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Antecedents of Competitive Advantage for Vietnamese Firms: The Roles of Transformational Leadership, Organizational Learning and Innovation

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Abstract

Given the important role of innovation, this paper aims to clarify its antecedents and consequences by investigating influence of transformational leadership (TL), organizational learning (OL) and specific forms of innovation on differentiation competitive and low-cost competitive advantage. This study applied the structural equations modeling using the data collected from 315 participants of 63 manufacturing and service firms in Vietnam to test dual mediating roles of innovation speed and innovation quality in the relationship between TL, OL and competitive advantage. The empirical results have pointed out that TL and innovation speed have more significant influences on cost competitive advantage, meanwhile OL and innovation quality have more significant influences on differentiation competitive advantage. The finding of this paper significantly contributes to increasing the understandings and specific solutions for Vietnamese firms to pursue certain forms of competitiveness such as differentiation or low cost.

Keywords: Transformational leadership, Organizational learning, Innovation speed, Innovation quality, Differentiation competitive advantage, Low-cost competitive advantage

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Introduction

Innovation has been recognized an important factor for firms to create value and have a great influence on competition (Than et al., 2023). Innovation is fast becoming a crucial factor for firms to improve its performance and overcome challenges in the increasingly fierce competitive environment (Gui et al., 2022; Le et al., 2022; Phong & Thanh, 2023). Innovation helps firms adapt well with the uncertainty of the external environment and become one of the most important factors enabling firms to achieve the success in the long term (Yang et al., 2018; Le & Le, 2021a, b). Innovation brings firms a competitive advantage in several aspects such as market performance, market share maintenance, production shorten and accelerating new products development (Tidd et al., 2006), operational efficiency and service quality (Hsueh and Tu, 2004; Parasuraman, 2010), meeting customer's needs, developing new capabilities, performance or superior profitability in comparison with competitors (Hui et al., 2018; Van et al., 2018).

Innovation is widely accepted as an essential for the survival and growth of organizations. However, most of firms do not know how to start and how to develop it properly (Phong et al., 2018; Le & Lei, 2018a; Nguyen et al., 2019). Thus, many research works had been implemented to identify

key factors for fostering innovation competence of firms. The literature highlighted transformational leadership (TL), knowledge sharing and organizational learning (OL) as drives of innovation capability such as innovation speed and innovation quality (Lei et al., 2017; Hui et al., 2018; Le & Lei, 2019). However, previous studies on the impacts of these variables on specific forms of innovation such as innovation speed and quality in relations with the competitive advantage are still very sparse (Lei et al., 2017; Le & Lei, 2018a). In order to bring deeper and fuller understanding of optimal pathway by which firms can follow for improving innovation and competitive advantage, this study will focus on assessing the direct influences of TL and OL on differentiation and cost competitive advantage. This study also explores the indirect influences of TL and OL on competitive advantage through dual mediating role innovation speed and innovation quality.

Literature revealed that although TL, OL and innovation have positive relationships and influences on competitive advantage (Lei et al., 2017; Le & Le, 2018; Ha et al., 2019), however little to no study has explained the influence of TL, OL on competitive advantage via mediating role of innovation speed and innovation quality from a holistic perspective. Accordingly, the following questions may arise:

RQ1. Whether innovation speed and innovation quality serve as mediators in the relationship between OL and competitive advantage or not?

RQ2. Do OL and innovation mediate the influence of TL on specific forms of competitive advantage?

RQ3. Do TL and OL directly and indirectly affect competitive advantage?

To answer above questions, structural equations modeling (SEM) is employed to test the correlation among the latent factors based on a survey of 315 key employees from 63 manufacturing and service firms in Vietnam.

Literature Review and Hypotheses Development

Transformational leadership and organizational learning

Organizational learning is a hot topic, and it has a huge attraction in social scientific research. At the same time, the literature on OL is increasingly rich and development (Santos-Vijande et al., 2012; Lei et al., 2017; Van et al., 2018; Ha et al., 2019). Prior studies considered OL as a process or a model that includes four basic activities: information acquisition, knowledge dissemination, shared interpretation and organizational memory (Lei et al., 2017; Van et al., 2018; Ha et al., 2019). OL is also defined as a dynamically balanced relationship in which organizations acquire external knowledge and further adjust organization activities for organizations survive and grow (Lei et al., 2017; Ha et al., 2019). This model helps firms to develop mechanisms and processes that encourage both individual and group workplace learning (Armstrong and Foley, 2003). Generally, literature widely accepted OL as a process that constantly create, share, disseminate and integrate new knowledge and incessantly modifies its action based on new knowledge and awareness for achieving intended strategic goals (Marquardt, 1996; Lewis, 2002; Lei et al., 2017)

Transformational leadership is defined as a style of leader who characterizes by clarity in their communications about organizational goals; always acting as an organization's leading force; engaging in active coaching; promoting new skill development among their followers and continuously seek new opportunities for their organization development (Le & Lei, 2017; Le & Lei, 2018a, b: Le et al., 2018). TL is considered as an important catalyst to form the appropriate climate for fostering OL through promoting intellectual stimulation, inspirational motivation, and self-confidence among organization members (Noruzy et al., 2013; Van et al., 2018). According to Ha et al. (2109), transformational leaders form groups and offer them direction and energy for processes of change and organizational learning. This allows firms to learn through experimentation, exploration, communication and dialogue (Slater and Narver, 1995; Lei et al., 2000). Especially, recent studies showed the evidence that explains for the positive effects of TL on OL (Van et al., 2018; Ha et al., 2019). So, following hypothesis is posed:

H1: Transformational leadership positively affects organizational learning

Transformational leadership and innovation

The concept of innovation can be expressed in many different ways (Lei et al., 2019; Le & Le, 2023a, b). However, this study recognizes and distinguishes innovation in two categories namely innovation speed and innovation quality (Le & Lei, 2018a). Innovation speed is defined as the time elapsed between: (1) initial development attempts, including the conception and definition of an innovation and (2) final commercialization by introducing a new product into the marketplace (Kessler & Bierly, 2002; Allocca & Kessler, 2006). Innovation quality is defined through variables like quality of new processes, amount, performance, effectiveness, features, reliability, timing, costs and value to the customer, innovation degree, complexity, and many more. By that means, it makes a statement on how good a firm pursues in the process, product and services innovation, as well as, determines how these results have been achieved (Le & Lei, 2018a).

Many academic works in the growing literature of TL have shown a positive relationship between TL and firm innovation (e.g., Le & Lei, 2019; Lei et al., 2020; Lathong et al., 2021; Le, 2021). Transformational leaders create the perfect conditions for innovation by forming innovative teams and transmitting stronger motivation to innovate (Tushman and Nadler, 1986; Senge et al., 1994; Nguyen et al., 2022). According to Lathong et al. (2021), transformational leaders increase innovation capabilities by two reasons: (1) engaging employees' personal value systems, thereby having effective methods to strengthen work motivation toward greater efficiency (Shamir et al., 1993); and (2) stimulating employees to think creatively.

In sum, although TL is considered as one of the most important factors influencing on firm innovation, however the researches that assess the specific influences of TL on innovation speed and innovation quality is still scarce. To fill research gaps, this study proposes following hypotheses.

H2a: Transformational leadership is positively associated with innovation speed.

H2b: Transformational leadership is positively associated with innovation quality.

Transformational leadership and competitive advantage

Transformational leadership is one of the key driving forces for improving firm performance (Menguc et al., 2007; Le & Tran, 2020; Son et al., 2020). It has close ties to competitive advantage, work performance and contribution firm's competitive advantage by many reasons. Fiedler (1996) emphasized the important role of leadership by arguing that the effectiveness of a leader is a key determinant of the firm's success or failure. In fact, in order to cope with the increasing volatility and turbulence of the external environment, many firms try to train and develop leaders as well as equip them with the necessary skills to overcome such challenges (Anning-Dorson, 2018; Chen et al., 2020). Leaders make important decisions in the process of attraction, development and deployment of firm resources, conversion of these resources into valuable goods, as well as delivery of value to organizational stakeholders. So, transformational leaders are the valuable sources for sustaining competitive advantage (Lado et al., 1992; Chen et al., 2020; Özgül & Zehir, 2022).

Many previous studies mentioned to positive relationships between TL and key outcomes at both individual and firm levels (Le et al., 2018; Lei et al., 2020; Son et al., 2020). Most recently, some empirical studies claimed that, TL has positive effects on follower performance and firm outcomes (Bass et al., 2003; Son et al., 2020; Le & Le, 2021). TL helps firms to achieve their current objectives more efficiently by attaching job performance with valued rewards and ensuring that employees have the resources needed enough to complete the job (Avolio et al., 1999; Son et al., 2020; Le & Le, 2021). Transformational leaders, who have capabilities to develop a strategic vision, build commitment towards the vision and communicate vision to their followers through framing and acting consistently (Avolio, 1999), hence they can play a decisive role in shaping and stimulating employees to act in order to achieve competitive advantage-oriented development of the organization.

In summary, the above arguments support for the positive relationship between TL and competitive advantage. To clarify the TL's influences on differentiation and cost competitive advantage is still limited, following hypotheses are posed:
H3a: TL is positively related to differentiation competitive advantage.
H3b: TL is positively related to cost competitive advantage.

Organizational learning and innovation
Many works in the extensive and diverse literature on organizational innovation indicated a positive impact OL on innovation capability (e.g., Lei et al., 2017; Van et al., 2018; Ha et al., 2019). Prior studies pointed out that OL is positively associated with supports creativity, stimulating new knowledge and ideas, enhancing ability to understand and apply creative ideas, favoring organizational intelligence and forming a background for orientation to organizational innovation (García-Morales et al., 2012; Van et al., 2018; Ha et al., 2019). In addition, innovation often originates in knowledge absorption in the research and design, as a result, an increasing number of firms analyzes organizational innovation as an OL process or applies OL model to specific aspects of the innovation process (García-Morales et al., 2012; Lei et al., 2017; Van et al., 2018). Literature revealed that innovation speed and innovation quality seem to depend on the company's capability to learn through processes by which new knowledge is developed, distributed and used (Le & Lei, 2018a; Ha et al., 2019). Especially, Ha et al. (2019) revealed that process of sharing knowledge and information in an organization has a positive influence on both innovation speed and innovation quality. Based on these arguments, this study proposes following hypotheses:
H4a: Organizational learning is significantly associated with innovation speed.
H4b: Organizational learning is significantly associated with innovation quality.

Organizational learning and competitive advantage
Organizational learning enables firms to expand its ability to develop successful strategies for establishing and maintaining profitable customer relationships (Santos-Vijande et al., 2005). So, if a firm performs on the paradigm of organizational learning, it will not only increase firm's ability to cope well with emerging market opportunities or threats but also enables them effectively using available resources to meet market trends and demands (Yeung et al., 2007; Ha et al., 2019). OL also helps to create favorable conditions for interaction between staff and customers, thereby helps them increase competitive advantage based on expanding and applying useful information about customer needs, tastes and selection criteria for producing products and services that match customer needs (Chenhall, 2005; Van et al., 2018). In other words, OL practices allow firm to achieve competitive advantage by creating goods that meet customer needs thereby enhance their satisfaction and loyalty, and reinforce organization's brand name and image (Bell et al., 2010; Zhao et al., 2011).

Although current literature mentions the positive OL-competitive advantage relationship, few studies investigate the effects of OL on specific aspects of competitive advantage namely differentiation competitive advantage and cost competitive advantage. So this study proposes following hypotheses:
H5a: Organizational learning predicts differentiation competitive advantage of firms.
H5b: Organizational learning predicts cost competitive advantage of firms.

Innovation and competitive advantage
Innovation is widely recognized as a key antecedent for firms to create dynamic capacity that help firms adapt to the environment and outpace the competition (Lathong et al., 2021; Phong & Tung, 2021; Shehzad et al., 2021). It allows firms to make full use of existing resources, to improve efficiency and potential value, and to bring new intangible assets into organization (Le, 2021; Cao & Le, 2022; Shehzad et al., 2022). Literature considers innovation capability as a optimal solution for firms to achieve competitive advantage in several aspects: market performance, market share maintenance, production shortening and accelerating new products development (Tidd et al., 2006); operational efficiency and service quality (Hsueh and Tu, 2004; Parasuraman, 2010); meeting

customer's needs, developing new capabilities, performance or superior profitability (Sadikoglu & Zehir, 2010; Yang et al., 2018) in comparison with their main competitors. Especially, Weerawardena and Mavondo (2011) suggested that "all types of innovation contribute to a firm's competitive advantages", so following hypotheses are posed.

H6a.b: Innovation speed positively affects differentiation and cost competitive advantage.

H6c.d: Innovation quality positively affects differentiation and cost competitive advantage.

Research Methodology

Sample and data collection

A questionnaire survey instrument is applied to gather data and examine the validity of proposal hypotheses in the research model. This study collected data from July to September in the summer 2022 through a survey of 63 Vietnamese manufacturing and service enterprises. We randomly select these companies from the yellow pages of the Vietnamese business directory with 250,000 enterprises. The authors made contact with representatives of these enterprises to elucidate the research's significance, pledge to keep the survey information confidential for participants, suggest for assisting in handing out and gathering questionnaires. The participants in this study are Directors, Deputy managers/directors, or Head of some important offices like R&D and administration ones to guarantee having all key information and full comprehension of the business situation of firms. The observable variables are utilized in this research modified from previous studies to evolve the preliminary list of measurement. Basically, the authors handed out 550 question sheets and acquired 395 question sheets in the official survey. Finally, the study collected 315 valid questionnaires, corresponding to the rational rate of 57.2 %.

Measures

All the items are measured via five-point Likert-type scales, ranging from "1" (strongly disagree) to "5" (strongly agree). The Appendix A to F present all scales in full detail. *Transformational leadership*. This study used four items adapted from the research of Son et al. (2020) to measure transformational leadership. *Organizational learning*. This study used four items developed by Aragón et al (2007) to measure organizational learning. *Innovation capability*. Ten items adapted from the research of Le and Lei (2018a) were used to measure innovation speed (five items) and inn0vation quality (five items). *Competitive advantage*. This study used seven items to measure differentiation (four items) and low-cost (three items) competitive advantage. These items were derived from the research of Le and Lei (2018a).

Results and Analysis

Measurement testing

We firstly carry an exploratory factor analysis (EFA) to eliminate factors having factor loading lower than 0.5 to ensure the practicality of research (Hair at al., 1998). We performed confirmatory factor analysis (CFA) to evaluate the overall measurement model. Convergent validity and discriminant validity were accessed to evaluate the validity of measurement model.

Convergent validity is accessed by considering factor loading, which should be significant and exceed 0.5; composite reliabilities (CR) which should exceed 0.6; and the average variance extracted (AVE) should be greater than 0.5 for all constructs (Fornell and Larcker, 1981). CFA results (Table 1) show that all the factor loadings and composite reliabilities are in the acceptable ranges and are significant at the 0.001 level. So, it expresses our model meeting the convergent validity criteria. Table 1 shows the means, SD, factor loading, AVE, CR and Cα of every construct.

Table 1. Result of CFA and internal reliable testing

Construct	Mean	SD	Item	Loading	AVE	CR	Cα
Transformational leadership	3.53	0.50	TL1	0.78***	0.55	0.83	0.83
			TL2	0.75***			
			TL3	0.66***			
			TL4	0.76***			
Organizational learning	3.46	0.45	OL1	0.66***	0.59	0.85	0.85
			OL2	0.75***			
			OL3	0.82***			
			OL4	0.82***			
Innovation speed	3.49	0.57	IS1	0.89***	0.69	0.92	0.92
			IS2	0.82***			
			IS3	0.69***			
			IS4	0.91***			
			IS5	0.81***			
Innovation quality	3.58	0.60	IQ1	0.87***	0.65	0.90	0.89
			IQ2	0.87***			
			IQ3	0.73***			
			IQ4	0.64***			
			IQ5	0.89***			
Differentiation advantage	3.80	0.56	DA1	0.81***	0.74	0.93	0.92
			DA2	0.95***			
			DA3	0.90***			
			DA4	0.86***			
Costs advantage	3.67	0.52	CA1	0.85***	0.74	0.90	0.89
			CA2	0.80***			
			CA3	0.93***			

*Notes: ***significant at p < 0.001*

Discriminant validity is the degree to which, factors that are supposed to measure a specific construct do not predict conceptually unrelated criteria (Kline, 2010). This study used Fornell and Larcker's (1981) measure of average variance extracted to assess the discriminant validity. In this approach, the AVE for each construct should be higher than the square correlation between the construct and the other constructs in the model. Table 2 indicates that the measurement model meets the standard of discriminant validity, because the result show that, the AVE of each construct in diagonal is all higher than the squared correlations between construct and any of the other constructs. Therefore, all constructs in the measurement model were judged as having adequate discriminant validity.

Table 2. Discriminant validity analysis

Construct	TL	OL	IS	IQ	DA	CA
Transformational leadership (TL)	**0.55**					
Organizational learning (OL)	0.21	**0.59**				
Innovation speed (IS)	0.26	0.14***	**0.69**			
Innovation quality (IQ)	0.36	0.29***	0.35***	**0.65**		
Diferentiation advantage (DA)	0.32	0.29***	0.27***	0.39***	**0.74**	
Cost advantage (CA)	0.36	0.22***	0.37***	0.36***	0.29***	**0.74**

*Notes: ***correlation is significant at the 0.001 level*

To measure the degree fit of the model this study evaluated following indicators: absolute fit measures including Chi-square/df (CMIN/df), goodness of fit index (GFI) and root mean square error of approximation (RMSEA); incremental fit measures including normed fit index (NFI), adjusted goodness of fit index (AGFI) and comparative fit index (CFI); parsimonious fit measures including parsimony goodness-of-fit index (PGFI) and parsimony normed fit index (PNFI). With results shown in Table 3, all fit indices meet satisfactory levels. Therefore, it demonstrated that there was adequate reliability and validity in this study.

Table 3. Overall fit index of the CFA model

Fit index	Scores	Recommended threshold value
Absolute fit measures		
CMIN/df	1.483	≤2[a]; ≤5[b]
GFI	0.913	≥0.90[a]; ≥0.80[b]
RMSEA	0.039	≤0.80[a]; ≤0.10[b]
Incremental fit measures		
NFI	0.933	≥0.90[a];
AGFI	0.900	≥0.90[a]; ≥0.80[b]
CFI	0.977	≥0.90[a];
Parsimonious fit measures		
PGFI	0.725	The higher the better
PNFI	0.803	The higher the better

Notes: a Acceptability: acceptable; b Acceptability: marginal

Structural model

This section presents the main result of the hypothesis testing of the structural relationship among the latent variables (Table 4, Table 5 and Figure 1).

Direct effect analysis

The results show that, all the direct effects are quite large and statistically significant (P≤0.05), therefore all the hypotheses are supported. Specifically:

For H1, relating to the positive influence of transformational leadership (TL) on organizational learning (OL), the result shows that estimate value is quite large ($\beta = 0.46$; $p < 0.001$). Thus, H1 is supported.

Hypotheses of H2a and H2b relating to the positive effect of TL on innovation speed (IS) and innovation quality (IQ), the result demonstrated that TL's influences on IQ ($\beta = 0.48$; $p < 0.001$) is a little larger than its influence on IS ($\beta = 0.46$; $p < 0.001$).

Hypotheses of H3a and H3b relating to the positive effects of TL on differentiation advantage and cost advantage. The result confirms both of two hypotheses because the effects of TL on DA ($\beta = 0.22$; $p = 0.002$) and CA ($\beta = 0.27$; $p < 0.001$) all have statistically significant. In this case, TL has more important significant in the relationship with CA in comparison with DA.

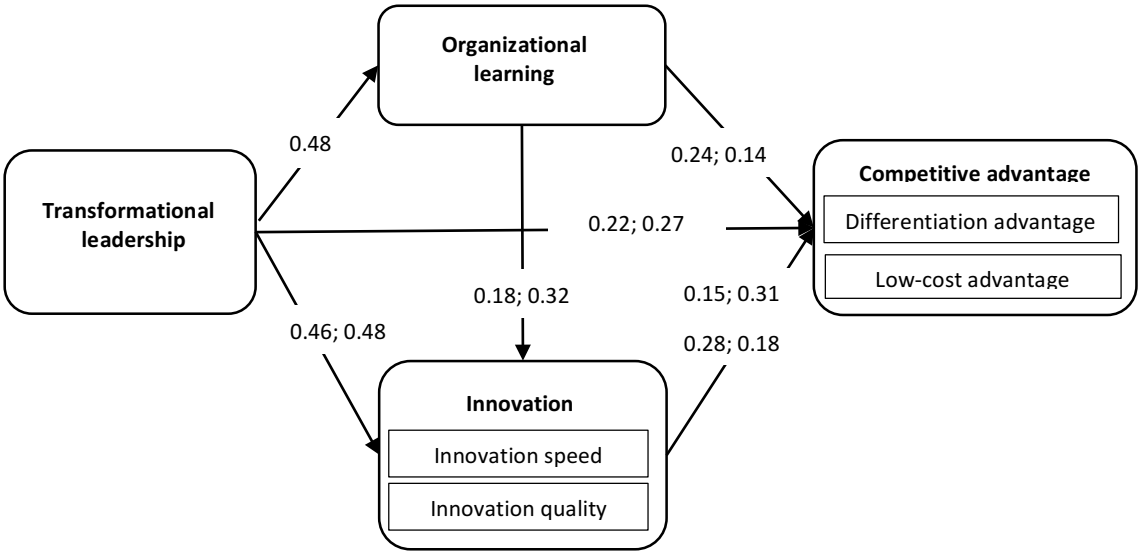

Figure 1. Path coefficients

For H4a and H4b relating to the positive effects of OL on two forms of innovation. The findings provide the evidence on positive effect of OL on IQ ($\beta = 0.32$; $p < 0.001$) and IS ($\beta = 0.18$; $p < 0.005$). It emphasizes the important role of OL on IQ in comparison with IS.

Table 4. Structure model results

Hypotheses	Proposal effect	Estimate	P	Results
H1: Transformational leadership → Organizational learning	+	0.46***	< 0.001	Supported
H2a: Transformational leadership → Innovation speed	+	0.46***	< 0.001	Supported
H2b: Transformational leadership → Innovation quality	+	0.48***	< 0.001	Supported
H3a: Transformational leadership → Differentiation advantage	+	0.22**	0.002	Supported
H3b: Transformational leadership → Low-cost advantage	+	0.27**	< 0.001	Supported
H4a: Organizational learning → Innovation speed	+	0.18**	0.005	Supported
H4b: Organizational learning → Innovation quality	+	0.32***	< 0.001	Supported
H5a: Organizational learning → Differentiation advantage	+	0.24***	< 0.001	Supported
H5b: Organizational learning → Low-cost advantage	+	0.14**	0.021	Supported
H6a: Innovation speed → Differentiation advantage	+	0.15**	0.009	Supported
H6b: Innovation speed → Low-cost advantage	+	0.31***	< 0.001	Supported
H6c: Innovation quality → Differentiation advantage	+	0.28***	< 0.001	Supported
H6d: Innovation quality → Low-cost advantage	+	0.18**	0.010	Supported

*Note: ***significant at the 0.001 level; **significant at the 0.005 level.*

H5a and H5b refer to the positive effects of OL on DA and CA, the result show that OL has more important significant in the relationship with DA ($\beta = 0.23$; $p < 0.001$) in comparison with CA ($\beta = 0.14$; $p < 0.05$). The results also confirm the positive effects of IS and IQ on two kinds of advantage. Specially, IS has a larger impact on CA ($\beta = 0.38$; $p < 0.001$)) in comparison with DA ($\beta = 0.14$; $p < 0.05$); while IQ has a larger impact on DA ($\beta = 0.28$; $p < 0.001$) in comparison with CA ($\beta = 0.18$; $p < 0.05$).

Indirect and total effect analysis

This study does not just give evidence about the influence of TL on differentiation and cost competitive advantage but also discovers how this mechanism works through OL, IS and IQ; direct and indirect effects as well as total effects are computed and listed in table 5. As to the indirect effects, table 5 firstly confirms the mediating role of following variables.

Table 5 shows that the mediating role of OL in relationship between TL and two kinds of innovation (IS and IQ). In this case, TL's indirect effects have on IQ ($\beta = 0.15$; $p < 0.05$) is higher than IS ($\beta = 0.084$; $p < 0.05$); the mediating role of IS, IQ in relationship between OL and two kinds of competitive advantage. Wherein, OL's indirect effects have on DA ($\beta = 0.118$; $p < 0.05$) is little higher than CA ($\beta = 0.114$; $p < 0.05$); the mediating role of OL and innovation in the relationship between TL and two kinds of competitive advantage. In which, TL's indirect effects on DA ($\beta = 0.366$; $p < 0.001$) is higher than CA ($\beta = 0.347$; $p < 0.001$). Finally, with the total effects, Table 5 also indicated that total effects of TL on IQ ($\beta = 0.628$; $p < 0.001$) are higher than IS ($\beta = 0.547$; $p < 0.001$); total effects of TL on CA ($\beta = 0.621$; $p < 0.001$) are higher than DA ($\beta = 0.590$; $p < 0.001$), while total effects of OL on DA ($\beta = 0.354$; $p < 0.001$) are higher than CA ($\beta = 0.256$; $p < 0.001$).

Table 5. Direct, indirect and total effects analysis

Predictor/dependent	OL	IS	IQ	DA	CA
Direct effects					
TL	0.462	0.463	0.478	0.224	0.274
OL		0.181	0.323	0.236	0.143
IS				0.146	0.308
IQ				0.282	0.180
Indirect effects					
TL		0.084	0.150	0.366	0.347
OL				0.118	0.114
Total effects					
TL		0.547	0.628	0.590	0.621
OL				0.354	0.256

Discussions and Conclusions

Discussions

Innovation is an effective means of dealing with challenges to better meet growing market complexity and uncertainty (Lei et al., 2021; Le & Le, 2022; Le et al., 2022). So, it is necessary to explore key antecedents ò innovation (Le & Le, 2023a, b; Phong & Thanh, 2023). TL practices are suggested by many prior studies to contribute to firm's performance and innovation. However, few researches link TL, OL, innovation and competitive advantage from a holistic perspective. In this context, this study significantly contributes to both theory and practice by some following reasons.

First, our study contributes to fill the theoretical gaps by proposing a model discussing the influences of TL on OL and two form of innovation, which in turn lead to differentiation and low-cost competitive advantage in a model. The empirical findings verified the relationships among the latent variables. Through direct and indirect analysis, the study provides a possible mechanism by which TL practices contribute to increasing organizational learning, innovation and competitive advantage of firms. In other words, it highlights the necessity of practicing TL to achieve key outcomes of organizations and competitive advantage (Phong et al., 2017; Sengphet et al., 2019; Phong et al., 2023).

Second, the mediating roles of organizational learning and two aspects of innovation are also confirmed. In other words, it highlights the important role of TL practices in fostering competitive advantage of firms directly or indirectly through improving positive impacts on organizational learning, innovation speed and innovation quality. The findings indicate that OL plays an extreme important role on the road leading competitive advantage. OL not only mediates the relationship between TL and competitive advantage but also mediates the relationship between TL and two forms of innovation. Similarly, the findings also support the mediating role of specific forms of innovation in connecting the influence of TL or OL on competitive advantage.

Third, an important contribution of this study is to analyze the influence of specific aspects of innovation and specific forms of competitive advantage by dividing innovation into speed and quality, and competitive advantage in terms of differentiation and cost competitive advantage. The findings on the relationships between TL, organizational learning, innovation and competitive advantage, therefore, might provide deeper knowledge and useful guides for firms to pursue the right direction of selected strategy: differentiation or low cost. Specifically, if firms pursue differentiation competitive advantage, they should pay attention to the role of OL and innovation quality; in case of pursuing cost competitive advantage, they should concentrate in TL and innovation speed.

Research Limitations and Future Directions

This study has some limitations. First, this study has just explored the definitions, dimensions and consequences of organizational learning in general. Further researches should explain in more detail by accessing organizational learning through its specific dimensions such as information acquisition, knowledge dissemination, shared interpretation and organizational memory (Slater & Narver, 1995; Weerd et al., 2002) in the relationship with three levels of innovation speed and quality in terms of product/service level, process level and enterprise level (Haner, 2002). Different patterns of

innovation at each level may reflect a different states and result. Second, this study has not evaluated the relationship between latent variables in cases of having the impact of the moderating variables such as organizational culture, organizational justice, and market turbulence (Le & Le, 2023 a, b; Le & Nguyen, 2023). So, future researches may explore more deeply the relationship between latent variables in the research model by adding moderator variables such as organizational culture, organizational justice, and market turbulence.

Implications and conclusions

Prior studies have investigated the relationship between TL, OL and competitive advantage, and revealed that OL has better effects on differentiation competitive strategy in comparison with cost leadership strategy (Santos-Vijande et al., 2012) and TL has higher effects on low-cost strategies compared to marketing differentiation (Menguc et al., 2007). However, in terms of direct effect, our study shows important implications by providing evidence that, innovation quality creates a greater influence on differentiation competitive advantage, while innovation speed induces a more significant influence on cost competitive advantage. Specifically, it reveals that, firms will have many opportunities to pursue and implement differentiation strategy by focusing their efforts on innovation quality. The main reason for this result is that following innovation quality allows firm to increase their ability to create special and valuable things for customers and achieving a differentiation strategy. In contrast, firms will implement more successful slow cost strategy by focusing their efforts on innovation speed. This implies that innovation speed creates faster responses to environment by launching new products with less time and fewer costs, which eventually improves firm performance (Tidd et al., 2005) and therefore help firm minimizing costs per product unit in comparison with key competitors.

Generally, this study has provided empirical evidence to prove the hypotheses that transformational leadership, organizational learning and innovation significantly contribute to firm competitive advantage. The findings are encouraged to bring deeper understanding of effective pathway by which CEO/managers can follow to increase differentiation or cost competitive advantage through transformational leadership, organizational learning and innovation.

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Appendix A: Transformational leadership (TL)

TL1: Our leaders have a clear common view of final aims to transmit and achieve the commitment of all followers.
TL2: Our leaders are capable of motivating and guiding employees on the job.
TL3: Our leaders are always on the lookout for new opportunities for the unit/department/organization.
TL4: Our leaders always act as the organization's leading force.

Appendix B: Organizational learning (OL)

OL1: We have acquired and shared much new and relevant knowledge
OL2: We have acquired some critical capacities and skills that provided competitive advantage.
OL3: Organizational improvements have been influenced fundamentally by new knowledge entering the organization (knowledge used).
OL4: Our firm is a learning organization

Appendix C: Information speed (IS)

IS1: Our firm is quick in coming up with novel ideas as compared to key competitors.
IS2: Our firm is quick in new product launching as compared to key competitors.
IS3: Our firm is quick in new product development as compared to key competitors.
IS4: Our firm is quick in new processes as compared to key competitors.
IS5: Our firm is quick in problem solving as compared to key competitors.

Appendix D: Innovation quality (IQ)

IQ1: Our firm does better in coming up with novel ideas as compared to key competitors.
IQ2: Our firm does better in new product launching as compared to key competitors.
IQ3: Our firm does better in new product development as compared to key competitors.
IQ4: Our firm does better in processes improving as compared to key competitors.
IQ5: Our firm does better in management improving as compared to key competitors.

Appendix E: Differentiation competitive advantage (DA)

DA1: Creation of a brand image identifying the firm.
DA2: The quality of the service offered is better than that offered by competitors.
DA3: A great number of supplementary services is offered, adding value for customers.
DA4: Important innovations are made in the service.

Appendix F: Costs competitive advantage (CA)

CA1: Efforts are made to reach economies of scale
CA2: General costs are minimized.
CA3: An attempt is made to improve productivity.