



INFLUENCE OF LEADER AND MEMBER EXCHANGE ON WORKPLACE FUN THROUGH THE PSYCHOLOGICAL SAFETY MEDIATOR OF FULFILMENT SERVICE WAREHOUSE EMPLOYEES IN SAMUT PRAKAN PROVINCE

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Abstract

The topic of leadership effectiveness remains in the organization and can direct the organizational performance. With the innovative economy, it has become more important to enhance the development of effective teams to meet customer satisfaction. While the team feels fun (no pressure/ dispute, a good climate) at work by employing psychological safety mediator, it can be defined as one's openness and involvement in the job to see the influence of Leader-member exchange on Workplace fun. This study attempted to investigate the influence of Leader-Member Exchange (LMX) on Workplace Fun mediating Psychological Safety. The study used a sample selection of 250 full-time employees in Fulfilment Service Warehouse, Samut Prakan province, Thailand. Data were collected by online questionnaires measuring those constructs with good reliability and validity confirming with Confirmatory Factor Analysis (CFA) or the covariance-based structural equation model (CB-SEM) and Confirmatory Composite Analysis (CCA) or the partial least square structural equation model (PLS-SEM). The findings revealed a positive association between LMX and Workplace Fun and confirmed the assumptions on the moderating role of Psychological Safety having a high correlation with Workplace Fun. It fully mediated the relationship between CFA and CCA. The results pointed out the importance of considering the interplay of both the LMX and Psychological Safety to increase employees' Workplace Fun, enhance their work performance and easily manage employees' perspectives on the element of workplace culture.

Keywords: Leader-member exchange, Psychological safety, Workplace fun, CB-SEM and PLS-SEM

Introduction

During the Covid-19 crisis Changing trends are affecting economies around the world. It has changed people's lives in the new normal era such as online shopping and using delivery services. A growing proportion of working from home and the company's flexibility to work. As a result, people's lifestyles are socially distanced with many factors to be considered with their health concerns, social adjustment and family relations. That means the E-commerce and delivery services growth has accelerated a couple of years ahead. (Kawa and Zdrenka, 2016) In Thailand (2021), the value is 4.01 trillion baht with a proportion of B2C or 15% of the total retail market, increasing to 5 trillion baht. It could be indicated that e-commerce has made the shortened distance between manufacturers and consumers which has an additional sales channel. (Agatz, Fleishmann and Numen, 2008)

As a result, the logistics service providers become the key role in the fulfillment services Warehouse (Electronic Transaction Development Agency: ETDA, 2021) to e-commerce. The quality of logistics human resources and planning is enhanced to meet the demands of the business sector (Officer of the National Economic and Social Development Council: NESDC, 2017). This is more important to focus on the logistics service group of employees in the warehouse who must work hard to satisfy customers. The fulfillment service Warehouse gets involved in the seller's logistics process; reception, storage, picking, packaging sending of the products by an external operator. Inefficient fulfillment process: inaccurate inventory, slow restocking and lack of skill to operational staff cannot gain capability appropriate to the challenge of dynamic in a future situation. The operating team can be focused and determined on their work with fun beyond work efficiency.

Reflecting on the perspective of subordinates through supervision and promotion from supervisors with having more workplace fun to achieve goals under the hustle. Determining the dynamic mechanism is concerned with the influence of Leadership member exchange and Workplace fun mediating psychological safety to operational fulfillment service employees. There is a relationship between leaders and their subordinators (Erdogan B, Bauer TN, Walter J, 2015, Breukelen, Schyns, Blanc, 2006). The subordinator is the person who reports to the supervisor or manager directly. The management must conduct these variables. Hence, the purpose of this study is to reveal Psychological Safety mediating the relationship between LUX and Workplace Fun.



Literature review

Warehousing (fulfilment)

Logistics has been applied in organizations to move materials and products to customers. Recently E-commerce logistics have been essential (Qin, Liu and Tian, 2020) from traditional sales channels to electronic channels plus the Covid-19 pandemic resulted in heavy operational tasks in fulfillment service warehouses which is a third-party service provider.

Leader-member exchange: lmx and workplace fun

LMX theory was conducted by Graen and colleagues in 1970 (Dansereau, Graen and Haga, 1975; Graen and Cashman, 1977) with the atmosphere of working, member's Attitude, Trust, Respect and good relationships to supervisors without authority. In 1986 LUX investigated the quality of exchange relationships, or dyads between formally assigned leaders/supervisor and their subordinators (Schriesheim, Neider and Scandura, 2017). Whereas, in 1991, LMX claimed that supervisors' ability to perform a strong and reciprocal relationship with members/subordinates. If the group of subordinators are treated as trusting, friendly and supportive, their performance will be in a good way. Conversely, if the supervisors lack a good relationship with the members, it could deteriorate and not meet the goals.

Research on the concept of Workplace Fun is limited, except for Happiness at work in Thailand; True Distribution and Sales Co. Ltd. and Yo Hong Co., Ltd. are at a moderate level to have more productivity and workplace happiness. The definition of workplace fun is as followings; a fun work environment that intentionally encourages, initiative enjoyable, pleasurable activities (Ford et al, 2003); engaging in activities not specifically related to the job that is enjoyable, amusing, or playful (McDowell, 2004); any social, interpersonal, task activities at work of a playful (Flugge, 2008); fun draws on an implied link between, play, fun and laughter and increased corporate performance, in the forms of motivations, creativity and job satisfaction. In summary, fun and enjoyment during working are not related to assigned tasks but they must concern some cooperation from supervisors to subordinators. Creating workplace fun could make some satisfaction which affecting on the developing subordinates' performance.

As seen from the above, LMX can be a powerful tool of Workplace Fun in the fulfillment services Warehouse, leading to emotion, a good relationship, playful, fun activities, a laughter environment and supervisor's support for fun facilities to subordinators. It could create a motivating work environment (Baldonado, 2015; Buliginoglu and Yozgt, 2020) and increase their creativity also enhance satisfaction (Erin R. and Fluegge-Woolf, 2014)

The mediating role of psychological safety

As psychological safety describes, people's minds or feelings are related to self-experience (Edmondson, et.al., 2003). Others have defined psychological safety as a feeling to show or express the fearlessness of negative consequences to self-image, status, or career (Kahn, 1990). This can create an atmosphere of subordinates' safety. When they are safe, they will desire to participate in the group with an open mind, speak out assertively, volunteer extra jobs and be willing to achieve the goals and eliminate the problem complexity in a good way. There is much research that established a positive link between psychological safety and behavior related to work engagement (Frazier, et al., 2017), work outcome (Zeng et al., 2020), work environment and work creativity (Inaba. et al., 2021). Furthermore, some research identified psychological safety as a necessary condition for employee involvement and mediated roles of psychological safety and felt obligation between trust in supervisor and work engagement among nurses as such in Malaysia (Frazier et al., 2017) If subordinators have fun at work, they tend to pour their hearts into their work.

Objective

- 1) to study the level of workplace fun exchange between leaders and members, the psychological safety and workplace fun of fulfillment service warehouse employees
- 2) to study the influence of leaders and members exchange on workplace fun
- 3) to examine the harmonization of the structural equation model (CB-SEM and PLS-SEM), the influence of leaders and members exchange on workplace fun through the psychological safety mediator of fulfillment service warehouse employees

Hypotheses of the research

Based on the literature review, three hypotheses are exhibited

H1: LMX (LEEX) will positively influence workplace fun (WOPU)

H2: LUX (LEEX) will positively influence psychological safety (POSA)

H3: Psychological safety (POSA) will positively influence workplace fun (WOPU)

The conceptual framework

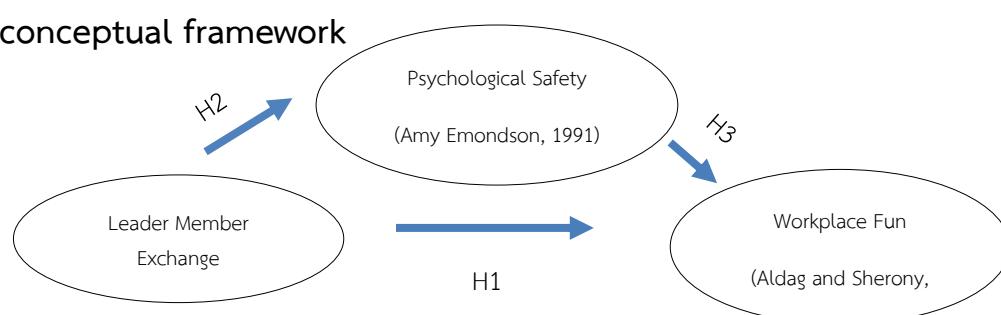


Figure 1: The Conceptual Framework for the study

Method

Population and sample

The samples were 250 full-time employees in the Fulfilment Service Warehouse, Samut Prakan province, Thailand, selected by purposive sampling between January – April 2022 with the online survey questionnaire.

Measurements

The instrument is a five – point Likert scale in 3 measure modes; 1) Leader-member exchange (LEEX) was developed and adapted by Liden and Maslyn (1998) and Putsom (2020) with 4 aspects: Loyalty, Contribution, Affection and Professional Respect. The reliability revealed consistency (α -0.85). 2) Workplace fun (WOPU) was measured by Aldag and Sherony (2001) and adapted some parts from Bilginoglu and Yozgat (2020) using 3 aspects: Appropriateness, Salience and Perceived consequences. The reliability revealed consistency (α -0.87). 3) Psychological Safety (POSA) was measured by Edmondson (1999) with the following 3 aspects: Individual safety, Team respect and Team learning.

Cb-sem and pls-sem

Structural equation modeling (SEM) becomes a powerful statistical modeling tool. SEM consists of two main methods, the Covariance based structural equation model: CB-SEM) and Variance-based or Partial least square structural equation model: PLS-SEM (Hair et al, 2020 and Jhantasan, 2021). CB-SEM uses a relationship between observed variables and latent with degree of discrepancy applying confirmatory factor analysis (CFA). Most of the questionnaires of behavioral or social science tend to test with CFA and follow the expected factors structure in the assumption scales. Sometimes, the results would not be part of the output and become less visible, especially indicating a good model fit (GOF indices) to reflect the underlying theory. The category of CB-SEM is the Chi-Squared test, RMSEA, GFI, AGF, RMR and SRMS. While PLS-SEM is a path analysis with weighted composites via the least-squares (LS) regression. It is a so-called Confirmatory composite analysis (CCA) when all the constructs are emergent variables and used to measure a linear combination of composite or emergent variables. PLS-SEM is the one to eliminate bias or misestimate the output from CFA (Dijkstra and Henseler, 2015) These two technics are suitable to confirm a specific model fits the data.

Results

1) The data collected were analyzed using Descriptive statistics and Structural Equation Modeling (SEM). The hypothesized relationships were reported accordingly. The final sample size of the study was 250 participants: Female (59.60%), 23-33 years

(60.40%), with bachelor's degree (71.20%) and 6 years in work experience (35.60). As recommended, the result for three-level variables, LUX, Psychological Safety, Workplace fun. The Leader-member exchange found that the average aspect score was Professional respect ($=3.77$, $SD = 0.66$). The average score for psychological safety was Team learning ($=3.97$, $SD = 0.50$). The last aspect, Workplace fun, found that the average for Perceived consequences ($= 4.07$, $SD = 0.54$)

2) CB-SEM results between the empirical data of the hypothetical model (Hypothesized Model) with a new adjustment. Three measurement modes were assessed: a three-factor model (Leader-member exchange Workplace Fun mediating with Psychological Safety). The result shows that the three-factor model better fits the data in this figure 2: Result of Model

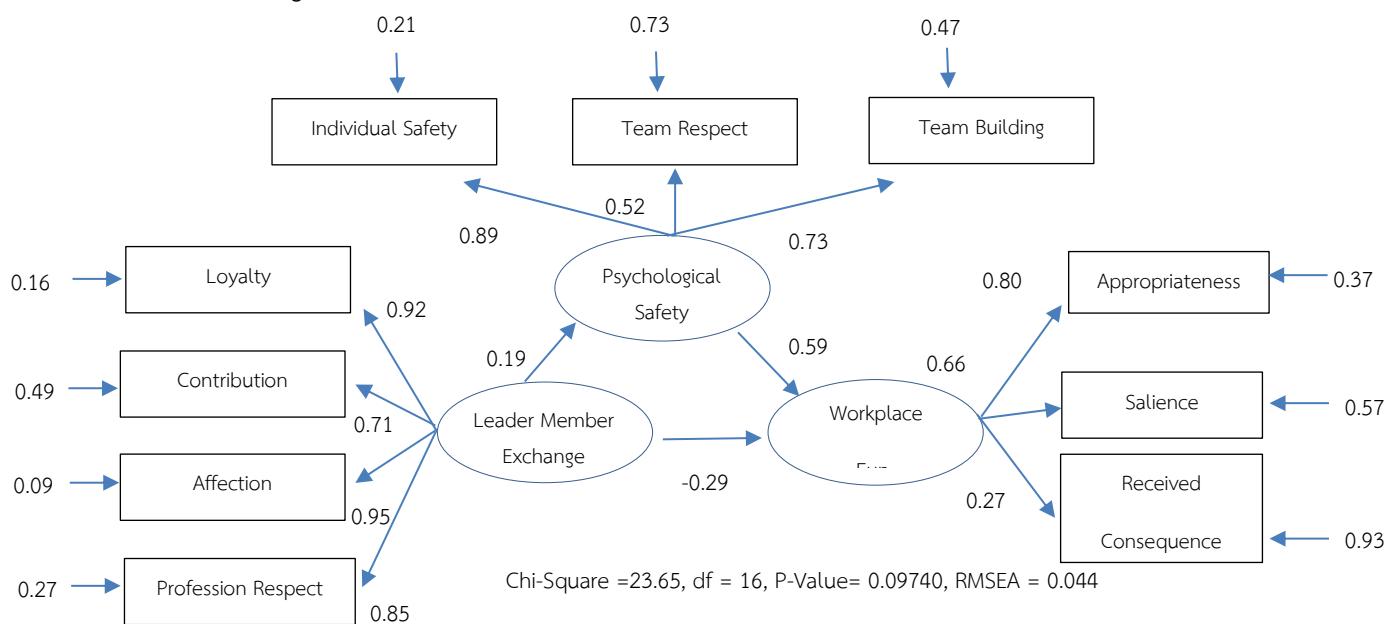


Figure 2: Results of Model

Figure 2 showed that the Structure Equation Model of Influence of LMX, Workplace Fun mediating Psychological Safety of fulfillment Service Warehouse in Samut Prakan was congruent with empirical data as criteria as follows: chi-square = 23.65 degrees of freedom ration ($\chi^2 / df = 16$, P -value = 0.124, chi-square value was not significant ($\chi^2 / df = 1.48$, goodness of fit index (GFI) = 0.98, adjusted goodness of fit index (AGFI) = 0.94 comparative fit index (CFI) = 0.99, root of the mean square of the standard error (SRMR) = 0.049, root mean square error of approximation (RMSEA) = .044, critical N (CN) = 326.01. As these findings provide evidence was not a serious concern in this study with the following Table 1.

Table 1: the conformity of the equation model assessment

Latent variable	Observable variable	λ	B	SE	t	R^2	ρ_c	ρ_v
LEEX	LOYA	0.92	0.54	0.05	10.18**	0.84	0.921	0.744
	COBU	0.71	0.45	0.05	9.78**	0.51		
	AFFO	0.95	0.66	0.06	11.74**	0.91		
	PROT	0.85	0.55	0.05	10.96**	0.73		
POSA	INSA	0.89	0.41	-	-	0.79	0.765	0.532
	TERE	0.52	0.28	0.07	4.05**	0.27		
	TALA	0.73	0.36	0.13	2.68**	0.53		
WOPU	APPE	0.80	0.91	-	-	0.63	0.718	0.513
	SALE	0.65	0.37	0.06	6.44**	0.43		
	PECO	0.27	0.15	0.04	3.55**	0.07		

(1) LMX model depicted 4 observation variables: reliability of the latent variable of LMX (ρ_c) = 0.921, (ρ_v) = 0.744, the range of (R^2) = 0.07 - 0.84, the range of (λ) = 0.27 – 0.95 all positive values and differ from zero at significant level 0.01, the component weight and maximum coefficient is Affection (AFFO), the component weight and minimize coefficient is Contribution (COBU) (2) Psychological Safety model displayed 3 observation variables: reliability of Psychological Safety (ρ_c) = 0.765 (ρ_v) = 0.532, the range of (R^2) = 0.27 - 0.79, the range of (λ) = 0.52 - 0.89 all positive values and differ from zero at significant level 0.01, the component weight and maximum coefficient Individual Safety (INSA), the component weight and minimize coefficient is Team Respect (TERE) (3) The workplace fun model displayed 3 observation variables: reliability of the Workplace fun (ρ_c) = 0.718 (ρ_v) = 0.513, the range of (R^2) = 0.07 - 0.63, the range of (λ) = 0.27 – 0.80 all positive values and differ from zero at significant level 0.01, the component weight and maximum coefficient Appropriateness (APPE), the component weight and minimize coefficient is Perceived Consequences (PECO) The result showed that the influence of LMX on Workplace fun with 3 - hypothesis factor outcomes were direct (DE), indirect (IE) and total effect (TE) in table 2.

Table 2: Influence of the Direct, Indirect and Total Effect on Workplace fun

Variables	R^2	Influence	Causal Factors					
			Leader-member exchange: LEX			Psychological safety: POSA		
			λ	SE	t	λ	SE	t
POSA	0.04	DE	0.19	0.07	2.89**	-	-	-
		IE	-	-	-	-	-	-
		TE	0.19	0.07	2.89**	-	-	-
WOPU	0.36	DE	-0.29	0.08	-3.88**	0.59**	0.16	3.71
		IE	0.11	0.05	*2.38	-	-	-
		TE	-0.18	0.07	-2.44*	0.59**	0.16	3.71
Variables								
		POSA	WOPU	LEX	Covariance Matrix			
POSA	1.00							
WOPU	0.53	1.00						
LEX	0.19	-0.18	1.00					

** p< 0.01, * p<0.05

Table 2 showed that (1) Psychological Safety, the dependent variable had a positive significance at 0.01, from the causal factor of the highest Leader-member exchange = 0.19 with a direct influence on the positive direction at the 0.01 level was 0.19 with reliability in the psychological safety by causal factor exchange between LMX was 4%.

(2) Workplace fun, the dependent variable, had a positive significant total influence at the 0.01 level from the causal factor, the highest psychological safety was 0.59, followed by the LMX had a negative significant total influence at the 0.05 to Workplace fun is at 0.18. There was a positive significant indirect influence at the 0.05 level equal to 0.11 and a negative significant indirect influence at 0.01 with -0.29. The proportion of reliability in the Workplace fun was explained by LMX and Psychological safety by 36%.

(3) Hypotheses of the Research

The hypotheses testing indicated that Leader-member exchange (LEX) negatively influenced Workplace fun (WOPU) at a significant level of 0.01. Workplace fun (WOPU) was -0.18, the direct influence was -0.29 and the indirect influence was 0.11, providing support for H1. In contrast, the Leader-member exchange (LEX) positively influences psychological safety (POSA) at a significant level of 0.01. Psychological safety (POSA) had a total influence from Leader-member exchange (LEX) which was 0.19, of



which the direct influence was 0.19, providing support for H2. The direct influence was 0.59 providing support for H3. At the same time, psychological safety (POSA) negatively influences workplace fun (WOPU) at a significant level of 0.01. Workplace fun (WOPU) had a total influence on psychological safety (POSA), which was 0.59.

3) PLS-SEM: /CFA/CCA

(1) all PLSc model parameters are higher than the composite model and 99% are higher than the bootstrap quantile, but SRMR is lower than 0.08 for the same composite model.

(2) the PLSc, the internal consistency reliability is Dijkstra-Henseler's rho, Jöreskog's rho and Cronbach's alpha between 0.687 and 0.884.

(3) The indicator reliability has a factor loading higher than 0.960 and all indicator factor loadings are below the requirements. The convergent validity has an average variance extracted (AVE) above 0.5, with the value being between 0.687 and 0.846.

(4) The composite model consistency, consisting of CFA, CCA composite and Variance inflation factors (VIF) which have a positive tendency on the assumption multicollinearity (VIF) is below five between 1.378 (SALE) and 1.952 (TERE). The value from indicators is significant, but Appropriateness (APPE) in Workplace fun (WOPU) in table 3.

Table 3: The composite model/ Internal consistency reliability

Indicator	Factor loading (CFA-PLSc)	Factor loading (CCA-PLSc)	Weight Composite	VIF
Leader-Member Exchange(LEEX)				
1. Loyalty (LOYA)	0.960	0.787	0.682	1.639
2. Contribution (COBU)	0.491	-0.378		2.012
3. Affection (AFFO)	0.608	0.029		1.942
4. Professional Respect (PRDT)	0.861	0.564	0.446	2.133
Psychological Safety (POSA)				
1. Individual Safety (INSA)	0.727	0.401	0.360	1.644
2. Team respect (TERE)	0.742	0.304	0.281	1.952
3. Team learning (TALA)	0.808	0.475	0.535	1.708
Workplace Fun (WOPU)				
1. Appropriateness (APPE)	-	-0.066		1.058
2. Salience (SALE)	0.708	0.609	0.548	1.378
3. Perceived consequences (PECO)	0.740	0.518	0.598	1.377

CFA and CCA models defined all directions well in figure 3 and 4

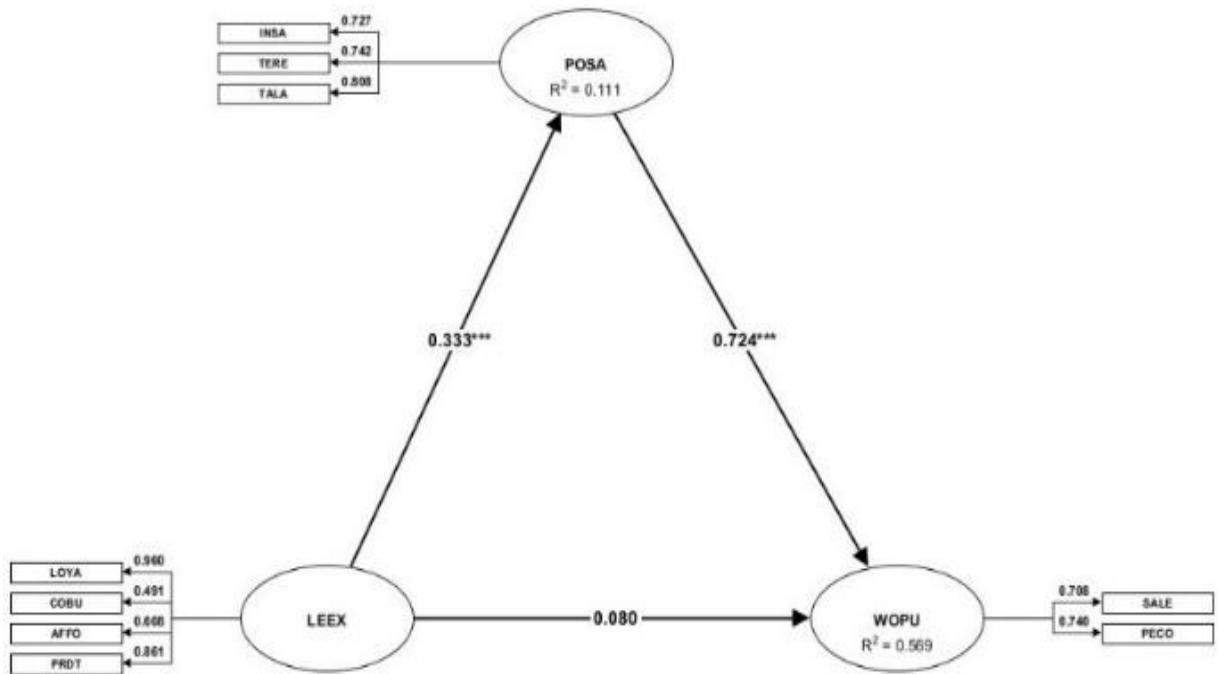


Figure 3: The confirmatory factor analysis (CFA)

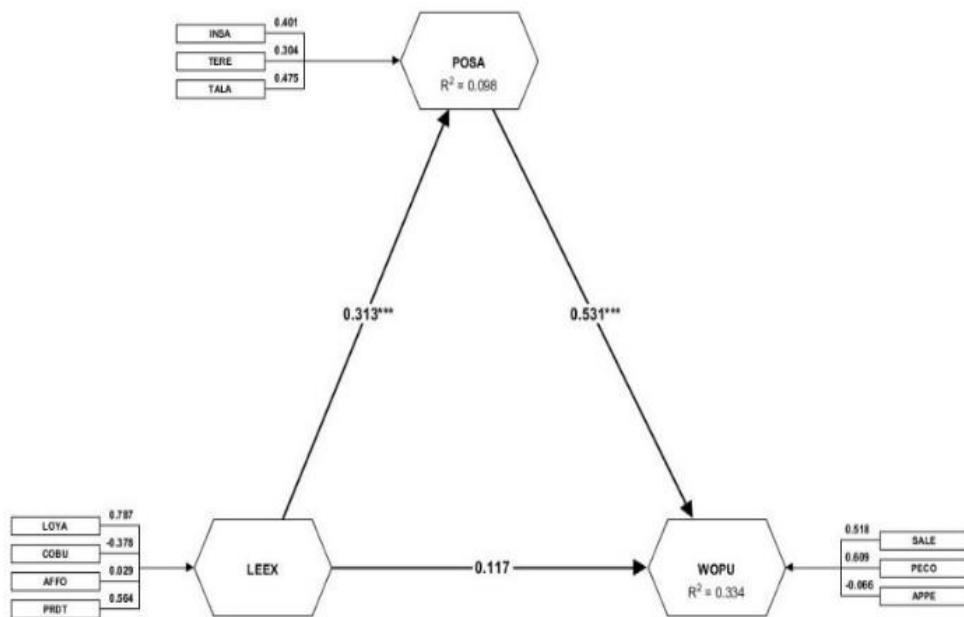


Figure 4: The confirmatory composite analysis (CCA)

The R² has a Workplace Fun of 56.90% and 33.40. It had one significant direction of CFA and CCA model: Psychological safety to Workplace Fun with a magnitude of 0.724, the size effect of 1.079 and importance of 0.531, the size effect of 0.381.



Discussion and Conclusion

The present study assessed the influence of Leader-member exchange and Workplace Fun mediating the Psychological Safety of Fulfilment Service Warehouse in Samut Prakan. These findings show that the average aspect score of the Leader-member exchange was Professional respect with knowledge-based and job competency supervisors. This finding supported the supervisors' competency identified by Liden and Maslyn (1998). They stated that Profession Respect for warehouse supervisors, performing their knowledge, capability and management skill efficiency must perform competently to subordinator because the number of emerging fulfillment services is broad, they need to run operation with the physical and the heart. When the subordinators can be treated exceptionally well by the supervisor's professional, they can be released and work efficiently. Conversely, the subordinators have no confidence or trustworthiness. They cannot intend to work based on the analysis results and lack loyalty and affection (= 3.62)

The average aspect score of Psychological Safety was Team learning with all colleagues talking about mistakes, finding the ways to improve and learning from mistakes. Positive correlation with psychological safety, subordinators can be engaged with work (Mao and Tian, 2022). The higher level of psychological subordinators, the greater the team's safety (Newman et al., 2017). In the part of the operational job in the fulfillment service Warehouse, there are heavy jobs from receiving, picking, kitting, assembly, arranging, packing, labeling, shipping orders and managing returns in real-time. Therefore, it needs to communicate to solve problems promptly but to be aware of personal safety, which was only (= 3.78). It would be an obstacle to resolving the problems.

The average aspect score of Workplace fun was Perceived consequences: "when work is fun, I can work harder and longer," as Hemsath and Yerkes (1997). They offer a fun program called "Happiness starting with yourself" and pass it to others. Create a fun environment to promote the fun, look for a sense of humor in subordinators. Do not hesitate to have fun creating with the team, smiling and laughing until it is called fun-loving. In addition, fun is an easy phenomenon, anyone could join without practicing their skills. It is free and has a positive influence on subordinators continually. Google, IBM and Southwest Airlines bring fun to work as part of the corporate culture (Collinson, 2002; Tews et al., 2010). This study found, "I think the fun during working is unimportant" (=2.73). From this point, everyone can define "fun" differently, as explained by Dilakshini and Kumar (2020). Fun has different meanings for humans which are based on human background, class hierarchy and the diversity of operational subordinators. There are two statements of fun: organic fun and packaged fun. Organic fun comes from nature, such

as teasing each other. Some packaged fun are social events, holiday parties, picnics, team-building activities and company-sponsored football teams. These fun activities had a favorable influence on subordinators' performance. (Michael, Tews, John. Michel and Stafford, 2013)

CB-SEM resulted in the influence of Leader-member exchange and Workplace Fun mediating the Psychological Safety of the Warehouse (Fulfilment Service) in Samut Prakan. It found that the two direct influences, psychological safety (POSA) and Leader-member exchange (LEEX) were 0.59 and -0.29. Indirect influence found that Leader-member exchange (LEEX) had an indirect influence on Workplace fun (WOPU) toward psychological safety (POSA) with a coefficient of influence of 0.11. The total influence of two significant factors. The Psychological safety (POSA) and Leader-member exchange (LEEX) were 0.59 and - 0.18 respectively. When considering the correlation matrix between latent variables, it was seen that the coefficients of latent variables were between -0.18 to 0.53. Two pairs of variables were syntactically correlated and there was a positive correlation and one variable was inversely correlated with a negative correlation. The greatest coefficient of 0.53 was the psychological safety (POSA) and Workplace fun (WOPU).

PLS-SEM: /CFA/CCA resulted in the influence of Leader-member exchange and Workplace Fun mediating the Psychological Safety of the Warehouse (Fulfilment Service) in Samut Prakan. It found that two direct influences: Leader-member exchange (LEEX) (0.333), Psychological safety (POSA) (0.724) in CFA and (0.313), (0.531) in CCA. The model fit and theoretical validity of the model were consistent with all criteria. Hypothesis testing revealed that Leader-member exchange (LEEX) positively influenced Workplace Fun (WOPU). Leader-member exchange (LEEX) had a positive direct effect on psychological Safety (POSA) and psychological Safety (POSA) and had a positive direct effect on Workplace Fun (WOPU). These findings highlight the influence of the Leader-member exchange on Workplace fun as a passive factor for psychological safety in Warehouse. Twes., et al., (2014) found that fun, enjoyment and comfort are not related to tasks assignment but must have in cooperation. On the other hand, Mao J., et al., (2022) stated that psychological safety is the mediate between the Leader-member exchange and work engagement. The positive relation of Leader-member exchange to work engagement is mediated by psychological safety. Meaning that psychological safety can be an appropriate mediation of any variables. In another research (Bolton and Houlihan, 2022), the mediate between work fun and creativity had a positive direct effect and was indirectly correlated through the middle of psychological safety.

Implications

This study attempts to assess the influence of Leader-member exchange and Workplace Fun mediating the Psychological Safety of Fulfilment. This research will contribute to constructs with CB-SEM and PLS-SEM. The direct influence, indirect influence and total influence at a significant level of 0.01 which can be applied easily to both CB-SEM and PLS-SEM. In the hustle and bustle of fulfillment services Warehouse operations, the primary tends to focus on workplace safety which protects and prevents accidents, injuries from equipment and business property rather than psychological safety. It should encompass both workplace and psychological safety in fulfillment services Warehouse operations. The managers/ supervisors become key men to work at a professional level and solve many problems in the warehouse environment. Employees want to work in a good environment; well-being and protection from harm, while they need to be fostered in a psychologically safe environment; comfortable (Individual safety), team respect and team learning.

The findings also suggest that the logistics service provider should look over the human resource development policies aimed at improving the measurements both supervisors and subordinators in terms of training sessions, workshops on effective communication, good listening and conflict resolution. Consequently, it could encourage open communication from them on many channels within organizations. It also enables them to manage efficiently in any serious situation. The more love subordinator feels at Workplace fun, the more engaged they are. By implementing these tools, it can create a work climate workplace to feel safe, valued, fun and express themselves without negative consequences. It allows everyone to work harder, longer and manage employees' perspectives on the element of workplace culture.

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