Intervening Role of Supervisor Trust and Leader-Member Exchange: An Investigation into the Role of Supervisor Support on Employee Innovative Behaviour

Gamal S. A. Khalifa
Hotel Studies, Faculty of Tourism and Hotels, Fayoum University, Fayoum, Egypt
Gsk00@fayoum.edu.eg; https://orcid.org/0000-0003-1665-9291

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Abstract
The hospitality industry is extremely competitive, and employee innovative behaviour plays an essential role in determining whether hotels survive, grow, or achieve a competitive advantage. This research implements structural equations modelling via SMART-PLS3 to analyse the 504 valid questionnaires to assess the theoretical framework and identify the factors that influence employee innovative behaviour. This paper focuses on five-star hotels in Egypt which use an innovative approach to evaluate the influence of Perceived supervisor support (PSS) through supervisor trust (ST) and Leader-Member Exchange (LMX) on employee innovative behaviour (EIB). The investigation depicts the relations among the different variables of the study and has enhanced our understanding of EIB. Results indicated the PSS predicted LMX significantly, which in turn influenced the ST. PSS has also been found to have an indirect impact on the EIB through LMX and ST. The variation clarified by the proposed research model in the EIB is 32.3%.

INTRODUCTION
Because of the worldwide recession, the tourism industry is also in a period of stagnation, and the hotel industry is extremely competitive at present (Alseiari et al., 2019a, 2019b; Sudigdo and Khalifa, 2020). The Egyptian tourism industry is not different; the Egyptian government is seeking a different renewable resource to boost its economy (Khalifa, 2018), and the tourism industry is a vital renewable resource in Egypt, especially Cairo and Sharm El-Sheikh (Khalifa, 2020a). Hoteliers in Cairo and Sharm El-Sheikh searching varied techniques to increase their competitive advantages to increase their market share (Abou-Shouk and Khalifa, 2017; Khalifa, 2020a). Therefore, visitor lodgings have begun to investigate inventive approaches to attract and retain clients by urging their representatives to think of imaginative and novel ideas to improve services, products and procedures (Abdulla et al., 2020; Dhar, 2016), to...
enhance service quality and keep up feasible development (Hossain et al., 2019; Khalifa, 2020b; Robinson and Beesley, 2010; Widjaja et al., 2020). In such a manner, generating inventive ideas can help for lodging supervisors produce exceptional and appealing facilities that encounter client needs and increase their hotel profitability (Weng et al., 2016).

Within the work environment, creativity and inventiveness have turned out to be increasingly vital elements of a firm’s performance, survival, and accomplishments (Alareefi et al., 2019; Alsaadi et al., 2019b; Gharama et al., 2020b). As hotels try to act upon the employees’ recommendations and innovative ideas, it is evident that the procedure of generating and implementing the plans has turned into a competitiveness wellspring in the hospitality context (Abdulla et al., 2019; Anderson et al., 2014; Cai et al., 2018; Khaola and Coldwell, 2018; Liu et al., 2016).

Perceived Supervisor Support (PSS) plays an important role in enhancing employee innovative behaviour (EIB). This behaviour has a significant value on productivity, success, and growth (Khaola and Coldwell, 2018). The EIB means generating new ideas and effective multitasking processes which should be performed by the supervisors/managers (Gharama et al., 2020b). Companies progressively search for diverse methods to foster staff creativity (Gharama et al., 2020b), and how to implement effective leadership has become a significant area of focus for many organisations and academics (Chen et al., 2016; Wang et al., 2015). With drastic changes to culture, technology, society, and finance in the knowledge-based-economy, staff creativity has turned into a vital tool for companies to improve their competencies, and sustain a competitive advantage in the worldwide hospitality industry (Wang et al., 2015).

Supervisor leader is one of the most influential predictors of EIB (Birdi et al., 2016; Chen et al., 2016). Many associations apply diverse methods to advance the innovativeness of their workers. To express individual and organisational level innovation, workers rely upon one another for knowledge sharing and to see themselves as a fundamental piece of the organisation (Demir and Budur, 2019; Kang et al., 2016; Wisse et al., 2015). Knowledge sharing (KS) is viewed as an essential factor in creating innovation, yet the components that advance or debilitate KS are not well understood or examined (Gharama et al., 2020b). Sharing the knowledge between the supervisor and his/her employees shows a strong LMX and trust (Wisse et al., 2015). There are very few studies that researched the mediating effect of LMX and supervisor trust (ST) on the connection between PSS and EIB, especially in an Egyptian hospitality context.

Additionally, most research on PSS and leadership is based on Western culture. Academics have perceived national culture’s effect on impacting supervisors qualities and effectiveness (Dorfman et al., 2012), yet no study has researched the connections among PSS and worker creativity that are explicit in the social setting. In this investigation, the significant point is to examine the mediation impact of ST and LMX in investigating the connection between PSS and EIB in the Egyptian hospitality industry. By way of conclusion, the study contributes to the literature by giving an interpretation of how PSS promotes or inhibits EIB through LMX and ST.
Hypotheses Development
Perceived Supervisor Support (PSS) and Leader-Member Exchange (LMX)
PSS is characterised as “employees’ general perspective about how much their managers value their contribution and look after their happiness” (Škerlavaj et al., 2014). LMX is a process of social exchange and mirrors a business-orientated connection among managers and followers (Bauer and Green, 1996). LMX relationship’s nature considers shared trust, respect, and liking (Eisenberger et al., 2010). Leader conduct has been perceived as a critical asset in the manager-follower relationship (Dienesch and Liden, 1986). LMX theory implies that leaders create excellent and diverse associations with followers via social exchanges (Park et al., 2015). LMX theory additionally has long documented the significance of fairness in the advancement of LMX (e.g., (Bauer and Green, 1996; Dienesch and Liden, 1986; Graen and Scandura, 1987).

The theory of LMX was initially conducted by Graen and his associates and concentrated on the social exchange forms implanted in the relationship between subordinate and leaders (Dansereau Jr et al., 1975). The power of LMX alludes to the nature of the relationship of the interpersonal exchange among the two parties employee-supervisor (Graen and Uhl-Bien, 1995). The power dynamic between supervisors and individuals decides the measure of physical or mental effort, raw-material assets, data, and leader-subordinates social support (Liden et al., 1997). Furthermore, those subordinates who regularly cooperate with their leaders and have their confidence, consideration and support, often go beyond their contractual or transactional expectations by performing additional tasks or showing more dedication towards work-group goals (Liden et al., 1997; Wayne et al., 2002, 1997). Subsequently, the accompanying hypothesis is proposed:

H1a. PSS positively affects LMX

LMX and ST
The theory of LMX hypothesised that leaders are willing to build up exchange-relationships after a certain period with their employee (Alneadi et al., 2020; Park et al., 2015). The role and social exchange theories clarify and reveal how exchange relationships grow progressively over time as a leader associates with each employee and organises their work (Alkheyi et al., 2020; Zhang et al., 2012).

The nature of the association may change, starting with one follower then onto the next. As explained by literature, the high level of respect and trust will come with the high exchange relationship (Almatrooshi et al., 2020; Taştan and Davoudi, 2015). When supervisors provide more desirable working conditions or benefits (e.g. interesting tasks, overtime, bonuses), employees are expected to be more committed and faithful to the company. Within the lower-power exchange interactions, people are just willing to do the official prerequisites of their occupations, and additional advantages are not given by managers (Gharama et al., 2020b, 2020a; Mahsud et al., 2010).

Ole Borgen (2001) suggested that “trust in the leader is vitally identified with the ability to foresee and influence the other party’s conduct”. Because of the significance of a leader’s trust, Dirks & Ferrin, (2002) have demonstrated that trust is contemplated with
two other points of view in literature. Trust among leaders and subordinates are clarified with social exchange theories (Alkhateri et al., 2019; Alsaadi et al., 2019a). The studies utilising this methodology are classified as “relation based”. In the second view, the prominence is on the insights of individuals and their level of susceptibility to the leader’s behaviour. This methodology is classified as “character-based” (Taştan and Davoudi, 2015).

The studies demonstrate that leader trust has been considered by organisations, along with the factors and outcomes associated with it (Budur and Demir, 2019). Leader’s trust antecedents were likewise investigated under “relational variables, organisational variables, and employees factors” (Alharthi et al., 2020; Brower et al., 2000). Additionally, innovativeness and LMX are studied in the meta-analytic research of Dirks & Ferrin’s (2002), which are also studied in the present study. Trust is a significant factor of social exchange since when someone offers a benefit to another person; they must believe that the other person is willing to reciprocate in some way (Demir et al., 2020; Taştan and Davoudi, 2015). After some time, the mutual reciprocate relationship will create the trust needed for the survival of the relationship. Within a high power employee-leader association, the staff are treated as trusted assistants (Mo and Shi, 2017; Taştan and Davoudi, 2015). The powerful leader-employee association includes LMXs, where the boss is mindful and supportive toward the subordinates, while the subordinates hold a positive attitude towards their leaders (Dansereau Jr et al., 1975). In this way, employees have a more significant influence on the decision-making process and problem-solving (Scandura, 1999). Thus, the accompanying hypothesis is proposed

H2. LMX significantly affects ST’

The influence of trust in supervisor on EIB

DeConinck & Johnson (2009) examined the idea of trust in social relationships “since social exchange requires placing trust in others to reciprocate, the main concern is to substantiate oneself as trustworthy”. Trust is an imperative element of social exchange since when one person gives a benefit to somebody else; the person must believe that the other person will react positively. Mutual dealings with time will increase trust and promote the progression of the relationship (Wu et al., 2012). A refinement should be made between supervisory trust and organisational trust. Joyce (2016) indicated that organisational leaders are concerned with making strategic decisions, whereas direct leaders are concerned with supervisory activates. Unfortunately, there are not many studies that investigate both types of trust.

As discussed by Tan & Tan, (2000) supervisor’s trust is defined as “the everyday collaboration between supervisor and employee though organisational trust, and it includes relations with an assortment of constituent groups in the association”. Also, as Taştan & Davoudi, (2015) argue that higher altitudes of confidence in leader impacts followers outputs, and impacts the excellence of the revenue Walumbwa et al., (2011) inferred that employees with elevated amounts of belief in a leader are increasingly driven and enthusiastic to accomplish tasks regarding the prosperity of the firm. Chenhall, (2005) mentioned that staff’s trust in leader help in achieving the singular and firm objectives, involvement in problem resolving and creating inventive strategies. In
their empirical study, Taştan & Davoudi (2015) indicated that trust in administrative processes influenced the innovative behaviour of the public sector employees significantly. Furthermore, the studies that investigate trust in leaders and EIB give little explanation on the impact of workers’ trust of leadership on their innovative behaviour. Consequently, the accompanying hypothesis is proposed

H3. ST influences positively on EIB.

The mediating role of LMX between PSS and ST

Managers have a critical job in improving workers understanding of trust (Alharthi et al., 2019; Alkathiri et al., 2019a, 2019b; Whitener et al., 1998). According to Zhang et al., (2008), PSS was found to be a crucial antecedent in the improvement of trust among employees-supervisors. Additionally, they consider such supervisory support (SS) as a measure of the exchange relation among employees-supervisors. SS includes articulations of concern for staff prosperity and career advancement, and signals to workers the value of their work. Consequently, workers want to use exertion and exhibit ST (Holland et al., 2017). The improvement of the trust connection between the staff and the supervisor thus enables workers to make additional enthusiastic investments since they have built up the perceptions, because of the social exchange involvement, that such ventures will be reciprocated.

The advancement of the trust connection among the worker and the manager thus enables staff to make further enthusiastic speculations since they have built up the understanding, in light of the social trade-off, that such ventures will be rewarded. Consequently, the following hypothesis is proposed

H1b. LMX mediates the relationship between PSS and ST

The Relationship between PSS and EIB via LMX and ST

PSS discusses the degree to which employees see their managers as supportive, which depends on the favourability of the quick context made by their leaders which influences their achievement (Eisenberger et al., 2014). SS gives acclaim and reward for effort and excellent execution, responds positively to innocent oversights by subordinates, provides reasonable pay, and makes employees feel valued and significant (Eisenberger et al., 2014). SS show concern for the needs and feelings of employees, value their efforts, and consider their well-being; thereby promoting their perceived self-determination and intrinsic motivation (Huo et al., 2018).

The significance of SS for employee innovation is easy to understand. It tends to contend that by giving physical and passionate support to individuals in higher quality dyads, supervisors build up a situation that encourages innovation (Chen et al., 2016). No doubt by providing tangible help, supervisors makes it physically workable for subordinates to be inventive. By giving enthusiastic support, supervisors motivate employees to state their innovative ideas (Gharama et al., 2020b). Employees are bound to stray from the norm and behave innovatively if they think they won’t be punished for it. If supervisors can mollify their fears, employees are bound to be inventive (Chen et al., 2016). Hence, it is hypothesised as follows:

H1c. LMX and ST mediate the relationship between PSS and EIB.
The Research Methodology

Research model overview
In this study, the theoretical framework and relationships between variables of the model are extracted from the extent literature. Figure 1 illustrates the study model. Within the proposed model, it can be seen that LMX and ST, along with PSS predict EIB. These relationships are derived from (Li et al., 2017; Rhoades et al., 2001) for PSS, (Scandura et al., 1986) for LMX, (McAllister, 1995) for ST, and (Scott and Bruce, 1994) for EIB. The current study model investigates the causal relationships among PSS, LMX, and ST as predictable variables that explain the variance on EIB as an output variable among employees in Egyptian five-star hotels. According to the suggested model, there are five-hypotheses to examine.

![Figure 1. suggested study model](image)

Development of instrument
The data gathering tool in this study was developed in three stages. (1) Concerned with employees’ perceptions of perceived SS, perceived LMX, and perceived ST. This section was completed by front line hotel staff in the Egyptian hospitality sector. (2) Concerned with supervisors’ perceptions of EIB. This section was completed by the employee’s supervisor. (3), the participants (employees) were asked about the respondents’ profile (gender, age, education, and work experience). The data collection tool is separated into two sections. The first part of the questionnaire was distributed to the employees; and three months later, the second part was sent to and collected from the supervisors. These three months are given to the supervisors to allow them to observe their employees’ innovative behaviour (Dong et al., 2017; Liu et al., 2017, 2012; Wu et al., 2018). As the respondents were Arabic-speaking, it was imperative to translate the English questionnaire to Arabic and then translate it back to English (Brislin, 1970).

As per all questionnaire-based perception studies, a multi-item 7-point Likert scale (7=Strongly Agree; 1=Strongly Disagree) was implemented in this study (Lee et al., 2009) A pre-test piloted with 50 employees and supervisors from five-star hotels in Egypt to solve any wording or measurement ambiguities. Eventually, the measurements of the sample were checked on pilot to check their internal consistency.
Data collection

The researcher investigated 46 out of 76 five-star hotels in Cairo and Sharm El-Sheikh, Egypt, which had agreed to participate in the study. This study targeted all front-line employees, and 690 paired questionnaires were given out (15/hotels). Five hundred four valid questionnaires were received, which indicates a response rate of 73%. The concluding sample size was acceptable (Krejcie and Morgan, 1970; Tabachnick and Fidell, 2012), and 73% is an excellent response rate compared to similar studies in the relevant literature (Cable and DeRue, 2002).

Results

Descriptive Analysis

Out of 504 respondents, there were 61.9% male and 38.1% female employees. Around 40 per cent of them were in their twenties; followed by those in their thirties and forties (27% and 24.2% respectively). It was noted that the young and old employees were far less widespread in the Egyptian hospitality industry see Table 1. Also, employees with a bachelor’s degree dominate the front-line jobs in the industry, at some 60%, while those with a diploma degree accounted for 24.2%. Meanwhile, postgraduates accounted for a mere 15.2%. Surprisingly, more than 50.6% of employees had work tenure from 6 to 10 years; while less than 0.04% had work tenure over 20 years, see Table 1.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Respondents' profile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freq.</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>312</td>
</tr>
<tr>
<td>Female</td>
<td>192</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>40</td>
</tr>
<tr>
<td>21-30</td>
<td>171</td>
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<td>31-40</td>
<td>136</td>
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<tr>
<td>41-50</td>
<td>121</td>
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<tr>
<td>Over 50</td>
<td>76</td>
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<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>122</td>
</tr>
<tr>
<td>Graduation</td>
<td></td>
</tr>
<tr>
<td>Post-Graduation</td>
<td>78</td>
</tr>
<tr>
<td>Tenure</td>
<td></td>
</tr>
<tr>
<td>1-5</td>
<td>196</td>
</tr>
<tr>
<td>6-10</td>
<td>265</td>
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<tr>
<td>11-15</td>
<td>137</td>
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<tr>
<td>16-20</td>
<td>44</td>
</tr>
<tr>
<td>21-25</td>
<td>13</td>
</tr>
<tr>
<td>Over 25</td>
<td>5</td>
</tr>
</tbody>
</table>

Measurement model assessment

This current research utilised SEM (structural equation modelling) via PLS technique to test the model with SmartPLS-3.0 (Ringle et al., 2015). Then for the respondent profile analysis, the current study pursues two-stages of analytical methods suggested by (Hair et al., 2017), (1- measurement model and 2- hypotheses testing). As indicated by Schumacker & Lomax (2004) and Hair, Hult, et al. (2017), the two-stages analysis method, which incorporates measurements and structural model has an advantage over other techniques.
Construct reliability and validity (discriminant and convergent) were employed for the measurement model’s assessment. Cronbach’s alpha coefficients were implemented to quantity the constructs’ reliability. The finding of this study fluctuated from 0.867 to 0.947, which exceeded the recommended value 0.7 (Kannana & Tan, 2005; Nunnally & Bernstein, 1994). Furthermore, composite reliability (CR) for the current model’s constructs exceeded the recommended value (0.7) (Kline, 2010). Indicator reliability was tested by using factor loading. Factor’s high-loading show that indicators look to acquire ample in common, which is taken by the dimension (Hair et al., 2017). The indicators’ loading was higher than the recommended value, 0.5 for all items (see Table 2). The convergent validity was labelled as the degree to which a measure relates positively with alternate measures of the similar constructs. The AVE (average variance extracted) was implemented to quantity convergent validity for the current study. AVE measures achieved the suggested amount of (0.5) (Hair et al., 2017).

**Table 2**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicator</th>
<th>Loading (&gt; 0.5)</th>
<th>M</th>
<th>St. Deviation</th>
<th>α (&gt; 0.7)</th>
<th>CR (&gt; 0.7)</th>
<th>AVE (&gt; 0.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Supervisor Support</td>
<td>PSS1</td>
<td>0.891</td>
<td>4.071</td>
<td>0.887</td>
<td>0.901</td>
<td>0.930</td>
<td>0.770</td>
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<td></td>
<td>PSS2</td>
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<tr>
<td></td>
<td>PSS3</td>
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<tr>
<td></td>
<td>PSS4</td>
<td>0.864</td>
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<td>Supervisor Trust (ST)</td>
<td>ST1</td>
<td>0.822</td>
<td>4.442</td>
<td>0.978</td>
<td>0.867</td>
<td>0.904</td>
<td>0.652</td>
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<tr>
<td></td>
<td>ST3</td>
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<td>ST5</td>
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<td>Leader-Member Exchange (LMX)</td>
<td>LMX 1</td>
<td>0.886</td>
<td>4.144</td>
<td>0.926</td>
<td>0.948</td>
<td>0.957</td>
<td>0.762</td>
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<td>LMX 2</td>
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<td></td>
<td>LMX 3</td>
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<td>LMX 4</td>
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<tr>
<td></td>
<td>LMX 5</td>
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<td>LMX 6</td>
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<td></td>
<td>LMX 7</td>
<td>0.907</td>
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<tr>
<td>Employee Innovative Behavior (EIB)</td>
<td>EIB1</td>
<td>0.847</td>
<td>4.862</td>
<td>1.444</td>
<td>0.889</td>
<td>0.919</td>
<td>0.693</td>
</tr>
<tr>
<td></td>
<td>EIB2</td>
<td>0.832</td>
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<td>EIB3</td>
<td>0.827</td>
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<td></td>
<td>EIB5</td>
<td>0.837</td>
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</table>

Three criteria were implemented to assess the measurement model’s discriminant validity. They were cross-loading, Fornell-Larcker criterion and heterotrait-monotrait ratio (HTMT) (Hair et al., 2017). Table 3 shows the criterion of the cross-loading was fulfilled, as the outer-loading for each latent-variable was higher than the cross-loading with other measurements.
Table 3  
Cross loading results

<table>
<thead>
<tr>
<th>Constructs</th>
<th>EIB</th>
<th>LMX</th>
<th>PSS</th>
<th>ST</th>
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<tr>
<td>Employee Innovative Behavior</td>
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<tr>
<td>(EIB) EIB1</td>
<td><strong>0.847</strong></td>
<td>0.238</td>
<td>0.182</td>
<td>0.495</td>
</tr>
<tr>
<td>EIB2</td>
<td><strong>0.832</strong></td>
<td>0.211</td>
<td>0.195</td>
<td>0.487</td>
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<tr>
<td>EIB3</td>
<td><strong>0.827</strong></td>
<td>0.201</td>
<td>0.192</td>
<td>0.460</td>
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<tr>
<td>EIB4</td>
<td><strong>0.820</strong></td>
<td>0.202</td>
<td>0.193</td>
<td>0.466</td>
</tr>
<tr>
<td>EIB5</td>
<td><strong>0.837</strong></td>
<td>0.160</td>
<td>0.185</td>
<td>0.458</td>
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<tr>
<td>Leader-Member Exchange</td>
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<tr>
<td>(LMX) LMX1</td>
<td>0.242</td>
<td><strong>0.886</strong></td>
<td>0.365</td>
<td>0.524</td>
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<td>LMX2</td>
<td>0.215</td>
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<td>LMX3</td>
<td>0.234</td>
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<td>0.338</td>
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<td>LMX4</td>
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<td><strong>0.866</strong></td>
<td>0.291</td>
<td>0.459</td>
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<tr>
<td>LMX5</td>
<td>0.187</td>
<td><strong>0.864</strong></td>
<td>0.287</td>
<td>0.490</td>
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<td>LMX6</td>
<td>0.200</td>
<td><strong>0.858</strong></td>
<td>0.285</td>
<td>0.484</td>
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<tr>
<td>LMX7</td>
<td>0.206</td>
<td><strong>0.907</strong></td>
<td>0.334</td>
<td>0.510</td>
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<tr>
<td>Supervisor Trust</td>
<td></td>
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<tr>
<td>(ST) ST1</td>
<td>0.457</td>
<td>0.477</td>
<td>0.187</td>
<td><strong>0.822</strong></td>
</tr>
<tr>
<td>ST2</td>
<td>0.471</td>
<td>0.433</td>
<td>0.220</td>
<td><strong>0.809</strong></td>
</tr>
<tr>
<td>ST3</td>
<td>0.446</td>
<td>0.472</td>
<td>0.187</td>
<td><strong>0.793</strong></td>
</tr>
<tr>
<td>ST4</td>
<td>0.420</td>
<td>0.409</td>
<td>0.170</td>
<td><strong>0.798</strong></td>
</tr>
<tr>
<td>ST5</td>
<td>0.498</td>
<td>0.455</td>
<td>0.227</td>
<td><strong>0.816</strong></td>
</tr>
<tr>
<td>Percieved Supervisor Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PSS) PSS2</td>
<td>0.178</td>
<td>0.351</td>
<td><strong>0.888</strong></td>
<td>0.239</td>
</tr>
<tr>
<td>PSS3</td>
<td>0.225</td>
<td>0.294</td>
<td><strong>0.866</strong></td>
<td>0.187</td>
</tr>
<tr>
<td>PSS4</td>
<td>0.211</td>
<td>0.302</td>
<td><strong>0.864</strong></td>
<td>0.213</td>
</tr>
<tr>
<td>PSS1</td>
<td>0.190</td>
<td>0.330</td>
<td><strong>0.891</strong></td>
<td>0.221</td>
</tr>
</tbody>
</table>

The fulfillment of discriminant validity was achieved according to the displayed results of Fornell-Larcker’s Criterion. As shown in Table 4, the bolded values of the AVEs in the diagonals are higher than the correlation between variables (Fornell and Larcker, 1981).

Table 4  
The model Discriminant validity

<table>
<thead>
<tr>
<th>Constructs</th>
<th>AVEs values</th>
<th>HTMT results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1 EIB</td>
<td><strong>0.833</strong></td>
<td></td>
</tr>
<tr>
<td>2 LMX</td>
<td>0.244</td>
<td><strong>0.873</strong></td>
</tr>
<tr>
<td>3 PSS</td>
<td>0.227</td>
<td>0.365</td>
</tr>
<tr>
<td>4 ST</td>
<td>0.569</td>
<td>0.557</td>
</tr>
</tbody>
</table>

Key: PSS: Percieved Supervisor Support, ST: Supervisor Trust, LMX: Leader Member Exchange, EIB: Employee Innovative Behavior

According to (Henseler et al., 2015), Fornell-Larcker’s criterion in the situations of mutual study does not precisely uncover the absence of discriminant validity. HTMT (Heterotrait–Monotrait Ratio) method was introduced by (Henseler et al., 2015). Fornell-Larcker criterion received some criticism by Henseler et al. (2015) who stated
that it does not uncover the absence of discriminant validity in mutual study situations. They suggested a new method which is the heterotrait-monotrait ratio (HTMT) of correlation being dependent on the multitrait-multimethod matrix. The current research implemented HTMT to assess the discriminant validity. According to Gold, Malhotra & Segars, (2001) HTMT values needs to be less than 0.90. Kline (2010) suggested HTMT values of less than 0.85. The current study’s values were lower than the recommended value (0.85) (Table 4).

The model hypotheses testing
The Beta, r2, f2, Q2 and t-values through the bootstrapping process were observed to assess the study’s structural model (Hair et al., 2017).

**Hypotheses testing**
The study’s model assessment illustrates the assessment’s results of hypotheses (Figure 2 & Table 5), with 3 out of the three direct propositions are accepted. PSS significantly predicts LMX. Henceforth, H1a is supported with (β=0.365, t=8.403, p<0.001). LMX significantly predict ST. Hence, H2 is accepted with (β=0.557, t=17.207, P<0.001). ST significantly predicts EIB. Therefore, H3, is accepted with (β=0.569, t=13.885, P<0.001). PSS, LMX, and ST are explaining 32.3 % of the variance in EIB. According to Cohen, (1988) and Chin, (1998b) The explanatory power level of the values of r2 was good, (Cohen (1988) and Chin (1998), highlighting a moderate model.

According to Gefen & Rigdon, (2011), The effect sizes (f2) to show the effect of exogenous on the endogenous. This study followed Cohen (1988) guidelines to test f2’s magnitude. The results indicate those two associations with huge effect size and one have a moderate effect.

Further, blindfolding procedure was implemented to measure the power of the predictive relevance. The implementation of this procedure is for endogenous latent variables with a reflective measurement (Hair et al., 2017). The existence of the predictive relevance of the proposed model if the Q2 values are greater than zero (Hair
et al., 2017). The finding for this study indicates that the predictive relevance is medium.

**Table 5**
Path analysis finding

<table>
<thead>
<tr>
<th>H</th>
<th>Relation</th>
<th>β</th>
<th>Error</th>
<th>t-value</th>
<th>P Value</th>
<th>Finding</th>
<th>R²</th>
<th>f²</th>
<th>Q²</th>
<th>(VIF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>PSS -&gt; LMX</td>
<td>0.365</td>
<td>0.043</td>
<td>8.403</td>
<td>0.000</td>
<td>Supported</td>
<td>0.134</td>
<td>0.154</td>
<td>0.100</td>
<td>1.444</td>
</tr>
<tr>
<td>H2</td>
<td>LMX -&gt; ST</td>
<td>0.557</td>
<td>0.032</td>
<td>17.207</td>
<td>0.000</td>
<td>Supported</td>
<td>0.310</td>
<td>0.450</td>
<td>0.200</td>
<td>1.00</td>
</tr>
<tr>
<td>H3</td>
<td>ST -&gt; EIB</td>
<td>0.569</td>
<td>0.041</td>
<td>13.885</td>
<td>0.000</td>
<td>Supported</td>
<td>0.323</td>
<td>0.478</td>
<td>0.222</td>
<td>1.242</td>
</tr>
<tr>
<td>H1b</td>
<td>PSS -&gt; LMX -&gt; ST</td>
<td>0.204</td>
<td>0.027</td>
<td>7.612</td>
<td>0.000</td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1c</td>
<td>PSS -&gt; LMX -&gt; ST -&gt; EIB</td>
<td>0.116</td>
<td>0.018</td>
<td>6.344</td>
<td>0.000</td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key:** PSS: Perceived Supervisor Support, ST: Supervisor Trust, LMX: Leader Member Exchange, EIB: Employee Innovative Behavior

Based on the analysis of bootstrapping, LMX significantly mediates the relationship between PSS and ST with (β=0.204, t=7.612, P<0.001). Hayes & Preacher (2014) recommended the existence of mediating effect when the influence of PSS on ST via LMX with boot-95% CI: [LL=0.149, UL=0.247], does not straddle a zero in between (H1b supported). In the same way hypothesis H1c was supported; the bootstrapping’s results illustrated that the indirect relationship between PSS and EIB via LMX and ST was significant with (β=0.116, t=6.344, P=<0.001) and Boot CI: [LL = 0.088, UL = 0.162].

**IPMA (IMPORTANCE-PERFORMANCE MAP-ANALYSIS)**

IPMA was implemented as a post-hoc technique within SMART-PLS3 for EIB the dependent variable of the study. Mainly the concern of IPMA is to predict the total effect (TE) introduced by the former constructs’ importance in reforming the latent dependent variable (EIB), while the average of the construct scores introduce their performance (Hair et al., 2017). The index values calculation was achieved by ordering the variables’ scores to a scope of 0-100 (Hair et al., 2017). As indicated by Ringle & Sarstedt (2016), IPMA enhances the analysis of PLS findings. Rather than just analysing the path coefficient, it also considered the constructs’ average value and the average indicator values (Table 6).

**Table 6**
IPMA for Employee Innovative behavior (EIB)

<table>
<thead>
<tr>
<th>Latent constructs</th>
<th>Total effect of the construct EIB (Importance)</th>
<th>Index values (Performance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader Member Exchange (LMX)</td>
<td>0.317</td>
<td>52.399</td>
</tr>
<tr>
<td>Perceived Supervisor Support (PSS)</td>
<td>0.116</td>
<td>51.221</td>
</tr>
<tr>
<td>Supervisor Trust (ST)</td>
<td>0.569</td>
<td>57.391</td>
</tr>
</tbody>
</table>
The total importance and performance scores are plotted in Figure 3 in a priority map. The finding showed that ST is a very significant variable in increasing EIB because of its importance scores compare to other variables. Also, the performance of this significant factor (ST) is higher than the LMX and PSS. IPMA’s main objective is to define the predecessors that possess higher scores on the outcome variable, but also a relatively lower performance (Hair et al., 2017). The perspectives underlying these constructs introduce a potential area of enhancement that may get high consideration. In aggregate, to improve the EIB, the managerial processes need to focus on upgrade the performance of ST.

![Image of priority map showing PSS, LMX, and ST performance and importance scores.]

**Key:** PSS: Perceived Supervisor Support, ST: Supervisor Trust, LMX: Leader Member Exchange, EIB:

**Figure 3.** IPMA for Employee Innovative Behavior

**Discussion and Implications**

The present research shows that perceived support from supervisors has a significant indirect impact on the innovative behavior of hotel employees. PSS influences the EIB indirectly by the mediation of LMX and ST variables. The EIB directly correlates with ST and relates indirectly to PSS and LMX. Henceforth, increased PSS will affect in improved LMX and ST, which in turn increase EIB. The identification of LMX and ST to mediate the causal relation between PSS and EIB allow the management of five-star hotels in Cairo and Sharm El-Sheik to establish effective techniques for improving the conduct of supervisors inside hotels. According to the model presented, the existing research adds to the knowledge about the important role that LMX, ST and PSS play in encouraging employee innovative actions in five-star hotels in Egypt. It also outlines the related managerial and policy implications. The study revealed that PSS positively affects LMX among employees in Egyptian hotels; which is supported by previous studies (Gu et al., 2015; Mahsud et al., 2010; Walumbwa et al., 2011). To enhance PSS, to gain trust and confidence between employees, hotel management can create projects and practices that support that goal. The best way to decrease turnover among hotel staff is to raise the level of employee-leader trust and make the staff love their jobs. Additionally, hotel supervisors should set a good example by adhering to the organisational standards so that followers feel a sense of loyalty and achievement. The character-modelling for administration-level services is to increase trust and esteem from the subordinates. PSS is considered one of the vital supervisor practices to positively increase staff’s LMX and ST while increases EIB indirectly.
Along with concentrating on improving PSS, the hotel management should also stretch deliberation to further antecedents of high LMX and high ST to improve EIB. To promote loyalty hotel supervisors should support staff in their objectives and those of the hotel by implementing the strategy of management by objectives. Furthermore, the investigation revealed that LMX significantly influences employee trust of their supervisors; this is in line with earlier studies (Jada and Mukhopadhyay, 2018; Mahsud et al., 2010). Lim, Loo, & Lee (2017) stressed the importance of working to enhance the company’s favorable feelings and inspirations. Supervisors have to provide appropriate working conditions for the staff members to feel a sense of purpose in the workplace.

Also, ST significantly influences EIB among workers in the Egyptian five-star hotels; this is supported by existing academic writing (Aydogdu and Asikgil, 2011; Jang and Kandampully, 2018; Joo, 2010; Lim et al., 2017; Mowday et al., 1982; Newman et al., 2011; Porter et al., 1974; Tarigan and Ariani, 2015). In order to achieve an advantage over competition in the hotel industry, the management must consider the market behaviour as it is perceived as more predictable and less susceptible to natural volatility than job satisfaction (Joo, 2010). The more ST the workers are becoming, the more likely they are to achieve ideal quality and not just meet minimum standards. Employees involved in the jobs are therefore less likely to abandon the workplace (Lim et al., 2017). The mentoring and coaching sessions play a part in improving PSS and ST. When employee empowerment is reflected in objectives, and decision-making increases worker satisfaction and commitment; ideally, hotel supervisors should introduce a system that allows employees to provide criticism and feedback so that they have a voice in the institution.

The current study explains the causal connections in five-star hotel workers and suggests that PSS, LMX, and ST are essential factors that indirectly influence these significant job consequences. This idea may be of interest to researchers intrigued by employee innovation. Furthermore, the explained variance with the existing study’s model for EIB is 32.3%. Therefore, hotel managers who need to develop stronger LMX and ST among the lodging staff should take steps to affirm a higher PSS (Schwepker Jr, 2001). This is demonstrated by the fact that PSS improves the EIB for hotel workers (Brown et al., 2005; Brown and Treviño, 2014, 2006), and it will improve organisational performance by enhancing subordinates’ relationship with their supervisors, along with their sense of attachment to the organisation.

This research is critical for hotel professionals, as it shows the value of LMX, PSS and ST. The competitiveness of the hospitality industry highlights the crucial importance of EIB in the dynamic market environment. Service managers can inspire hotel staff to create new techniques to attract and retain customers. The latest findings suggest that PSS, LMX and ST are critical to improving employee innovative behaviors. The order of this series would allow hotels to stress even the moral-person and moral-manager aspects of supervisors.

Furthermore, administrators ought to give their staff adequate independence to do their job viably and attentively, express more trust in the capacities and abilities of supervisors to make progress in a profoundly challenging workplace. Such techniques can assist with the growth of LMX and ST, along these lines guaranteeing that every
representative can benefit as much as possible from their aptitude to manage different client issues, needs, and work difficulties, hence producing creative habits.

Besides, to increase the trust of supervisors among employees, managers need to monitor the supervisors with a low level of confidence. The results predict that trust in the supervisor can be a powerful technique to predict an employee’s innovativeness. Low trusted supervisors should undergo proper training to enhance their capabilities and gain their subordinates’ trust. The literature recommends that hotels need to invest in developing supervisors interpersonal skills because staff are more creative when they respect and trust their supervisor (Dhar, 2016). Human resource managers should then follow up and measure the staff perceptions of supervisors to assess the efficiency of the training courses.

**Future work suggestions and limitation of the study**

The first limitation relates to the generalisation of the research results; the specific target sample size of this research comprised staff working only in Egyptian hotels. Another limitation is that the investigation is limited by the influence of PSS. Therefore, the study may miss other external factors that might have an impact on EIB. Further research is required to investigate the influence of external factors such as culture, promotion opportunity, and working environment. Moreover, the removal of other hotel resources like finance represents another limitation of the model. Whereas these tools are important for organizations in the effective execution of their capacity-building approaches, it was decided that taking into account certain facets of the hotel in the model would have resulted in increasingly needless intervention with the concept and would have hampered the study’s main emphasis.

**References**


Ringle, C.M., Sarstedt, M., 2016. Gain more insight from your PLS-SEM results: The


الدور الوسيط للثقة في المشرف والعلاقة التبادلية بين القادة والمرؤوسين: التحقق من دور دعم المشرف في السلوك الابتكاري للعاملين
جمال خليفة
قسم الدراسات الفندقية، كلية السياحة والفنادق، جامعة الفيوم.

الملخص
صناعة الضيافة تنافسية للغاية، ويلعب السلوك الابتكاري للموظفين دورًا أساسًا في تحقيق ما إذا كانت الفنادق ستتجو أو تنمو أو تحقق ميزاً تنافسيًا. ييطبق هذا البحث نموذج المعادلات الهيكلية عبر SMART-PLS3 لتحليل 504 استبيانات صالحة لتحديد العلاقة بين دعم المشرف المدرِّك (PSS) والثقة في المشرف (ST) والعلاقة التبادلية (LMX) بين القادة والموظفين (EIB) مع السلوك الابتكاري (EIB). توضح الدراسة العلاقات بين المتغيرات المختلفة للدراسة، وقد عززت الدراسة فهما لمهموه السلوكيات مثيرة للدراسة، وقد أظهرت النتائج أن دعم المشرف المدرِّك له تأثير مباشر على السلوك الابتكاري للعاملين من خلال علاقة التبادلية بين القادة والموظفين والثقة في المشرفين. أوضح نموذج البحث المقترح أن التغيير الناتج عن عوامل الدراسة في المتغير التابع (السلوك الابتكاري للموظفين) هو 32.3%.

الكلمات المفتاحية
دعم المشرف المدرِّك؛ السلوك الابتكاري للعاملين؛ الثقة في المشرف؛ العلاقة التبادلية بين القادة والمرؤوسين؛ الفنادق.