ARTICLE

The Relationship of Transformational Leadership and Perceived Organisational Support with Organizational Commitment: The mediating role of Employee Engagement

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ABSTRACT

This study proposed a conceptual model and examined the nature of the relationship between transformational leadership (TFL), perceived organisational support (POS), employee engagement (EE), and organisational commitment (OC) among employees in the Indian IT sector. It then examined the mediating effect of EE on the relationship between TFL, POS, and OC. The partial least squares equation modelling (PLS-SEM) was applied to validate the conceptual model. The findings revealed that TFL, POS and EE were significantly and positively related to OC. TFL had a greater significant effect on OC than POS. EE was found to partially mediate the relationship between TFL, POS, and OC. Control variables had a weak effect on EE and OC. However, Multigroup Analysis (MGA) revealed a significant difference in the EE of TFL between the lower and middle level managers. The findings confirm that direct policymakers and HR departments influence TFL and EE by adopting organisational interventions. Besides, its effect is also manifested in increasing the positive attitude and commitment towards the employees' work.

KEYWORDS
Transformational Leadership, Perceived Organizational Support, Employee Engagement, Organizational Commitment, PLS-SEM

Relação da Liderança Transformacional e do Suporte Organizacional Percebido com o Comprometimento Organizacional: O Papel Mediador do Engajamento dos Funcionários

RESUMO

Este estudo propôs um modelo conceitual e examinou a natureza da relação entre liderança transformacional (LTF), suporte organizacional percebido (SOP), envolvimento dos funcionários (EF) e comprometimento organizacional (CO) entre os funcionários do setor de TI indiano. Em seguida, o efeito mediador da EF na relação entre LTF, SOP e CO foi examinado. A modelagem de equações de mínimos quadrados parciais (PLS-SEM) foi aplicada para validar o modelo conceitual. Os achados revelaram que LTF, SOP e EF foram significativa e positivamente relacionados ao CO. A LTF teve um efeito mais significativo no CO do que o SOP. Verificou-se que a EF medeia parcialmente a relação entre LTF, SOP e CO. As variáveis de controle tiveram um efeito fraco em EF e CO. No entanto, a Análise Multigrupo (MGA) revelou uma diferença significativa no EF de LTF entre os gerentes de nível inferior e médio. Os resultados confirmam que os formuladores de políticas diretas e os departamentos de RH influenciam a LTF e a EF adotando intervenções organizacionais. Além disso, seu efeito também se manifesta no aumento da atitude positiva e do compromisso com o trabalho dos funcionários.

PALAVRAS-CHAVE

Liderança Transformacional, Suporte Organizacional Percebido, Envolvimento dos Funcionários, Compromisso Organizacional, PLS-SEM

1. INTRODUCTION

The business world is limited only to acquiring human capital, maintaining and engaging them in its work lives. However, the increasing focus of academia and practitioners is on employee engagement (EE) (Mansur & Felix, 2021), and they leave no stone unturned to discover new approaches to identify that EE is associated with work-related employee attributes/outcomes such as organisational commitment (OC) (Bagga & Haque, 2020), productivity, and ultimate performance (Cole et al., 2012). The antecedents of EE that are gaining attention in the current scenario are transformational leadership (TFL) and perceived organisational support (POS) (Balwant et al., 2019). Although there are different styles of leadership, TFL has a greater impact on EE and OC (Al-Serhan et al., 2021; Herminingsih, 2020; Jekelle, 2021; Surucu et al., 2020). Lai et al. (2020) stated that employees motivated by transformational leaders are more engaged in their work, leading to better task performance and OC. Casado (2018) and Lakshmi (2020) further explained that transformational leaders are generally eager and upbeat, which exerts the same optimistic influence on the employees around them. Employees in today's multinational culture have high expectations of their organization (Felix & Cavazotte, 2019; Felix, 2020), which prompted researchers to explore whether POS creates an emotional connection with the organization. However, there is a paucity of exhaustive studies on the contingencies that restructure various correlates of engagement such as leadership and POS (Bakker et al., 2011).

According to reports by several global consulting firms such as Nasscom and McKinsey, the Indian IT sector accounted for 8% of India's GDP in FY20 and is expected to grow to 10% in FY25 (IBEF, 2021; Mathur, 2021). Despite thriving, the IT sector in India is confronting many external challenges, including growing insecurity among co-workers and disengaged employees, which is leading to reshuffling the internal equilibrium of the Indian IT sector (Manjunath & Chandni, 2018). It has become a challenge for the IT sector to keep its employees engaged and committed (Ahmad & Oranye, 2010). According to Rana et al. (2019), TFL and POS can probably strengthen the commitment of the Indian IT sector to achieving competitive and affirmative business advantage by ensuring EE towards OC.

There is a dearth of studies that confirm a systematic relationship among TFL, POS, EE, and OC. To bridge this gap, this study proposed a model to examine the nature of the relationship between these variables. Subsequently, the mediating effect of EE on the relationship between TFL, POS, and OC in Indian IT sector employees was examined.

The novelty of the study is noteworthy in the sense that the factors examined have not been studied in the Indian and global context before. Most notably, no prior study has successfully validated the mediating effect of EE on the relationship between TFL, POS and OC in the Indian IT sector. This study merits the combination of exploratory and descriptive analysis. The partial least squares equation modelling (PLS-SEM) was applied to validate the study's model. This was followed by hypothesis development, research methods, result and discussion, conclusions, and implications.

2. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1. LINKING TRANSFORMATIONAL LEADERSHIP WITH ORGANISATIONAL COMMITMENT

Several existing studies have confirmed the positive relationship between TFL and OC (Lo et al., 2010; Othman et al., 2013). However, based on the theoretical background, the present study followed the study of Allen and Meyer (1990) to examine the association of TFL with EE and its role in enhancing OC. Rahmawati (2019), Silitonga et al. (2020), and Udin (2020) found the positive and significant effect of TFL on OC. Their findings concluded that if TFL could be utilised correctly, employees' satisfaction and OC would be better formed. The same findings were confirmed by Cavazotte et al. (2020). Gulluce et al. (2016) explored the significant relationship between TFL and OC as perceived by bank employees in Kars, Turkey. Malik et al. (2017) affirmed the same in case of Islamic banks of Pakistan. Given these notes, the following hypothesis was formulated:

- *H1: TFL is positively related to OC.*

2.2. LINKING TRANSFORMATIONAL LEADERSHIP AND EMPLOYEE ENGAGEMENT

Schaufeli (2015) was a pioneer in embedding the leadership style as a precursor in the JD-R model (Bakker & Demerouti, 2007) and provided a theoretical basis for TFL and EE. Many studies claimed a positive and significant relationship between TFL and EE (Park, 2019; Lin et al., 2020). Amor et al. (2020) and Balwant et al. (2019) findings supported a positive link between TFL and EE in the tourism sector and retail sector (10 shopping malls), respectively.

They further revealed that transformational leaders foster engagement by accessing resources and opportunities. Qabool and Jalees (2017) concluded that TFL not only significantly positively affects OC but also has a more substantial effect on EE. The above discussion forms the premise that the TFL style strengthens EE; therefore, the following hypothesis was proposed.

- *H2: TFL is positively related to EE.*

2.3. Linking employee engagement and organisational commitment

The consistent findings of many previous studies suggested EE as an antecedent of OC and concluded that EE has a positive relationship with OC (Ahakwa et al., 2021; Linggiallo et al., 2021). Based on the Indian IT sector, Lolitha (2015) examined that EE positively affects OC. Similarly, Rameshkumar (2020) and Sutiyem (2020) concluded a positive association between EE and OC (affective and normative) in the banking sector. In this sense, the hypothesis was formulated that:

- *H3: EE is positively related to OC.*

2.4. Linking transformational leadership and organisational commitment through employee engagement as a mediator

Purvanova et al. (2006) found that EE serves as a significant mediating variable between TFL and OC. Thereafter, Park et al. (2021) confirmed the similar mediating effect of EE between TFL and OC (affective). At present, the literature doesn't corroborate the relationship between TFL and OC through EE as a mediator in the Indian context. To the best of the authors' knowledge, no prior study has yet explored the mediating role of EE on the relationship between TFL and OC, especially in the Indian IT sector. Given these notes, the following hypothesis was proposed:

- *H4: EE mediates the relationship between TFL and OC.*

2.5. Linking perceived organisational support and organisational commitment

The positive relationship between POS and OC is conceptualised from the perspective of the social exchange (Blau, 1964). Many researchers fundamentally identified POS as a predictor of OC and proved a positive association between POS and OC (Khurram, 2009; Panaccio & Vandenberghe, 2009). Arshadi (2011) conducted a study on 325 employees of industrial organisations in Iran and found that POS was positively related to OC. In the studies by Donald et al. (2016) and Aube et al. (2007), authors found that there was a significant relationship between POS and affective commitment (AC) and between POS and continuance commitment (CC) but found no significant relationship with normative continuance (NC). Similarly, in a study by Sherwani (2019), the authors revealed a significant and positive relationship between OC and POS. In conclusion, the findings of existing studies reinforce the fact, or understanding, that the organisation will eagerly demonstrate its commitment and support to its employees, while employees in return respond and get paid by demonstrating organisational commitment (Garg & Dhar, 2014). Hence, the following hypothesis was proposed:

- *H5: POS is positively related to OC.*

2.6. Linking perceived organisational support and employee engagement

POS is seen as an important construct for understanding motivation among employees, resulting in greater employee engagement. Kurtessis et al. (2015) shares that employees with low POS are more skeptical, whereas, when POS is high, employees find their work environment acceptable and are more engaged in their work. Abundant references confirming a positive and significant effect of POS on EE can be found in the existing literature (Dai & Qin, 2016; Murthy, 2017; Imran et al., 2020). In line with the current study, Sihag (2020) established a positive relationship between POS and EE among 420 IT professionals in the Indian region. The in-depth analyses further revealed that requisite support from organisations could increase the level of engagement among mid-level IT professionals. Based on these justifications the following hypothesis was proposed:

- *H6: POS is positively related to EE.*

2.7. Linking perceived organisational support and organisational commitment through employee engagement as a mediator

It is recognised that when employees experience a higher level of organisational support, it results in a higher level of participation (Gupta et al., 2015) which is reflected in the form of higher achievement, OC, and performance. However, unless the POS gives impetus for more EE, a commitment based on organisational support will not be one of competence. In addition, according to the social exchange approach based on the SET, employees act as social beings when exchanges occur and bank on reward and perform cost analysis (Blau, 1964). Schaufeli and Bakker (2004) further contributed that employees with higher levels of engagement, which stems from POS, tend to reciprocate with affective commitment. Lee and OK (2016) noted that favouritism done to employees might include affective commitment. Moreover, based on the findings of the following referenced studies, the present study acknowledged the intervening role of EE on the relationship between POS and OC (Biswas & Bhatnagar, 2013); POS and affective commitment (Gokul et al., 2012). To the best of the authors' knowledge, no prior study has yet explored the mediating role of EE on the relationship between POS and OC, especially in the Indian IT sector. So, the following hypothesis was proposed:

- *H7: EE mediates the relationship between POS and OC.*

After a thorough literature review, minimal empirical studies were found that studied POS, EE, and OC together and studied these variables with the mediating role of EE. Whereas to the best of the authors' knowledge, there is no such study available in the context of the Indian IT sector. As a result, the execution of this study in the Indian IT sector became important enough to cover this literature gap.

The proposed conceptual framework (*Figure 1*) indicates that TFL and POS (exogenous) have a significant relationship with EE, which in turn indicate a positive relationship (intervening) with OC; and TFL and POS also have a direct significant relationship with OC. The theoretical rationale for each proposed relationship in the model is duly discussed in the relevant sections of the literature review.
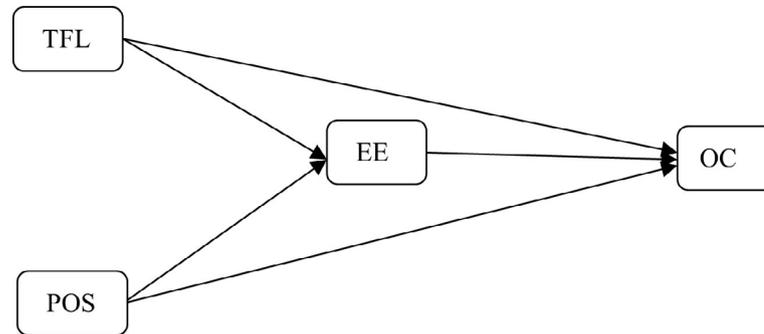
Figure 1. Proposed Conceptual Framework.
Source: Authors.

3. RESEARCH METHODOLOGY

3.1. SAMPLE CHARACTERISTICS AND SAMPLING TECHNIQUE

For the rationale of the present study, a descriptive research design with a survey approach was considered. Since the sampling frame could not be determined due to the pandemic, the Purposive sampling technique with elements of Convenience sampling was adopted to get responses from the top 10 IT companies in India. Rating firms like *Deloitte, Gartner, McKinsey,* and others rate top IT companies based on their revenue. Correspondingly, information on the *Top 5 IT Companies* in India by revenue is provided by *IBEF, TECHGIG,* and other sources. Since the current study did not want to be limited to only the *Top 5 IT Companies* based on revenue, the *Top 10 IT companies* were selected (irrespective of a slight mismatch in ranking) through reliable online sources based on revenue, market cap (moneycontrol.com, 2021), and the number of employees (indiancompany.in, 2021). The companies that were approached for collecting the data include Tata Consultancy Services, Infosys, HCL Technologies, Wipro Ltd., Reddington India Ltd., Tech Mahindra Ltd., Larsen & Toubro Infotech Ltd., Mphasis Ltd., Mindtree Ltd., and Hexaware Technologies Ltd. See *Table 1* for the revenue (in USD), market cap (in USD), and employee count of these companies.

The data compilation period was from April 2021 to September 2021. The study focused on the prominent cities of Delhi and the National Capital Region (NCR), where several multinational IT companies have their offices (including the top IT companies). Delhi-NCR is the ideal place in India to study employee behaviour with people of different cultures and diversity and a dense population of 28 million (Delhi, 19; Noida & Greater Noida, 1.057; Gurgaon, 1.5(2011); Faridabad, 3.8; and Ghaziabad, 2.78) (Kumar & Nisa, 2021b). Self-administered questionnaires were delivered through electronic platforms and personal interactions (consisting mainly of telephonic interviews followed by face-to-face methods). The sampling elements in this study comprised both non-managerial (employees) and managerial professionals employed in Delhi-NCR. Non-managerial (employees) and managerial professionals were classified on the basis of experience (Top et al., 2020) and particularly on direct reports (Sarros et al., 2015). Non-managerial employees included all software engineers, software developers, systems analysts, associate consultants, process associates, and process developers who had no direct reports, while managerial professionals were classified into three levels, including low level, middle level and upper level. See *Table 1* for classification and other essential details.

Table 1

Demographic information of the respondents and the characteristics of the organizations

Factor		Characteristics	Frequency	Percentage (%)
Gender		Male	195	55.1
		Female	159	44.9
Age		≤30 years	127	35.9
		31-35 years	188	53.1
		>35 years	39	11.0
Educational Qualification		≤Graduate	171	48.3
		≥Master	183	51.7
Non-managerial		Employees	264	74.6
Managerial (with experience level)	LL	≥5 to <11 years	23	6.5
	ML	≥11 to <15 years	49	13.8
	UL	≥15 years	18	5.1
Direct Report	LL	≥7 to <15		
	ML	≥15 to <20		
	UL	≥20		
	Name	**Values** (revenue; mktcap; employees)		
IT organizations	TCS	1524.97B; 8453.37B; 0.42M		
	Infosys	873.71B; 2820.28B; 0.228M		
	HCLtech.	656.43B; 1533.70B; 0.1765M		
	Wipro ltd.	601.37B; 1530.43B; 0.1600M		
	Redington India ltd.	479.96B; 44.38B; 1.561K		
	Tech Mahindra ltd.	351.19B; 701.41B; 0.1257M		
	L&T ltd.	100.14B; 293.02B; 35.991K		
	Mphasis ltd.	79.73B; 177.38B; 22K		
	Mindtree ltd.	73.75B; 118.55B; 21K		
	Hexaware Tech. ltd.	53.06B; 101.65B; 18.294K		
Total			**354**	**100**

Note. Revenue and market cap values are in USD. LL, lower level; ML, middle level; UL, upper level; B, billion; M, million; K, thousand. HCL tech., Hindustan Computers Technology ltd.; L&T, Larsen & Toubro Infotech ltd.; TCS, Tata Consultancy Services.
Source: Authors.

Initially, Google Forms were circulated through various social networking sites, followed by a face-to-face approach as both approaches were required for the maximum possible equal representation of all demographic characteristics in the sample (Kumar & Nisa, 2021a; Kumar, 2022). Due to bias in the lower level of personnel, the telephonic/face-to-face methods were

adopted to receive responses from middle and upper levels professionals. Overall, 410 responses were received. The respondents who didn't meet the criteria for a minimum work experience of 5 years, and at least seven direct reports for a respondent in leadership position weren't considered. Thus, a sample of 354 responses was obtained which is considered sufficient for further statistical analysis (Roscoe, 1975; Faul et al., 2009), especially for PLS-SEM (Goodhue et al., 2012). *Table 1* shows the descriptive statistics for the demographic variables.

3.2. RESEARCH DESIGN

In the exploratory phase, existing studies were searched for coverage and gaps. In the descriptive phase, quantitative data analysis was performed to arrive at specific findings with the help of data gathered through a survey questionnaire. The self-administered questionnaire was separated into two parts. The first part of the questionnaire included the personal information bank of employees as displayed in *Table 1*. The second part contained indicators adapted from standardised instruments (scales) to measure the latent constructs, including transformational leadership (TFL), perceived organisational support (POS), employee engagement (EE), and organisational commitment (OC), as shown in *Table 3*. All the items were rated on the 5-point Likert scale (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree). Previous researchers have adapted the certified scales according to the suitability of their studies. For instance, Lin et al. (2020; 12-items), Hai et al. (2020; 8-items), and Hee et al. (2018; 10-items) adapted the shortened version of Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio (1995) for TFL. Jin and Tang (2021) and Imran et al. (2020) adapted the shortened version of 8-items POS scale given by Eisenberger et al. (1986). Balwant et al. (2020) and Vermeulen and Scheepers (2020), adapted the shortened version of 9-items from Utrecht Work Engagement Scale (UWES) developed by Schaufeli et al. (2006) for EE. Crow et al. (2012; 5-items) and Palalic (2020; 12-items) adapted the shortened version of OC developed by Meyer et al. (1993). Based on the evidence from these studies, this study adapted 20-items for TFL, 8-items for POS, 9-items for EE, and 11-items for OC from above-mentioned scales. Refer to *Section 4.3* and *Table 2* for more details.

The literature substantiates that demographic characteristics may partially explain differences in employee commitment to their organization, which may influence the relationship hypothesized in this study. Therefore, the direct effects of gender, age, educational qualification, and designation on OC were examined as control variables. Demographic variables were coded as dummy variables and the assigned codes were as follows. For gender, male = 1 and female = 2. For age, ≤30 years = 1, 31-35 years = 2, and >35 years = 3. For education qualification, undergraduate = 1, ≥postgraduate = 2. For designation, employee = 0, junior level = 1, middle level = 2, and upper level = 3.

4. RESULTS & DISCUSSIONS

4.1. ASSESSMENT OF COMMON METHOD BIAS

The data for the conceptual model's latent variables came from the single respondents in a one-time survey data, so common method bias was to be effectively examined. Therefore, procedural and statistical approaches were assessed for minimizing the potential common method bias (CMB) (Podsakoff et al., 2003). Regarding the procedural procedures, the authors ensure the confidentiality and anonymity of the data provided by the employees as this controls the possibility

that the respondents would respond artificially or dishonestly (Podsakoff et al., 2003). Also, the proposed model variables were arbitrarily introduced into the survey to reduce respondents' cause and effect association among the latent constructs (Kumar, 2022). As considering the statistical techniques, a full collinearity test based on variance inflation factors (VIFs) was recommended by Kock's (2015b) and Kock and Lynn's (2012) procedure in Smart PLS-SEM. This approach explains that when an inner VIFs value was ≥ 3.3 threshold, indicating a collinearity issue, it ultimately suggests the presence of CMB. The inner VIF values for the proposed conceptual model ranged from 1.267 to 1.701, implying that CMB was not a significant issue in this research study. Refer to *Section 4.4* and *Table 4* for more details.

4.2. DATA ANALYSIS PROCESS

PLS-SEM was applied to investigate the association of the four variables: TFL, POS, EE, and OC. Smart PLS v3.3.3 was practised to validate the study's research model. In utilising PLS-SEM, evaluation of the conceptual model involves two stages (Hulland, 1999). In the first phase, the measurement model with reliability and validity of the variables were assessed. In the second step, structural models were examined, where hypothesised path relationships between variables were estimated (Dimaunahan & Amora, 2016).

4.3. ASSESSMENT OF THE MEASUREMENT MODEL

Figure 2 displays the structural model reflecting all variables along with their factors loading, the mediating effect of EE on the relationship between TFL→OC & POS→OC, and combined effect of control variables (CVs) on OC. The Explained Variance (R^2) for EE and OC were obtained as 0.371 and 0.554 respectively (i.e., above moderate). This study included CVs (i.e., age, gender, designation and qualification) to examine and manipulate their potential impact on the relationship between exogenous and endogenous variables within the proposed model of the study (Kumar, 2022). However, the results indicated the insignificant effect of CVs. To study the actual effect of CVs on exogenous variables, despite the negligible effect, we first measure the
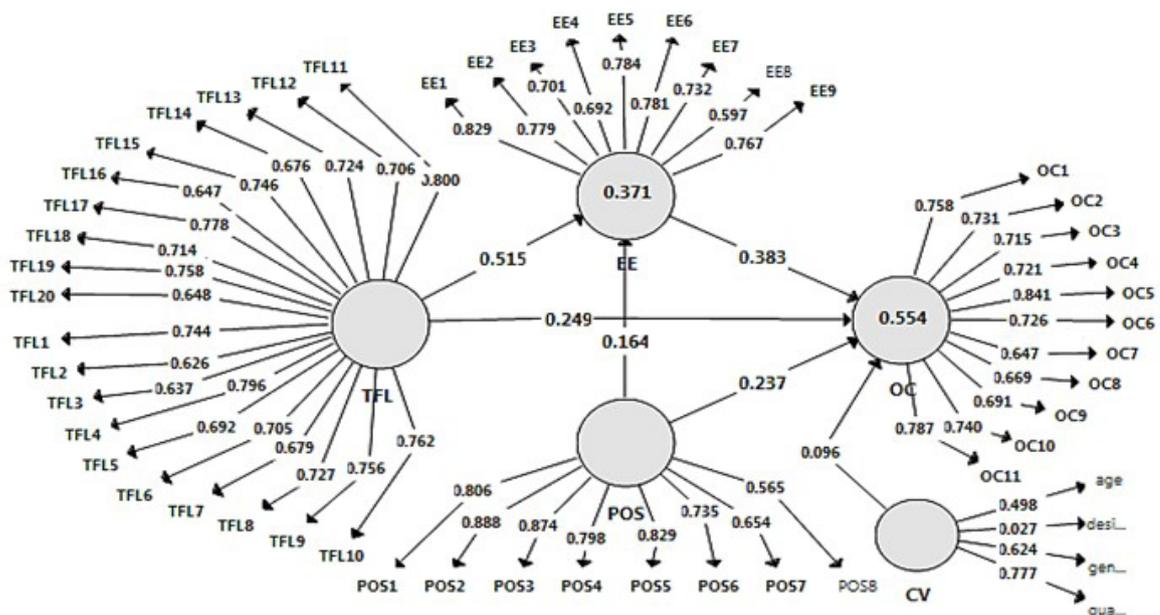

Figure 2. Structural model: regression values of constructs showing direct and indirect effect with control variables.
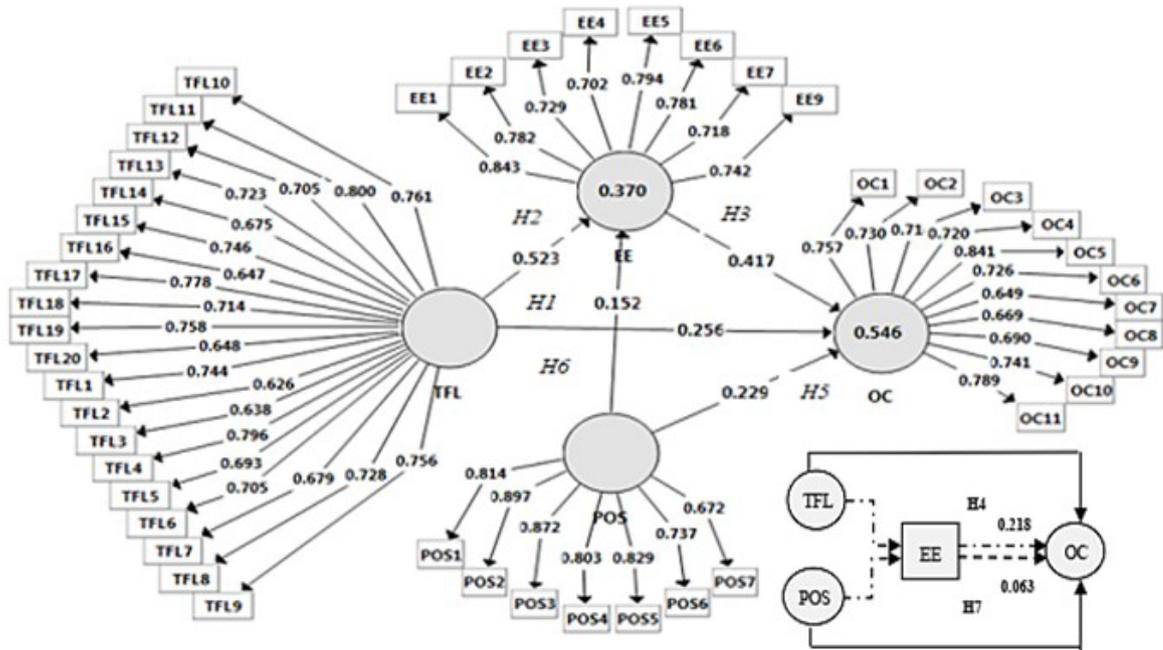*Source:* Authors.

Figure 3. Structural models: regression values of constructs showing direct and indirect effect (miniature model) after exclusion of CVs and two items having factor loading ≤0.6, i.e., EE8 (0.597) and POS (0.565).
Source: Authors.

change in R^2 by including all CVs in the model (*Figure 2*) and subsequently eliminating them in the final model (*Figure 3*). After subtracting the R^2 value of the initial model including CVs with the final model excluding CVs, the change in R^2 value was obtained as 0.008 (0.554 – 0.546), indicating an insignificant improvement in R^2 with the inclusion of CVs in the model (refer to R^2 values of *Figure 2 & 3*). Nevertheless, the study analysed the control variables by grouping them into a single reflective variable using the PLS-SEM bootstrapping technique (5000 bootstrap samples) (refer to *Section 4.6*).

The manifest constructs assessed theoretical variables to examine the PLS-SEM measurement model. PLS-SEM employed a reflective model to gauge the constructs, and its items/factors were evaluated through convergent and discriminant validity (reliability and validity results). Firstly, the reliability of the scale was scrutinised by Cronbach's alpha (CA) and composite reliability (CR) (Hair et al., 2011). Secondly, convergent validity assessed the value of the set of items in the same manner as was explained by the respondents and gauged by average value extracted (AVE) measures. Lastly, discriminant validity determined the items related to one construct should not measure the indicators of the other construct (Kock, 2017). As shown in *Table 2*, all the factors' loadings were statistically significant and were equal or greater than the minimum cut-off value of 0.5 (Barclay et al., 1995; Kock, 2015a). However, this study included all the factors ≥0.6 and 2 items {i.e., EE8 (0.597) and POS8 (0.567)} were removed due to factor loading <0.6. Eventually, 46 items with factor loading ranging from 0.626-0.897 were retained. *Table 2* also displayed that TFL, POS, EE, and OC met the criterion for reliability scale. CA and CR were used to measure the internal consistency of the scale. All the values of CA and CR surpassed the minimum limit value of 0.70, showing good reliability (Chin, 2010). Next, to ensure the convergent validity, the AVE for all latent constructs should be ≥0.5 (Fornell & Larcker, 1981). Since all coefficients of AVE were ≥0.5, reliability was ensured and the constructs were well-fitted to the appropriate model.

Table 2

Measurement Model

Reference (source of validated scale)	Selective indicators (after factor analysis)	Loading	AVE	CA	CR
Bass and Avolio (1995)	TFL1: My leader instills pride in me for being associated with him/her	0.744			
	TFL2: My leader goes beyond self-interest for the good of the group	0.626			
	TFL3: Acts in a way that builds my respect	0.638			
	TFL4: Displays a sense of power and confidence	0.796			
	TFL5: Talks about their most important values and beliefs	0.693			
	TFL6: Specifies the importance of having a strong sense of purpose	0.705			
	TFL7: Considers the moral and ethical consequences of decisions	0.679			
	TFL8: Emphasizes the importance of having a collective sense of mission	0.728			
	TFL9: Talks optimistically about the future	0.756			
	TFL10: Envisions exciting new possibilities at hand	0.761	0.515	0.950	0.955
	TFL11: Articulates a compelling vision of the future	0.800			
	TFL12: Expresses confidence that goals will be achieved	0.705			
	TFL13: Seeks differing perspectives when solving problems	0.723			
	TFL14: Suggests new ways of looking at how to complete assignments	0.675			
	TFL15: Gains input from others in solving a problem	0.746			
	TFL16: Spends time teaching and coaching	0.647			
	TFL17: Treats all employees as individuals rather than just a member of the group	0.778			
	TFL18: Considers me as having different needs, abilities, and aspirations from others.	0.714			
	TFL19: Helps me to develop my strength.	0.758			
	TFL20: Examines assumptions to questions to verify accuracy.	0.648			
Eisenberger et al. (1986)	POS1: My organization strongly considers goals and values.	0.814			
	POS2: Cares about my well-being.	0.897			
	POS3: Forgive an honest mistake on my part.	0.872	0.651	0.909	0.928
	POS4: Cares about my opinions.	0.803			
	POS5: Help is available from my organization when I have a problem.	0.829			

Table 2
Cont.

Reference (source of validated scale)	Selective indicators (after factor analysis)	Loading	AVE	CA	CR
Eisenberger et al. (1986)	POS6:My organization is willing to support me when I need a special favour.	0.737			
	POS7: My organization shows very little concern for me[(R)].	0.672	0.651	0.909	0.928
	POS8: If given the opportunity, my organisation would take advantage of me.	0.565			
Schaufeli et al. (2006) (UWES)	EE1: At work, I feel fully energetic.	0.843			
	EE2: I forget everything else around me while working.	0.782			
	EE3: I am enthusiastic about my work.	0.729			
	EE4: My work inspired me.	0.702			
	EE5: I am proud of the work I do.	0.794	0.582	0.897	0.917
	EE6: During work, I feel strong and vigorous.	0.781			
	EE7: I feel happy when I work intensely.	0.718			
	EE8: I feel the work I do has a purpose.	0.597			
	EE9: I am immersed in my work.	0.742			
Meyer et al. (1993)	OC1: Happy to spend my career in this organization.	0.757			
	OC2: I feel as if this organization's problem is my own.	0.730			
	OC3: Organization has a great deal of personal meaning to me.	0.714			
	OC4: I do not feel 'emotionally attached to this organization [R)]..	0.720			
	OC5: It would be very hard for me to leave my job at this organization right now, even if I wanted to.	0.841			
	OC6: Too much of my life would be disrupted if I left my organization.	0.726	0.535	0.912	0.926
	OC4: Right now, staying with my job at this organization is a matter of necessity as much as desire.	0.649			
	OC8: I would feel guilty if I left this organization now.	0.669			
	OC9: This organization deserves my loyalty.	0.690			
	OC10: I wouldn't leave my organization now because of my sense of obligation to it.	0.741			
	OC11: I owe a great deal to this organization.	0.789			

Note: All loading significant at 0.001 level; AVE, average variance extracted; CA, Cronbach's alpha; CR, composite reliability, TFL, transformational leadership; POS, perceived organizational support; EE, employee engagement; OC, organizational commitment.
Source: Authors.

Table 3 exhibits the mean (M), standard deviation (SD), and the square root of AVE coefficients and correlation among the latent constructs to reveal the discriminant validity of the construct developed by (Fornell & Larcker, 1981). The mean values of the study variables shown in Table 3 indicated that EE was higher on the average score (3.64), followed by OC (3.59), POS (3.47), and TFL (3.41). All mean values were well above the neutral mean score (2.5), concluding this as a positive sign for the 10 organizations approached in this study and suggesting that their employees demonstrated a supportive behaviour toward these domains.

Table 3
Discriminant validity and correlation coefficients of constructs

Construct	M	SD	EE	OC	POS	TFL
EE	3.64	0.74	0.763	–		
OC	3.59	0.75	0.658	0.731	–	
POS	3.47	0.73	0.392	0.509	0.807	–
TFL	3.41	0.78	0.593	0.608	0.459	0.718

Note. M, mean; SD, standard deviation; Diagonal elements depict square root of AVE coefficients; Off Diagonal elements shows the correlation between constructs. Refer *Table 2* for variables' abbreviations.
Source: Authors.

As required, the square roots of each latent construct's AVE (diagonal values) were greater than the off-diagonal values as proposed by (Hair et al., 2011). Thus, the results showed that the measures used in the study had adequate discriminant validity.

4.4. ASSESSMENT OF THE STRUCTURAL MODEL AND MEDIATION ANALYSIS

The study utilised the bootstrapping techniques to calculate the indirect effect of the conceptual mediation model as proposed by (Preacher & Hayes, 2008; Hair et al., 2011). *Figure 3* displays the structural model of the present study reflecting all the loading of the factors (variable) and items along with the mediating effect. However, this study included all the factors ≥0.6 and removed 2 items {(i.e., EE8 (0.597) and POS8 (0.565)}.

Table 4 exhibits the parameter results of the direct effect model. First, the path analysis revealed that TFL was positively and significantly associated with OC (β=0.256, p=0.000, H1 supported). This implies that if transformational leaders are sound in the organisation, employees' commitment towards the firm becomes more evident. The results of this study were also substantiated by previous research studies (Feizi et al., 2014; Qabool & Jales, 2017). First, the existence of transformational leaders plays a vital role in enhancing employees' commitment, creating a positive environment, and developing employees' morale. Second, the path analysis showed a positive and significant relationship of TFL with EE (β=0.523, p=0.000, H2 supported). This positive relationship indicated that EE increases when employees experience transformational leadership in the organisation. The finding of this current study was consistent with prior research papers (Bezuidenhout & Schultz, 2013; Singh, 2019a). Third, further analysis revealed that EE had a positive and significant relationship with OC (β= 0.417, p=0.000, H3 supported). The finding was in line with the study of Prerana (2017). This affirmative relationship concluded that an engaged employee was satisfied with their job and involved with the work role (Cavalcanti et al., 2022). It led to the sense of employees' commitment towards the organisation. Fourth, the findings

Table 4
Parameters results of the direct effect model

Hypothesis	Path relationship	DE			SE	t-value (bootstrap)	p-value	Results	VIF
H1	TFL → OC	0.256			0.072	3.530	0.000	Supported	1.701
H2	TFL → EE	0.523			0.054	9.690	0.000	Supported	1.267
H3	EE → OC	0.417			0.046	9.055	0.000	Supported	1.586
H5	POS → OC	0.229			0.061	3.727	0.000	Supported	1.304
H6	POS → EE	0.152			0.058	2.603	0.009	Supported	1.267
Mediation effect									
		(IDE)	**(TE)**	**(VAF)**					
H4	TFL → EE → OC	0.218	0.473	0.460	0.069	6.528	0.000	Supported	
H7	POS → EE → OC	0.063	0.292	0.216	0.073	2.407	0.016	Supported	

Note. DE, direct effect; IDE, indirect effect; TE, total effect (DE + IDE); SE, standard error; VAF, value adjustment factor; Refer *Table 2* for variables' abbreviations.
Source: Authors.

showed that POS and OC was significantly positive (β=0.229, p=0.000, H5 supported). This finding was also corroborated by previous research works that determined POS as a determinant of OC (Alijanpour et al., 2013; Mohammadpanah, 2016). They indicated that organisational support leads human resources to build a sense of pleasure and belongingness in their company, resulting in enlarged organisational commitment. Finally, path results revealed a positive and significant relationship between POS and EE (β=0.181, p=0.000, H6 supported). This positive relationship implied that when the firms value employees' contribution and care about their comfort, they feel vigorous and more engaged in their job roles. These results were corroborated in previous studies linking POS to EE (Kose, 2016; Koodamara, 2019). Multicollinearity was measured through VIF. To eliminate the possibility of multicollinearity issues between variables, the variance inflation factor (VIF) should be ≤ 3.3 (Kock, 2017), and as can be seen in *Table 4*, the VIF values for all variables were below the maximum threshold value.

4.4.1. Mediating effect

Table 4 explains the parameter results of the mediation model. The indirect effect of EE on the relationship between TFL and OC was found statistically significant (β= 0.218, p=0.000, H4 supported). To further check the strength of the indirect mediating effect, VAF (value adjustment factor) was used by dividing the indirect effect value by total effect value. If VAF < 20 % the no mediation occurs, if VAF > 20 but < 80 % concluded partial mediation effect, else VAF > 80 % results in full mediation effect (Hair et al., 2012). The VAF for H4 was calculated about 46.08% (0.4608), with an indirect effect of 0.218. This confirmed that EE partially mediates between TFL and OC and thus covers the research gap and concludes that a significant increase in OC can be seen if leaders with a transformational style encourage higher EE in the organisation.

Similarly, the indirect effect of EE on the relationship between POS and OC was also found statistically significant (β= 0.063, p=0.000, H7 supported). The VAF was calculated at about 21.57% (0.2157), with an indirect effect of 0.063. Hence, the findings confirmed that EE also partially mediates between POS and OC and thus covers the literature gap. In addition, this implied that the employees felt a sense of belonging when they recognised the support from the organisation, and as a result, the EE automatically increased, which eventually led to the OC.

4.5. Model fit and explained variance (prediction power) of the model

The predicting power of the model was assessed through the structural framework with the presence of a mediator (i.e. EE) by investigating the coefficient of determination (R^2) of the endogenous constructs. R^2 explained the amount of variance in the latent construct. As shown in *Figure 2*, the R^2 values for EE and OC were obtained 37% and 54.6%, respectively. It described that the model had a moderate predictive value and was able to explain all the endogenous constructs. (Hair et al., 2011; Henseler et al., 2009). Thereafter, the blindfolding procedure or the Stone–Geisser Q^2 (PLS-Predict) was performed to ascertain the predictive relevance of the structural model with the cross-validated redundancy index (Q^2) for endogenous constructs. If all Q^2 values are above zero, evidence pointed that the model has predictive relevance (Chin, 2010). In Table 5, the findings confirm that the structural model had a significant predictive relevance. More precisely, the Q^2 value for OC and EE were 0.418 and 0.356, which was well above zero, indicating the model's predictive relevance. The effect size (Cohen's f^2) for TFL→OC, POS→EE, and POS→OC was found above small (i.e., 0.085, 0.029, 0.088). Whereas the effect size (Cohen's f^2) for TFL→EE & EE→OC was found above medium (i.e., 0.343, 0.241).

The model fit results obtained the SRMR value 0.063 (<0.08), indicating that model fit was achieved (Hu & Bentler, 1998). The rms Theta less or equal to 0.12 indicated a well-fitted model. The rms Theta for the current study was achieved as 0.124, which indicated a well-fitted model (Hair et al., 2017). However, the model fit is a rising field; unlike in CB-SEM (confirmatory analysis), its utilisation is not mandatory in exploratory and predictive analysis (i.e. PLS-SEM) (Hair et al., 2017; Sarstedt et al., 2011; Kumar, 2022).

Table 5

Model fit, effect size, and predictive relevance

Path relationship	f^2	Q^2	SRMR	RMS$_{theta}$
TFL → OC	0.085			
TFL → EE	0.343			
EE → OC	0.241			
POS → OC	0.088			
POS → EE	0.029			
EE (MV)		0.356		
OC (DV)		0.418	0.077	0.124

Note is the Cohen's (1988) effect size (f2): 0.02=small, 0.15=medium, 0.35=large; MV, mediating variable; DV, dependent variable.

4.6. DIRECT EFFECT OF CONTROL VARIABLES ON THE ORGANISATIONAL COMMITMENT

Table 6 exhibited the direct effects of the control variables and the comprised groups on OC. Four control variables (gender, age, qualification, and designation) were included in the model and analysed to determine whether the degree of their impact on organizational commitment was significant. The results emphasized that the relationship between gender and OC was highly insignificant (>0.05), indicating gender as an inexpressive variable of OC among IT employees in the study area. Further in-depth analysis revealed that there was no significant difference between males and females in their commitment to the organization (>0.05). The findings were in line with Kuruuzum et al. (2009), Mathieu and Zajav (1990), and Mwesiwa et al. (2019) and in contrast to Aydin et al. (2012). In which author reported that males have higher levels of commitment than their female counterparts. Similarly, there was no significant effect of age on the OC (>0.05). Further, there was no significant difference across all age groups on the OC (>0.05). This was in consistent with Kuruuzum et al. (2009) and Iqbal et al. (2011) and in contrast with Nanjundeswaraswamy (2021) and Mwesiwa et al. (2019). Education level failed to reveal a significant effect on OC by a small margin at the 0.05 significance level (p = 0.065). This finding was in line with Mathieu and Zajac (1990), Iqbal et al. (2011), and Nanjundeswaraswamy (2021) and in contrast with Lok and Crawford (2004). However, further analysis confirmed that employees at the postgraduate and above education level had a positive commitment to the organization compared to undergraduates and below, concluding that employees' organizational commitment increased with their education level. Ultimately, as with other demographic characteristics, the regression results also showed no significant effect of designation and comprised groups on OC (>0.05). This finding was consistent with that of Lok and Crawford (2001), Kuruuzum et al. (2009), and Nanjundeswaraswamy (2021) but in contrast to Mwesiwa et al. (2019).

Table 6
Results of direct effects of control variables and comprised groups on OC.

Path relationship	β	SE	t-value	p-value	DV ↓
Gender → OC	0.005	0.078	0.102	0.919	
Male → OC	-0.198	0.193	1.026	0.305	
Female → OC	0.198	0.199	0.999	0.318	
Age → OC	0.095	0.065	1.681	0.094	
≤30 → OC	- 0.146	0.051	2.891	0.004	
31-35 → OC	0.115	0.154	0.746	0.456	
>35 → OC	0.139	0.077	1.795	0.073	
Qualification → OC	0.100	0.079	1.854	0.065	O C
≤Graduate → OC	-0.186	0.052	3.561	0.000	
≥PG → OC	0.186	0.068	2.725	0.007	
Designation → OC	0.060,	0.044	1.088	0.278	
Emp. → OC	- 0.089	0.084	1.055	0.292	
JL → OC	0.178	0.167	1.063	0.288	
ML → OC	0.073	0.135	0.540	0.589	
UL → OC	0.142	0.093	1.518	0.130	

Note: β, path coefficient; DV, dependent variable; Emp., employee; Grad, graduate; PG, post-graduate; JL, junior-level; ML, middle-level; UL, upper-level.

5. CONCLUSIONS

Prior studies have investigated the nature of the relationship between transformational leadership, perceived organisational support, employee engagement, and organisational commitment. These studies have taken only the role of employees as an essential influencing variable and ignored the vital role of managerial level professionals, or vice versa. The present study examined both aspects equally. The study's findings successfully contributed to the significant disclosure that transformational leadership, perceived organizational support, and employee engagement, significantly influenced organizational commitment. Notably, the contribution of this study was novel in that it provided theoretical findings to prior employee engagement research by contributing and validating an empirical model (with significant predictive relevance and effect size), which defined that employee engagement partially mediated the association between transformational leadership and organizational commitment, and perceived organizational support and between perceived organisational support and organisational commitment. Especially in the Indian IT sector. Other significant key findings derived from the study were as follows. Transformational leadership enhanced employee engagement and organisational commitment. Perceived organisational support enhanced employee engagement and organisational commitment. Employee engagement directly and significantly enhanced organisational commitment. Control variables had no significant effect on organizational commitment. However, in-depth analysis confirmed that employees' organizational commitment increased with their education level.

5.1. PRACTICAL AND MANAGERIAL IMPLICATIONS

This study provides insight into the emerging importance of organisational support for academicians and practitioners, as it focuses on the engagement level of employees in IT industries. Therefore, the implications of the study's findings are able to contribute to how leaders of hierarchical organizations can empower their employees. Several practical implications emerge at the managerial level. Firstly, employees of IT companies express that the role of their leaders inspires enthusiasm among them through discussion and conversations. Thereby they are motivated by positive organizational goals and values which naturally inculcate in them a sense of commitment towards the organization's loyalty and commitment. This imply that IT organizations with better transformational leadership practices are the key catalyst in generating enhanced levels of employee engagement and organizational commitment. In order to enhance the organizational commitment of the employees, equal opportunity should be assured by the IT firms in their work roles so that the employees can come with enthusiasm and be deeply immersed in performing their tasks.

Second, the EE's mediating role in the POS-OC relationship implies that senior IT leaders should emphasize the support felt by employees to enhance the mentoring and coaching process. Believing that the members of the organization feel that the organization cares for their well-being and opinions, forgive their honest mistakes, provides full support and special favour in need. As a result, a higher level of work engagement, enthusiasm and organizational commitment will be observed among the employees. The mediating role of employee engagement in the relationship between transformational leadership and organizational commitment has implications for transforming IT firms' transformational leaders to actively develop a team of energetic and passionate employees with a strong perspective towards their organization's goals and values. All such transformational practices that support employees and take care of their needs help establish and strengthen the quality of employee-organization relationships.

Third, the profound findings divulge the implications that IT managers' adoption of transformational leadership practices (particularly, seeking divergent perspectives when solving problems, considering the moral and ethical consequences of decisions, emphasizing the importance of having a collective sense of mission, articulating and reinforcing a compelling vision, envisioning exciting possibilities, and treating all employees as individuals) creates a positive environment within the organization. This encourages employees to feel happy and energetic and to exhibit discretionary behaviour in the workplace, naturally leading them to higher engagement and organizational commitment.

Fourth, the study outcomes propound the provision of higher levels of perceived organizational support from upper management while developing an action plan to achieve higher levels of employee engagement and positive work outcomes. In conclusion, IT firms are suggested to maintain positive attitude and behaviour in staff by encouraging transformational leadership style while focusing on employee motivation and psychology. Simultaneously, leaders are suggested to show a human-centred approach to achieve an affirmative environment that ultimately enhances employee engagement.

5.2. Limitations and recommendation for the future research

This study was cross-sectional and deals with data gathered at one point in time, so the path of causality cannot be investigated. Furthermore, few studies on employee engagement suggest that employee engagement can change over time, so longitudinal analysis may also be considered in further research. The study was confined to the top 10 IT companies located only in the Delhi-NCR, so, the findings may differ in other regions of the country. The model of the present study also leaves the option open to include other variables such as turnover intent, organizational citizenship behaviour, job satisfaction, rewards and recognition, and others that may be included by future studies.

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AUTHOR'S CONTRIBUTION

SK: conceived/ presented the original idea; has provided supervision/guidance at every step and assisted with the proofreading and plagiarism of the paper; **SB:** contributed to the literature review. **SK and SB:** Both authors contributed to computation portion, designed and verified the method and model, discussed the results, and contributed to the final manuscript.

COMPLIANCE WITH ETHICAL STANDARDS

The authors take the responsibility that this paper has not been published before in any journal or presented in any other Conference/Seminar/Symposium or submitted for consideration of any award.

CONFLICTS OF INTEREST

No conflicts/competing of interest was reported by the authors.

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