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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

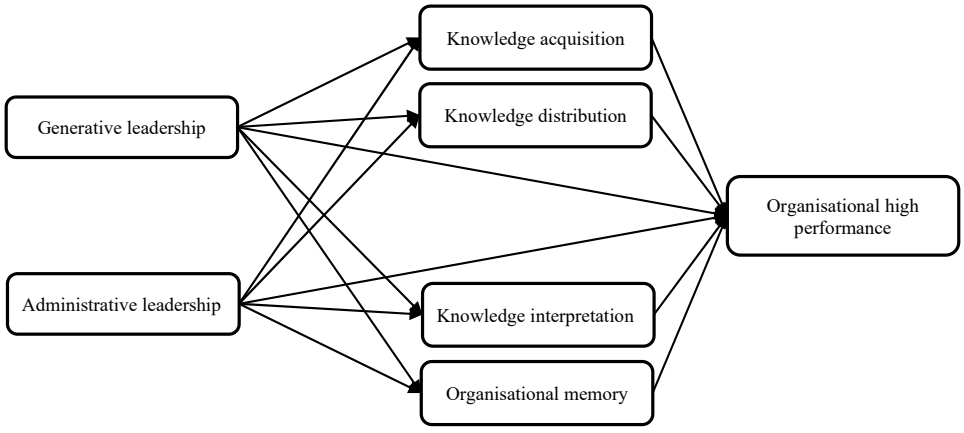
Bryant (2003) noted that leaders invest time and resources to develop organisational learning mechanisms, which enhance firms' effectiveness. Consequently, scholars have found organisational learning to have a mediating influence on the relationship between leadership and organisational high performance (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.

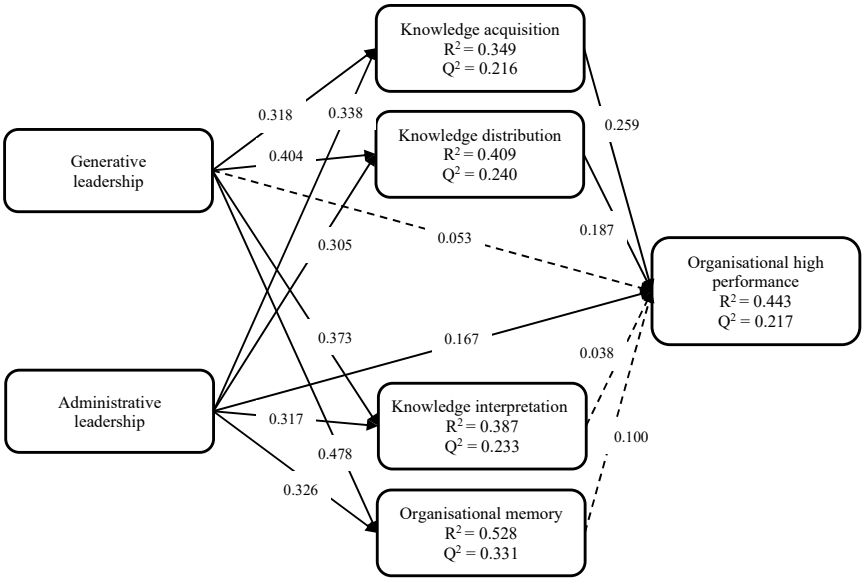
The results for H1 indicated that administrative leadership has a significant and positive relationship with organisational high performance at a 95% confidence level with ALM ($\beta = 0.167$, $p = 0.031$). The results for H3 indicated that administrative leadership has a significant and positive relationship 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.	