

## THE ROLE OF TRANSFORMATION LEADERSHIP IN ENHANCING CORPORATE SUSTAINABILITY CAPABILITIES AND SUSTAINABLE SUPPLY CHAIN MANAGEMENT

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**Abstract:** The present study aims to investigate the effect of transformational leadership on sustainable supply chain management performance through developing sustainability capabilities. The data were collected from 653 managers of Thai SMEs and analyzed by applying the PLS-SEM approach. The results highlighted that transformational leadership has a positive impact on developing organizational sustainability capabilities. Further, organizational sustainability capabilities enhance organizational sustainable supply chain management performance. Moreover, the study provides empirical support for the full mediation of sustainability capabilities between the relationship of transformational leadership and sustainable supply chain management performance. Finally, the study contains managerial implications and suggestions for future research.

**Keywords:** Transformational leadership, Sustainable supply chain management, Sustainability capabilities

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### Introduction

Management and leadership literature has proved leadership as the essential element for organizational success. Past studies have explored that people-oriented leadership styles (i.e., organic, transformational, authentic, ethical, and visionary leadership) have more impact on organizational performance than others (Jing, Avery, and Bergsteiner, 2019). Various studies found in the leadership scholarship that provided evidence concerning the leader's involvement in the implementation process and organizational change through employee involvement (Fitri, Elmanizar, Nugraha, Yakub, and Cahyono, 2019). The idea of linking sustainability concepts with a firm's supply chain was highlighted at the beginning of the 21<sup>st</sup> century after recognizing the side-effects of various organizational products to humans as well as the environment. The organization that has more dependence on its suppliers have more concerns about the sustainable supply chain management (SSCM) (Carter and Liane Easton, 2011).

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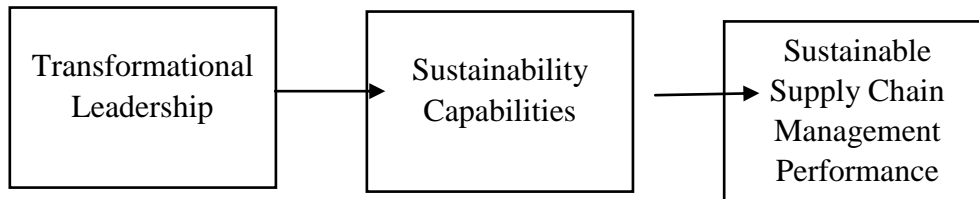
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Based on these arguments, we further the management literature by investigating how transformational leadership develops SSCM by enhancing the sustainability capabilities of the organization. Hence, we ought to find the answers to two main research questions. First, does transformational leadership contributes to the development of organizational sustainability capabilities. Second, does organizational sustainability capability mediates the relationship among transformational leadership and SSCM? The literature is evident in the positive effect of transformational leadership on organizational performance that has been examined in developing countries (Hongdao, Bibi, Khan, Ardito, and Nurunnabi, 2019). However, the empirical support of transformational leadership on SSCM is limited in developing countries. Therefore, the present research focused on one of the emerging developing countries and a growing economy of Southeast Asia, i.e. Thailand. The target of the study was specifically Thai small and medium enterprises (SMEs) as the SME sector of Thailand is the major contributor to the GDP of Thailand. According to OSMEP (2017), the contribution of the SME sector to the Thai GDP was 42.2%. The majority of the Thai SMEs have incorporated the sustainability activities in their operations, but their linkages with the supply chain were still understudied (Suriyankietkaew and Avery, 2016). Hence, this study aims to investigate the role of transformational leadership in developing sustainability capabilities and the mediating effect of sustainability activities between the relationship of transformational leadership and sustainable supply chain management (Saleem, Adeel, Ali, and Hyder, 2018; Loučanová and Olšiaková, 2019).

### **Literature Review**

Prior literature has defined the concept of leadership in different contexts and scenarios. Mostly the scholar had defined this concept in the behavioral context that explains how the leaders behave in different situations or scenarios. According to Yukl (2013), Leaders are the key player and essential elements for enhancing organizational performance as they are the policymakers (Gröschl, Gabaldón, and Hahn, 2019). It is included in the duties of a leader to develop a cooperative work environment and motivate the workforce in order to accomplish organizational targets (Yukl, 2013). However, transformational leadership theories have much more coverage to address the diverse organizational areas as compared to other leadership styles (Yukl, 2013). The traditional leadership theories have focused on the stereotype procedure to address the employees' issues (Burliai, Ryabchenko, Bielik, and Burliai, 2018; Oláh, Sadaf, Máté and Popp, 2018). However, theories of transformational leadership have focused on human behavior as well as the emotional, cognitive, and social systems that may influence their performance. Transformational leadership theories go beyond the traditional leadership approach by touching the ethical, social, and spiritual phenomena. It stresses on the beliefs, abilities, education, perception, and socio-economic status of the leader (Miao et al., 2016). Finally, the transformational leadership style may play a vital role in

enhancing sustainable supply chain management by developing sustainability capabilities. The research framework of the present study is presented in figure 1.



**Figure 2 Research Framework**

Transformational leadership plays a vital role in achieving the optimal level of organizational performance (Hakimah, Nugraha, Fitri, Manihuruk, and Hasibuan, 2019; Wahab, Rahmat, Yusof, and Mohamed, 2016). In addition, past studies have explored the positive and significant impact of TL on employees' job performance (Richardson and Vandenberg, 2005). Similarly, the empirical support for the positive relationship of TL with corporate sustainability can also be found in the recent literature of organizational studies (Rego et al., 2017). Moreover, Ojha et al. (2018) inferred that the TL style has a positive and significant role in enhancing organizational supply chain management. Organizational leadership achieves sustainable supply chain management goals by involving employees in organizational citizenship behaviors (Shareef and Atan, 2019). Moreover, Organizational sustainability requires structural changes in the firm's systems and processes that consequently enhance organizational sustainability capabilities (Epstein and Roy, 2003; Munajat and Kurnia, 2015). Therefore, the present study hypothesized that:

H1: Transformational leadership style has a positive and significant impact on sustainable supply chain management performance.

H2: Transformational leadership style has a positive and significant impact on organizational sustainability capabilities.

Organizational capabilities are very crucial in achieving organization goals, specifically in implementing the sustainability activities in any area of organization (Munajat and Kurnia, 2015; Nugraha and Hakimah, 2019). Several past studies have explored the sustainability arena in the context of the supply chain. For instance, Wilhelm, Blome, Wieck, and Xiao (2016) have concluded that the strategic integration of sustainability activities is essential to gain the optimum level of sustainable SSCMP. In line with this, Paulraj (2011), Kot and Brzezinski (2015) and Nugraha et al., (2019) argued that the development of internal organizational resources enhances the organizational capabilities to manage its supply chain efficiency in the context of sustainability. Similarly, in critical analysis of the food industry, Beske, Land, and Seuring (2014) found a positive relationship between supply chain management and organizational capabilities. Therefore, it is hypothesized that:

H3: Organizational sustainability capabilities have a positive and significant impact on sustainable supply chain management.

Finally, organizational sustainability capabilities may serve as a mechanism to achieve the organization's SSCMP. Past studies have noted that TL plays a vital role in enhancing the sustainability capabilities of their organization by introducing structural changes in their system and processes (Epstein and Roy, 2003; Munajat and Kurnia, 2015). Further, Beske et al. (2014) and Paulraj (2011) found that organizational capabilities are crucial to achieving SSCMP. Therefore, it is hypothesized that:

H4: Organizational sustainability capabilities mediate the relationship between transformational leadership and sustainable supply chain management performance.

### **Methodology**

The data was collected through self-administered questionnaires. Before collecting the data, the managers were briefed about the purpose of the study, and they were guaranteed secrecy about their personal information. A total of 653 branch managers participated in the study. The questionnaire of the study was comprised of four sections. The first section consisted of questions intended to require demographic information of the participants. The second section contains all the scales of exogenous variables. The third section encompasses the mediators, and the last section covers the questions about the endogenous variable. Each scale of the TL dimension consisted of 3 items. The construct of sustainability capabilities was measured by 8 items adapted from Munajat and Kurnia (2015) organizational capabilities inventory. Lastly, the construct of sustainable supply chain management performance was measured by five dimensions developed by Das (2017), comprised of 7 items of competitiveness, 5 items of environmental performance, 4 items of operations performance, 3 items of employee centered social performance and 4 items of community centered social performance scale. All the items were measured at 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The data were analyzed by partial least square structural equation modelling (PLS-SEM) approach by using Smart PLS 3.2.8. PLS-SEM approach is most suitable in assessing the causal relationship among constructs (Joe Hair, Hollingsworth, Randolph, and Chong, 2017).

### **Results**

It is necessary to establish the construct reliability and validity before assessing the research model (Hair, Sarstedt, Hopkins, and Kuppelwieser, 2014). Therefore, first, we assessed the convergent validity and discriminant validity of the measurement model. Table 1 explains the measurement model of the study. For the outer model,

all the factor loadings were higher than 0.5 that is required for establishing the reliability of the indicators. All the constructs have Cronbach's alpha > 0.70, average variance extracted (AVE) > 0.5, and composite reliability (CR) > 0.60 that established the convergent validity of the model (J. F Hair, Hult, Ringle, and Sarstedt, 2014).

**Table 1: Measurement Model**

Construct	Cronbach's Alpha	CR	AVE
Articulating a Vision (AV)	0.749	0.856	0.666
Competitiveness (CP)	0.697	0.806	0.507
Community-Centred Social Performance (CSP)	0.698	0.815	0.526
Exhibiting High Performance Expectations (EHE)	0.690	0.828	0.617
Environmental Performance (EPR)	0.837	0.885	0.606
Employee-Centred Social Performance (ESP)	0.688	0.828	0.620
Fostering Acceptance of Group Goals (FAGG)	0.746	0.856	0.664
Individualized Support (IS)	0.718	0.842	0.640
Individual Intellectual Stimulation (IST)	0.698	0.832	0.623
Operations Performance (OPR)	0.789	0.864	0.614
Role Modeling (RM)	0.749	0.857	0.666
Sustainability Capabilities (SC)	0.717	0.801	0.552
Transformational Leadership* (TL)		0.864	0.516
Sustainable Supply Chain Management Performance* (SSCMP)		0.845	0.535

**Table 2: Fornell and Larcker Criterion for Discriminant Validity**

	SC	SSCMP	TL
SC	<b>0.743</b>		
SSCMP	0.127	<b>0.731</b>	
TL	0.308	0.211	<b>0.718</b>

**Table 3: Heterotrait-Monotrait Criterion for Discriminant Validity**

	SC	SSCMP	TL
SC			
SSCMP	0.400		
TL	0.382	0.380	

Table 4 presented the results of PLS bootstrap algorithms that confirms the significant direct relationship of TL with SC ( $\beta=0.31$ , t value = 4.73, p value = 0.00) and SC with SSCMP ( $\beta = 0.19$ , t value = 2.31, p value = 0.02). However, the direct relationship of TL with SSCMP ( $\beta = 0.063$ , t value = 0.598) found no empirical support of its significance. These results show that the SC is directly affected by TL by explaining 32% variance in the latent variable. Similarly, SSCMP is directly affected by SC by explaining 27% variance. Out of all the relationships, the TL and SC have the highest beta. The findings also confirm the significant indirect effect of SC between the relationship of TL with SSCMP ( $\beta = 0.057$ , t value = 3.015, p value = 0.02). It means that SC fully mediates the relationship of TL with SSCMP. Therefore, 3 out of four hypotheses of the study are supported by the results of the PLS-SEM.

**Table 4: Hypotheses Results**

Hypothesis	Beta	S.E	T Value	P Value	CI <sup>BCa</sup> Low	CI <sup>BCa</sup> High
TL -> SSCMP	0.063	0.105	0.598	0.550	-0.194	0.207
TL -> SC	0.308	0.065	4.725	0.000	0.089	0.402
SC -> SSCMP	0.186	0.081	2.310	0.021	0.042	0.342
TL -> SC-> SSCMP	0.057	0.019	3.015	0.002	0.015	0.066

### Discussions

The present research has three-fold contributions to the existing literature of SCM. First, the findings explain that transformational leadership is essential to develop organizational structure and processes that enhance organizational sustainability capabilities. Second, the results show that organizational capabilities regarding sustainability are vital to enhance organizational SSCMP. Finally, it provides the empirical evidence of the full mediation of sustainability capabilities between the relationship of TL and SSCMP. The study's main contribution lies in the indirect effect of sustainability capabilities. It can be inferred from the findings of the study that organizational capabilities serve as a mechanism in achieving organizational performance. Our findings explain that the management of the organization by demonstrating transformational leadership behaviors may develop and enhance organizational systems and processes that may need to fulfill the sustainability requirements by the organizational key stakeholders. The results of the present research are consistent with the prior studies. For instance, Eisenbach, Watson, and Pillai (1999), Epstein and Roy (2003) and Hakimah, Nugraha, Fitri, Manihuruk, and Hasibuan (2019) explained that organizational change is inevitable to enhance

sustainability capabilities of the organization, and transformational leadership has a key role in implementing change in the organization. Similarly, the study of Chen and Chang (2013) found that SSCMP is an important factor in overall organizational sustainability performance, and it can be enhanced through developing organizational sustainability capabilities.

### **Conclusion**

This study concluded that transformational leadership is essential to develop organizational structure and processes that enhance organizational sustainability capabilities. Second, the results show that organizational capabilities regarding sustainability are vital to enhance organizational SSCMP. Finally, full mediation of sustainability capabilities between the relationship of TL and SSCMP has been observed. Hence, our study extends the past scholarship in the supply chain by explaining the mechanism to enhance sustainable supply chain management by transformational leadership style.

### ***Implications of the Study***

The present study has focused on the SME industry of Thailand. Therefore, it has several implications for the owners and managers associated with any business that comes under the SME industry in Thailand. First, it explains that the organization's supply chain processes and strategies should be designed by considering social and environmental future needs along with economic needs. The organization should use environmental and human-friendly raw material to make ecological products. The environment-friendly raw material protects the environment, specifically when the products are wasted or recycled. Similarly, human-friendly raw material helps to sustain the user's health and societies. Moreover, the study suggests the leaders should go beyond the leader-follower transactional relationship and consider the emotional, ethical, and spiritual aspects while dealing with their followers. Past literature suggested that sustainability capabilities can be achieved by incorporating change in organizational systems and processes. Organizational employees are the key stakeholders that may affect by the organizational change, and retaliation may take from their side to counter the change. Therefore, TL plays an essential role in understanding the employee's concerns about the change and motivating them to achieve organizational targets. We suggest that managers may enhance an organization's sustainability capabilities by demonstrating the transformational leadership style to increase the sustainable supply chain management performance.

### ***Limitations and Future Research Direction***

The first limitation of the present study is the cross-sectional nature. Due to time and financial constraints, the data was collected at one point in time. Therefore, to get the causal inferences, the future longitudinal and time-series studies must be conducted in this regard. Second, to meet the objective of the study, the construct of TL and SSCMP was measured as a second-order construct. However, in order to

have deep insights into the concepts of the variables mentioned above, it will be quite interesting to assess them by dimensions. It will explain the indirect effect of sustainability capabilities on each dimension of TL and SSCMP. Finally, future studies should expand this research by controlling the demographic variables to assess the influence of workforce diversity on the research model.

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### ROLA PRZYWÓDZTWA TRANSFORMACJI W ZWIĘKSZENIU ZDOLNOŚCI KORPORACYJNYCH ORAZ ZRÓWNOWAŻONEGO ZARZĄDZANIA ŁAŃCUCHEM DOSTAW

**Streszczenie:** Artykuł przedstawia badanie wpływu przywództwa transformacyjnego na efektywne zarządzanie łańcuchem dostaw poprzez rozwijanie zdolności zrównoważonego rozwoju. Dane zostały zebrane od 653 menedżerów tajlandzkich MŚP i przeanalizowane przy zastosowaniu podejścia PLS-SEM. Wyniki podkreśliły, że przywództwo transformacyjne ma pozytywny wpływ na rozwój zdolności zrównoważonego rozwoju organizacji. Co więcej, możliwości zrównoważonego rozwoju organizacji zwiększają wydajność zarządzania zrównoważonym łańcuchem dostaw w organizacji. Ponadto badanie zapewnia empiryczne wsparcie dla pełnej mediacji w zakresie zdolności zrównoważonego rozwoju między relacją przywództwa transformacyjnego a wydajnym zarządzaniem łańcuchem dostaw. Ponadto artykuł zawiera implikacje zarządcze i sugestie dotyczące przyszłych badań.

**Słowa kluczowe:** Przywództwo transformacyjne, Zrównoważone zarządzanie łańcuchem dostaw, Możliwości zrównoważonego rozwoju

#### 转型领导在增强企业可持续能力和可持续供应链管理中的作用

**摘要:** 本研究旨在通过发展可持续能力来研究变革型领导对可持续供应链管理绩效的影响。这些数据是从653名泰国中小型企业经理那里收集的，并通过应用PLS-SEM方法进行了分析。结果表明，变革型领导对发展组织的可持续能力具有积极影响。此外，组织的可持续能力增强了组织的可持续供应链管理绩效。此外，该研究为转型领导力与可持续供应链管理绩效之间的可持续能力的完全中介提供了经验支持。最后，该研究包含管理意义和对未来研究的建议。

**关键字:** 变革型领导，可持续供应链管理，可持续能力