.*'s (2013) study.

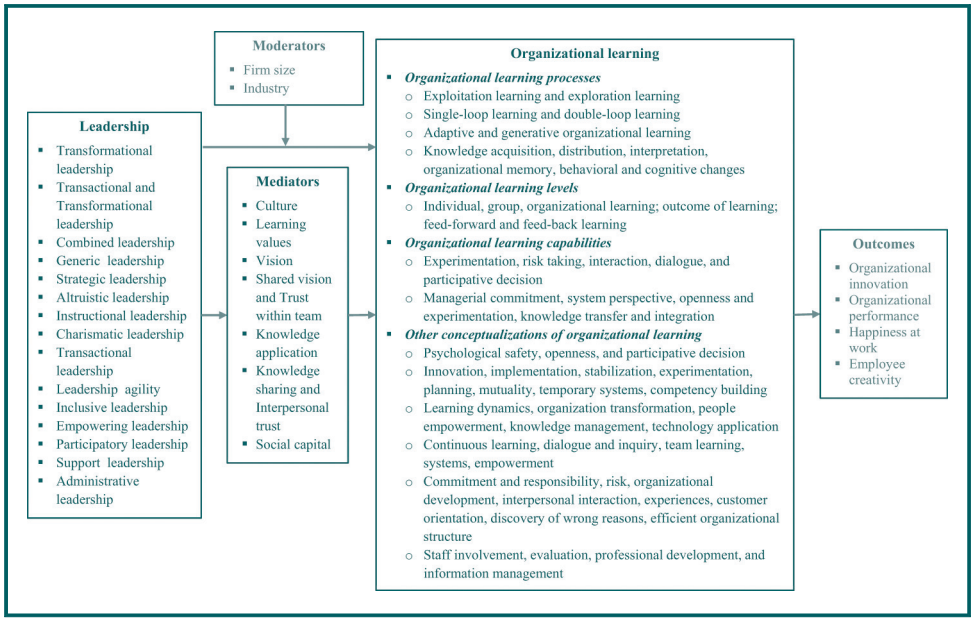
In the reviewed studies, organizational learning has been viewed as a single-level phenomenon, particularly at the individual level and organizational level (n = 52). Our study only found three published articles examined multi-level organizational learning (Aydin *et al.*, 2015; Berson *et al.*, 2015; Džinić, 2015) and two papers, which aggregate and analyze organizational learning at the group level (Bhat *et al.*, 2012; Nemanich and Vera, 2009). Across all of reviewed manuscripts, there were a considerable number of studies that treated organizational learning as a single construct (n = 32). While there are studies using multiple constructs to measure organizational learning (n = 25), all of these studies have conceptualized organizational learning in several ways (Figure 2 for more details). In terms of instruments, scholars have used different measures of organizational learning in examining its relationship with leadership. The most widely used instrument is the scale developed by Chiva *et al.* (2007) (n = 5), followed by García-Morales *et al.* (2007, 2012) measure (n = 4) and Lopez *et al.*'s (2004) scale (n = 3). There were 12 studies that combined multiple scales in measuring organizational learning (Hasson *et al.*, 2016; Pasamar *et al.*, 2019).

The findings also revealed a number of mediating mechanism and boundary conditions in the relationship between organizational learning and leadership. As for mediators, specific contributions from the literature have reported learning values (Amitay *et al.*, 2005) and vision (Kurland *et al.*, 2010) as mediating factors of the relationship between leadership and organizational learning. Other mediating variables identified include: culture (Abbasi and Zamani-Miandashti, 2013; Molodchik and Jardon, 2015), shared vision and trust within team (Berson *et al.*, 2015), knowledge application (Imran *et al.*, 2016), knowledge sharing and interpersonal trust (Park and Kim, 2018) and social capital (Golmoradi and Ardabili, 2016). Firm size and industry were investigated as moderators by Aragón-Correa *et al.* (2005) and Liao *et al.* (2017). However, their study results clearly showed that these variables cannot moderate the relationship between leadership and organizational learning.

Among outcomes of organizational learning in the reviewed studies, organizational innovation and organizational performance have received the most attention (Ha *et al.*, 2018; Liao *et al.*, 2017; Aragón-Correa *et al.*, 2005; Mutahar *et al.*, 2015). Organizational learning also catalyzes employee outcomes such as happiness at work (Salas-Vallina and Alegre, 2018) and creativity (Khurosani, 2018).

The findings elicited from 57 empirical studies on the relationship between leadership and organizational learning have been described above. Preceding the discussion, we outline a

Figure 2 Model of the relationship between leadership and organizational learning



model of the relationship between leadership and organizational learning to present an overall picture of how far the field has come (Figure 2).

5. Discussion and recommendation for future research

The aim of this review is to synthesize extant literature on the relationship between leadership and organizational learning. As observed in our review, research on leadership and organizational learning is burgeoning in the past two decades, with a plethora of publications across various contexts. However, different conceptualizations of organizational learning have been used without any distinctions, which have caused confusions and misspecifications of this concept (Turner *et al.*, 2018). This is in line with what Lähteenmäki *et al.* (2001) found in their review of organizational learning. Our review also confirms Yukl's (2013) opinions that leadership research is being held back by an over-reliance on quantitative method, simple survey design, single-level data and a specific leadership approach such as transformational leadership. In response, this study offers some avenues for future research into this area.

5.1 Research context advancement

Literature has shown that the topics of leadership and organizational learning have gained growing interests among scholars worldwide. However, existing studies have focused on education and manufacturing industry, leaving other important but less studied sectors such as hospitality and tourism as potential areas for future research. More importantly, an overwhelming bias of scholars toward large enterprise research has resulted in a general shortage of high-quality studies in small and medium businesses. As small and medium-sized enterprises are a rapidly growing body of research, this sector should receive more attention from scholars.

5.2 Research design advancement

As compared to quantitative approach, qualitative studies discussed leadership best practices and behaviors that reinforce organizational learning and offered in-depth explanations for the effects of leadership in many contexts. Therefore, to gain better insights and build more useful

theories, more qualitative studies are encouraged. We also recommend combining quantitative and qualitative designs (mixed-method approach) in examining how leadership influences multiple levels of organizational learning. In designing mixed methods studies, researchers might pair interviews and surveys, using interviews to identify common themes for conceptualizing leadership, then using surveys to analyze the relationship between the conceptualized leadership and organizational learning. Besides, researchers are encouraged to advance the studies on leadership and organizational learning by using field experiments. This can be done by partnering with enterprises to design and conduct leadership training seminars to identify if leadership training interventions increase managers' leadership effectiveness and ultimately improve organizational learning.

5.3 Conceptualization and measurement advancement

Organizational learning has been theoretically described as multilevel factors (Crossan *et al.*, 1999). As identified in our review, an overwhelming majority of studies has viewed organizational learning as a single-level phenomenon. This perspective failed to provide a comprehensive explanation how leadership influences different entities within an organization and their collective efforts in fostering organizational learning. Therefore, the question of how leadership facilitates all levels of organizational learning is a fruitful and promising area of future studies. Besides, scholars have used various tools to measure different concepts of organizational learning. Some of them mistakenly used scales of learning organization to measure organizational learning without determining whether the construct is unidimensional and multi-dimensional. Without a high quality instrument, any empirical efforts are a waste of money, time and resources (Hughes *et al.*, 2018). Researchers can refer to the list of instruments outlined in this review to select relevant instruments for their research or develop an agreed upon instrument for organizational learning in future studies. This call also applies to leadership instrumentation, as there is no consensus on a generally applicable measure to each type of leadership.

5.4 Application of understudied leadership approaches and inclusion of intervening/boundary variables

Transformational leadership is a dominant style that has been linked to organizational learning in different contexts. This is partly because this leadership approach is "systematic and consists of a purposeful and organized search for changes, all of which are important for organizational learning to occur" (Jogulu, 2011, p. 12). In particular, transformational leaders exhibit inspirations, caring and consideration toward employees, thereby providing them with a consistent platform for creating, acquiring and sharing knowledge. Leaders displaying transformational behavior also enable employees to be creative and keep them intellectually stimulated (García-Morales *et al.*, 2012). The findings that emerged from our review align with what other scholars postulated in their studies (Hitt, 1995; Macneil, 2001). Transactional leadership, on the other hand, yields conflicting results regarding its relationship with organizational learning. Therefore, future empirical studies will be needed to further acknowledge the role of both transactional and transformational leadership, as well as address whether a simultaneous application of these leadership approaches can enable leaders to manage and foster organizational learning.

Besides, as empirical studies in our review have shown that various leadership approaches enhance organizational learning, it is assumed that some understudied leadership styles may have similar effects on organizational learning such as servant, empowering and altruistic leadership. Therefore, more future studies on these leadership approaches are encouraged. This review also confirms Tourish's (2019) opinion that complexity leadership has been hampered by overly heroic models of leadership. Our findings show that there are no empirical studies examining complexity leadership mechanism that facilitates organizational learning to date, leaving this as an area for future research to focus on. This is also in line with the call from a

recent study by Mendes *et al.* (2016), which suggested that complexity leadership theory should be used to better explain the emergence of organizational learning and innovation.

In addition, although numerous leadership approaches are found to significantly affect organizational learning, it is vague, which one is the strongest factor. The abundance of leadership theories, combined with the lack of theoretical clarity, appear to exacerbate this problem. Hence, future research needs to combine and examine the relative effects of different leadership approaches to determine, which is a key predictor of organizational learning. Furthermore, to extend the knowledge on the relationship between leadership and organizational learning, future research could explore new intervening variables (mediators) and boundary variables (moderators), then compare their incremental variance with existing mediators/moderators outlined in our review.

6. Implications for research and practice

This study provides significant theoretical and practical implications in several ways. From theoretical perspectives, this review extends and supports previous literature on leadership and organizational learning. While past reviews posit that transformational and transactional leadership approaches contribute significantly toward organizational learning (Vera and Crossan, 2004), the current study suggests positive relationships between a wide range of leadership approaches and organizational learning. Additionally, our review confirms and expands previous literature on the use of different organizational learning conceptualizations (Wang and Ahmed, 2003) and overreliance of leadership research on quantitative design and heroic leadership model (Yukl, 2013). Based on considerable gaps identified in the review, we provide a more detailed conceptual model linking the variables in leadership and organizational learning research, as well as suggest alternative research avenues that provide a platform for future studies.

From practical perspectives, this review offers an overall picture of the existing knowledge of organizational learning and leadership that will be fruitful for practitioners to understand and replicate these concepts. For example, transformational leadership supports knowledge transfer, and thus establishes a foundation for organizational learning. The consistent positive relationship found between this dominant leadership style and organizational learning suggests that this approach is well-suited for learning organizations and can be considered by adoption by practitioners. A simultaneous application of both transactional and transformational approaches is also encouraged, as empirical findings highlighted that both approaches contribute greatly to organizational learning. Moreover, the leadership approaches identified in this study can be also used by leaders and human resources department in identifying suitable leadership styles that can improve their organizational learning.

Besides, both managers and human resource department should collaborate to foster organizational learning. Managers should articulate a shared vision, build trust within team and modify the firm structure, processes and policies to promote a culture supportive for organizational learning to occur. Human resource department can implement learning practices and training programs to build and strengthen organizational capabilities within the organization such as system thinking, experimentation, risk taking and participative decision.

7. Conclusion

This paper aims to comprehensively review existing literature on leadership and organizational learning to evaluate how far the field has come and recommend future research directions. Three key findings have emerged from the review. First, leadership and organizational learning research has been burgeoned over decades and generated a number of interesting and compelling studies distributed over a range of scientific journals. Notably, the relationship between leadership and organizational learning has been mostly quantitatively investigated in many countries and sectors. Second, multiple leadership styles have been identified to ameliorate processes, levels and capabilities of organizational learning. Transformational

leadership still remains the most commonly used style among the reviewed empirical articles. Third, the review also revealed a number of mediating mechanism, boundary conditions and outcomes in the relationship between leadership and organizational learning. Based on these findings, we provide a nuanced conceptual model showing the relationship between leadership and organizational learning. We also recommend potential directions and methodological avenues that can help guide future research on leadership and organizational learning.

One potential limitation of the study is that the literature search was based on publications written in the English language only. Future research can include empirical studies being published in other languages and explore whether they complement or contradict findings drawn from this review.

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High-performance organization: a literature review

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Abstract

Purpose – This paper aims to review and synthesize notable literature on high-performance organization (HPO), from which future research directions can be recommended.

Design/methodology/approach – This narrative literature review analyzes major HPO literature in popular books and peer-reviewed articles published in English in the period between 1982 and 2019.

Findings – The review revealed that HPO literature has evolved multiple times, illustrating the complex and multifaceted nature of this phenomenon. In particular, literature on HPO has evolved in four phases: (1) definitions and conceptual development of HPO; (2) exploration of approaches to achieve HPO; (3) empirical validation of HPO framework; and (4) complicated research models and designs on HPO. Several research gaps were identified, which definitely hold varying research value and can be seen as potential opportunities for future research.

Research limitations/implications – The focus of this review is on HPO literature published in English rather than cover all existing literature.

Originality/value – It is among the first studies to review the HPO literature and its evolution. This review also recommends constructive areas for future research on HPO to focus on.

Keywords High performance, High performance organization, Organizational performance, Literature review

Paper type Literature review

Introduction

Literature on high-performance organization (HPO) has a relatively long history that dated back to the 1980s, when Peters and Waterman published their work "*In Search of Excellence*" in 1982. Since then, organizations have paid more attention to how to become HPOs and the interests in exploring this phenomenon will never be over. According to Holbeche (2012), the desire toward high performance is still a long-lasting management theme that requires further research to be redefined in current volatile and complex working environment. Holbeche (2012) also stated that organizations in an increasingly volatile and competitive global economy have no choice but to reinvent themselves and outperform their rivals in terms of quality, innovation, versatility, and consumer responsiveness.

Research on HPO is scarce in the past, with some studies aiming to define and conceptualize HPO (Pava, 1983; Huczynski, 1985; Brown *et al.*, 1993; Kirkman *et al.*, 1999). Recently, scholars began to find attributes of HPO (de Waal, 2007; Lacy *et al.*, 2009) and assess the applicability of HPO in different settings (de Waal and Sultan, 2012; de Waal and Tan Akaraborworn, 2013). Since scholars studied HPO in a variety of contexts, approaches, and purposes, there is no consensus around a specific definition of HPO, let alone its components and applicability. This has urged scholars to carry out comprehensive review on this subject. One of the most noticeable works on literature review of HPOs was produced by de Waal (2007). Based on a systematic review of hundreds of work related to HPO, de Waal (2007) provided a definition of HPO, with five components and eight key drivers of HPO. de Waal (2018a) published another review that presents a list of definitions and measurements for HPO and calls for future literature review papers that explore and synthesize more relevant literature sources of this phenomenon.

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Despite the visible impact on both business and academics, research on HPO remains piecemeal, and there has been no univocal definition or framework for synthesizing the key attributes of HPO. Moreover, HPO literature has developed and evolved multiple times, making previous literature reviews inadequate to comprehensively explain this phenomenon. Therefore, it is imperative that prominent HPO literature be reviewed in contemporary research. To that end, this paper seeks to review existing literature on HPO to advance understanding of this field and identify future research directions. The following research questions guided this review:

RQ1. How has literature on HPO evolved in terms of definitions, approaches, and empirical research over the past decades?

RQ2. What are some of research directions on HPO that scholars can focus on in the future?

To address these questions, we conducted a narrative review on literature pertinent to HPO. Narrative literature reviews cover several studies related to a subject and are useful for summarizing information, describing the history or development, identifying research directions, and bringing practitioners up to date with current knowledge (Hutchison, 1993; Slavin, 1995; Rowley and Stack, 2004; Green *et al.*, 2006). This review draws on a variety of key sources, including popular books and journal articles on HPO. The sources of books were *In Search of Excellence* (Peters and Waterman, 1982), *Built to Last* (Collins and Porras, 1994), *The Boundaryless Organization* (Ashkenas *et al.*, 1998), *Good to Great* (Collins, 2001), and *The High Performance Organization: Creating Dynamic Stability and Sustainable Success* (Holbeche, 2012). These books were selected because they all aim at identifying the exceptional characteristics of high-performing companies.

Besides, reliable and well-known databases (Emerald Insight, Web of Science, ProQuest, Google Scholar, ScienceDirect, etc.) were used to find HPO publications. Keywords for searching included "high performance," "high performance organization," "high performing organization," and "high performance work organization." For papers to be included, they must be peer-reviewed and published in English. The first search returned 382 results (excluding duplications). Next, a qualitative review of the retrieved articles was conducted independently by the two authors. The titles and abstracts were read and evaluated using the following exclusion criteria: (1) studies that did not include a direct discussion about high performance; (2) studies that included high performance but did not discuss its definition or characteristics; and (3) studies that addressed high performance at individual or team level. After this filtering, 137 papers remained. The full text of the articles was then analyzed with the same exclusion criteria. In total, a final sample of 41 appropriate publications was obtained, which were then analyzed to propose future research directions on HPO.

Our review covers the period between 1982 and 2019 (37 years) as 1982 was the year when the work on HPO by Peters and Waterman (1982) was published. Most publications were found in business, management, and organizational behavior fields. Following this introduction section, the review provides an overview of how HPO is defined. Next, previous approaches and emerging conceptions of HPO are discussed. Afterward, current trends in HPO research are presented, followed by some directions for further research.

Definitions of HPO

Achieving HPO is one of the most studied topics in the literature. However, previous scholars approached this topic from a variety of backgrounds, purposes, and interpretations (de Waal, 2018a). This reflected the difficulty and also the need to provide a unifying definition of HPO.

The concept of HPO dated back to the 1980s by the book of Peters and Waterman entitled "*In Search of Excellence*". In their book, Peters and Waterman (1982) believed that HPOs are characterized by strong culture and alignment between strategy, structure, leadership, and employees' skills. In the 1990s, competitive performance of an organization is often demonstrated by its ability to adapt to environment changes and its capacity to learn (Pettigrew and Whipp, 1991; Schein, 1993; Senge, 1990). Collins and Porras (1994) made a remarkable effort to identify how a truly exceptional organization is different from others in their best-selling book *Built to Last*. According to Collins and Porras (1994, p. 2), exceptional companies "prosper over long periods of time, through multiple product life cycles and multiple generations of active leaders."

Chiera (1994) defined a high-performance work organization as flexible, highly skilled, nonbureaucratic, and performance-based. This type of organization openly seeks alliances and retains its competitive advantage through improved work process efficiencies. As stated by Vecchio and Appelbaum (1995), high-performing organizations manage and improve their performance through the implementation of solutions to problems, empowerment and accountability, consensus between managers and employees on performance goals, good information flow, and work group spirit. Ashkenas *et al.* (1998) described that sustainable success of a firm is reflected by its ability to leverage necessary resources in turbulent economic conditions. According to Ashkenas *et al.* (1998), the capability to learn, share, and deploy knowledge is fundamental in leveraging resources.

Kirkman (1999, p. 13) reviewed 168 studies on HPO and defined it as "an organizational system that continually aligns its strategy, goals, objectives, and internal operation with the demands of its external environment to maximize organizational performance." In 2001, Collins published *Good to Great*, which is a sequel to *Built to Last*. In this book, Collins (2001, p. 3) defined HPOs as "companies that made the leap from good results to great results and sustained those results for at least fifteen years." Owen *et al.* (2001) came up with a new term called sustainable high-performance organization, which was defined as the firms' ability to respond to marketplace demand and sustain necessary behaviors that are aligned with the marketplace.

Epstein (2004) stated that HPO definitions refer to the accomplishments or characteristics of organizations, for example, financial performance, consumer and staff satisfaction, productivity, personal initiatives, innovation, and performance–reward alignment. Jones (2005, p. 34) argued that in an HPO, "goals are set around both outcome and process, with the result that performance is mapped out in a meticulous fashion." Jones also noted that HPO is multifaceted and can be defined at multi levels, including the vision, achievement, innovation, adaptability, and well-being.

de Waal (2007) reviewed hundreds of HPO literature and proposed a new way to define this concept. According to de Waal (2007), an HPO is "an organization that achieves financial results that are better than those of its peer group over a longer period of time by adapting well to changes and reacting quickly, by managing for the long term, by setting up an integrated and aligned management structure, by continuously improving its core capabilities, and by truly treating the employees as its main asset" (p. 180).

Lacy *et al.* (2009) researched on more than 6,000 firms and provided another definition of high performance. They contended that high-performing organizations are the ones that generate impressive business value through the execution of five sustainability strategies: organization change, leadership development, learning, performance management, and employee engagement. Recently, Vagadia (2014) mentioned about high-performance organizations as "guerrilla organizations" in which decision-making and development of new strategies are quick so that they can survive and thrive in the competitive and complex business environment.

An overview of previous attempts to define HPO shows that the majority of previous studies rendered the definitions of HPO in terms of its antecedents, outcomes, and long-term nature. Therefore, it seems to make sense to offer a general definition of HPO based on the foregoing premises:

HPOs are organizations that continuously integrate a set of best practices to enhance firm performance, respond to market needs, outperform competitors, and remain competitive in the business environment over a prolonged period of time.

Previous approaches to achieve HPO

There has been a plethora of approaches toward achieving HPO. Peters and Waterman (1982) postulated eight attributes requisite for an organization to achieve excellence: a preference for action; closeness with consumers; autonomy and entrepreneurial spirit; productivity fostered through people; value-driven practices; adherence to standards; simple organization and lean staff; and simultaneous display of both aggression and patience.

Pava (1983) conducted a literature review and proposed the design of managerial and professional work for organizations to achieve high performance. In this regard, organizations will be established as work groups that take care of an interim product and manage daily operations themselves. Pava stated that this "sociotechnical design" can help organizations achieve superior performance compared to traditional designs. Huczynski (1985) examined how to transform from traditional bureaucratic-scientific organizations to another organizational design called "high commitment–high performance organization." Through experiments, Huczynski came up with a step model focusing on designing autonomous work group, intrapreneurial group, subcontracting group. At a glance, Pava's (1983) and Huczynski's (1985) approaches to achieve HPO just focused on organizational design.

Brown *et al.* (1993) introduced SET as a model for high-performance work organization. This model comprises of three components: security, employee involvement, and training (SET). However, having tested SET on five organizations in the United States, Brown *et al.* (1993) found that this model is difficult to implement.

Collins and Porras (1994) analyzed massive amounts of data to identify a series of prescriptions that they believe make organizations exceptional. These prescriptions involve: a focus on skill development and capacity building; visions that entail more than profits; preservation of the core while still stimulating progress; desire to take audacious goals; cult-like cultures; innovation while still retaining what works; appointment of home-grown leaders; and not settling for good enough.

Chiera (1994) postulated a new paradigm called "High Performance Work Organization" in which innovations act as activity-based costing and bargaining power for productivity. To create high-performance work organization, firms must establish a coequal and collaborative labor–management link in which roles and responsibility are clarified.

Bulger (1995) highlighted the importance of performance management in building an HPO. According to Bulger, high-performing firms are established and sustained by focusing on core business and supporting processes (training, quality in action, associate involvement, management development, rewards and recognition, and cross-functional teams). Moreover, firms also need to design and implement a performance management system.

The term "transformed high-performance organization" was used by Wood (1999) to describe the high-performance work system or other similar high-performance terminology. Using latent trait analysis to examine data from Osterman's study of US organizations, Wood (1999) concluded that high-performance management is a combination of modern quality and personnel management methods.

Collins (2001) postulated eight metaphors of good-to-great companies, involving developing leaders that can equate personal humility and professional will; filling right

people in the right places; confronting the brutal facts; concentrating on what the companies can be the best at; creating a culture of discipline; applying selected technology to accelerate core processes; building momentum until a point of transformation; and preserving core values while stimulating processes.

Owen *et al.* (2001) came up with the concept called "sustainable high performance organization," which is illustrative of organizations that respond effectively to market's demand and sustain the essential behaviors for the need of the marketplace. During the research, Owen *et al.* (2001) found a set of core elements of sustainable performance, namely senior leaders' understanding of the marketplace; shared vision, mission, values, and strategies; leadership practices; employee attitude and behaviors; and enabling infrastructures.

According to Beer (2001), organizations need to take an organizational development approach to achieve and sustain competitive advantage and high performance. Beer (2001) reviewed previous literature and listed some organizational capabilities that foster sustainable competitive advantage: creativity, trust and commitment, constructive conflict resolution and learning, teamwork and collaboration, technical competence and leadership, and open communication.

Taking a different approach, Lawler (2005) used a virtuous spiral of multiple levels of performance and rewards. The spirals start with organizations using strategies to scout, develop, and retain high-performance individuals and thus generate an HPO. This type of organization is able give better rewards to staff and in turn make them more motivated and committed. The increased challenging and rewarding context will support organizations in staffing and developing more effective human resources, which further contribute to the organizational performance. The virtuous spiral continues to develop to higher and higher levels, reinforcing the organizations and employees to achieve higher performance.

A historical overview of approaches to achieve HPO demonstrates that this field has evolved over decades, with new concepts and core elements of HPO being proposed. Common factors correlated to HPO within different theories and approaches could be categorized into three levels of analysis: individual (competence, attitude, motivation, satisfaction, learning, creativity, etc.); group/team (cross-functional teams, teamwork, creativity, conflict resolution, leadership, communication, person–role fit, etc.); and organization (organizational structure/design, culture, core values, etc.). Although the fundamentals of HPO identified in previous studies vary in several ways, they all imply that no single factor or attribute can correlate to the achievement of HPO. Instead, it is the multi-level interplay between various elements that can guarantee high performance.

Emerging and consolidated conceptions of HPO

Though previous researchers have approached HPO in many ways, no theoretical or conceptual perspective of this phenomenon has been agreed upon. Some scholars attempted to explore newly emerging and more comprehensive conceptions of HPO.

de Waal (2007) combined the work of Kotter and Heskett (1992) and Scott Morton (2003) to propose eight factors influencing HPO, namely organizational design, strategy, process management, technology, leadership, individuals and roles, culture, and external orientation. Moreover, de Waal (2007) made a notable attempt to review, synthesize, test, and conceptualize a new framework for HPO. He conducted a research that consists of two phases. The first one included descriptive literature review and selection of literature on HPO. As a result, 290 publications were selected, summarized, and categorized by de Waal and his assistants. The second phase related to practical research, with questionnaires distributed in many parts around the world. During the 2006–2007 period, there were 2,601 responses from

nearly 1,300 organizations. After statistical analysis, there are five factors with 35 characteristics found to correlate with HPO. The factors and characteristics of the new HPO framework developed by de Waal (2007) are summarized in Table I.

Besides the HPO framework developed by de Waal (2007), there are other emerging conceptual developments of HPO. Aiming to explore determinants of high-performance organizations in greater detail, Rogers and Blenko (2006) interviewed more than 40 high-performing companies and compared many industry leaders with their competitors. Their findings reinforced the belief that HPOs are organizations that are good at "making good decisions and making them happen." Based on the research findings, Rogers and Blenko (2006) figured out five dimensions that enable organizations to achieve high performance and outperform competitors (Table II).

Lacy *et al.* (2009) conducted in-depth interviews with five market leaders in sustainability in Fortune 1000 list. As a result, Lacy *et al.* (2009) developed a framework that guides companies toward high performance. There are five components or "five levers" in the framework, which are depicted in Table III.

By comparison, Rogers and Blenko (2006) and Lacy *et al.* (2009) concentrated only on the Western context and qualitative methodology to provide consolidated frameworks of HPO, which affects the generalizability of their findings in different organizational settings. Perhaps this helps explain why none of these frameworks became a universal HPO model. On the other hand, the HPO framework developed by de Waal (2007) is arguably the only framework that has been scientifically validated. As a result, several research has been conducted in attempts to further examine the framework in practice. The following section will discuss recent trends in the empirical studies of HPO.

Current trends in HPO research

Recent studies on HPO have been conducted to test the applicability of HPO framework developed by de Waal (2007) and examine the determinants and outcomes of the

Components	Description
Management quality	HPOs embrace belief, trust, and fair treatment among employees. Managers in HPOs are persons of integrity, trustworthiness, commitment, accountability, enthusiasm, and respect. They are decisive, action-focused in making decisions. They speak out values and strategy throughout the workplace to make sure all employees know and embrace them
Openness and action-orientation	HPOs embrace open culture, reflected in the involvement of employees' concerns in organizational processes. Mistakes are acceptable and can be seen as learning opportunities. Employees involve in discussion, learning, and knowledge sharing, which in turn improve their performance. Managers instill a culture of change in the organization
Long-term orientation	HPOs have long-term commitment with all stakeholders, including their partners, suppliers, and customers. Internal recruitment is prioritized and every employee is empowered to become a leader. Employees at an HPO find it a safe and secure place to work. They are laid off just when there is no other choice
Continuous improvement and renewal	HPOs continuously seek improvements, process alignment and product innovation, as well as new way to gain the competitive edge. Core competencies of HPOs are managed in an efficient manner
Workforce quality	HPOs maximize their work flexibility by the combination of diverse and harmonious managers and staff. HPOs develop employees to become resilient and flexible, as well as equip them with skills to achieve remarkable performance results

Table I.
de Waal's (2007) HPO framework

framework (Melchar and Bosco, 2010; Bagorogoza and de Waal, 2010; de Waal and Sivro, 2012).

Perhaps most publications on testing how the HPO framework can be applied to various settings and contexts came from de Waal. The common method that de Waal used to conduct the research is to distribute HPO questionnaire in workshops. de Waal tested and confirmed the applicability of the HPO framework in Vietnamese and Nepalese banking sector (de Waal *et al.*, 2009; de Waal and Frijns, 2011); in African institutions (de Waal and Chachage, 2011); in the Middle East (de Waal and Sultan, 2012); in a multinational retailer (de Waal, 2012); in Thai organizations (de Waal and Tan Akaraborworn, 2013; de Waal *et al.*, 2014a); and in the diamond industry value chain (de Waal *et al.*, 2014b).

In the last five years, de Waal continued to conduct a variety of studies to evaluate the effects of the HPO framework in practice. One published in 2016 examined the suitability of the framework in information and communications technology companies in Egypt (de Waal *et al.*, 2016). Five 2017 studies validating the HPO framework were conducted in Dutch supermarket (de Waal *et al.*, 2017); in Dutch agricultural sector (de Waal and Meingast, 2017); in Chinese state-owned enterprises (de Waal and Wang, 2017); in North America (de Waal, 2017a); and in a social care and rehabilitation organization in the Netherlands (de Waal, 2017b). Several publications in 2018 also addressed whether the HPO framework helps organizations in Zambia, the Philippines, and the United Arab Emirates enhance their performance (Mroueh and de Waal, 2018; de Waal, 2018b; de Waal and de Haas, 2018).

However, there are not many empirical studies on the relationship between HPO and its determinants and/or outcomes. Bagorogoza and de Waal (2010) comprehensively reviewed the literature and practices on knowledge management and high performance. According to their research findings, competitive advantage is a precursor to high performance. Added to this, the HPO framework mediates the relationship between knowledge management and

Components	Description
Leadership	Provide compelling direction, clear priorities, and cohesive leadership team
Accountability	Define clear roles and accountabilities in important decision-making. Align structure with sources of values
People	Develop and deploy talented people with proper job placements and aligned measures/ incentives
Execution	Excel at frontline execution and G&A (general and administrative expense)
Culture	Instill a high-performance culture and capabilities to change

Table II.
Rogers and Blenko's (2006) five dimensions of HPO

Components	Description
Organizational change	Integrate sustainability into decision-making processes
	Leverage sustainability strategy to enhance talent management efforts
Leadership development	Align and mobilize leadership with the company's sustainability objectives
	Develop critical competencies, such as coordination
	Increase your company's level of stakeholder engagement/collaboration
Learning	Leverage a combination of formal and informal approaches to increase employees' sustainability knowledge
Performance management	Incentivize the workforce, starting with the leadership team, to attend to sustainability in day-to-day tasks
Employee engagement	Mobilize all levels of employees
	Use change agents to pursue sustainability
	Employ internal marketing campaigns to value employees' sustainability contributions

Table III.
Lacy *et al.*'s (2009) five levers of HPO

high performance. Melchar and Bosco (2010) employed mixed methods to empirically examine the model of servant leadership in creating HPO. Results showed that servant leaders create a culture of subordinates who are servant leaders themselves in HPO. Another research was carried out by de Waal and Sivro (2012), aiming to study the linkages among servant leadership, organizational performance, and the HPO framework on 116 managers and staff from Vrije Universiteit medical center. After quantitative analyses, although servant leadership impacts factors in the HPO framework, no direct positive link between servant leadership and organizational performance was found. This result was contrary to what Melchar and Bosco (2010) found in their study. Ugheoke (2017) conducted quantitative researched on SMEs in Nigeria. The result supports the notion that best recruitment practices positively and significantly relate to the achievement of HPO.

Honyenuga *et al.* (2014) quantitatively analyzed the relationship between the HPO framework and performance of insurance companies in Ghana. Their findings revealed a positive relationship between workforce quality, continuous improvement and renewal, and long-term orientation factors in the HPO framework with firm performance. de Waal and Goedegebuure (2017) carried out a longitudinal study in a service company based in the Netherlands to examine the causality between the HPO framework and organizational performance. Their finding suggests that the studied company improved their firm performance by utilizing the HPO framework. Honyenuga *et al.* (2019) surveyed 186 managers from insurance companies in Ghana and found that the HPO framework mediates the direct impact of management innovation on organizational performance.

In addition to empirical research, there are conceptual studies on HPO. Vargas (2015) used analytical-synthetic methodology to analyze empirical evidence related to leadership, organizational learning, innovation, and high performance. Afterward, Vargas (2015) made a proposition that leadership has positive effects on organizational learning, thereby enhancing innovation, high performance, and competitiveness. Sayyadi (2019) presented a literature review with similar approach to the work of Vargas (2015). Based on the literature, Sayyadi (2019) developed a framework illustrating the relationships between leadership, knowledge management, and organizational performance. It is argued that Sayyadi's (2019) framework contributes to the development of HPO.

Areas for future research

In reviewing the literature on HPO, this paper identifies considerable gaps on which future studies into this field should be focused.

First, the lack of a clear and univocal definition has resulted in a constant search for HPO theories and conceptualization for many years, marked by a plethora of books and publications on this topic. Many HPO theories and definitions have been developed by many research practitioners that provide us with explanations of this phenomenon (Ashkenas *et al.*, 1998; Kirkman, 1999; de Waal, 2007; Vagadia, 2014). Several approaches to achieve HPO were introduced, varying from the organizational design approaches (Pava, 1983; Huczynski, 1985), to multiple drivers approaches (Owen *et al.*, 2001; Beer, 2001; Lawler, 2005), then to emerging and consolidated frameworks (Rogers and Blenko, 2006; de Waal, 2007; Lacy *et al.*, 2009). At a glance, it can be argued that most definitions and approaches were stretched to fit the argument and interpretations of each scholar, causing poor conceptualization and incomplete understanding of HPO (MacKenzie, 2003). This might be an explanation of the fact that several HPO concepts remain understudied and have not yet been tested or empirically validated (e.g. Rogers and Blenko, 2006; Lacy *et al.*, 2009). Researchers therefore are encouraged to validate and advance the HPO research on these concepts to assess their applicability relative to other more well-defined HPO concepts (e.g. de Waal, 2007).

Second, across the HPO literature, we found only the HPO framework developed by de Waal (2007) as an example of scientifically validated conceptualization of HPO. To build a meaningful theoretical rationale and ensure the credibility and validity of future studies, application and further development of the HPO framework (de Waal, 2007) are needed. Researchers are also encouraged to conduct more HPO studies attempting to capture mediating and moderating mechanism in complicated research models. For example, future research may examine the relationship between emerging concepts of leadership and organizational learning/knowledge management with the HPO framework. At present, there are not many studies that have investigated such connections, meaning that this research gap is waiting to be filled by researchers in the future.

Third, there are some limitations to be found in past research on the HPO framework, which can be seen as potential research opportunities for scholars in the future. Most of these studies were conducted at a single organization, in a specific industry, and in a single country to evaluate the extent to which the framework could be applied to certain areas. This causes a problem of generalizing the research findings in other settings. Future studies should empirically test the HPO framework in a variety of organizations, in different sectors (e.g. tourism and health care), and in other developing economies.

Fourth, there are some articles that applied analytical-synthetic methodology to develop new frameworks related to HPO and its determinants (e.g. Vargas, 2015; Sayyadi, 2019). As these conceptual papers are of theoretical character, the results from these studies are limited in terms of empirical validation. Thus, it is recommended that future research be conducted to further explore and empirically test the proposed frameworks. Before the validation, researchers might consider conducting interviews with managers and experts in the field through a Delphi approach to obtain feedback for further refinement of the frameworks.

Last but not least, the research on HPO began to gain more attention and is evolving. We recommend future researchers to conduct more comprehensive and systematic literature reviews that synthesize a wider literature on HPO. This will add to a fuller understanding of HPO and also answer the call from de Waal (2018a, p. 3) that "future research could cast its net even wider during a literature search."

Conclusion

This literature review aims to review and synthesize notable literature on HPO. It is revealed that HPO literature has evolved multiple times, illustrating the complex and multifaceted nature of this phenomenon. In particular, literature on HPO has evolved in four phases. The first focused on the definitions and conceptual development of HPO. Most scholars considered HPO as continuous attempts of organizations to not only enhance organizational performance but also sustain responsiveness and competitiveness to the marketplace. In the second phase, research focused on describing characteristics of HPO and identifying approaches to achieve HPO. There has been a plethora of approaches to achieve HPO, ranging from design theories at an early age (Pava, 1983; Huczynski, 1985) to some consolidated conceptions in the recent time (Rogers and Blenko, 2006; de Waal, 2007; Lacy *et al.*, 2009). The third phase is an empirical validation trend where the research focused on evaluating the applicability of HPO and testing the relationships between HPO and its antecedents. HPO research is currently into a fourth phase where scholars applied more complicated research models and designs to go beyond simple linkage with antecedents to understand the outcomes and mediating mechanism of HPO. Several research gaps have arisen from understudied HPO concepts, application and validation of de Waal's (2007) HPO framework, empirical testing of proposed conceptual models on HPO, and systematic reviews of the HPO literature, which definitely hold varying research value and can be seen as potential opportunities for future research.

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A systematic review on high performance organization

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Abstract

Purpose – This paper aims to synthesize existing knowledge on high performance organization (HPO) in terms of definitions, contemporary trends and findings from empirical studies; from which areas for future research can be proposed.

Design/methodology/approach – This systematic literature review applies the matrix method to analyze major HPO literature in peer-reviewed English articles. A total of 73 articles have been found in 59 journals.

Findings – There are three key findings that emerged from this study. First, the research on HPO has been burgeoned in the past decades, generating several compelling studies in different contexts. The trend of HPO research is now shifting from theory development to theory validation. Second, HPO has been defined in various ways in the extant literature. However, they all address the importance of aligning the firms' resources with the market demand and integrating various types of performance to measure HPO relative to competitors for a prolonged period. Third, an assessment of empirical HPO studies revealed gaps in terms of the research context, research design and the HPO's nomological network.

Research limitations/implications – The literature search in this review targeted at only articles published in the English language; therefore, publications in other languages were not included.

Originality/value – The strength of this study is that it provided an updated systematic review of HPO literature, is therefore, valuable in providing an overall picture of the current state of HPO research and providing potential directions for future studies.

Keywords Strategic management, Systematic review, High performance organization, High performance company, High performance culture, High performance work organization, Superior organizational performance

Paper type Literature review

1. Introduction

The publication *In Search of Excellence* written by Peters *et al.* (1982) was said to give rise to the thirst for understanding on a term called "high performance organization" (HPO). Since then, there is a plethora of books and articles aiming to explore and provide a description of what HPO really is. Epstein (2004) links HPO with the achievement of financial results, stakeholder satisfaction, productivity and innovation. HPO has also been described as an organization's ability to learn and adapt to changes (Pettigrew and Whipp, 1991; Rowden, 2001); to align strategy and goals with the external environment (Chiera, 1994), to meet the demand of the marketplace (Owen *et al.*, 2001); to sustain strong leadership, accountability and high-qualified manpower (Rogers and Blenko, 2006); and to remain competitive in the volatile and ambiguous business environment (Vagadia, 2014). After conducting a comprehensive review on this concept, de Waal (2007, p. 180) defined an HPO as "an organization that achieves financial results that are better than those of its peer group over a longer period of time by adapting well to changes and reacting quickly, by managing for the

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long term, by setting up an integrated and aligned management structure, by continuously improving its core capabilities and by truly treating the employees as its main asset."

Research on HPO has evolved in four phases. First, a definition and conceptual development phase, where the research focus on defining and exploring what constitute HPO. The second phase focused on identifying antecedents of HPO, followed by the third phase of empirical research on the applicability of HPO and the relationships between HPO and its determinants. At present, research on HPO has come to the fourth phase where more complicated research designs are applied to provide more understanding of the outcomes and mediating mechanisms of HPO. Therefore, our study aims to systematically review the extant literature on HPO with the goal of not only evaluating how far the field has come but also providing directions for future studies toward impactful theoretical and practical contributions.

We believe there is a need for an integrated and updated systematic review of HPO literature for the following reasons. First, while several decades of research have contributed to the advancement of HPO concept, the literature on HPO is fragmented and yet to be synthesized to shed light on the current trend of HPO research. Second, although the pioneering work by Peters *et al.* (1982) has laid a foundation for the development of HPO theory, the proliferation of academic and practitioner research has resulted in a variety of definitions and conceptions of HPO that have caused conceptual ambiguity and confusion about this construct. According to de Waal (2018), there exist various ways to define and measure HPO in the literature; however, not many articles provide a comprehensive view on this phenomenon, let alone a univocal definition or measurement. Finally, with a recent emergence of multiple empirical investigations of HPO that potentially alleviate some of the ambiguity about the antecedents and outcomes of HPO, it is important to integrate knowledge from these empirical studies and map out the nomological network of HPO.

Given the above rationales, through this systematic review, we aim to answer the following questions:

RQ1. What is the current trend in HPO publications?

RQ2. How is HPO defined in the extant literature?

RQ3. What do we know about HPO through existing empirical studies?

RQ4. What are the potential areas for future study and practice of HPO?

This paper is important for four main reasons. First, this review synthesizes the scattered literature on HPO and provides clarity and coherence of this concept in terms of definitions and conceptualizations. Second, this study also reviews the existing empirical studies of HPO, focusing on construct measures and mapping out the nomological network. Third, this paper has important methodological contribution, as it applies a systematic literature review (SLR) method from the medical field to the performance and organizational behavior studies field, where construct conceptualization is poor and systematic studies are scarce. As for managerial contributions, the findings of this review help business owners and practitioners aiming to drive their organizations toward superior organizational performance to ensure that they develop and execute the right strategies and best practices.

In the next section, we will describe the methodology and literature search strategy. The remaining sections include a presentation of the findings, discussion and directions for future studies, implications for theory and practice and conclusion.

2. Methodology

2.1 Research approach

This study aims to systematically review the extant literature on HPO and provide potential avenues for future research. To achieve this aim, SLR method is applied. According to Pati and Lorusso (2018, p. 15), an SLR "is a systematic way of collecting, critically evaluating, integrating and presenting findings from across multiple research studies on a research question or topic of interest." This method is different from the traditional review, as it adopts a well-defined review process and rigorous evaluation criteria that enable researchers to mitigate bias and produce a transparent, reproducible, scientific and holistic review (Thomé *et al.*, 2016; Tranfield *et al.*, 2003).

2.2 Data collection

Initial search. Publications were identified through major business databases and search engines such as Web of Science, Google Scholar, Emerald Insight, ScienceDirect to ensure exhaustive coverage. The initial search required that one of the following keywords be present in the title: "HPO," "superior organizational performance," "high performance company," "high performance work organization" and "high performance culture." We also filtered the publications based on the following inclusion criteria:

- be a journal article (e.g. not a newspaper article, book review or dissertation);
- be written in the English language; and
- be peer-reviewed. No restriction was placed on publication date and discipline. In total 168 articles were identified.

Articles eliminated based on the title. The authors examine the title of each remaining publication to eliminate duplicates and articles that did not fit the inclusion criteria defined earlier. After this stage, 40 duplicates and 18 inappropriate articles were removed, leaving 110 articles in the sample.

Articles eliminated based on the abstract. In this stage, the abstracts of the remaining articles were evaluated to eliminate articles that

- did not focus on HPO as a key subject area;
- did not discuss definition, conceptualization or measure of HPO; and
- did not examine HPO and its antecedents/outcomes either quantitatively or qualitatively.

This exclusion criteria were defined based on our research aims and questions identified in the introduction section. After the abstract examination process, the set of relevant publications was reduced to 77.

Articles eliminated based on the full text. The full text for the remaining 77 articles was obtained and carefully examined using the same pre-defined inclusion/exclusion criteria. As a result, 14 papers were excluded and 63 articles remain.

Articles included based on snowballing from the references of retrieved articles. In the final stage, we conducted a snowballing procedure to identify potentially relevant articles from the references of 63 retrieved publications, locating 10 additional articles. In summation, the final number of articles selected for this systematic review was 73.

2.3 Data analysis

Referring to the research questions mentioned previously, a coding scheme was developed to guide our content analysis. For every article we recorded the following information:

- author names and year of publication;
- article type (theoretical/conceptual, qualitative, quantitative and mixed methods);
- theoretical foundation;
- definitions of HPO; and
- the country and industry in which the study was conducted.

For theoretical/conceptual studies, the propositions and any models of antecedents and/or outcomes of HPO were recorded. For empirical qualitative/quantitative/mixed methods studies, we recorded: research method used; source of data; data analysis techniques; and antecedents and/or outcomes of HPO.

Upon the completion of the coding, a matrix table was developed based on guidelines from Garrard (2004) to efficiently organize data extracted from the selected publications. The matrix table is located in the Appendix Table A1. Our findings are presented in the following section.

3. Findings

The results after the review and analysis of 73 HPO articles are categorized into the following three sections according to the research questions of this review.

3.1 Trends in high performance organization publications over time

A graphical depiction of the HPO publications included in this review by year and type is presented in Figure 1.

As can be seen in Figure 1, there were 21 theoretical/conceptual papers and 52 empirical papers within 73 articles in the sample. Figure 1 also indicates a clear ascending trend, albeit with fluctuations, in HPO research for a prolonged period (1983–2019). The earliest theoretical publication on HPO by Pava (1983) focused on a sociotechnical approach to design managerial and professional aspects of HPO. Following this work, there was many professional studies on HPO while high-quality academic studies on the field were virtually absent until de Waal (2007) introduced the HPO framework and its validated instrument. Stimulated by the work of de Waal (2007), there have been an emergence of studies that offer empirical findings of HPO research. This trend indicates that the interest in HPO research is even fiercer and continuously growing as other scholars predicted (de Waal, 2018; Rogers and Blenko, 2006). Moreover, it is also evident that research activities in the field of HPO are shifting from theory development to theory validation.

3.2 Definitions of high performance organization

The very first attempt to define high performance of organizations was made by Peters *et al.* (1982) in their book entitled *In Search of Excellence*. Peters *et al.* (1982) stated that HPOs maintain a strong culture and an alignment between leadership, strategies, structure and employee's competencies. Given their background as practitioners, it is not surprising that this HPO definition is primarily descriptive and inadequate for guiding scholarly research on this concept. However, Peters *et al.* (1982) book has spurred multiple theoretical and conceptual studies aiming to define and operationalize HPO. Table 1 summarizes several HPO definitions that have been advanced over the past decades.

Within our reviewed articles, Chiera's (1994) study is among the earliest scholarly papers that define HPO. According to Chiera (1994, p. 679), HPO "is founded on uniquely balanced relationship between union and management for creating corporate growth and sustained quality employment for their workers." For Bulger (1995), HPO is posited to be an

Sources	Definitions
Chiera (1994, p. 679)	HPO "is founded on uniquely balanced relationship between union and management for creating corporate growth and sustained quality employment for their workers"
Bulger (1995, p. 109)	"High-performing organizations are not created by chance. They are formed and sustained through an organization's ability to stay focused on its core business and core supporting processes"
Kirkman *et al.* (1999, p. 5)	In practice, HPO is "a manifestation of the dynamic process of obtaining a fit between an organization's structure and the demands of its business environment"
Owen *et al.* (2001, p. 11)	"The sustainable high performance organization is one that is able to: remain responsive to marketplace expectations; and sustain the behaviors required to meet marketplace expectations"
Muldrow *et al.* (2002, p. 342)	"Effective organizations, then, will be those that accurately assess their competencies and take appropriate action to make improvements"
Osborne and Cowen (2002, p. 231)	"High performance companies exhibit a set of characteristics that are available to almost every company, regardless of the industry and scale of business"
Jones (2005, p. 34)	In HPO, "goals are set around both outcome and process, with the result that performance is mapped out in a meticulous fashion involving five levels: the vision, achievement, innovation, adaptability and well-being"
Lloyd and Payne (2006, p. 155)	"Clearly then, depending on the practices that are included (and those that are not), high performance working can be understood to represent very different forms of work organization and employment relations"
Van Heerden and Roodt (2007, p. 18)	HPO is "a goal, which is based on the organization's corporate culture, values and belief systems, which are underlined by an integrated framework and strategic determinants. The strategic determinants form the foundation upon which organizations are able to build their competitiveness"
Lacy *et al.* (2009, p. 488)	HPO "are attending to sustainability in ways that are producing high performance" in terms of "growth, profitability, positioning for the future, longevity and consistency"
Hough (2012, p. 3)	HPO is "the sustained outperformance of peers across industries, business and economic cycles, as measured by accepted standardized financial metrics"
Amah and Oyetunde (2019, p. 320)	"An effective definition of [high] performance incorporates the results obtained (end), defined not in economic terms only but also in terms of achievement in the social and environmental contexts and the actions taken to achieve the results (means), which must include how to preserve the social and economic environment in organizational operations"
Honyenuga *et al.* (2019), Pattanasing *et al.* (2019); Ugheoke (2017), Roijen *et al.* (2017); Jirangkul (2018)	HPOs are "organizations that achieve results (both financial and non-financial) that are better than those of their peer group over at least 5 to 10 years" (de Waal, 2009, p. 182)

Table 1.
Definitions of HPO

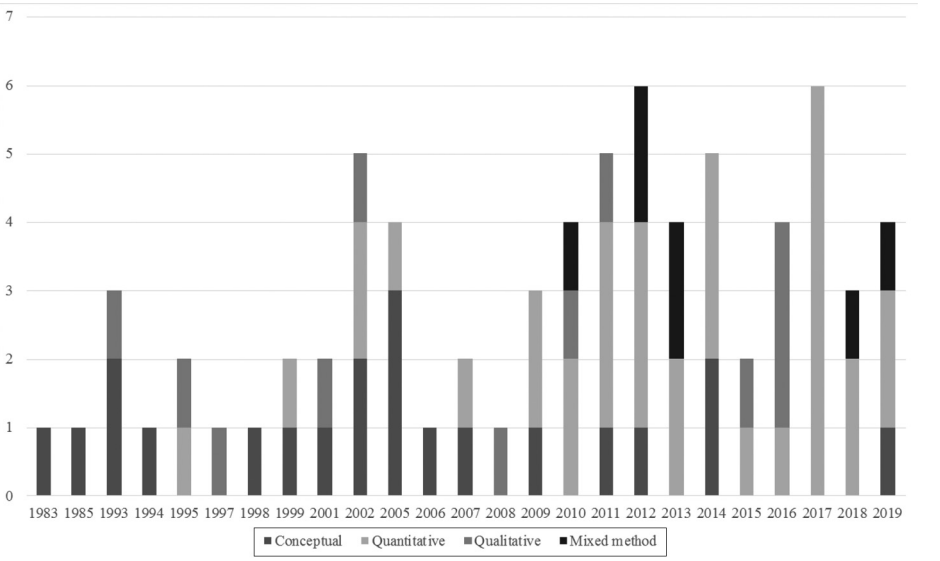

Figure 1.
Types of HPO publications over time

organization's ability to concentrate on its core businesses and processes. Finally, Kirkman *et al.* (1999, p. 5) proposed that HPO is manifest by "the dynamic process of obtaining a fit between an organization's structure and the demands of its business environment."

In the 21st century, definitions of HPO have been evolved but are still based on earlier perspectives of this concept. Specifically, HPO is characterized as how organizations obtain a set of competencies that enable them to remain responsive and competitive in the market (Owen *et al.*, 2001; Osborne and Cowen, 2002; Muldrow *et al.*, 2002; Lloyd and Payne, 2006; Van Heerden and Roodt, 2007). Besides, there are studies aiming to conceptualize HPO and reflect the central components of this concept. For example, Jones (2005, p. 34) contended that the performance of HPO is "mapped out in a meticulous fashion" involving the vision, achievement, innovation, adaptability and well-being. Lacy *et al.* (2009, p. 488) proposed that HPO "are attending to sustainability in ways that are producing high performance" in terms of "growth, profitability, positioning for the future, longevity and consistency."

Other significant definitions of HPO include Hough's (2012) consideration of how organizations use financial ratios to sustain and outperform their business competitors; de Waal's (2009, p. 182) application of both financial and non-financial metrics to evaluate the performance of organizations compared with "those of their peer group over at least 5 to 10 years;" and Amah and Oyetunde's (2019) emphasis on the role of economic, social and environmental achievements in explaining HPO.

Overall, while earlier HPO definitions emphasize an alignment between the organizations' competences and the market demand, recent definitions of HPO recognize the importance of integration of various types of performance to measure and evaluate high performance of organizations relative to competitors for a prolonged period.

3.3 Findings from empirical studies of high performance organization

3.3.1 Research context. Among 73 reviewed studies, the most surveyed industry was mixed sector (n = 13); followed by manufacturing (n = 6), service (n = 6) and healthcare (n = 3)

industries. The rest (n = 17) did not specify a certain sector in which these studies were conducted. It is also worth noticing that large firms were mostly selected as research samples in the available literature, as there exists only one study conducted on small and medium-sized enterprises (SMEs) (Ugheoke, 2017).

Besides, there is 54 papers that were published using samples from 25 countries, while the rest (n = 19) did not identify the country in which the research was carried out. The USA and The Netherlands lead the ranking with 14 and 7 papers, respectively; followed by Thailand with 4 papers. These findings indicate that studies on HPO were carried out with wide geographical distribution, ranging from the Western nations to Asia. In other words, the thirst for HPO insights has been established and developed among scholars and practitioners worldwide.

3.3.2 Research design in empirical high performance organization studies. Of 73 articles, there are 52 empirical publications on HPO and most of them were quantitative studies (n = 33). Only 12 studies took a qualitative approach to examine HPO, while the rest (n = 7) used mixed methods research design.

Quantitative research investigates the relationships between variables using statistical techniques (Saunders *et al.*, 2016). Among 33 quantitative articles on HPO, 32 of these collect primary data using survey and one uses a data set as secondary data (Wood, 1999). Structural equation modeling (n = 6) and multiple regression analysis (n = 5) are statistical techniques that were mostly used. In these quantitative studies, HPO was measured by different types of measure. Most of them measure HPO using both financial and non-financial aspects in a unidimensional scale suggested by de Waal (n = 28). Other studies evaluated HPO through multiple dimensions such as customer satisfaction and sales volume (Melchar and Bosco, 2010); operational, market and financial performance (Gupta *et al.*, 2019); or new product success, growth in sales, return on investment, customer retention and overall performance (Farrell and Oczkowski, 2002). There are only three studies that relied on financial metrics (e.g. net profit margin, return on investment, sales growth, etc.) to assess HPO (Hough, 2012; Hughes *et al.*, 2017; Wood, 1999). Besides, most of the quantitative articles in our study used cross-sectional design (n = 29), while only four were longitudinal studies. There are 15 quantitative papers that assess the validity of the research findings through exploratory factor analysis, confirmatory factor analysis and discriminant validity evaluation.

Qualitative research explores the meanings and the hidden relationships between variables to build theories and conceptual frameworks (Saunders *et al.*, 2016). For the qualitative research, case study is a data collection method that was favored by HPO researchers (n = 9), followed by interviews (n = 3). Regarding data analysis techniques, most articles focused on categorizing data into themes or quantifiable categories. No studies discussed the issue of credibility, transferability and dependability of the research findings.

Mixed methods articles in our review are characterized by the combination of survey and interviews (both quantitative and qualitative design). Surveys are used to test hypotheses or validate the applicability of HPO concept, while interviews are used to offer explanations for the emergence of HPO.

When looking closer at the research models, it is noticeable that de Waal's HPO framework is frequently used in the reviewed empirical studies. Compared to earlier frameworks that are popular in the extant literature on performance improvement (e.g. the Total quality management – focusing on operational processes; the balanced scorecard – looking at innovation and learning, financial, customer and internal perspectives), de Waal's HPO framework is a more holistic approach, as it includes an exhaustive coverage of multiple disciplines (quality of management; openness and action orientation; long-term

orientation; continuous improvement and renewal; and quality of employees) and has been scientifically validated in various context.

3.3.3 Mapping the nomological network of high performance organization research. According to Cronbach and Meehl (1955), the nomological network that includes an empirical framework specifying the relationships between antecedents and outcomes is an important element in advancing theory development. We attempt to explicate the nomological network for HPO by presenting a summary of the factors that our retrieved empirical articles identified as antecedents and outcomes of HPO (Table 2).

Antecedents of HPO. Given the importance of HPO toward the competitiveness and survival of the organizations in today's chaotic environment, several quantitative studies (n = 18) have explored the relationship between HPO and its 29 antecedents (Table 2). In a recent study of determinants of high-performance public organizations in Thailand, Jirangkul (2018) found that culture, leadership, change management, people and organizational design positively affect HPO. Gupta *et al.* (2019) made a great contribution by applying information technology to the management field and providing the correlations between big data analytics and HPO. Notable, two studies examined the relationship between bonus and HPO (de Waal, 2012b; de Waal and Jansen, 2013). Contrary to expectations, bonus and reward were unrelated to HPO.

Outcomes of HPO. An emerging body of empirical studies has demonstrated that HPO is positively associated with firm's overall performance (Thompson and Heron, 2005; Bagorogoza and de Waal, 2010). Moreover, HPO is found to be positively related to other performance outcomes including return on investment and customer satisfaction (Muldrow *et al.*, 2002). Extant research has also found support for the connection between HPO and knowledge productivity (Roijen *et al.*, 2017).

Mediators/Moderators in HPO research. There have been two studies that used the HPO framework developed by de Waal (2007) as a mediator (Honyenuga *et al.*, 2019; Pattanasing *et al.*, 2019) in the relationship between HPO and its antecedents (dynamics capabilities and management innovation). Among the 73 reviewed articles, there are no studies examining the boundary conditions or moderators in HPO network.

4. Discussion and recommendation for future research

Literature from the past two decades shows that both academics and practitioners have expressed great interest in studying HPO in different contexts and research designs, confirming the prediction and calling of Rogers and Blenko (2006) and de Waal (2018). Based on the findings from this systematic review, we have identified three areas for future research on HPO, which is outlined below.

4.1 Advancing research context

The findings from this review suggest that there is a worldwide interest in exploring HPO, particularly, in the USA. Regarding SMEs, there were only one studies from Ugheoke (2017). As SMEs experience tough competition but lack of technology, infrastructure and information (Gill and Biger, 2012; Mbonyane and Ladzani, 2011), their pathway toward high performance may not be similar to large organizations. Scholars are encouraged to use SMEs as research samples in future research, as the study of high performing small organizations would be an interesting extension in HPO research.

In addition, these publications come mostly from management, education, strategy, leadership and organizational development fields. Not many papers published in the industries of tourism development or entrepreneurship, indicating that these fields are worth exploring. For example, with emergence of industrial industry 4.0 and fierce global

Variables	Sources	Predicted direction	Findings
Antecedents			
Management innovation	Honyenuga *et al.* (2019);	Direct, positive	Supported
Job characterisitcs and satisfaction	Morley and Heraty (1995), Wood (1999)	Direct, positive	Supported
Big data analytics	Gupta *et al.* (2019)	Direct, positive	Supported
Leadership	Jirangkul (2018), Van Heerden and Roodt (2007)	Indrect, positive	Supported
Change management	Jirangkul (2018)	Indrect, positive	Supported
People	Jirangkul (2018)	Direct, positive	Supported
Organizational design	Jirangkul (2018)	Direct, positive	Supported
Best recruitment practice	Ugheoke (2017), Wood (1999)	Direct, positive	Supported
Entrepreneurial orientation	Hughes *et al.* (2017)	Direct, positive	Supported
Ambidexterity	Hughes *et al.* (2017)	Direct, positive	Supported
Performance management	de Waal and Van Der Heijden (2015)	Direct, positive	Supported
Bonus and reward	de Waal (2012b), de Waal and Jansen (2013)	Direct, positive	Not supported
Organizational culture	Gupta (2011), Muldrow *et al.* (2002), Jirangkul (2018), Morley and Heraty (1995)	Direct, positive	Supported
Corporate social responsibility	de Waal and Escalante (2011)	Direct, positive	Supported
Knowledge management	Bagorogoza and de Waal (2010)	Direct, positive	Supported
Competitive advantage	Bagorogoza and de Waal (2010)	Direct, positive	Supported
Dynamic capabilities	Pattanasing *et al.* (2019), Van Heerden and Roodt (2007)	Direct, positive	Supported
Vision and strategy	Van Heerden and Roodt (2007)	Direct, positive	Supported
Operational process	Van Heerden and Roodt (2007)	Direct, positive	Supported
Stakeholder satisfaction	Van Heerden and Roodt (2007)	Direct, positive	Supported
Management capability	Thompson and Heron (2005)	Direct, positive	Supported
Market and orientation	Farrell and Oczkowski (2002)	Direct, positive	Supported
Learning orientation	Farrell and Oczkowski (2002)	Direct, positive	Supported
Quality circles	Wood (1999)	Direct, positive	Not supported
Teamworking	Wood (1999)	Direct, positive	Supported
Employment security	Wood (1999)	Direct, positive	Supported
Process control	Wood (1999)	Direct, positive	Supported
Organizational policy	Wood (1999)	Direct, positive	Supported

(*continued*)

Table 2. Summary of antecedents, outcomes and mediators of HPO in empirical research

Variables	Sources	Predicted direction	Findings
HPO framework	Roijen *et al.* (2017), de Waal and Meingast (2017), de Waal and Wang (2017), Honyenuga *et al.* (2014)	Direct, positive	Supported
Outcomes			
Knowledge productivity	Roijen *et al.* (2017)	Direct, positive	Supported
Return on investment	Muldrow *et al.* (2002)	Direct, positive	Supported
Customer satisfaction	Muldrow *et al.* (2002)	Direct, positive	Supported
Firm performance	Thompson and Heron (2005), Bagorogoza and de Waal (2010)	Direct, positive	Supported
Mediator			
HPO framework	Honyenuga *et al.* (2019), Pattanasing *et al.* (2019)	Direct, positive	Supported

Table 2.

competition, more attention should be put on how tourism organizations achieve high performance and remain competitive in the market. Scholars can refer to this review to identify understudied or unexplored contexts for their future research.

Another way to advance knowledge in the field is to compare organizations of different type or origin (e.g. American versus Chinese manufacturing firms or governmental versus for-profit companies) and assess how the HPO models might vary in such cases.

4.2 Advancing research design

This study found that qualitative publications mostly used case studies and interviews to study HPO. Compared to the quantitative approach, these qualitative papers researched HPO in depth and offer new insights rather than testing existing theories or hypotheses. Noticeably, there exist mixed methods articles on HPO that tested the applicability of HPO in certain settings or investigated factors affecting HPO. More future empirical studies on HPO that using qualitative or mix-methods approaches to offer a fuller understanding on this phenomenon are highly welcomed.

Regarding quantitative research, this review presents numerous instruments that have been used to measure HPO. As previous publications used multiple quantitative measures developed from the literature, there is a need for an agreed upon instrument for HPO. The HPO instruments identified in our review can help researchers determine available HPO measures for their future studies. However, given the advancement of quantitative studies in the field, researchers are encouraged to find the answers to the question of how future studies could accurately measure and ensure construct validity of HPO in the future.

Besides, as the over-reliance on cross-sectional research can make the existing studies susceptible to common method bias, future studies should conduct data collection from multiple time points to better explain the relationships between HPO and its antecedents/outcomes. In other words, researchers should conduct longitudinal research that captures the performance of the organization before and after adopting high-performance best practices.

As for research models, the overreliance and abundant use of de Waal's HPO framework across HPO literature might cause biases and affect the advancement of the field. Future studies are encouraged to empirically validated understudied HPO

frameworks (Rogers and Blenko, 2006; Lacy *et al.*, 2009) and evaluate the applicability of these frameworks compared to de Waal's HPO framework or earlier frameworks of performance improvement (e.g. the Total quality management and the balanced scorecard).

4.3 Expanding the high performance organization's nomological network

The expansion of the HPO's nomological network will act as a complement to theory advancement that contribute greatly to moving a field of HPO forward. Our review of HPO's nomological network highlights gaps in the extant literature. For example, while organizational learning was proposed as a key determinant of HPO (Hayter, 1997; Kirkman *et al.*, 1999; Thomson, 2010), no empirical studies examined this relationship. Added to this, there are not many articles that investigated the interactive impact of multiple antecedents of HPO as proposed by conceptual studies (Kirkman *et al.*, 1999; Owen *et al.*, 2001; Lacy *et al.*, 2009). These foregoing gaps are potential areas for future research to develop a fuller understanding of the relationship between HPO and its antecedents. This recommendation also applies to the study of HPO and its outcomes.

In addition, future studies should involve more competing factors in the research design with the goal of painting a more comprehensive picture of what constituting HPO. Future research should also examine new intervening variables (mediators) and explore boundary variables (moderators) in the relationship between HPO and its antecedents/outcomes.

5. Implications for theory and practice

This review has significant implications for both theory and practice. First, our study extends the extant literature on HPO. While the previous review aims to identify how to define and measure HPO (de Waal, 2018), the current systematic study provides an updated review on the trend of HPO research, definitions of HPO, findings reflected in existing empirical work and potential areas for future study and practice of HPO. By bringing together the scattered understanding of HPO and mapping out the nomological network, we hope that our study can contribute greatly to the literature on how to study HPO in a robust way. New researchers can gain insights from our review about what is known and unknown in this field of research.

In practice, this study presents a holistic picture of the existing knowledge of HPO that are useful for business owners and practitioners to use this concept. For example, our review identifies numerous antecedents that establish a foundation for achieving HPO. The positive connections found between these antecedents and HPO indicate that they are well-suited for high-performing organizations. Business owners and practitioners can consider the adoption of these antecedents as best practices of HPO. Besides, given the importance of culture in creating HPO, practitioners must make effort in building a work culture for HPO. As high-performance culture is not easy to develop and sustain, it requires continuous attempt to create a performance-oriented organization, align organizational resources and develop appropriate leadership capability.

6. Conclusion

This paper aims to investigate how HPO is studied in the literature, from which areas for future research can be proposed. There are three key findings that emerged from this study. First, the research on HPO has been burgeoned in the past decades, generating several compelling studies in different contexts. The trend of HPO

research is now shifting from theory development to theory validation. Second, HPO has been defined in various ways in the extant literature. However, they all address the importance of aligning the firms' resources with the market demand and integrating various types of performance to measure HPO relative to competitors for a prolonged period. Third, an assessment of empirical HPO studies revealed gaps in terms of research context, research design and the HPO's nomological network. Based on these identified gaps, we provide potential directions that can help advance study and practice of HPO in the future.

One potential limitation of this review is that the literature search included only articles published in the English language, meaning that publications in other languages were not included. Future systematic reviews should include publications published in other languages. In addition, given the interest in evaluating the evolution of HPO and advancing knowledge in the field, this study concentrates on scholarly publications and excludes practitioner publications on HPO and related terms. Future reviews would benefit from examining consultant views on HPO in the vast amount of practitioner studies.

*Indicates a source that was included in the systematic review.

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Appendix

Table A1. Literature review matrix table

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
Pava (1983)	*National Productivity Review*	Conceptual	Not specified	N/A	N/A	N/A	The USA	Not specified	N/A	N/A	A: organizational design
Huczynski (1985)	*Technovation*	Conceptual	Not specified	N/A	N/A	N/A	Not identified	Not specified	N/A	N/A	A: organizational design
Agrawal (1993)	*Vikalpa: The Journal for Decision Makers*	Conceptual	Not specified	N/A	N/A	N/A	India	Not specified	N/A	N/A	A: organizational culture
Brown *et al.* (1993)	*The International Journal of Human Resource Management*	Qualitative	Not specified	N/A	Case study	Company records	The USA	Manufacturing	N/A	No	A: employee involvement; employee training; employment Security
Veverka (1993)	*Drug Information Journal*	Conceptual	Not specified	N/A	N/A	N/A	Maryland	Public	N/A	N/A	N/A
Chiera (1994)	*Control Engineering Practice*	Conceptual	See Table 1	Customer driven and consistent growth	N/A	N/A	The USA	Manufacturing	N/A	N/A	N/A
Bulger (1995)	*National Productivity Review*	Qualitative	See Table 1	N/A	Case study	Company records	The USA	Manufacturing	N/A	No	A: performance management
Morley and Heraty (1995)	*Management Decision*	Quantitative	Not specified	N/A	Survey	*t*-test	Not identified	Technology	Cross-sectional	No	A: job characteristics and satisfaction; organization culture and beliefs
Hayter (1997)	*The Canadian Geographer/Le Géographe Canadien*	Qualitative	Not specified	N/A	Case study	Company records	Canada	Paper	N/A	No	A: employee flexibility

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
Hillard and McIntyre (1998)	*Review of Radical Political Economics*	Conceptual	Not specified	N/A	N/A	N/A	Not identified	Not specified	N/A	N/A	A: unionized workers
Kirkman *et al.* (1999)	*Leadership in Action*	Conceptual	See Table 1	Work teams; employee involvement; technology; organizational learning; total quality management	N/A	N/A	Not identified	Not specified	N/A	N/A	N/A
Wood (1999)	*British Journal of Industrial Relations*	Quantitative	Not specified	Total quality management; delayed layoffs; use of temporary workers	Osterman's data set (secondary data)	Latent variable analysis	The USA	Manufacturing and services	Cross-sectional	No	A: team working; job rotation; human relations skills in selection; cross-training; Internal recruitment; employment security policy; statistical process control
Beer (2001)	*Organizational Dynamics*	Qualitative	Not specified	N/A	Case study	Company records	The USA	Mixed	N/A	No	A: organizational change
Owen *et al.* (2001)	*Managing Service Quality: An International Journal*	Conceptual	See Table 1	N/A	N/A	N/A	Not identified	Not specified	N/A	N/A	A: perception of the market; vision and strategies; leadership practices; infrastructures; employee behaviors

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
Farrell and Oczkowski (2002)	*Journal of Market-Focused Management*	Quantitative	Not specified	Customer retention; new product success; sales growth; return on investment; overall performance	Survey	SEM	Australia	Manufacturing	Cross-sectional	Yes	O: customer loyalty; business performance A: market orientation; learning orientation
Lawler (2002)	*Performance Improvement*	Conceptual	Not specified	N/A	N/A	N/A	Not identified	Not specified	N/A	N/A	A: employee involvement, total quality management, re-engineering, knowledge management
Muldrow *et al.* (2002)	*Human Resource Management*	Quantitative	See Table 1	N/A	Survey	Comparing average scores	The USA	Public	Cross-sectional	No	A: organizational culture O: return on investment; customer satisfaction
Osborne and Cowen (2002)	*Management Decision*	Conceptual	See Table 1	N/A	N/A	N/A	The USA	Mixed	N/A	N/A	N/A
Smith (2002)	*Global Business and Economics Review*	Qualitative	Not specified	N/A	Case study	N/A	The USA	Technology and Paper	N/A	No	N/A
Hiltrop (2005)	*Strategic Change*	Conceptual	Not specified	N/A	N/A	N/A	Not identified	Not specified	N/A	N/A	A: human resource capabilities
Jones (2005)		Conceptual		N/A	N/A	N/A		Not specified	N/A	N/A	A: leadership

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
	Human Resource Management International Digest		See Table 1				Not identified				
Lawler (2005)	*Asia Pacific Journal of Human Resources*	Conceptual	Not specified	N/A	N/A	N/A	Not identified	Not specified	N/A	N/A	A: employee development, rewards
Thompson and Heron (2005)	*The International Journal of Human Resource Management*	Quantitative	Not specified	Recruitment and training; performance feedback; team working; rewards; information sharing; involvement; personal development	Survey	Regression analysis	The UK	Aerospace	Cross-sectional	Yes	A: management capability, O: firm performance
Lloyd and Payne (2006)	*Work, Employment and Society*	Conceptual	See Table 1	N/A	N/A	N/A	Not identified	Not specified	N/A	N/A	O: employees' skills and quality
de Waal (2007)	*Business Strategy Series*	Conceptual	See Table 1	Financial and non-financial performance	N/A	N/A	Not identified	Not specified	N/A	N/A	A: firm design; strategy; technology; process management; leadership; individuals and roles; culture; external orientation
Van Heerden and Roodt (2007)	*SA Journal of Industrial Psychology*	Quantitative	See Table 1	N/A	Survey	Reliability and factor analysis	South Africa	FMCG	Cross-sectional	Yes	A: vision and strategy; leadership; core

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
											capabilities; delivery process; stakeholder satisfaction
Wolf (2008)	*Performance Improvement*	Qualitative	Not specified	Leadership; culture; communication; ongoing development; service; community outreach; employee relationships	Interviews	Coding	Not identified	Health care	N/A	No	A: N/A
de Waal *et al.* (2009)	*Journal of Transnational Management*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	Vietnam	Banking	Cross-sectional	No	O: firm performance
Lacy *et al.* (2009)	*Corporate Governance: The International Journal of Business in Society*	Conceptual	See Table 1	Growth; profitability; positioning for the future; longevity; consistency	N/A	N/A	Not identified	Not specified	N/A	N/A	A: organizational change; leadership development; learning; performance management; employee management
Bagorogoza and de Waal (2010)	*World Journal of Entrepreneurship, Management and Sustainable Development*	Quantitative	See Table 1	Profitability; productivity; perceived high performance; market share	Survey	Regression analysis	Uganda	Finance	Cross-sectional	Yes	A: knowledge management; competitive advantage; HPO framework

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
de Waal (2010)	*Public Performance and Management Review*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	The Netherlands	Public	Cross-sectional	No	O: firm performance O: firm performance
Melchar and Bosco (2010)	*The Journal of Business Inquiry*	Mixed method	Not specified	Customer satisfaction and sales volume	Survey and interviews	ANOVA	The USA	Service	Cross-sectional	No	A: servant leadership
Thomson (2010)	*SSRN Electronic Journal*	Qualitative	Not specified	Work teams; employee involvement; technology; organizational learning; total quality management	Case study	N/A	The USA	Retailer	N/A	Yes	A: integrated production technologies; total quality management; organizational learning
Berry (2011)	*Industrial Marketing Management*	Conceptual	Not specified	N/A	N/A	N/A	The USA	Service	N/A	N/A	A: service quality; talent development; relationships; organizational generosity
de Waal and Chachage (2011)	*International Journal of Emerging Markets*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	Tanzania	Education	Longitudinal	No	O: firm performance
de Waal and Escalante (2011)	*International Journal of Sustainable Strategic Management*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	Peru	Mining	Cross-sectional	No	A: corporate social responsibility
Gupta (2011)	*International Journal of*	Quantitative	Not specified	performance orientation;	Survey	SEM	Mixed	Mixed	Cross-sectional	Yes	

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
	Commerce and Management			group collectivism							A: organizational culture
Wolf (2011)	*International Journal of Training and Development*	Qualitative	Not specified	N/A	Interviews	Coding	Not identified	Health care	N/A	No	A: agile/ consistency; informative/ inquiry; collective individualism
Coulson-Thomas (2012)	*Industrial and Commercial Training*	Mixed method	Not specified	N/A	Survey and case study	N/A	Not identified	Mixed	Cross-sectional	No	A: talent management
de Waal (2012b)	*Compensation and Benefits Review*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	Mixed	Mixed	Longitudinal	No	A: bonus (non-significant)
de Waal (2012a)	*Global Business and Organizational Excellence*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	Europe	Multinational companies	Cross-sectional	No	O: firm performance
de Waal and Sivro (2012)	*Journal of Leadership and Organizational Studies*	Mixed method	See Table 1	Financial and non-financial performance	Survey and interviews	Comparing average scores	The Netherlands	Health care	Cross-sectional	No	A: servant leadership
de Waal and Sultan (2012)	*Business and Society: Contemporary Middle Eastern Issues*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	Palestine	Education	Cross-sectional	No	O: firm performance
Hough (2012)	*Corporate ownership and control*	Conceptual	Not specified	Net profit margin; return on assets; return on equity; turnover	N/A	Mixed	South Africa	Not specified	N/A	N/A	O: competitive advantage
				N/A		N/A		Mixed		No	A: leadership

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
Coulson-Thomas (2013a, 2013b)	*Industrial and Commercial Training*	Mixed method	Not specified		Survey and case study		Not identified		Cross-sectional		
Coulson-Thomas (2013a, 2013b)	*Industrial and Commercial Training*	Mixed method	Not specified	N/A	Survey and case study	N/A	Not identified	Mixed	Cross-sectional	No	A: leadership
de Waal and Jansen (2013)	*Evidence-Based HRM: A Global Forum for Empirical Scholarship*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	Mixed	Mixed	Longitudinal	No	A: bonus (non-significant)
de Waal and Tan Akaraborworn (2013)	*Measuring Business Excellence*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	Thailand	Mixed	Cross-sectional	No	O: firm performance
de Waal (2014)	*Strategic HR Review*	Conceptual	See Table 1	Financial and non-financial performance	N/A	N/A	Not identified	Not specified	N/A	N/A	A: employee satisfaction
de Waal *et al.* (2014a)	*Measuring Business Excellence*	Quantitative	See Table 1	Financial and non-financial performance	Survey	CFA	Thailand	Mixed	Cross-sectional	Yes	O: firm performance
de Waal *et al.* (2014b)	*Journal of Strategy and Management*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	The Netherlands	Diamond	Cross-sectional	No	O: firm performance
Honyenuga *et al.* (2014)	*Journal of Transnational Management*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Regression analysis	Ghana	Insurance	Cross-sectional	Yes	O: firm performance
Welbourne (2014)	*Organizational Dynamics*	Conceptual	Not specified	N/A	N/A	N/A	Not identified	Not specified	N/A	N/A	A: employee energy
de Waal and Van Der Heijden (2015)	*Journal of Organization Design*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Correlation analysis	Mixed	Mixed	Cross-sectional	Yes	A: performance management

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
Ghatge *et al.* (2015)	*South Asian Journal of Business and Management Cases*	Qualitative	Not specified	N/A	Case study	N/A	India	Manufacturing	N/A	No	O: firm performance A: visionary leadership; operation management; financial management; human resource management
de Waal and Heijtel (2016)	*Management Research Review*	Qualitative	See Table 1	Financial and non-financial performance	Interviews	Intervention	The Netherlands	Service	Cross-sectional	No	A: organizational change
de Waal *et al.* (2016)	*International Journal of Emerging Markets*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	Egypt	ICT	Cross-sectional	Yes	O: firm performance
Fulker *et al.* (2016)	*International Journal of Hospitality and Tourism Administration*	Qualitative	Not specified	Customer satisfaction	Case study	N/A	The USA	Service	N/A	No	A: leadership; planning; culture
Warrick *et al.* (2016)	*Organizational Dynamics*	Qualitative	Not specified	N/A	Case study	N/A	The USA	Service	N/A	No	A: leaders, core values, customer-focused strategy, human resource practices; management practices
de Waal and Meingast (2017)	*Measuring Business Excellence*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	The Netherlands	Agricultural	Cross-sectional	No	O: firm performance

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
de Waal and Wang (2017)	*Journal of Chinese Human Resource Management*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	China	State-owned	Cross-sectional	No	O: firm performance
de Waal *et al.* (2017)	*International Journal of Retail and Distribution Management*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Comparing average scores	The Netherlands	Supermarket	Cross-sectional	No	O: firm performance
Hughes *et al.* (2017)	*British Journal of Management*	Quantitative	Not specified	Growth in sales, profit and market share	Survey	SEM	Finland	Mixed	Cross-sectional	Yes	A: entrepreneurial orientation; ambidexterity
Roijen *et al.* (2017)	*International Journal of Management and Applied Research*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Correlation analysis	The Netherlands	Knowledge-intensive	Cross-sectional	No	O: knowledge productivity
Ugheoke (2017)	*International Postgraduate Business Journal*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Regression Analysis	Nigeria	SMEs (food and beverages)	Cross-sectional	Yes	A: best recruitment practice
de Waal and de Haas (2018)	*International Journal of Productivity and Performance Management*	Mixed method	See Table 1	Financial and non-financial performance	Survey and interviews	Comparing average scores	Philippine	Manufacturing	Longitudinal	No	O: firm performance
Jirangkul (2018)	*Kasetsart Journal of Social Sciences*	Quantitative	See Table 1	N/A	Survey	SEM	Thailand	Health care	Cross-sectional	Yes	A: culture and engagement; leadership; change management; people; design
Mroueh and de Waal (2018)	*Journal of Islamic Accounting and Business Research*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Matching	The UAE	Insurance	Longitudinal	No	N/A

(*continued*)

Table A1.

Citation	*Journal title*	Paper type	HPO definition	HPO measure	Data collection	Data analysis	Country	Industry	Time-frame	Validity test	Antecedents (A), outcomes (O) and mediators (M)
Amah and Oyetunde (2019)	*International Journal of Management, Economics and Social Sciences*	Conceptual	See Table 1	Economic performance; Social performance; environmental performance	N/A	N/A	Africa	Not specified	N/A	N/A	A: economic/ internal factors; social factors; environmental factors
de Waal and Olale (2019)	*Global Business and Organizational Excellence*	Mixed method	See Table 1	Financial and non-financial performance	Survey and Interviews	Comparing average scores	Kenya	Non-government organizations	Cross-sectional	No	O: firm performance
Gupta *et al.* (2019)	*Industrial Marketing Management*	Quantitative	Not specified	Operational performance; market performance; financial performance	Survey	SEM	India	Mixed	Cross-sectional	Yes	A: big data analytics
Honyenuga *et al.* (2019)	*International Journal of Business and Globalization*	Quantitative	See Table 1	Financial and non-financial performance	Survey	Regression analysis	Ghana	Insurance	Cross-sectional	Yes	A: management innovation O: firm performance M: HPO framework
Pattanasing *et al.* (2019)	*Tourism and Hospitality Management*	Quantitative	See Table 1	Financial and non-financial performance	Survey	SEM	Thailand	Tourism	Cross-sectional	Yes	A: dynamic capabilities O: firm performance M: HPO framework

Notes: N/A = nott applicable; SMEs = small and medium-sized enterprises; SEM = structural equation modeling; HPO = high performance organization; ICT = information communication Technology; FMCG = fast-moving consumer goods

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Chapter 13

The Evolution of Leadership Theories: A Literature Review

Thanh Tung Do and Ngoc Khuong Mai

Abstract

Leadership theories have evolved over the decades, reflecting its complex and multifaceted nature. This narrative literature review aims to analyze significant leadership literature in popular leadership course books and published peer-reviewed English articles, from which future research directions can be extrapolated.Various development stages of leadership, which hold different research values, were examined and discussed. Since some emerging theories appear to be understudied (shared/distributive leadership, complexity theory of leadership, etc.), there are arguably scopes and opportunities for these to be developed in the future.

Keywords: Leadership; Leadership theories; Complexity; Literature review.

1. Introduction

Leadership has a relatively long history, moving from a set of personality traits to a complex, multifaceted, and ever-changing process. Various studies on leadership propose theories suitable for different contexts and catalyze varying outcomes. Leadership is recognized as a key factor affecting business performance, corporate culture, and employees' attitudes (Wang *et al.*, 2011; Elenkov, 2002; Koene *et al.*, 2002; Ogbonna and Harris, 2000). Scholars also examine and

point out that different leadership approaches result in different outcomes. For example, ethical leadership tends to improve organizational citizenship behavior (Ruiz-Palomino *et al.*, 2011); leader–member exchange leadership enhances creative work involvement (Volmer *et al.*, 2012), and transformational leadership facilitates innovation (Jia *et al.*, 2018).

The abundance of leadership theories and approaches in the literature require scholars to conduct comprehensive evaluation and categorization. There also exist few comprehensive literature reviews on this field. Stogdill (1975) attempts to review earliest leadership theories such as traits theories, exchange theories, expectancy-reinforcement theories, path–goal theory, and contingency theory. The author concludes that these available theories are ideologically biased and should be comprehensively combined. Van Seters and Field (1990) review nine different eras of leadership, namely Personality, Influence, Behavior, Situation, Contingency, Transactional, Anti-Leadership Era, Culture Era, Transformational Era. The two scholars also call for a conceptual integrating framework that connects different leadership approaches. Recently, Asrar-ul-Haq and Anwar (2018) have conducted a literature review on classical perspectives of leadership and its linkage with different outcomes. The two authors also propose a research agenda on studying leadership from a multiperspective in developing countries, especially in Southern Asia. Clark and Harrison (2018) use 11 interrelated eras of leadership framework adapted from Alimo-Metcalfe (2013) and King (1990) to review significant leadership literature and conclude that future research opportunities involve servant leadership as well as skill and entrepreneurial approach to leadership. However, as this field of study involves a variety of theories that evolve over time, those literature reviews are conceived insufficient. It is therefore vital to review prominent leadership theories that contemporary research attempts to address.

This narrative literature review chapter aims to answer the following questions:

- **Q1:** What does extant literature currently contribute to the understanding of leadership and its evolution?
- **Q2:** What are some of the leadership theories and concepts that future research should focus on?

First, the authors search for publications on leadership theories from respected online academic databases such as Web of Science, Google Scholar, Emerald Insight, Science Direct, and Pro Quest. Only notable articles that cover leadership theories and literature reviews on leadership are included. *Leadership*, *leadership theory*, and *leadership literature review* are keywords used for the search. Selected articles are subjected to a qualitative review that is carried out independently by the two authors. After comparing separate assessments and reaching consensus, the authors analyze the remaining papers, then discuss and propose areas for future research on leadership. Besides, some sections related to leadership theories in popular leadership handbooks and textbooks such as *Leadership: Theory and Practice* by Northouse (2018) and *Leadership in Organizations* by Yukl (2013) are used in the review.

This literature review starts with the definitions of leadership, prevailing approaches to leadership, then continues with emerging conceptions of leadership. Later, these leadership theories are discussed and some directions for further leadership research are proposed.

2. Definition of Leadership

There is a variety of leadership definitions and approaches in the literature. Most of them assume that leadership is a process whereby intended influences are exerted over colleagues or subordinates to guide, structure, and support activities and relationships at a group or firm level (Yukl, 2013). Northouse (2018) defines leadership as a process whereby a single person influences his or her followers to achieve a shared goal. Leadership, according to this definition, deals with influence, interaction, and relationships between leaders

and subordinates. Yukl (2013) comes up with a broader definition of leadership, which considers various attributes that not only facilitate the success of a group or an organization but also make sure it is ready to handle future challenges. Leadership, as defined by Yukl, is the process in which, through influences and facilitation, leaders and followers understand and reach consensus on future objectives and how to achieve mutual goals.

There is an evolution of various leadership theories, ranging from trait, behavior, contingency, transformation to a newly-introduced one called complexity theory of leadership (Uhl-Bien *et al.*, 2007; Yukl, 2013; Northouse, 2018). The next sections briefly review different leadership concepts from past to present and discuss how they inform future empirical research and practices of this phenomenon.

3. Prevailing Approaches to Leadership

3.1. *Trait theory and competence theory of leadership*

The classical root of leadership theories begins with the work of Stogdill (1948), which was then known as the trait theory of leadership. According to Northouse (2018), the trait approach is developed based on theoretical assumptions of the Great Man theory of Thomas Carlyle, which assumes that powerful leaders are made of numerous innate or learned characteristics. This approach emphasizes numerous leadership characteristics, varying from personality and skills, to values and attributes (Yukl, 2013). Brandstätter (2011) defines personality traits as abilities, behaviors, and attributes of temperament as an overarching approach of an individual.

According to Çpğaltay (2015) and Stogdill (1948), the most referenced traits and abilities are intelligence, self-confidence, decisiveness, consistency, and sociability. Northouse (2018), on the other hand, states that the Five-Factor Personality Model is the most mutually agreed and supported model among scholars. As defined in Northouse (2018), this model includes *Neuroticism* (characteristics of leaders who are miserable, fearful, insecure, vulnerable, and

unfriendly), *Extraversion* (characteristics of leaders who are sociable, assertive, and have positive energy), *Openness* (characteristics of leaders who are informed, innovative, insightful, and eager to learn), *Agreeableness* (characteristics of leaders who are conforming, believing, and cultivating), *Conscientiousness* (characteristics of leaders who are detailed, organized, controlled, reliable, and decisive).

The trait theory of leadership is expanded to leadership skills and competences, in which leadership competencies can be learned and leadership skills involve technical, human, and conceptual skills (Katz and Kahn, 1978; Zaccaro *et al.*, 2000). Other leadership concepts developed later are leadership motive profile theory (McClelland and Boyatzis, 1982) and emotional intelligence in leadership (Goleman, 2006; Walter *et al.*, 2011).

3.2. *Behavioral leadership*

Based on the outcomes of the work of Blake and Mounton (1964), the behavioral leadership approach develops a new way to define and conceptualize a leadership model that highlights the actions and behaviors of leaders rather than their inherent characteristics (Yukl, 2013). Most findings in behavioral leadership are converted into Blake and Mouton's managerial leadership grid of 1964. This grid is beneficial for leaders to understand and develop relevant leadership behaviors (Çğaltay, 2015).

In addition, the research carried out at Ohio State and Michigan Universities assumes that leaders exhibit dual behavior types: consideration (people-oriented) and imitating structure (task-oriented) (Northouse, 2018). According to Yukl (2013), while task-oriented leaders provide their subordinates with direct and detailed instructions on their assigned tasks, relationship-oriented leaders focus on developing mutual relationships, fostering collaboration, and improving commitments. Although many scholars refer to this two-factor model to find a comprehensive theory of leadership, this dual behavior fails to take situations into account and identify which behaviors are effective in such contexts (Yukl, 2013). Yukl *et al.* (2002) mention

about change-oriented leadership and combine it with the foregoing two-factor leadership behaviors to conceptualize a hierarchical taxonomy of leadership behavior. Over the years, many other leadership theories related to behaviors have been put forth, for example, leadership reward and punishment (Podsakoff *et al.*, 1984), participative leadership (Huang *et al.*, 2010), or ethical leadership, servant leadership, spiritual leadership, authentic leadership, and so on (Çğaltay, 2015).

3.3. *Situational leadership*

On account of Reddin (1967)'s 3-D administrative style theory, another approach emerged in the late 1960s called situational or contingency leadership (Aronson, 2009). Hersey and Blanckhard (1969) develop the Situational Leadership Theory based on Reddin's theory, aiming to illustrate varying leadership behaviors required in different contexts: directing, coaching, supporting, and delegating (Graeff, 1983). Besides, there are major works under the umbrella of the situational approach with varying results (Butler Jr and Reese, 1991; Thompson and Glasø, 2015; Silverthorne, 2000).

Fiedler's Contingency Theory (1964, 1967) implies that effective leadership stems from harmonious linkages between leadership behaviors, time, and settings. This model includes three variables (leader–member relations, task structure, and position power) and two leadership styles (task-motivated and relationship-motivated) (Campbell and Fiedler, 1968).

Path–Goal Theory, developed by House (1971), contains two leadership behaviors: instructing-supportive and success oriented-participatory. This theory refers to how leaders clearly determine the path to achieve the goals, remove possible hindrances on the way, and motivate their subordinates to accomplish the allocated goals (House and Mitchell, 1974).

Kerr and Jermier (1978) introduce the substitute theory of leadership, meaning that leadership can be replaced with processes and task structures. Murphy *et al.* (1992) develop cognitive resource theory

and state that leaders have to take advantage of intellectual ability and followers' experiential capabilities to improve organizational capabilities.

It can be argued that situational leadership approaches contribute to leadership effectiveness and organizational outcomes. However, some criticisms remain in terms of the over-dependence of employees on their leaders to fulfill goals, poor quality of measurements (Northouse, 2018), or the complex nature and doubtful validity of this approach (Yukl, 2013).

3.4. *Transformational leadership*

A new leadership era in literature is marked by the introduction of Charismatic leadership by House in 1976, followed by Transformational and Transactional leadership by Burns in 1978.

Charismatic leadership discusses various personality characteristics (e.g., dominant and desire to influence), behaviors (e.g., shows competence and articulates goals), and impact on subordinates (e.g., affection toward leader and obedience) (Northouse, 2018).

With regard to the transformational approach, leaders develop their leadership styles after identifying personal values that guide the actions and values of other people at the workplace (Burns, 1978). In 1985, Bass extends Burns (1978)'s research findings by adding *Laissez–Faire Leadership* to the model of transformational and transactional leadership. Bass calls the new model a *Full Range of Leadership Model*.

In the full range model, transformational leadership factors involve idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence deals with how leaders act as role models for followers. Inspirational motivation is how leaders set goals for followers and motivate them toward a shared vision. Intellectual stimulation deliberates on how leaders help followers to be more creative, innovative, and careful when dealing with problems. Individualized consideration describes how considerate and supportive leaders are towards their followers'

demands. Contingent reward and Management-by-exception are two factors of transactional leadership. The former is how leaders reward their followers and in turn expect them to be active. The latter is how leaders use feedback, criticism, and reinforcement in either an active or passive way. Laissez-faire or non-transaction factor means that leaders rule out responsibility, provide no feedback, and express no concerns for the needs of their followers (Çğaltay, 2015; Northouse, 2018).

One limitation of transformational leadership, according to Lord (2008), lies in not only the conceptualization of leaders as individuals but also its failure to consider the organizational context and the advent of unpredictable leadership. The author argues that the ignorance of organizational context can result in limited understanding on the creation of organizational change. In addition, Yukl (2013) states that transformational leaders may lack the cognitive skills required for facing increasingly complex and tough difficulties due to changed environmental situations. Similarly, according to Northouse (2018), there is no definite conclusion about a causal relation between transformational leadership and organizational change. Hence, a gap exists in the conceptualization of leadership when dealing with organizational context and the emergence of change and innovation.

4. Emerging Conceptions of Leadership

According to Bennis (2007), although scholars view leadership as a leading concept in organizational research, they have not yet agreed upon a unified theoretical perspective of this phenomenon. Some research practitioners rely on traditional approaches to conceptualize leadership that appears to be comprehensive. By contrast, other scholars exhibit a critical view towards prevailing leadership approaches and therefore prefer to employ newly emerging conceptions of relational leadership, shared and distributed leadership, or complexity theory of leadership in their studies (Drath *et al.*, 2008).

4.1. *Shared/distributed and relational leadership*

Under the shared/distributed approach, leadership is viewed as reciprocal, recursive influence processes among multiple leaders with different but inter-related responsibilities (Yukl, 2013). According to Van Ameijde *et al.* (2009, p. 776), distributed leadership is defined as *a shared influence process to which several individuals contribute*. The group of authors also mention that this leadership approach *arises from the interactions of diverse individuals which together form a group or network in which essential expertise is a dispersed quality*. Bolden (2011) says that most research interest in shared/distributed leadership is on education fields. In contrast, the author highlights that only one-fifth of published papers on distributed leadership and one-quarter of published papers on shared leadership can be accessed in business and management journals. This is indicative that this leadership approach is still not familiar in the business and management fields.

According to Yukl (2013, p. 295), relational leadership considers leadership as *part of an evolving social order that results from interactions, exchanges, and influence processes among many people in an organization*. Researchers of relational leadership aim to explore the social process and recurrent connections that describe the ways collective efforts can fulfill shared goals. Uhl-Bien (2006) defines this approach as a relational and ethical process of individuals who are making collective efforts to foster positive change. Most research on relational leadership is found in the education or healthcare industry, while little notice is paid to exploring this theory and its effects on organizational functions, especially in other sectors (Akram *et al.*, 2016).

Shared/distributed and relational theories seem inadequate to describe the impact of leadership, especially the chief executive officer (CEO) or the top management, on the organizations (Yukl, 2013). Marion and Uhl-Bien (2001) mention the complexity theory of leadership is more relevant to the upper echelons. Moreover, this theory is also used to illustrate emergent processes and help organizations adapt to the current chaotic environment.

4.2. *Complexity theory of leadership*

Complexity theory of leadership looks at leadership theory from a relational standpoint and draws upon the complexity science to categorize leadership as an asset of a social system (Clarke, 2013). Hence, leadership within complexity theory can be defined in a more comprehensive way, involving structures, activities, and processes that facilitate the organizations to face challenges like uncertainty, ambiguity in the working environment (Clarke, 2013).

Similarly, Uhl-Bien *et al.* (2007) propose that complexity leadership theory is relevant in today's challenging, complex, and knowledge-driven era, which demands the creation of knowledge, learning processes, and innovative solutions. These authors identify three types of processes in this leadership theory. Administrative leadership refers to actions and conclusions made by the formal hierarchy of the firm (CEO, directors, managers, and other formal leaders). These people oversee action planning and coordination at work (Yukl, 2013; Uhl-Bien *et al.*, 2007). Although administrative leadership bears resemblance to traditional leadership behaviors, it is merely a part of the whole leadership process in complexity leadership theory. Adaptive leadership is *an emergent, interactive dynamic that produces adaptive outcomes in a social system* (Uhl-Bien *et al.*, 2007, p. 306). This leadership behavior represents a process arising from collective interactions of those with diverse knowledge and opinions aiming to handle problems and conflicts (Yukl, 2013). Yukl also states that the process within adaptive leadership catalyzes innovative ideas and insights that are vital for conflict resolution and responsive adaptation to turbulence and prospective changes. Enabling leadership is how an individual or a team fosters interaction among different agents, enhances self-organization, enables others to access necessary resources, and provides a spark for creative ideas to be implemented (Yukl, 2013; Uhl-Bien *et al.*, 2007). Yukl (2013) also highlights another role of enabling leadership: keeping administrative leadership and adaptive leadership stable and mutually well-matched.

4.3. *Complexity leadership and transformational leadership*

According to Marion and Uhl-Bien (2002), Complexity Leadership differs from traditional leadership approaches in a number of ways. Specifically, leadership in complexity theory does not directly affect organizational dynamics but through a process of collective interaction and emergence, embedded in managerial roles but diffused through the complex system (Uhl-Bien *et al.*, 2007; Marion and Uhl-Bien, 2002). In a paper presented at a conference, Marion and Uhl-Bien (2002) point out some differences between Complexity Leadership with the commonly used leadership theory, transformational leadership. The comparison of the two authors is summarized in Table 1.

In addition, Transformational Leadership Theory (leader-oriented) cannot fully explain organizational creativity and the process that facilitates the adaptation of organizations to the environments. On the other hand, the Complexity Theory of Leadership (process-oriented) addresses this issue and further explains the responsibilities of leaders in the adaptation process (Yukl, 2013; Marion and Uhl-Bien, 2002). From this perspective, Complex Leadership is considered to remediate the restriction of Transformational Leadership, especially in the study of organizational change and innovation in the current complex and ambiguous working environment.

4.4. *Previous studies on complexity theory of leadership*

Research on complexity theory of leadership is scarce. Much of the published work on this concept is literature reviews based on theoretical and conceptual discussion/analysis (Nienaber and Svensson, 2013; Hogue and Lord, 2007; Schneider and Somers, 2006; Halbesleben *et al.*, 2003). For example, Schneider and Somers (2006) review literature in general systems theory and complex adaptive system to present a rudimentary leadership model and introduce nonlinear methodologies called dynamic systems simulation and artificial

Table 1: Complexity leadership and transformational leadership.

Transformational leadership	**Complexity leadership**
Sees control as top down, according to the leaders' decisions	Sees control as bottom-up, related to the dynamics of the system
Focuses on top-down, leader-centric activity	Focuses on bottom-up, collective interactions within the whole social network
Sees leaders as central to organizational functions and outcome	Sees leaders as an important part of a larger dynamic
Describes leaders as "managers of meaning"	Describes leaders as "managers of emergence"
Outlines transformation as inducing subordinates to go beyond their self-interests for collective achievements and success	Outlines transformation as an emergent dedication to innovation and productivity from different objectives at the bottom of the hierarchy
Transforms the followers' behaviors around a mutual vision	Transforms a social system into a neural network of varied and flexible agents
Converts individuals into their own replicas	Converts individuals into varied but interrelated complex adaptive agents
Defines social action as stable relationships or numerous linear events	Defines social action as a collection of events involving nonlinear activities

Source: Adapted from Marion & Uhl-Bien (2002).

neural networks for scholars to refer to in developing and analyzing leadership models under complexity theory. In a piece of research on two case studies in the Netherlands, Nooteboom and Termeer (2013) utilize complexity leadership theory and participatory observation techniques to identify adaptive and enabling leadership strategies that can spur innovation in a complex environment. Recently, Mendes *et al.* (2016) reviewed the literature on complexity leadership theory, learning and innovation in turbulent environments, and reflected on how adaptive, administrative, and enabling leadership behaviors in the theory simultaneously affect organizational outcomes. Specifically, they proposed that complexity leadership theory

can be employed to better explain the emergence of organizational learning and innovation that consequently affect performance. The group of authors also called attention to the further development and examination of this conceptual framework.

5. Conclusion and Area for Future Research

Leadership is undeniably an interesting theme for researchers to explore over many years. A variety of leadership concepts and theories are postulated by many authors and scholars (Çğaltay, 2015; Northouse, 2018; Yukl, 2013; Burns, 1978; House, 1971; Campbell and Fiedler, 1968). Early studies are conducted to investigate the outcomes of mainly well-known leadership styles such as transformational leadership, ethical leadership, leader–member exchange leadership (Wang *et al.*, 2011; Ogbonna and Harris, 2000; Ruiz-Palomino *et al.*, 2011; Volmer *et al.*, 2012; Jia *et al.*, 2018). These prevailing approaches facilitate a moderate but insufficient understanding of leadership and its impact.

Nevertheless, this field has evolved over the decades. Emerging conceptions of this field of study, such as shared leadership, distributed leadership, relational leadership, and complexity theory of leadership, appeared and have contributed to the wealth of leadership literature. These new leadership concepts are understudied in the literature and empirical research; thus yielding potential research opportunities for the future. More studies that examine the effects of other emerging leadership concepts on workplace dynamics are encouraged to advance the field.

In addition, it is believed that adopting a leader-centered standpoint can result in a narrowed understanding of leadership phenomenon in organizations (Mendes *et al.*, 2016; Yukl, 2013; Uhl-Bien *et al.*, 2007). According to Yukl (2013) and Rosing *et al.* (2011), individual and dyadic theories are insufficient to address the complexities that organizations face in the present day. Considering this research gap, Complexity Leadership Theory, which is considered to remediate the restriction of other theories, especially the widely used

approach, i.e., Transformational Leadership (Marion and Uhl-Bien, 2002), should receive the attention it deserves.

Further empirical research is also needed to advance the Complexity Theory of Leadership as an approach. Empirical studies on this leadership theory are potentially scarce. Some studies theoretically discuss complexity leadership and its influences on some phenomena such as performance, organizational learning, and innovation (Nienaber and Svensson, 2013; Hogue and Lord, 2007; Schneider and Somers, 2006; Halbesleben *et al.*, 2003, Mendes *et al.*, 2016). Since the results from these studies potentially allow for bias, future empirical and even longitudinal studies conducted within different contexts are encouraged to both further explore this leadership approach and validate its association with other outcomes. Notably, Mendes *et al.* (2016) call for research to validate the relationships among complexity leadership theory, organizational learning, and innovation. To the best of the authors' knowledge, there are little or even no empirical studies examining such associations. Hence, this is also a research gap that future studies should consider.

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