Study on the impact of transformation leadership on performance of small and medium enterprises in Can Tho City, Vietnam

Dinh Cong Thanh*, Pham Le Hong Nhung, Le Tan Nghiem, Le Trung Ngoc Phat



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ABSTRACT

Transformational leadership is understood as a leadership style that enhances a sense of collective benefits for members of an organization. This study aims to analyze the impact of transformational leadership on the performance of small and medium enterprises in Can Tho city, Vietnam. This research is based on the theory and the four components of Transformational Leadership Theory (TLT) (Idealized Influence - II; Inspirational Motivation - IM; Intellectual Stimulation - IS; Individualized Consideration - IC), a review of related studies, and opinions from expert interviews to develop a research model. The primary data of the article was collected from a survey of 214 small and medium enterprises in the city. The data analysis methods used in this study include Cronbach's alpha reliability test, confirmatory factor analysis (CFA), structural equation modeling (SEM), and multigroup structural analysis. The article's research results confirm that the leaders of enterprises with a transformational style play a significant and positive role in the spirit of learning and sharing knowledge of the organization members, especially the micro-enterprises face many difficulties due to the lack of resources. Research results also show that thanks to the transformational leadership (TL) style and organizational learning (OL), it has made an essential contribution to organizational innovation (OI) as well as to improving operational efficiency (both financial and non-financial performance) for small and medium enterprises in Can Tho city. Based on the article's research results, the authors have proposed some characteristics of transformational leaders in small and medium enterprises in the city. In particular, the study emphasizes the influence of the individualized consideration and idealized influence factors in improving learning ability, contributing to organizational renewal and improving performance for small and medium enterprises in Can Tho city.

Key words: Transformational leadership, organizational learning, organizational innovation, performance

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INTRODUCTION

Transformational leadership over time has emerged as an important factor contributing to enhancing the motivation, morale, and performance of the subordinates of enterprises in general and small and medium enterprises (SMEs) in particular 1-3. Rasheed et al. 2 proved that transformational leadership is particularly relevant in the context of SMEs. The leaders greatly influence the activities of enterprises. Due to the relatively SMEs, the owner is the one who sets the strategic direction for the organization's operations and communicates expectations to employees. Transformational leadership can be broadly defined as a leadership style in which the leader works with members to drive needed change 4. Although there are many different leadership styles, transformational leadership is one of the most commonly used and plays an essential role in corporate management 5,6 because it can promote and stimulate learning and knowledge sharing among members. This is a crucial element of the ideal learning organization. Besides,

Transformational leaders also positively influence organization innovation 7 .

Currently, many empirical studies proved the trend of choosing this style around the world because this has a positive and significant impact on performance ^{6,8–10}. This is even more important for leaders in SMEs in the context of limited resources, difficulty in retaining employees, and low performance. Scholars assert that the performance of SMEs is associated with leadership behaviors ^{2,11}. However, there has been a conflicting debate about the impact of transformational leadership.

Some studies show that transformational leadership does not affect job performance due to the lack of guidance from managers. There are even studies that show that transformational leadership negatively affects performance by not promoting the creativity and experience of subordinates ^{4,12}. Therefore, in the face of the changing trend of the environment and business models of today's enterprises, leaders need to determine the appropriate leadership style to improve

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the efficiency of the business.

Thus, from the review of empirical studies, it can be seen that there are many arguments and conflicting opinions about studying the impact of transformational leadership on performance. The reason for the difference in the results of the above studies is that the authors used different background theories in their research, and primarily because of the differences in the contexts of those studies⁵. Each author has a different approach when studying the effects of transformational leadership. For example, Mutahar et al.8, Elshanti 13 demonstrated the relationship between transformational leadership and performance through organizational learning. García-Morales et al. 14, Ahmad et al. 15 studied this relationship through innovation. Some studies demonstrate that transformational leadership influences performance through organizational learning and innovation 10,16-18. From the literature review, previous authors have mainly studied the relationship between transformational leadership and performance in large enterprises, while very little research was conducted on this topic for SMEs in developing countries. This is the first gap that this study intends to address. Second, each author demonstrates an aspect of the impact of transformational leadership, and few studies have combined the relationship between transformational leadership, organizational learning, innovation, and performance of SMEs. These gaps are intended to be addressed in this study. Although many studies are conducted on transformational leadership in enterprises, each author studied this topic in different contexts. Therefore, studying the role and influence of transformational leadership on the performance of SMEs in the context of a developing country like Vietnam in general and Can Tho city in particular is very meaningful and necessary.

About the practice of activities of enterprises in Can Tho in recent years and statistics from the Vietnam Enterprise Whitebook 2020, enterprises are mainly SMEs, accounting for 97.17%. Enterprises still face many difficulties in terms of weak management capacity, an unstable market, problems in competition, and deficient performance. Therefore, whether the use of transformational leadership affects the performance of SMEs in Can Tho?. How does transformational leadership impact performance? The leaders of SMEs should use the appropriate leadership style to improve their performance. This article is done with the following principal content: (1) presenting the fundamental theories related to the topic; (2) proposing a research model based on theoretical background

and review of empirical studies; (3) presenting the research method, including developing the scale and data collection method; (4) presenting research results and discussion; and (5) presenting the conclusion and proposing the managerial implications based on the research results.

THEORETICAL BACKGROUND

The theoretical framework for Transformational Leadership

Transformational Leadership Theory (TLT) was first proposed by Burns ¹⁹. Accordingly, the theory defines transformational leadership as a process in which the leader explores potential motivations, seeks to attract and satisfy the needs of employees. It is a supportive relationship and commitment among members to achieve the organization's common goals.

Based on Burns' ¹⁹ development of TLT, Bass ²⁰ emphasized the importance of people as the most valuable resource for any organization. Bass ²⁰ further explained transformational leadership affects people mainly by psychological factors. Therefore, it has a significant role in attracting, inspiring, motivating, and leading to cohesion. This will positively impact productivity and performance. According to Bass ²⁰ TLT, the four components of transformational leadership are as follows:

Firstly, idealized influence: Bass ²⁰ argued that managers must be exemplary role models to influence and attract people. To achieve idealization, ethical behavior in managers is significant to instill pride, respect, and trust among members.

Secondly, inspirational motivation: shows the capacity in which leaders communicate and motivate members to have confidence in themselves to complete the task well. This contributes to the achievement of the organization's goals and the accomplishment of the organization's vision. Furthermore, transformational leaders are also characterized by inspirational communicators through positive messages and statements that build motivation and trust².

Thirdly, intellectual stimulation: transformational leaders are interested in creating an environment that encourages innovation for members. Besides, intellectual stimulation also promotes an environment where members learn and share experiences.

Fourthly, individualized consideration: transformational leaders are concerned with the needs and lives of individuals. In addition, transformational leaders are advisors who provide advice and support to encourage people to work together towards the goals. Rasheed et al. ² asserted that transformational leadership is particularly well suited to the context of SMEs

because the owner is the person who builds the orientation and vision for the organization and employees. It is easy for leaders to communicate their expectations to all employees. In particular, the leader's attention and inspirational ability play an important role in promoting employee motivation. This is an essential factor to help improve performance in the context of SMEs. To assess transformational leadership characteristics, many studies relied on the scale proposed by Avolio and Bass ²¹. Therefore, this article will generally study the impact of the components of transformational leadership on performance in the context of SMEs in Can Tho.

The theoretical framework for performance

There are many different approaches to determining performance indicators. This depends on the goals of the managers and the research objectives ²². According to Mashovic ²³, performance was an essential indicator of an organization's ability to optimize resource allocation. Many studies are based on the Balanced Scorecard theory (BSC) ²⁴ to measure performance. There are four aspects to evaluate the effectiveness of an organization: (i) financial, (ii) customer, (iii) handling of internal processes, and (iv) organizational development. Thus, according to BSC, the performance of an enterprise needs to be assessed both in terms of financial and non-financial performance.

However, the BSC is often used to evaluate the effectiveness of large enterprises and is relatively difficult to apply to SMEs. Because SMEs usually change their strategies, they need to react quickly to changes. This feature is unlike those of large firms that often operate in more stable markets, especially lacking simplicity when applied to SMEs ²⁵.

Overcoming the above difficulties and based on inheriting the BSC, many studies have proposed a system of performance evaluation criteria for SMEs. Accordingly, the performance should be assessed from both financial and non-financial aspects. Financial performance for SMEs is usually evaluated through the following criteria: (i) growth in sales; (ii) growth in profits; and (iii) cash flow ^{26–28}. In addition, many enterprises also measure performance through non-financial indicators such as valued customer, employee conditions, and product/service development ^{27,29}.

The theoretical framework for SMEs

There is no common concept of the division of SMEs. Depending on the country, the regulations on SMEs are also different. However, governments often base themselves on the size of capital, number of laborers, and revenue of enterprises. According to Decree No. 39/2018/ND-CP, in Vietnam, SMEs are classified according to micro, small and medium enterprises. The criteria for identifying SMEs in Vietnam are presented in Table 1.

RESEARCH MODEL

Many studies have demonstrated the impact of transformational leadership on performance. However, most studies confirm a relationship between transformational leadership and performance through one or more mediating variables. For example, Mutahar et al. 8, Elshanti 13 demonstrated an association between transformational leadership and performance through organizational learning. García-Morales et al. 14, Ahmad et al. 15 illustrated this relationship through the element of corporate innovation. Some studies prove that transformational leadership styles in managers affect performance through the mediating variables of organizational learning and innovation 10,16–18.

The impact of transformational leadership on the learning organization

A learning organization is a place where members can improve new knowledge and understanding based on the existing experience of those in the organization ¹⁶. Mutahar et al. ⁸ further explained that a learning organization is also an ideal environment for members to expand their ability to learn and share experiences to fulfill the organization's mission best. Thus, the concept of a learning organization emphasizes the collective spirit and continuous learning of members.

Many empirical studies demonstrate that there is a positive impact of transformational leadership on organizational learning. Mutahar et al. ⁸, Elshanti ¹⁵ argued that it plays an essential role in coordinating and strengthening trust between members and leaders. Leaders inspire members to be active in expanding their knowledge and learning. Similar to previous studies, Molodchik et al. ³⁰ have also suggested that transformational leaders use inspirational motivation, intellectual stimulation, and personal considerations to inspire employees. Therefore, hypothesis H₁ is proposed as follows:

 H_1 : Transformational leadership has a positive impact on a learning organization.

The impact of transformational leadership on organizational innovation

Innovation is the new ability to create wealth using enterprise resources ¹⁶. This is considered a signifi-

Table 1: Criteria to identify SMEs in Vietnam

Business field	Micro-enterprises			Small-enterprises			Medium-enterprises		
	Number of la- borers	Revenue (bil- lion VND)	Total capital (billion VND)	Number of laborers	Revenue (billion VND)	Total capital (billion VND)	Number of laborers	Revenue (billion VND)	Total capital (billion VND)
 Agri- culture, forestry- fishery 	<3	<3	<3	<100	<50	<20	<200	<200	<100
2. Industry- construction									
3. Trade- service	<10	<10	<3	<50	<100	<50	<100	<300	<100

Source: Decree No. 39/2018/ND-CP of the Government

cant factor for the survival and development of enterprises, especially SMEs². According to Nguyen and Luu¹⁶, innovation is reflected in many aspects such as innovation of products and services, new management methods and technologies. Furthermore, García-Morales et al. 18, Adam et al. 10 argued that innovation is based on new ideas, and it is essential to turn them into enterprise practices. Cortes and Herrmann 11, Molodchik et al. 30 emphasized that transformational leaders use their ability to inspire, intellectually stimulate, and care for employees to promote learning and knowledge sharing, leading to innovation. Therefore, innovation is a critical factor for building and maintaining a competitive advantage for enterprises. Many studies demonstrated the relationship between transformational leadership and organizational innovation $^{10,15-18}$. Therefore, hypothesis H₂ is proposed as follows:

 H_2 : Transformational leadership has a positive impact on organizational innovation.

The impact of organizational learning on organizational innovation

Enterprise innovation is reflected in three aspects: product, process, and management model innovation ^{2,16}. Cortes and Herrmann ¹¹ argued that any innovation contributes significantly to the success of SMEs. However, innovation is considered essential for SMEs' growth and sustainable development because most SMEs often do not have enough investment resources for the market compared to large enterprises ². Studies showed that most of the authors focus on analyzing the impact of transformational

leadership on performance through the intermediary variables of organizational learning and innovation. However, very few studies mentioned the relationship between these intermediate variables. García-Morales et al. 18 , Nguyen and Luu 16 argued that learning organizations are essential to inspiring employees in enterprises. This helps everyone in the organization develop new capabilities and contribute to enterprise innovation. As such, the foundation of an organization's innovation activities is the process of creating and acquiring new knowledge. García-Morales et al. 18 further asserted, the deeper the innovation, the greater the level of learning. From these arguments, hypothesis H_3 is proposed as follows:

*H*₃: Organizational learning has a positive impact on organizational innovation.

The impact of organizational learning and organizational innovation on performance

As mentioned above, many studies demonstrated the relationship between organizational learning and innovation to performance ^{1,3,10,16–18}. As the literature reviewed above shows, transformational leadership greatly influences learning in an organization. Not only that, but it also contributes to innovation in enterprises, especially SMEs ^{2,11}. Therefore, most studies confirm a positive impact of organizational learning and innovation on performance. However, there are also many conflicting arguments about this relationship. Septiadi and Kristanto ³¹ argued that learning is a process, so today's learning can affect tomorrow's learning results. Therefore, the results of learning may not affect performance in the present but

the future. Another study by Hoopes and Postrel³² also confirmed that learning does not always improve performance. The reason is due to a gap in shared knowledge. This may be due to the separation of expertise and practical knowledge between individuals³². Thus, increased organizational learning does not always impact growth in performance. However, most comparative studies confirm a positive relationship between organizational learning, innovation, and performance. Therefore, this study expects two hypotheses:

H₄: Organizational learning has a positive impact on performance.

H₅: Organizational innovation has a positive impact on performance.

Overall, previous studies have mainly analyzed the impact of transformational leadership on overall performance. Therefore, the article tests the effect of the moderator variable (firm size) on the relationship between the concepts in the model to propose managerial implications. Thus, based on TLT, reviewing related studies and through qualitative research results, the authors propose a research model for the impact of transformational leadership on the performance of SMEs in Can Tho. The proposed research model is shown in Figure 1.

METHODOLOGY

To build a scale for the research model, the article has reviewed research related to the topic combined with opinions from expert interviews. The analysis of expert interview data shows a similarity between the expert opinion and the proposed scale. However, experts suggest adding more characteristics of transformational leaders, for example, "Leaders put the interests of individuals first" and "Leaders need to understand employees' needs, abilities, and aspirations." In addition, according to the experts' opinion, this study also added the criterion "Employees have expanded ability to learn from a friendly working environment" to the learning organization scale. Based on that, the scale of the concepts of the research model was developed to suit the context and characteristics of SMEs in Can Tho. The article uses a 5-point Likert scale, from 1 strongly disagree to 5 strongly agree with the statements. The details of the scale of the research model are shown in Table 2.

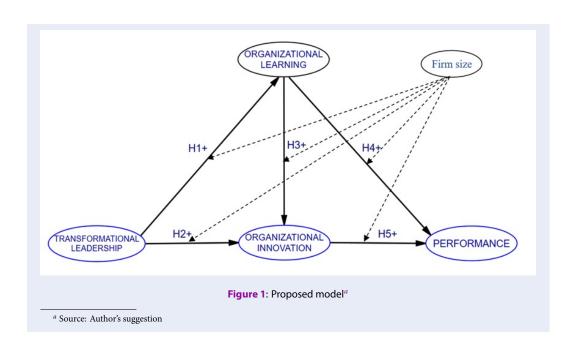
Table 2: Describe the variables

Variable	Statements	Citation
	tional leadership (TL)	Gradion
Idealised Ir		
II1	I instill pride in others for being associated with me	Avolio and Bass ²¹
II2	I act in ways that build others' respect	Trono una Baso
II3	I talk about my most important values and beliefs	
II4	I always uphold the interests of individuals	Interview the experts
	al Motivation (IM)	.
IM1	I express confidence that goals will be achieved	Avolio and Bass ²¹
IM2	I articulate a compelling vision of the future	
IM3	I talk enthusiastically about what needs to be accom-	
	plished	
3. Intellectual	Stimulation (IS)	
IS1	I suggest new ways of looking at how to complete assignments	Avolio and Bass ²¹
IS2	I seek differing perspectives when solving problems	
IS3	I get others to look at problems from many different an-	
	gles	
4. Individuali	zed Consideration (IC)	
IC1	I spend time teaching and coaching	Avolio and Bass ²¹
IC2	I treat others as individuals rather than just as a member	
	of a group	
IC3	I help others to develop their strengths	
IC4	I understand the needs, abilities, and aspirations of indi-	Interview the experts
	viduals	
II. Organizati	onal learning (OL)	
OL1	Members learn a lot of knowledge from the leader	Mutahar et al. ⁸
OL2	Members have acquired many essential competencies and skills	
OL3	Members apply new knowledge in their work	
OL4	Enterprise is truly a learning organization	
OL5	Everyone has expanded their ability to learn from a	Interview the experts
	friendly working environment	
III. Organizat	ional innovation (OI)	
OI1	Enterprise interested in developing new prod- ucts/services	García-Morales et al. 14
OI2	The number of new products/services introduced into the	
	market has increased	
OI3	Enterprise applies new technologies to improve customer	
	service and organizational management.	
OI4	Enterprise has more innovation than its competitors	García-Morales et al. ¹⁴
IV. Performan		
1. Financial (FIN)	
FIN1	The revenue of the enterprise has grown in the past three	Maduekwe and Ka-
	years	mala ²⁷ ;Rehman et al. ²⁸
FIN2	Enterprise profit has increased gradually within the last	
	three years	

Continued on next page

-	Table 2 continued	
FIN3	Enterprise return on equity has increased gradually within the last three years	
2. Non-finar	ncial (NON)	
NON1	The number of enterprise's customers have grown over the years	Maduekwe and Kamala ²⁷
NON2	Enterprise has responded well to changes in customer needs	Kimatu and Bichanga ²⁹
NON3	Customers are more loyal to the enterprise's products/services	
NON4	The market share of the enterprise has grown over the years	
NON5	Employees are more attached and loyal to the enterprise	
NON6	Employees have satisfied with the work performed	

Source: References from related studies and expert interviews



Primary data is collected through 2 methods: (1) interviewing eight experts through semi-structured interviews to build/adjust the scale for the theoretical model to suit the context of the study area; (2) personal survey through questionnaires designed with research contents, whereby the study uses a convenient sampling method combined with purposive sampling. The survey sites are SMEs in specific districts including Ninh Kieu, Cai Rang, Binh Thuy, Thot Not, and O Mon. Because enterprises in these five districts account for a substantial proportion, accounting for 91.76% at the beginning of 2021. The survey subjects are owners of enterprises, or directors/deputy directors, or heads/deputies of departments in SMEs in Can Tho. To conduct the survey, the research team members contacted enterprises to schedule interviews and send survey questionnaires. The study surveyed and collected data from March 2021 to May 2021. After execution, the authors obtained 214 observations with all necessary information.

RESULTS

General information about the survey enterprise

Survey results from 214 SMEs in Can Tho show that most of the enterprises surveyed are limited enterprises (accounting for 56.07%) while private enterprises account for nearly 23.36%. Meanwhile, joint-stock enterprises only account for 20.56% of enterprises surveyed. The results also show that most enterprises surveyed are micro-enterprises (accounting for 69.16%). Small enterprises accounted for 28.50%, and medium-sized enterprises accounted for only 2.34% of enterprises surveyed. In addition, the survey results from 214 SMEs show that the majority of enterprises operate in commerce and services (accounting for 43.46%); industry and construction accounted for 35.51%; and agriculture, forestry, and fishery accounted for 21.03%.

Testing the reliability of the scale

The Cronbach's Alpha test results show that the scale of the concepts of the theoretical model achieves good reliability because Cronbach's Alpha is greater than 0.60, and the corrected item-total correlation is higher than 0.3 ¹¹. However, variables II1, IC3, and OL4 have a total correlation coefficient of less than 0.3. Therefore, these variables are excluded from the theoretical model. The study conducts the second Cronbach's Alpha analysis, and the test results are shown in Table 3.

Confirmatory factor analysis (CFA)

According to Tho and Trang, the theoretical model is appropriate when the indicators include TLI, CFI \geq 0.9; CMIN/df \leq 2; RMSEA \leq 0.08 33 . The results of the CFA saturated model showed that the Chi-square test has P=0,000. Indicators such as CMIN/df=1.622; TLI=0.934, CFI=0.940, and RMSEA=0.054 show that the model is consistent with the market data. The results of the CFA analysis of the critical model are shown in Figure 2.

The study continues to test the discriminant validity between concepts in the theoretical research model. The test results are shown in Table 4 as follows.

The discriminant validity test results in Table 4 show that the P-value of the concepts is all less than 0.05, so the correlation coefficient of each pair of concepts is less than 1 at 95% confidence. Consequently, the research model scales are discriminant validity ³⁰. In addition, the composite reliability is that 0.7 or higher suggests good reliability, and the total variance extracted must have a value of 0.5 or higher ³⁴. The summary results are shown in Table 5.

Thus, the analytical results in Table 5 show that all the model concepts meet the requirement of high reliability. Therefore, the scale is suitable for the analysis of the structural equation analysis SEM.

Test theoretical model by SEM

The results of testing the impact model of transformational leadership on the performance of SMEs in Can Tho show that the model has a Chi-squared of 593.013 with P=0.000. The criteria CMIN/df=1.620<2, RM-SEA=0.054<0.8 meet the requirements. This shows that the research model is very suitable for market data. The results of model testing are shown in Figure 3 and Table 6.

From the analysis results in Table 6, the article has shown the relationship between transformational leadership, learning organization, innovation, and performance of SMEs in Can Tho city. However, to evaluate these relationships clearly, the article tests whether there is any difference in the relationship between the concepts by enterprise size through multigroup structural analysis. By size, SMEs in Can Tho city can be divided into two groups: (1) microenterprises, accounting for 69.16%; (2) small and medium-sized enterprises, accounting for 30.84%. The results of the study are shown in Tables 7 and 8. The test results in the table above show that the difference between the two variable and invariant models is not statistically significant at the 5% level (P=0.090>0.05). Therefore, the partial invariant

Table 3: The results of testing the reliability of the scales

Variable name	Number of items	Variable code	Cronbach's Alpha
1. Transformational leadership			
Idealised influence	3	II2, II3, II4	0.825
Inspirational motivation	3	IM1, IM2, IM3	0,825
Intellectual stimulation	3	IS1, IS2, IS3	0.802
Individualized consideration	3	IC1, IC2, IC4	0.846
2. Organizational learning	4	OL1, OL2, OL3, OL5	0.860
3. Organizational innovation	4	OI1, OI2, OI3, OI4	0.816
4. Performance			
Financial	3	FIN1, FIN2, FIN3	0.875
Non-financial	6	NON1, NON2, NON3, NON4, NON5, NON6	0.948

Source: Survey results from 214 enterprises

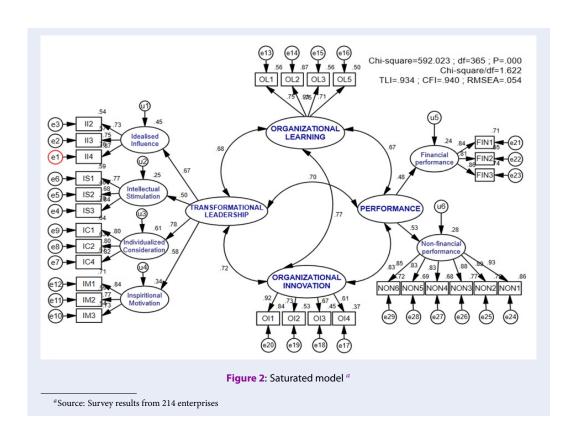


Table 4: The results of the unidimensional constructs test

Rela	Estimate	SE	CR	P		
Organizational innovation	\leftrightarrow	Performance	0.829	0.038	4.452	0.000
Organizational innovation	\leftrightarrow	Transformational leader- ship	0.716	0.048	5.923	0.000
Transformational leadership	\leftrightarrow	Organizational learning	0.676	0.051	6.402	0.000
Organizational learning	\leftrightarrow	Performance	0.670	0.051	6.472	0.000
Transformational leadership	\leftrightarrow	Performance	0.698	0.049	6.140	0.000
Organizational innovation	\leftrightarrow	Organizational learning	0.772	0.044	5.223	0.000

Source: Survey results from 214 enterprises

Table 5: Summary results of testing the reliability

Variable name	Number of items	Composite Relia- bility	Average Variance Ex- tracted
1. Transformational leadership			
Idealized influence	3	0.829	0.619
Individualized consideration	3	0.847	0.648
Inspirational motivation	3	0.825	0.612
Intellectual stimulation	3	0.807	0.585
2. Organizational learning	4	0.867	0.623
3. Organizational innovation	4	0.827	0.550
4. Performance			
Financial	3	0.876	0.701
Non-financial	6	0.948	0.752

Source: Survey results from 214 enterprises

Table 6: Testing the impact of transformational leadership on performance

Relationships			Estimate	SE	CR	P	Result
Transformational lead- ership	\rightarrow	Organizational learning	0.677	0.138	6.145	0.000	Supported
Organizational learning	\rightarrow	Organizational innovation	0.525	0.106	5.638	0.000	Supported
Transformational lead- ership	\rightarrow	Organizational innovation	0.366	0.147	3.541	0.000	Supported
Organizational learning	\rightarrow	Performance	0.066	0.095	0.356	0.722	Not supported
Organizational innovation	\rightarrow	Performance	0.789	0.097	3.654	0.000	Supported

Source: Survey results from 214 enterprises

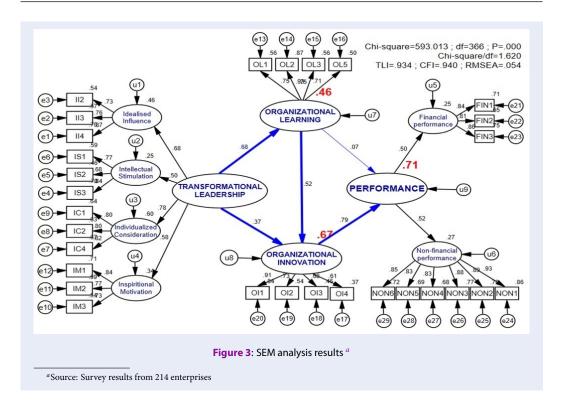


Table 7: Chi-square difference results

Models	Chi-square	df	P	RMSEA	TLI	CFI
Variable	1,071.690	722	0.000	0.048	0.902	0.913
Invariance	1,084.037	729	0.000	0.048	0.902	0.912
Difference value	12.347	7	0.090	0.000	0.000	0.001

Source: Survey results from 214 enterprises

Table 8: Impact of the concepts of the invariant model on firm size

Relationships			Micro-enterprises (N=148)		Small & medium enterprises (N=66)	
			Estimate	P	Estimate	P
Transformational leader- ship	\rightarrow	Organizational learning	0.729	0.000	0.603	0.000
Organizational learning	\rightarrow	Organizational innovation	0.467	0.000	0.513	0.000
Transformational leader- ship	\rightarrow	Organizational innova- tion	0.426	0.000	0.387	0.000
Organizational learning	\rightarrow	Performance	0.052	0.790	0.064	0.790
Organizational innova- tion	\rightarrow	Performance	0.881	0.000	0.982	0.000

Source: Survey results from 214 enterprises

model is chosen. In other words, firm size does not change the relationship between five hypotheses on the impact of transformational leadership on the performance of SMEs in Can Tho ³³. Based on the results of multi-group analysis, we have the following table of effects of the concepts of the invariant model by firm size.

DISCUSSION

Thus, based on the results of Tables 6 and 8, we can confirm that the article has found evidence to prove that transformational leadership impacts SMEs' performance in Can Tho city. Firstly, this study confirms the positive role of transformational leadership in organizational learning in SMEs in Can Tho. The results of SEM analysis (Table 6) show that the investigation is consistent with previous studies of Nguyen and Luu¹⁶, Mutahar et al.⁸, Molodchik et al.³⁰. This shows the important role of leaders in SMEs in Can Tho city because leaders can inspire their employees, thereby enhancing the spirit of mutual learning and knowledge sharing. The study also discovered the role of transformational leadership in expanding employees' ability to learn from a friendly working environment. The results of the multigroup analysis in Table 8 provide further findings that, compared with SMEs, transformational leadership in micro-enterprises in Can Tho has a more significant impact on organizational learning. This is considered a new finding different from previous studies because most of the authors have a similar approach to all enterprises of all

In addition, similar to the studies of García-Morales et al. 18, Ahmad et al. 15, Adam et al. 10, Kittikunchotiwut ¹⁷, Cortes and Herrmann ¹¹, this study also confirms that transformational leadership has made an essential contribution to the innovation of SMEs in Can Tho. This could explain that transformational leaders in SMEs in Can Tho play an indispensable role in inspiring, intellectually stimulating, and caring for employees. As a result, it has promoted the spirit of learning in employees and positively influenced the innovation of enterprises in Can Tho. Unlike empirical studies, this article has found that transformational leadership in micro-enterprises has a more significant impact on innovation than small and medium-sized enterprises (Table 8). This can confirm that transformational leadership is ideal for small enterprises in developing countries like Vietnam in general and Can Tho in particular. Because transformational leaders can foster a spirit of learning. sharing knowledge, and enhancing an organization's ability to innovate 35.

Moreover, through the SEM analysis in Table 6, it is also confirmed that the role of organizational learning has had a significant impact on the innovation of SMEs in Can Tho in recent years, similar to the study of García-Morales et al. 18, Nguyen and Luu 16. Thereby, we can affirm that the driving force promoting innovation of SMEs is the spirit of mutual learning between leaders and employees, and between employees in the organization. Unlike experimental studies, this article does not have evidence to prove the impact of organizational learning on performance in SMEs in Can Tho city (Hypothesis H4 is not statistically significant 5%). Thereby we can see not always learning together in an organization is effective. Because learning is a long-term process, so learning together in an organization may not be effective now but can be effective in the future³¹. Another cause may be the separation of expertise and knowledge of leaders and organization members, thereby making it difficult to improve performance³². Although the research does not have enough evidence to confirm the impact of learning, thanks to organizational innovation, it has significantly contributed to improving the performance of SMEs in Can Tho. The results of the multi-group analysis (Table 8) confirmed that transformational leadership in small and medium-sized enterprises had a more significant impact on performance than in micro-enterprises. Thus, the research results of this article have more clearly shown the effect of using transformational leadership style on the performance of SMEs in Can Tho city.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Conclusions

Based on the research results, some conclusions can be drawn as follows: Firstly, based on TLT, the gaps of previous studies, and expert opinion, the study has built a model of the impact of transformational leadership on performance consistent with the SMEs context in Can Tho city. Research results show a relationship between transformational leadership, organizational learning, innovation, and performance in SMEs. The study confirmed that there is an impact of transformational leadership on the performance of SMEs. As Rasheed et al. ² has demonstrated, transformational leadership is very relevant and necessary in the context of SMEs. Because of the small scale, the head of the enterprise is the one who directs the strategy, and they directly influence the employees.

Secondly, based on the research results (Table 6, Figure 3), the elements constituting the transformational

leadership of SMEs in Can Tho have similarities with the TLT. Accordingly, the transformational leader must set a good example for the members to follow (Idealized Influence-II). In addition, transformation leaders in SMEs also inspire their employees (Inspirational Motivation-IM), Furthermore, transformational leaders stimulate intellectual growth (Intellectual Stimulation-IS) and care for individuals in the organization (Individualized Consideration-IC). Among those components, the leader's concern and idealization factors have the most influence on the transformational leadership of SMEs in Can Tho city. Thirdly, the research results show that implementing the transformational leadership of SMEs in Can Tho city positively impacts the spirit of learning and sharing of members thanks to transformational leadership and organizational learning that have made an essential contribution to the innovation of SMEs. As Rasheed et al.² has shown, innovation is significant for the survival and development of enterprises, especially SMEs. As a result, it has had a positive impact on the performance of SMEs in Can Tho city in both financial and non-financial aspects.

Managerial implications

Thus, the article's research results show that transformational leadership has a positive impact on the performance of SMEs in Can Tho city through organizational learning and innovation. The results of the multi-group analysis (Table 8) confirm the role of transformational leadership in improving the spirit of learning and innovation in micro-enterprises. Therefore, to contribute to improving performance, leaders of SMEs in Can Tho need to pay attention to the characteristics of transformational leaders such as (i) Role model for employees; (ii) Motivation to inspire employees; (iii) Intelligent stimulation for employees; (iv) Caring for employees. In particular, the individualized and idealized characteristics of the leader make an essential contribution to the characteristics of transformational leaders in SMEs in Can Tho city. Therefore, to perform well in the role of individualized consideration, leaders need to pay attention to professional training and skills coaching for employees, especially for micro-enterprises. Not only that, but leaders of SMEs in Can Tho also need to pay more attention to employees' needs, abilities, and aspirations to promote their strengths.

Based on the research results, it is also shown that the idealized influence of leadership contributes to the transformational leadership style in SMEs in Can Tho city. Therefore, SMEs in Can Tho city leaders need to pay attention to creating trust in employees and respecting their subordinates. Because leaders want employees to believe in them, they must first put their trust in employees. In addition, through interviews with experts, to create trust for employees, leaders in SMEs in Can Tho city need to uphold the interests of individuals. And most importantly, the leader must always listen to ideas, initiatives and treat everyone fairly.

In addition, this study also shows that inspirational motivation and intellectual stimulation factors for individuals also create outstanding characteristics of leaders of SMEs in Can Tho city. Therefore, to generate motivation at work for employees, leaders must regularly provide timely support, help, and guide individuals to solve problems that arise in their work. Moreover, based on the article's research results, leaders in SMEs in Can Tho need to promote and express more confidence and enthusiasm to their subordinates. This contributes to creating a learning culture in enterprises and arouses the spirit of learning and sharing, contributing to innovation and improving the performance of SMEs in Can Tho city.

This study demonstrates the need for transformational leadership to contribute to creating a learning organization that contributes to the innovation and performance of SMEs in Can Tho. For proposals related to the research's results to apply to SMEs, these results can be transferred to the Can Tho Business Association, where business leaders periodically meet, exchange, and share. Not only that, the results of this study can be a valuable source of information in the Can Tho SMEs Support Center (Department of Planning and Investment) for the consulting and training on leadership transformation for SMEs in the city. Therefore, the article can help SMEs in Can Tho realize the importance of leadership in improving performance.

By implementing this article, we can affirm the necessity of transformational leadership for innovation activities in SMEs, especially micro-enterprises in Can Tho city. Because of its positive contribution to the performance of SMEs. Different from empirical studies, this article in the SME context incorporates research on the relationship between transformational leadership, organizational learning, organizational innovation, and performance. Moreover, this article has adjusted and supplemented the scales through expert interviews to suit the characteristics and context of SMEs in Can Tho, such as the "Idealised Influence" and "Individualized Consideration" scales of transformational leadership concept

and "Organizational Learning" scale. The article provides a scientific basis for future scholars to review for research related to leadership transformation in other localities in Vietnam.

The limitations and future recommendations: Firstly, the research does not have enough evidence to prove the direct impact of organizational learning on performance. This is because this study has not considered the difference in expertise and knowledge between leaders and organization members ³². Therefore, further studies can examine the influence of this factor on organizational learning ability and performance. Secondly, although it ensures the analysis conditions, the study's sample size ensures the necessary minimum. Therefore, the following authors can expand the research with a larger sample size to have a basis for comparing the results with experimental studies.

LIST OF ABBREVIATIONS

AVE: Average Variance Extracted

BSC: Balanced Scorecard

CFA: Confirmatory factor analysis

CR: Composite Reliability

FIN: Financial Performance

IC: Individualized consideration

II: Idealized influence

IM: Inspirational motivation

IS: Intellectual stimulation

NON: Non-financial performance

SEM: Structural equation modeling

SMEs: Small and Medium Enterprises

TLT: Transformational Leadership Theory

CONFLICT OF INTERESTS

The authors declare that they have no competing interests.

AUTHOR'S CONTRIBUTIONS

The research article on "Study on the impact of transformation leadership on performance of SMEs in Can Tho city, Vietnam" was made with the efforts and contributions of all members of the research team. The authors have made the following contributions:

- Dinh Cong Thanh is responsible for the following contents: reviewing related studies, writing introductions, theoretical background, collecting data, reporting research results, editing article.
- Pham Le Hong Nhung is responsible for designing expert interview questionnaires, enterprise survey questionnaires, processing expert interview data.
- Le Tan Nghiem is responsible for collecting and processing data from enterprise surveys.
- Le Trung Ngoc Phat is responsible for surveying enterprises and writing managerial implications.

REFERENCES

- Samson AT, Ilesanmi OA. The relationship between transactional leadership, transformational leadership and performance of SMEs in Nigeria. Noble International Journal of Business and Management Research. 2019;3(4):73-85;.
- Rasheed MA, et al. Transformational leadership and employee voice for product and process innovation in SMEs. Innovation & Management Review. 2021; 18(1):69-89;;Available from: https://doi.org/10.1108/INMR-01-2020-0007.
- Feranita NV, et al. Effect of transformational and transactional leadership on SMEs in Indonesia. Problems and Perspectives in Management. 2020;18(3):415-425;;Available from: http:// dx.doi.org/10.21511/ppm.18(3).2020.34.
- Odumeru JA, Ogbonna IG. Transformational vs. transactional leadership theories: Evidence in literature. International review of management and business research. 2013;2(2):355-361;.
- Marczyk GR, et al. Essentials of research design and methodology. John Wiley and Sons. 2010;.
- Arif S, et al. Transformational leadership and organizational performance: the mediating role of organizational innovation. SEISENSE Journal of Management. 2018;1(3):59-75;;Available from: https://doi.org/10.33215/sjom.v1i3.28.
- Naguib HM, et al. The impact of Transformational leadership on the organizational innovation. The International Journal of Social Sciences and Humanities Invention. 2018;5(1):4337-4343;Available from: https://doi.org/10.18535/ijsshi/v5i1.15.
- Mutahar AY, et al. Relationship of Transformational Leadership, Organizational Learning and Organizational Performance. International Journal of Economics and Financial Issues. 2015;5:406-411;.
- Yıldız S, et al. The effect of leadership and innovativeness on business performance. Procedia-Social and Behavioral Sciences. 2014;150:785-793;;Available from: https://doi.org/10. 1016/j.sbspro.2014.09.064.
- Adam JK, et al. The leadership styles impact, in learning organizations, and organizational innovation towards organizational performance over manufacturing companies, Indonesia. Journal of Multidisciplinary Academic. 2020;4(2):63-69;.
- Cortes AF, Herrmann P. Ceo transformational leadership and sme innovation: The mediating role of social capital and employee participation. International Journal of Innovation Management. 2019;24(3):1-25;Available from: https://doi.org/10. 1142/S1363919620500243
- Chen Y. Is transformational leadership always good for employee task performance? Examining curvilinear and moderated relationships. Frontiers of Business Research in China. 2018;12(1):1-28;Available from: https://doi.org/10. 1186/s11782-018-0044-8.
- Elshanti M. Transformational leadership style and organizational learning: The mediate effect of organizational culture. International Business and Management. 2017;15(2):1-14;;Available from: https://doi.org/10.4172/2162-6359.
- García-Morales VJ, et al. The effects of transformational leadership on organizational performance through knowledge and innovation. British journal of management. 2008;19(4):299-319;Available from: https://doi.org/10.1111/j. 1467-8551.2007.00547.x.
- Ahmad SA, et al. The effect of transformational leadership on innovation. European Research Studies Journal. 2019;22(4):215-240;Available from: https://doi.org/10.35808/ ersi/1507.
- Nguyen TTN, Luu TMN. Linking transformational leadership and organizational performance: An empirical investigation of manufacturing firms in Vietnam. Economics & Sociology. 2019;12(2):170-191;Available from: https://doi.org/10.14254/ 2071-789X.2019/12-2/10.

- Kittikunchotiwut P. Transformational Leadership and Financial Performance: The Mediating Roles of Learning Orientation and Firm Innovativeness. The Journal of Asian Finance, Economics and Business (JAFEB). 2020;7(10):769-781;Available from: https://doi.org/10.13106/jafeb.2020.vol7.n10.769.
- García-Morales VJ, et al. Transformational leadership influence on organizational performance through organizational learning and innovation. Journal of business research. 2012;65(7):1040-1050;Available from: https://doi.org/10.1016/ j.jbusres.2011.03.005.
- Burns JM. Leadership. New York: Harper and Row. 1978;124-135;.
- Bass BM. Leadership and Performance beyond Expectations. Free Press, New York. 1985;152-175;.
- Avolio BJ, Bass BM. Multifactor leadership questionnaire (TM). Mind Garden. Inc. Menlo Park. CA. 2004;
- Ondoro CO. Measuring organization performance from balanced scorecard to balanced ESG framework. International Journal of Economics, Commerce and Management. 2015;11(3):715-725;.
- Mashovic A. Key financial and nonfinancial measures for performance evaluation of foreign subsidiaries. Journal of Contemporary Economic and Business Issues. 2018;5(2):63-74;.
- Kaplan RS, Norton DP. In Search of Excellence-der Maßstab muß neu definiert werden. Harvard manager. 1992;14(4):37-46;.
- Rompho N, et al. Why the balanced scorecard fails in SMEs: a case study. International Journal of Business and Management. 2011;6(11):39-46;Available from: https://doi.org/10.5539/ijbm.v6n11p39.
- Annastazia M, Robert GM. Socio-Cultural Factors and Financial Performance among Women SMEs in Tanzania. European Journal of Business and Management. 2014; 6(32):153-163;.
- Maduekwe CC, et al. Performance measurement by SMEs in Cape Metropolis, South Africa. Problems and Perspectives

- in Management. 2016;14(2):46-55;Available from: https://doi.org/10.21511/ppm.14(2).2016.05.
- Rehman SU, et al. Mediating effect of innovative culture and organizational learning between leadership styles at thirdorder and organizational performance in Malaysian SMEs. Journal of Global Entrepreneurship Research. 2019;9(1):1-24;Available from: https://doi.org/10.1186/s40497-019-0159-1.
- Kimatu DK, et al. Competitive Strategies and the Non Financial Performance of Micro Enterprises in Kenya. International Journal of Management and Commerce Innovations. 2014;2:160-186:.
- Molodchik M, et al. Multilevel analysis of knowledge sources for product innovation in Russian SMEs. Eurasian Business Review. 2020;11(2):247-266;Available from: https://doi.org/10. 1007/s40821-020-00166-6.
- Septiadi O, Kristanto H. Influence of Transformational Leadership Perception in Employee Performance: Perception of Learning Organizations and Innovations as Mediator. International Journal of Multicultural and Multireligious Understanding. 2019;6(5):792-813;Available from: https://doi.org/10.18415/ijmmu.v6i5.1151.
- Hoopes DG, et al. Shared knowledge, "glitches," and product development performance. Strategic management journal. 1999;20(9):837-865;Available from: https://doi.org/10.1002/ (SICI)1097-0266(199909)20:9<837::AID-SMJ54>3.0.CO;2-I.
- Đình Thọ N, Trang NTM. Nghiên Cứu Khoa Học Marketing-Ứng Dụng Mô Hình Cấu Trúc Tuyến Tính SEM. Đại học Quốc gia TP.HCM. 2008;.
- 34. Hair JF, et al. Multivariate data analysis 7th Edition, New Jersey: Pearson Education. 2013;.
- 35. Phong LB. Tăng cường khả năng đổi mới thanh đạm cho các doanh nghiệp Việt Nam: Vai trò của lãnh đạo chuyển đổi và khả năng quản trị tri thức của doanh nghiệp. Tạp chí Kinh tế và Phát triển. 2021;286(4):68-77;.



Nghiên cứu sự tác động của lãnh đạo chuyển đổi đến hiệu quả hoạt động của các doanh nghiệp nhỏ và vừa tại Thành phố Cần Thơ, Việt Nam

Đinh Công Thành*, Phạm Lê Hồng Nhung, Lê Tấn Nghiêm, Lê Trung Ngọc Phát



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TÓM TẮT

Lãnh đạo chuyển đổi được xem là phong cách lãnh đạo nâng cao ý thức về lợi ích tập thể cho nhân viên của tổ chức. Nghiên cứu được thực hiên nhằm phân tích sự tác động của lãnh đạo chuyển đổi đến hiệu quả hoạt động của các doanh nghiệp nhỏ và vừa tại Thành phố Cần Thơ, Việt Nam. Đề tài được thực hiện dựa trên cơ sở lý thuyết và bốn thành phần của Lý thuyết Lãnh đạo chuyển đổi (TLT) (Ảnh hưởng lý tưởng – II; Truyền cảm hứng – IM; Kích thích trí tuệ – IS; Quan tâm cá nhân – IC), lược khảo các nghiên cửu liên quan và tham vấn ý kiến các chuyên gia để xây dựng mô hình nghiên cứu. Dữ liệu được khảo sát từ 214 doanh nghiệp nhỏ và vừa trên địa bàn thành phố. Các phương pháp phân tích dữ liệu được sử dụng bao gồm kiểm Cronbach's alpha, phân tích nhân tố khẳng định (CFA), mô hình cấu trúc tuyến tính (SEM) và phân tích cấu trúc đa nhóm. Kết quả nghiên cứu khẳng định, lãnh đạo có phong cách chuyển đổi đóng vai trò quan trọng tác động tích cực đến tinh thần học hỏi và chia sẻ kiến thức của các thành viên trong tổ chức, đặc biệt đối với các doanh nghiệp siêu nhỏ gặp nhiều khó khăn do thiếu nguồn lực. Nhờ vào lãnh đạo chuyển đổi (TL) và sự học tập trong tổ chức (OL) đã đóng góp quan trọng vào sự đổi mới (OI) cũng như nâng cao hiệu quả hoạt động (hiệu quả tài chính và phi tài chính) cho các doanh nghiệp vùa và nhỏ ở Cần Thơ. Dựa vào kết quả nghiên cứu, đề tài đã đề xuất một số đặc điểm của người lãnh đạo chuyển đổi ở các doanh nghiệp nhỏ và vừa trên địa bàn thành phố. Trong đó, bài viết nhấn mạnh sự ẩnh hưởng của yếu tố quan tâm cá nhân và lý tưởng hóa của người lãnh đạo trong việc nâng cao khả năng học tấp, góp phần vào sự đổi mới tổ chức cũng như nâng cao hiệu quả hoạt động cho các doanh nghiệp nhỏ và vừa tại Thành phố Cần Thơ.

Từ khoá: Lãnh đạo chuyển đổi, học tập tổ chức, đổi mới tổ chức, hiệu quả hoạt động

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