ความสัมพันธ์ระหว่างพฤติกรรมเชิงนวัตกรรม การขัดเกลาทางสังคม และพฤติกรรมสีเขียว: พนักงานจากบริษัทผู้ให้บริการโลจิสติกส์ในประเทศไทย

บุบผา ฐานุตตมานนท์[1]

Received 2 June 2022
Revised 31 August 2022
Accepted 31 August 2022

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาและตรวจสอบความสัมพันธ์ระหว่างพฤติกรรมเชิงนวัตกรรม การขัดเกลาทางสังคม และพฤติกรรมสีเขียวของพนักงานจากผู้ให้บริการด้านโลจิสติกส์ในประเทศไทย กลุ่มตัวอย่างคือพนักงานที่ทำงานในบริษัทผู้ให้บริการด้านโลจิสติกส์จำนวน 400 คน ทำการเก็บข้อมูลด้วยแบบสอบถาม และมีวิธีการสุ่มตัวอย่างแบบเจาะจงและตามความสะดวก วิเคราะห์ข้อมูลด้วยแบบจำลองสมการเชิงโครงสร้าง ผลการวิจัยพบว่าพฤติกรรมเชิงนวัตกรรมมีอิทธิพลในเชิงบวกต่อการขัดเกลาทางสังคม ในขณะที่การขัดเกลาทางสังคมส่งผลในเชิงบวกต่อพฤติกรรมสีเขียว นอกจากนี้ พฤติกรรมที่เป็นนวัตกรรมยังส่งผลดีต่อพฤติกรรมสีเขียว สุดท้ายนี้ การขัดเกลาทางสังคมมีบทบาทเป็นตัวกลางความสัมพันธ์เชิงบวกระหว่างพฤติกรรมเชิงนวัตกรรมและพฤติกรรมสีเขียวที่ระดับนัยสำคัญทางสถิติที่ 0.001 โดยผลการศึกษานี้เป็นประโยชน์ทั้งด้านการปฏิบัติงานและด้านทฤษฎีที่สามารถส่งผลต่อผลการดำเนินทางธุรกิจได้

คำสำคัญ: พฤติกรรมเชิงนวัตกรรม การขัดเกลาทางสังคม พฤติกรรมสีเขียว ผู้ให้บริการโลจิสติกส์

[1] คณะบริหารธุรกิจ มหาวิทยาลัยเทคโนโลยีราชมงคลธัญบุรี เลขที่ 39 หมู่ที่ 1 ตำบลคลองหก อำเภอคลองหลวง จังหวัดปทุมธานี 12110

* Corresponding author email: bubpha_t@rmutt.ac.th

Humanities and Social Science Research Promotion Network Journal
Volume 5 Issue 2 (May - August 2022)

THE RELATIONSHIP BETWEEN INNOVATIVE BEHAVIOR, SOCIALIZATION AND GREEN BEHAVIOR: EMPLOYEES FROM LOGISTICS SERVICE PROVIDERS IN THAILAND

Bubpha Thanuttamanon[1]

Abstract

This research aims at studying and examining the relationship among innovative behavior, socialization and green behavior of employees from logistics service providers in Thailand. The samples were of 400 employees working in the logistics service providers. The questionnaire was administered to collect the data, using purposive and convenient sampling methods. Structural equation modeling was employed for data analysis. The result indicated that that innovative behavior positively influences socialization meanwhile socialization positively influences green behavior. Furthermore, innovative behavior positively influences green behavior. Lastly, socialization positively mediates the relationship between innovative behavior and green behavior at a significant level as of .001. The study can contribute to both practical and theoretical aspects influencing business performance.

Keywords: Innovative Behavior, Socialization, Green Behavior, Logistics Service Providers

[1] Faculty of Business Administration, Rajamangala University of Technology Thanyaburi, 39 Moo 1, Klong 6, Khlong Luang Pathum Thani 12110

* Corresponding author email: bubpha_t@rmutt.ac.th

Introduction

Presently, environmental issues such as the excessive exploitation of natural resources for the production and distribution of goods and services have a substantial influence on the organizational practices as well as costs (Asadi et al., 2020; Luo et al., 2020). According to the problems, various scholars find ways to reach proper solutions in order that the organizations can adopt them for achieving the organizational, environmental, and sustainable performance. For example, Boudreau et al. (2008) suggested to implement green information technology and systems. Meanwhile, Vachon and Klassen (2006) and Azevedo et al. (2011) suggested to have collaboration and good relationship with suppliers, customers, producers, governors, and community in order to have effective work participation. Also, Zhu, Sakis and Lai (2007) suggested to improve internal resources such as total quality environment management, employee management and organizational communication as well as green supply chain management. Furthermore, Onputtha and Siriwichai (2021) suggested to have green corporate identity in order to build employees' identification for betting green performance. Lastly, various scholars also proposed to study employee green behavior in order to build them to have attitudes and awareness of protecting environment (Varela-Candamio et al., 2018; Wu et al., 2021).

In building green behavior, the organization requires various variables from internal and external perspectives. In internal aspect, the organization will require effective organizational management, organizational policy, organizational communication, working environment, employee citizenship behavior and others. Meanwhile, the external aspect considers the forces from governmental standards and regulations, supplier-customer requirement and community requirement. Among various variables, innovative behavior is one of interesting terms that can be adopted to increase employee performance (Aryee et al., 2012; Atatsi et al., 2019). However, based on previous studies, innovative behavior is not sufficient to increase green behavior in the organization. It is necessary to consider other variables to take mediating action on the relationship between innovative behavior and green behavior. The scholars proposed the socialization to play mediating role to increase employee performance (Madlock & Chory, 2014). For socialization, it refers to the process of making employees in the organization to mutauully understand the organizational direction, cultures and members (Jokisaari & Vuori, 2018; Kennedy & Widener, 2019). Nevertheless, from the literature review, it is found that there is a few evidence indicating the relationship among innovative behavior, socialization and green behavior.

From that, this research therefore aiming to study about innovative behavior, socialization and green behavior with having the purposes to study and examine the direct effect and indirect of behavior and socialization on green behavior. The logistics service providers were selected in this study since it has a significant impact on the Thai economy and plays a significant role in the service industry (Pengman et al., 2022). In addition, this logistics service industry also releases huge environmental problems including greenhouse gas emissions by logistics functional areas (Perotti et al., 2022). The findings of this study will have practical implications for organizational managers to emphasize the importance of socialization, as well as provide theoretical contribution to previous literature.

Objectives

This research aims at examining the relationship between innovative behavior, socialization and green behavior of employees from logistics service providers in Thailand.

Literature Reviews

Innovative Behavior and Socialization

Innovative behavior is one of the most important behaviors that various organizations want to have in their employees because it can be linked to the competitive advantage of the organization (Arsawan et al., 2022). Various scholars have defined innovative behavior as the behavior of having innovative ideas and procedures in order to create innovative products and services that, in the end, can contribute to the organization's success (Chen et al., 2018; Duradoni & Di Fabio 2019; Kör et al., 2021). Previous studies indicated that innovative behaviors of employees in the organization can be derived from individuals' creativity, which can be developed and led by organizational supports such as transformative leaders, followers, leader-employee interaction, organizational policy, rewards, and working environment (Ariyani & Hidayati, 2018; Riaz et al., 2018; Zhou & Wu, 2018; Qi et al., 2019). Additionally, innovative behavior can be connected to socialization in the organization. For example, Al-Hawari et al. (2019) revealed the relationship between frontline employee service innovative behavior and co-worker socialization in the service sector in the United Arab Emirates. This is because innovative behavior needs organizational members to be socialized to exchange or share their collected ideas, information, and experiences with others (Cranmer et al., 2019). For socialization definition, Jokisaari and Vuori (2018) defined socialization as the process in the organization that can help their new employees learn to perform their duties along with the organizational

environment regarding their existing colleagues, leaders, and followers. Meanwhile, Kennedy and Widener (2019) defined socialization as a mechanism to communicate with employees about the organization's core values, supervisor-employee engagement, career development mentoring, and others in order that the employees can behave in the same direction and goals as the organization. In addition, Madlock and Chory (2014) defined socialization as an employee outcome predictor, which can be divided into two categories: organizational socialization refers to the process of helping workers adjust to a new work environment, whereas task socialization refers to the process of helping employees adjust to new job responsibilities. To have an effective socialization outcome for employees in the organization, Van Maanen and Schein (1979) and Song et al. (2015) revealed six tactics, which include whether employees can be socialized from being in a group or individual (collective versus individual), by formal or informal activities (formal versus informal), by being informed explicitly to attend planned or unplanned events (sequential versus random), by being fixed with time or flexible (fixed versus variable), by having previous job incumbents as role models or not (serial versus disjunctive), and by receiving positive social support from insiders (investiture versus divestiture). Besides, Taormina (1999) showed that training, understanding of the organization, co-worker support, as well as strategic human resource management can build effective socialization. Based on a review of the literature, it can be said that innovative behavior can have an impact on socialization. Therefore, the hypothesis can be formulated as follows:

H1: Innovative behavior positively influences socialization.

Socialization and Green Behavior

Socialization refers to the process of blending employees' distinctiveness and newness to be able to perform the tasks assigned in the organization with other colleagues, leaders, and followers effectively in order to achieve the organization goals (Jokisaari & Vuori, 2018; Kennedy & Widener, 2019). Van Maanen and Schein (1979) and Song et al. (2015) revealed six tactics to create effective employee socialization. From the reviews of the literature, effective socialization has the importance of creating employee commitment, satisfaction, engagement, work performance, and proactive behavior because the employees who pass through the socialization activities can have more organizational practices, knowledge, experience, and skills (Taormina, 1999; Song et al., 2015; Ellis et al., 2017; Nishanthi, & Kailasapathy, 2018).

Regarding green behavior, it is also crucial and becoming a talk-of-the-town topic in the 21st century that various organizations must take into account (Dodsworth & Honohan,

2022; Sabbir & Taufique, 2022). Pro-environmental behavior, or green behavior, refers to the employees in the organization that have behavioral attitudes as well as awareness of being extremely concerned with environmental protection (Varela-Candamio et al., 2018; Wu et al., 2021). To effectively create employee green behavior, scholars found the significant variables include green human resource management practices such as employee life cycle, reward, education and training, employee empowerment, and management involvement (Zhang et al., 2019). In addition, the study done by Onputtha and Siriwichai (2021) also found that green corporate identity, including green corporate communication, policy, culture, forces and drives, goods and services, employee behavior, and visual identity, can be linked to green employee identification at a significant level.

The study done by Singh et al. (2020) found a relationship between socialization, pro-environmental behavior, and environmental concerns. Meanwhile, Katz-Gerro et al. (2020) reveal the significant influence of socialization styles, including learning, group participation, and control, on environmental behavior, including sustainable lifestyles, reducing consumption, and reducing environmental impact. Additionally, Piwowar-Sulej (2020) supported that a pro-environmental culture is needed to socialize employees according to a company's environmental objectives. In line with the literature review, it can be concluded that socialization can have an influence on green behavior. Therefore, the hypotheses can be written as follows.

H2: Socialization positively influences green behavior.

Innovative Behavior and Green Behavior

Innovative behavior is defined as the behavior of employees in an organization who seek new knowledge, skills, and experiences in order to create innovative products and services that can potentially support the organization's goals and missions (Chen et al., 2018; Duradoni & Di Fabio 2019, Kör et al., 2021). The literature reviews from previous studies reveal the significant association between innovative behavior and green behavior. For example, Zhu and Zhang (2020), Wang et al. (2021), and Zhang et al. (2022) discovered the relationship between employees' green behavior and innovative behavior. This is because the way employees in an organization aim to find new knowledge, skills, and experiences concerning environmental protection and share them with others, as well as initiate environmental protection work with new methods and approaches, can be linked to environmental performance (Onputtha et al., 2021). Therefore, the hypotheses can be written as follows.

H3: Innovative behavior positively influences green behavior.

Innovative Behavior, Socialization, and Green Behavior

Innovative behavior, socialization, and green behavior are important variables in the 21st century since they can assist organizations to achieve environmental performance, which can then be linked to sustainable business. The previous studies indicate the significant association between innovative behavior and socialization (Madlock and Chory, 2014; Al-Hawari et al., 2019); the relationship between socialization and green behavior (Katz-Gerro et al., 2020; Piwowar-Sulej, 2020; Singh et al., 2020); as well as the relationship between innovative behavior and green behavior (Zhu & Zhang, 2020; Wang et al., 2021; Zhang et al., 2022). In addition, the study done by Jones (1983) aimed to use the process of organizational socialization to blend employees' differences in order to learn subsequent adjustments in order to achieve personal and role outcomes in the organization. Similarly, the studies done by Van Maanen and Schein (1979) and Song et al. (2015) presented six tactics that can help encourage employees in the organization to perform their duties, which could then be linked to employee commitment, satisfaction, engagement, work performance, and proactive behavior. Also, Lee et al. (2013) found moderating roles of socialization in the relationship between employee behavior and employee performance, and Onputtha and Siriwichai (2021) found that social identification, similar to organizational socialization, can play a mediating role in employee behavior. Accordingly, the hypotheses can be written as follows:

H4: Socialization positively mediates the relationship between innovative behavior and green behavior.

Research Methodology

From the literature reviews, the conceptual framework depicting relationship between innovative behavior, socialization and green behavior, which is shown in Figure 1.

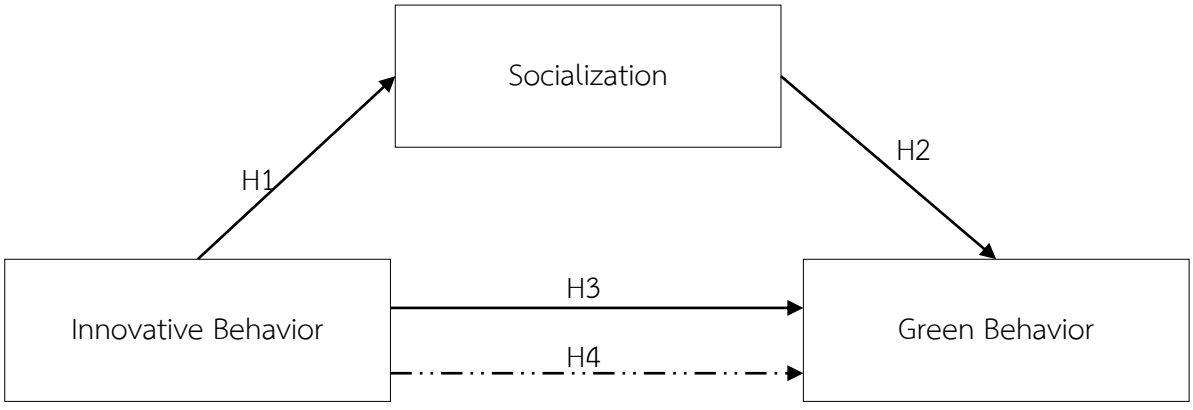


Figure 1 Conceptual Framework

Research Methodology

In response to the study objectives, the study was then designed to adopt a quantitative research approach. The population in this study were employees working for logistics service providers in Bangkok and the metropolitan areas of Thailand. Due to the unknown population, the 400 samples were drawn by using Cochran's sample size calculation (Cochran, 1977). The research tool was a questionnaire survey. Prior to data collection, an item-objective congruence (IOC) with five experts from management, international business, and statistics fields was used to indicate content validity. Cronbach's alpha, drawn from 50 sets of pretests, was employed to analyze the item reliability. In addition, the analysis indicated that the IOC is equal to 0.942 and Cronbach's alpha of innovative behavior, socialization, and green behavior is 0.886, 0.834, and 0.794, indicating that the research instrument has the quality to be used for further analysis. Regarding the pretest study, the results showed that most of the respondents (54%) were men, 66% were under 40 years old, 54% had a bachelor's degree, 92% worked as operational staff, and 92% had less than 5 years of experience.

In terms of the measures in this study, there are three major perspectives: innovative behavior, socialization, and green behavior. Innovative behavior items were adopted from Li and Zheng (2014), Riaz et al. (2018), Sun (2021), and Wang et al. (2021) using a 5-rating scale, marking 1 to refer to extremely disagreeable and 5 to refer to extremely agreeable. For socialization, the items were adopted from Madlock and Chory (2014) and Son (2016) using a 5-rating scale, marking 1 to refer to extremely disagreeable and 5 to refer to extremely agreeable. Lastly, the items pertaining to green behavior were adopted from Norton, Zacher and Ashkanasy (2014) and Tian, Zhang and Li (2020) using a 7-rating scale indicating 1 to refer to extremely disagreeable and 5 to refer to extremely agreeable.

To collect the data, the purposive sampling method was used to distribute the questionnaire. This method was chosen because it permits consideration of the participants specifically (Al-Hawari et al., 2019). Cronbach's alpha for 400 data sets was used to indicate the data reliability. From the study, Cronbach's alpha was 0.902 for innovative behavior, 0.785 for socialization, and 0.785 for green behavior.

Then, confirmatory factor analysis (CFA) was used to assess the model fitness as well as convergent and discriminant validity, as shown by factor loading (FL), composite reliability (CR), and average variance extracted (AVE), correlation matrix, and the square root of AVE. The goodness-of-fit indices, including p-value (Chi-square Probability Level) > 0.05, CMIN/df (Relative Chi-square) < 3, Goodness of Fit Index (GFI) > 0.90, Root Mean Square Error of Approximation

(RMSEA) < 0.08, Root Mean Square Residual (RMR) < 0.05, Tucker Lewis Index (TLI) > 0.90, Comparative Fit Index (CFI) > 0.90, Normed Fit Index (NFI), and Adjusted Goodness of Fit Index (AGFI) > 0.90 were used to examine the model satisfaction. When the model was determined to be unfit, it was permitted to be altered using modification indices (Polit & Beck, 2006; Tabachnick et al., 2007; Hair et al., 2012; Knekta et al., 2019). For hypothesis testing, structural equation modeling (SEM) with a bootstrapping technique was employed. After the results of the study are drawn, the findings are explained and discussed.

Results

Respondents' Profiles and Studied Variables

Respondents' profiles

Table 1 Respondents' Profile

Respondents' Profile	Detail	Frequency	Percent
Gender	- Male	174	43.5
	- Female	226	56.5
Age	- Below 30 years old	242	60.5
	- Between 31 - 40 years old	125	31.3
	- Between 41 - 50 years old	31	7.8
	- Above 50 years old	2	0.5
Education Level	- Below than bachelor's degree	173	43.3
	- Bachelor's degree	195	48.8
	- Above Bachelor's degree	32	9.1
Working Experiences	- Below 5 years	250	62.5
	- 5-10 years	113	28.3
	- Above 10 years	37	9.3
Position	- Managers/Executives	10	2.5
	- Head of Department / Division	15	3.8
	- Operational Staff	375	93.8
Total		400	100.0

Table 1 displays details of respondents' profiles. It can be concluded that most of the respondents were female. About 60.0% of their age was less than 30 years old. Meanwhile, 48.8% of the employees had graduated with a bachelor's degree. Regarding working

experience, two third of employees had less than 5 years. In addition, most of the employees were working as operational staff.

Innovative Behavior, Socialization, and Green Behavior

T**able 2** Innovative Behavior, Socialization, and Green Behavior

Items	Mean	S.D.	Agreeable Level
Innovative Behavior			
1. Attending seminars/training sessions to increase new knowledge	4.340	0.700	Extremely Agreeable
2. Looking for new knowledge sources	4.260	0.725	Extremely Agreeable
3. Meeting to talk to different people	4.320	0.724	Extremely Agreeable
4. Bringing past experiences to create new approaches for work	4.350	0.692	Extremely Agreeable
5. Bringing various creativity to create new approaches for work	4.330	0.756	Extremely Agreeable
6. Sharing ideas about works with others	4.290	0.730	Extremely Agreeable
7. Being confident to share ideas about works with others	4.240	0.720	Extremely Agreeable
8. Being able to convince others to agree with ideas	4.250	0.751	Extremely Agreeable
9. Ideas being supported by supervisors	4.210	0.771	Extremely Agreeable
10. Ideas being supported by colleagues	4.320	0.736	Extremely Agreeable
Overall	4.291	0.488	Extremely Agreeable

Table 2 Innovative Behavior, Socialization, and Green Behavior (Cont.)

Items	Mean	S.D.	Agreeable Level
Socialization			
11. Finding times to exchange ideas and experiences with others	4.290	0.733	Extremely Agreeable
12. Attending the meetings/seminars/events to exchange with others	4.240	0.774	Extremely Agreeable
13. Gaining knowledge and experiences from being socialized	4.250	0.731	Extremely Agreeable
Overall	4.260	0.600	Extremely Agreeable
Green Behavior			
14. Considering energy saving	4.340	0.711	Extremely Agreeable
15. Reducing emissions of various pollutants into the air	4.340	0.730	Extremely Agreeable
16. Providing services with the highest efficiency	4.340	0.711	Extremely Agreeable
17. Utilizing suitable time to provide service efficiently	4.310	0.797	Extremely Agreeable
18. Critically concerning the environment impact	4.360	0.770	Extremely Agreeable
Overall	4.339	0.546	Extremely Agreeable

Table 2 displays the mean, standard deviation, and interpretation of related variables. The findings addressed those respondents who extremely agreed on innovative behavior, socialization, and green behavior which imply that the employees in logistics service providers in Thailand envisaged the importance in considering environmental impact. In addition, skewness and kurtosis, which were considered for assessing normal data distribution, were acceptable since their values ranged between ± 3.00 (Curran et al., 1996; Kline, 2005).

Model Development, Convergent Validity, and Discriminant Validity

The crucial point for evaluating model, confirmatory factor analysis with good-fit indices was firstly performed and analyzed. The results revealed that good-fit indices (Cmin/df of 1.523, P-value of 0.001, GFI of 0.960, AGFI of 0.930, RMR of 0.022, RMRSEA of 0.036, TLI of 0.981, CFI of 0.988, and NFI of 0.966) were acceptable. Factor loadings, composite reliability, and average variance extracted are depicted in Table 3.

Table 3 Factor Loadings (FL), composite reliability (CR), average variance extracted (AVE)

Variables	Factor Loadings			CR	AVE
	InB	Soc	GrB		
InB1	0.569			0.848	0.358
InB2	0.580				
InB3	0.690				
InB4	0.592				
InB5	0.598				
InB6	0.573				
InB7	0.636				
InB8	0.596				
InB9	0.559				
InB10	0.581				
SoL1		0.647		0.745	0.494
SoL2		0.741			
SoL3		0.719			
GrB1			0.629	0.773	0.405
GrB2			0.572		
GrB3			0.642		
GrB4			0.687		
GrB5			0.649		

Note: InB 1-10 refer to Innovative Behavior, SoL 1-3 refer to Socialization, GrB 1-5 refer to Green Behavior, CR refers to Composite Reliability, AVE refers to Average Variance Extracted,

Table 3, the important indicators including composite reliability, average variance extracted, and square root of AVE, addressed the assessment of convergent and discrimination validity. Since factor loadings ranged from 0.559 to 0.741, composite reliability (CR) ranged from 0.745 to 0.848, and average variance extracted (AVE) ranged from 0.358 to 0.495, the result showed that the good constructs were present. In addition, the correlation matrix and square root of AVE were considered for convergent validity and discriminant validity. Table 4 shows discriminant validity.

Table 4 Discriminant validity

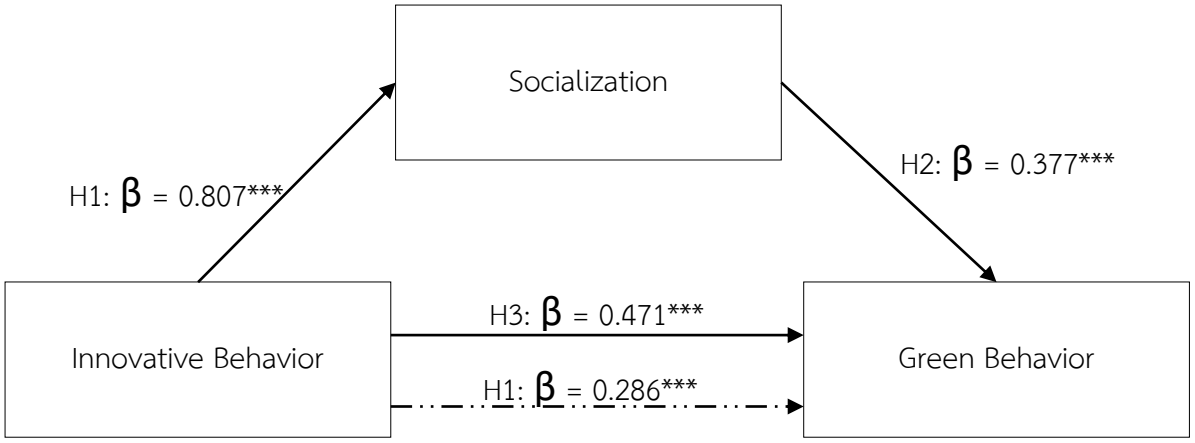
Variables	InB	SoL	GrB
InB	**0.598**		
SoL	0.519	**0.703**	
GrB	0.575	0.520	**0.636**

Note: Bold values in diagonal line display the square root of AVE meanwhile the others are correlation matrix, InB refers to Innovative Behavior, SoL refers to Socialization, GrB refers to Green Behavior

Table 4 indicates that the AVE square root values of InB, SoL, and GrB (0.589, 0.703, and 0.636) are higher than the correlation matrix value (0.519-0.575), which means that the studied variables are identical and appropriate for further analysis (Henseler et al., 2015).

Finalized Model and Hypothesis Analysis

After the model investigation using confirmatory factor analysis (CFA) was conducted, the finalized model through the employment of structural equation modelling was derived (shown in Figure 2). For hypothesis analysis, the determining indicators, such as t-value, z-value, and p-value, were evaluated, and important indices, such as standardized estimate, unstandardized estimate, and standard error, were taken into account to describe the predictive power of effects on variables (Table 5).



Cmin/df of 1.523, P-value of 0.001, GFI of 0.960, AGFI of 0.930, RMR of 0.022, RMRSEA of 0.036, TLI of 0.981, CFI of 0.988, NFI of 0.966

Figure 2 Finalized Model

Table 5 Standardized Estimate, Unstandardized Estimate, Standard Error, t-value, and p-value

Variables	β	b	S.E.	t-value	P-value
H1: InB → SoL	0.807	0.649	0.105	7.703	***
H2: SoL → GrB	0.377	0.440	0.009	3.813	***
H3: InB → GrB	0.471	0.442	0.104	4.523	***
	Indirect Effect Test by Sobel Test				
H4: InB → SoL → GrB		0.286		6.130	***

Note: β refers to standardized estimate, b refers to unstandardized estimate, S.E. refers to standard error, InB refers to Innovative Behavior, SoL refers to Socialization, GrB refers to Green Behavior

Table 5 demonstrated that (H1) innovative behavior positively influences socialization, whereas (H2) socialization positively influences green behavior. Furthermore, (H3) innovative behavior positively influences green behavior. Lastly, (H4) socialization positively and partially mediates the relationship between innovative behavior and green behavior at a significant level as of.001.

Discussion, Recommendation and Future Research

Regarding the objective of examining the relationship between innovative behavior, socialization, and green behavior of employees of logistics service providers in Thailand, the results indicated that innovative behavior positively influences socialization. This is because employees who innovatively behave in such a way as to learn and practice new things, skills, experiences, and knowledge from different sources of people and places can have more knowledge and potential as well as the confidence to participate in socialized events to share and exchange their ideas and thoughts, which the organization needs to support effective organizational and task socialization programs and tactics. The result is in correspondence to the study done by Al-Hawari et al. (2019), who revealed that there is a relationship between employee innovative behavior and socialization in the service sector in the United Arab Emirates. Furthermore, Chen et al. (2018), Duradoni and Di Fabio (2019), and Kör et al. (2021) demonstrated that innovative behavior can influence the creation of innovative products and services as well as organizational success.

In the meantime, the study results revealed that socialization positively influences green behavior. This is because when employees become members of the organization and are willing to share their skills, experiences, and knowledge regarding environmental protection with their existing colleagues, leaders, and followers through socialization tactics including collective or individual, formal or informal, sequential or random, fixed or variable, serial or disjunctive, or investiture or divestiture activities, they will assist their existing colleagues, leaders, and followers to perform the environmental protection duty assigned by the organization effectively. The result matches with the study done by Singh et al. (2020), who found a relationship between socialization, pro-environmental behavior, and environmental concerns. In addition, the study result also corresponds with the study done by Piwowar-Sulej (2020), who found that a pro-environmental culture needs employees' socialization in order to achieve the company's environmental objectives.

Furthermore, innovative behavior positively influences green behavior. This is because when employees who are inspired to learn and practice new things, skills, experiences, and knowledge about environmental protection from various informative sources such as governments, educational institutions, training centers, and experts in the companies, as well as existing colleagues in the workplace, can have more related knowledge and potential to effectively and efficiently work on environmental protection duties. This is in line with the study

of Zhu and Zhang (2020), Wang et al. (2021), and Zhang et al. (2022), who discovered the relationship between employees' green behavior and innovative behavior.

Lastly, socialization positively mediates the relationship between innovative behavior and green behavior. This is because employees can perform better work when they can join the culture of the organization. They will use this opportunity to join in the socialized events to learn, share, and exchange their skills, experiences, and knowledge about environmental protection with their colleagues, leaders, followers, and experts. Therefore, socialization can be found to positively mediate the relationship between innovative behavior and green behavior. The result is in correspondence to the studies done by Van Maanen and Schein (1979) and Song et al. (2015), stating the importance of socialization in employee behavior and performance. Also, Onputtha and Siriwichai (2021) revealed that social identification, comparable to organizational socialization, plays a mediating effect among employee behavior.

Suggestions from the research

From the study results, the contributions towards managerial and theoretical aspects are proposed. For managerial contribution, the managers in the organization can provide the activities using socialization tactics such as organizational trainings, organizational recreation activities, formal and informal meetings as well as cross-department workings to encourage employees in the organization to share and exchange their skills, experiences, and knowledge regarding environmental protection with their colleagues, leaders, and followers. This is very important for the organization recently to promote employee green behavior, which can finally be linked to creating environmental performance and organizational sustainability. For theoretical contribution, the result of this study reveals the positively mediating role of socialization on the relationship between innovative behavior and green behavior, which adds to the few studies on green behavior.

Limitations and Future Study

There are some limitations which can be linked to the guidelines for future research. First, the study can only collect data from the service industry, which is specifically about the logistics service providers in Bangkok and metropolitan areas in Thailand, leading to just demonstrating the employee innovative behavior, socialization style, and green behavior in the service sector. Therefore, future studies should focus more on extending the study to other industries in which the result can be generalized. Second, this study aimed at using quantitative

research due to the fact that it is convenient and time-saving. Therefore, a future study is recommended to apply qualitative research using different data collection techniques such as in-depth interviews, focus groups, or observation in order to gain data insights. Thirdly, this study focused only on innovative behavior and socialization to increase green behavior, and the study demonstrated quite weak predictive power of innovative behavior, socialization, and the mediating role of socialization on green behavior. Therefore, with the purpose of increasing green behavior in the organization, the scholars may apply other variables.

References

Al-Hawari, M. A., Bani-Melhem, S., & Shamsudin, F. M. (2019). Determinants of frontline employee service innovative behavior: The moderating role of co-worker socializing and service climate. **Management Research Review**, **42**(9), 1076-1094.

Ariyani, N., & Hidayati, S. (2018). Influence of transformational leadership and work engagement on innovative behavior. **Etikonomi**, **17**(2), 275-284.

Arsawan, I. W. E., Koval, V., Rajiani, I., Rustiarini, N. W., Supartha, W. G., & Suryantini, N. P. S. (2020). Leveraging knowledge sharing and innovation culture into SMEs sustainable competitive advantage. **International Journal of Productivity and Performance Management**, **71**(2), 405-428.

Aryee, S., Walumbwa, F. O., Zhou, Q., & Hartnell, C. A. (2012). Transformational leadership, innovative behavior, and task performance: Test of mediation and moderation processes. **Human Performance**, **25**(1), 1-25.

Asadi, S., Pourhashemi, S. O., Nilashi, M., Abdullah, R., Samad, S., Yadegaridehkordi, E., & Razali, N. S. (2020). Investigating influence of green innovation on sustainability performance: A case on Malaysian hotel industry. **Journal of cleaner production**, **258**, 120860.

Atatsi, E. A., Stoffers, J., & Kil, A. (2019). Factors affecting employee performance: a systematic literature review. **Journal of Advances in Management Research**, **16**(3), 329-351.

Azevedo, S. G., Carvalho, H., & Machado, V. C. (2011). The influence of green practices on supply chain performance: A case study approach. **Transportation Research Part E: Logistics and Transportation Review**, **47**(6), 850-871.

Boudreau, M. C., Chen, A., & Huber, M. (2008). Green IS: Building sustainable business practices. **Information Systems: A Global Text**, 1-17.

Chen, Y., Jiang, Y. J., Tang, G., & Cooke, F. L. (2018). High-commitment work systems and middle managers' innovative behavior in the Chinese context: The moderating role of work-life conflicts and work climate. **Human Resource Management**, **57**(5), 1317-1334.

Cochran, W. G. (1977). **Sampling techniques**. John Wiley & Sons.

Cranmer, G. A., Goldman, Z. W., & Houghton, J. D. (2019). I'll do it myself: Self-leadership, proactivity, and socialization. **Leadership & Organization Development Journal**, **40**(6), 684-698.

Curran, P., West, S., & Finch, J. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. **Psychological Methods**, **1**(1), 16-29.

Dodsworth, A., & Honohan, I. (Eds.). (2022). **Green politics and civic republicanism: Green republicanism as a response to the environmental and political crises of the 21st century**. New York: Taylor & Francis.

Duradoni, M., & Di Fabio, A. (2019). Intrapreneurial self-capital and sustainable innovative behavior within organizations, **Sustainability**, **11**(2), 322.

Ellis, A. M., Nifadkar, S. S., Bauer, T. N., & Erdogan, B. (2017). Newcomer adjustment: Examining the role of managers' perception of newcomer proactive behavior during organizational socialization. **Journal of Applied Psychology**, **102**(6), 993-1001.

Hair, J., Sarstedt, M., Ringle, C., & Mena, J. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. **Journal of the Academy of Marketing Science**, **40**(3), 414-433.

Jokisaari, M., & Vuori, J. (2018). Leaders' resources and newcomer socialization: the importance of delegation. **Journal of Managerial Psychology**, **33**(2), 161-175.

Jones, G. R. (1983). Psychological orientation and the process of organizational socialization: An interactionist perspective. **Academy of Management Review**, **8**(3), 464-474.

Katz-Gerro, T., Greenspan, I., Handy, F., & Vered, Y. (2020). Environmental behavior in three countries: The role of intergenerational transmission and domains of socialization. **Journal of Environmental Psychology**, **71**, 101343.

Kennedy, F. A., & Widener, S. K. (2019). Socialization mechanisms and goal congruence. **Accounting, Organizations and Society**, **76**, 32-49.

Kline, T. (2005). **Psychological testing: A practical approach to design and evaluation**. London: Sage.

Knekta, E., Runyon, C., & Eddy, S. (2019). One size doesn't fit all: Using factor analysis to gather validity evidence when using surveys in your research. **CBE—Life Sciences Education**, **18**(1), rm1.1-17.

Kör, B., Wakkee, I., & van der Sijde, P. (2021). How to promote managers' innovative behavior at work: Individual factors and perceptions. **Technovation**, **99**, 102127.

Lee, L. Y., Veasna, S., & Wu, W. Y. (2013). The effects of social support and transformational leadership on expatriate adjustment and performance: The moderating roles of socialization experience and cultural intelligence. **Career Development International**, **18**(4), 377-415.

Li, X., & Zheng, Y. (2014). The influential factors of employees' innovative behavior and the management advices. **Journal of Service Science and Management**, **7**(06), 446-450.

Luo, W., Tang, P., Jiang, L., & Su, M. M. (2020). Influencing mechanism of tourist social responsibility awareness on environmentally responsible behavior. **Journal of Cleaner Production**, **271**, 122565.

Madlock, P. E., & Chory, R. M. (2014). Socialization as a predictor of employee outcomes. **Communication Studies**, **65**(1), 56-71.

Nishanthi, H. M., & Kailasapathy, P. (2018). Employee commitment: The role of organizational socialization and protean career orientation. **South Asian Journal of Human Resources Management**, **5**(1), 1-27.

Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2014). Organisational sustainability policies and employee green behaviour: The mediating role of work climate perceptions. **Journal of Environmental Psychology**, **38**, 49-54.

Onputtha, S., & Siriwichai, C. (2021). The impact of green corporate identity and green personal-social identification on green business performance: A case study in Thailand. **The Journal of Asian Finance, Economics and Business**, **8**(5), 157-166.

Onputtha, S., Sriboonlue, U., & Sriboonlue, O. (2021). The role of knowledge transfer among creative behavior, green service behavior and environmental performance in Logistics Service Industry. **Journal of Management Information and Decision Science**, **24**(4), 1-12.

Pengman, H., Melan, M., & Hanan, S. B. A. (2022). Logistics service providers' capabilities and roles of government towards cross border logistics performance between Thailand and Malaysia. **ABAC Journal**, **42**(1), 202-221.

Perotti, S., Prataviera, L. B., & Melacini, M. (2022). Assessing the environmental impact of logistics sites through CO2eq footprint computation. **Business Strategy and the Environment**, **31**(4), 1679-1694.

Piwowar-Sulej, K. (2020). Pro-environmental organizational culture: Its essence and a concept for its operationalization. **Sustainability**, **12**(10), 4197.

Polit, D., & Beck, C. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. **Research in Nursing & Health**, **29**(5), 489-497.

Qi, L., Liu, B., Wei, X., & Hu, Y. (2019). Impact of inclusive leadership on employee innovative behavior: Perceived organizational support as a mediator. **PloS One**, **14**(2), e0212091.

Riaz, S., Xu, Y., & Hussain, S. (2018). Understanding employee innovative behavior and thriving at work: A Chinese perspective. **Administrative Sciences**, **8**(3), 46.

Sabbir, M. M., & Taufique, K. M. R. (2022). Sustainable employee green behavior in the workplace: Integrating cognitive and non‐cognitive factors in corporate environmental policy. **Business Strategy and the Environment**, **31**(1), 110-128.

Singh, P., Sahadev, S., Oates, C. J., & Alevizou, P. (2020). Pro-environmental behavior in families: A reverse socialization perspective. **Journal of Business Research**, **115**, 110-121.

Son, S. (2016). Facilitating employee socialization through mentoring relationships. **Career Development International**, **21**(6), 554-570.

Song, Z., Chon, K., Ding, G., & Gu, C. (2015). Impact of organizational socialization tactics on newcomer job satisfaction and engagement: Core self-evaluations as moderators. **International Journal of Hospitality Management**, **46**, 180-189.

Sun, X. (2021). Employees' innovative behavior in the workplace: A study of intellectual capital effect on the service-oriented companies in Thailand. **Thammasat Review**, **24**(2), 112-132.

Tabachnick, B., Fidell, L., & Ullman, J. (2007). **Using Multivariate Statistics**. Boston: Pearson.

Taormina, R. J. (1999). Predicting employee commitment and satisfaction: The relative effects of socialization and demographics. **International Journal of Human Resource Management**, **10**(6), 1060-1076.

Tian, H., Zhang, J., & Li, J. (2020). The relationship between pro-environmental attitude and employee green behavior: the role of motivational states and green work climate perceptions. **Environmental Science and Pollution Research**, **27**(7), 7341-7352.

Vachon, S., & Klassen, R. D. (2006). Extending green practices across the supply chain: the impact of upstream and downstream integration. **International Journal of Operations & Production Management**, **26**(7), 795-821.

Van Maanen, J. and Schein, E. H. (1979). Toward of Theory of Organizational Socialization. **Research in Organizational Behavior**, **1**, 209-264.

Varela-Candamio, L., Novo-Corti, I., & García-Álvarez, M. T. (2018). The importance of environmental education in the determinants of green behavior: A meta-analysis approach. **Journal of Cleaner Production**, **170**, 1565-1578.

Wang, Z., Ren, S., Chadee, D., & Sun, C. (2021). The influence of exploitative leadership on hospitality employees' green innovative behavior: A moderated mediation model. **International Journal of Hospitality Management**, **99**, 103058.

Wang, Z., Ren, S., Chadee, D., Liu, M., & Cai, S. (2021). Team reflexivity and employee innovative behavior: the mediating role of knowledge sharing and moderating role of leadership. **Journal of Knowledge Management**, **25**(6), 1619-1639.

Wu, J., Chen, D., Bian, Z., Shen, T., Zhang, W., & Cai, W. (2021). How does green training boost employee green creativity? A sequential mediation process model. **Frontiers in Psychology**, 5778.

Zhang, Y., Luo, Y., Zhang, X., & Zhao, J. (2019). How green human resource management can promote green employee behavior in China: A technology acceptance model perspective. **Sustainability**, **11**(19), 5408.

Zhang, Y., Wu, J., & Fan, Y. (2022). The effect of perceived organizational support toward the environment on team green innovative behavior: Evidence from Chinese green factories. **Emerging Markets Finance and Trade**, **58**(8), 2326-2341.

Zhou, F., & Wu, Y. J. (2018). How humble leadership fosters employee innovation behavior: A two-way perspective on the leader-employee interaction. **Leadership & Organization Development Journal**, **39**(3), 375-387.

Zhu, C., & Zhang, F. (2020). How does servant leadership fuel employee innovative behavior? A moderated mediation framework. **Asia Pacific Journal of Human Resources**, **58**(3), 356-377.

Zhu, Q., Sarkis, J., & Lai, K. H. (2012). Examining the effects of green supply chain management practices and their mediations on performance improvements. **International Journal of Production Research**, **50**(5), 1377-1394.