An investigation of the relationship between workplace practices and firm performance: evidence from hotel industry, China

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Abstract: Sustainable success and firm performance (FP) in the hotel industry highly depends on customer loyalty and workplace practices. However, the role of information technology (IT) in workplace practice’s effectiveness and FP is not much investigated. The objective of the present study is to investigate the relationship between workplace practices [low transaction cost (LTC), tangible and intangible service (TIS), and customer oriented approach (COA)] and customer oriented approach (COA) and FP in the hotel industry, China, and mediating role of IT. Through convenience sampling technique, out of 280, 192 workers returned complete and properly filled questionnaires. Partial least squares, structural equation modelling approach is used. The findings confirm that workplace practices (LTC, TIS, and COA) have a significant relationship with FP and IT partially mediates this relationship. Importance-performance matrix analysis highlights the ‘COA’ as a most important practice to enhance the FP. Limitations and future research directions are discussed in the last section of the study.

Keywords: workplace practices; transaction cost; tangible and intangible services; customer satisfaction; PLS-SEM; firm performance; information technology; IPMA; hotel industry; China.


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1 Introduction

Highly competitive environments in every industry compel the managers to think ‘how to compete’. Do the improved workplace practices confirm the better firm performance (FP)? Does information technology (IT) really support workers efficiently to enhance their productivity and the FP? Does IT really facilitate to the customers? These kinds of questions rise in every manager’s mind that faces competition. These questions become more perilous when a manager performs in services-oriented industry such as hotel, banking and transportation, etc. Several scholars’ recommended that innovative workplace practices and technologies may helpful to enhance the FP, especially the financial performance of the firm (Martínez et al., 2016; Phiri and Fang, 2013). The fastest growing and developing economies such as China and India, where competition is increasing day by day, managers may need more effective workplace practices and efficient technologies to enhance the FP.

In the 21st century, the hotel industry is considered one of the key services-oriented industries in the world (Kandampully and Suhartanto, 2000). Hotel industry performs a vital role not only in the growth of the business sector but also in the economic development of any country. China is the second biggest economy of the world and hotel industry of China exceptionally served to the international business community and tourists from last few decades. The hotel industry in China was not much developed to meet the international standards in the past (Zhang et al., 2005). In the 1980s, China realised the significance of hotel industry in economic growth and then Chinese Government designed a roadmap for its development (Chon et al., 2003). After a consistent focus and reforms by Chinese Government not only the Chinese hotel industry boosted up, but also the tourism industry of China got new dimensions (Chon et al., 2003).

In the late 1980s, first-time ‘star rating system’ was introduced in the hotel industry of China. This innovative system provided advance comparison criteria and organised competitive atmosphere among hotel firms in China. As growth in other industries in
China, a number of hotels also increased about 20%, 31.2% and 57.99% in 1991, 1994 and 2000 respectively (Gu et al., 2012). In 2010, 6.15% decline was observed in a total number of hotels because of international financial crises (Gu et al., 2012). This financial and economic recession wave triggered the competition among remaining hotel firms in China. In this competitive situation, how a hotel firm can take a competitive advantage is really a challenging question.

The focus of the present study is to suggest a way enhancing the hotel firm financial performance in China. In literature, different workplace practices are used to increase the FP and up to some extent, they are successful (Chathoth, 2007; Phiri and Fang, 2013). However, it is not clear which workplace practices are more significant and how a hotel firm can increase the effectiveness of those workplace practices to enhance the financial performance. Several scholars suggested that advanced and real-time IT applications may helpful to enhance the FP and customer satisfaction (Connolly et al., 2001; Phiri and Fang, 2013; Siguaw et al., 2000). In other words, effective management information system (MIS), real-time and online booking facility, 24/7 online availability of front office and comprehensive information regarding customer needs increase the customer satisfaction level and hotel FP (Berezina et al., 2015; Piccoli et al., 2017).

By considering previous studies regarding workplace practices and IT role to enhance the FP, the aim of present study is to investigate that 'what is the relationship between workplace practices and FP and how IT mediates the relationship between workplace practices and firm financial performance?' The contribution of the present study is four-fold. First, with the support of literature, it proposes a framework of workplace practices to enhance the FP. Second, it empirically investigates the effect of proposed workplace practices on firm financial performance in the context of the hotel industry, China. Third, empirical investigation of IT as a mediator between the relationship of workplace practices and FP. Fourth, through ‘importance-performance matrix analysis’ (IPMA), the present study highlights the most important workplace practice to enhance firm financial performance in the context of the hotel industry, China.

2 Theoretical background and hypothesis development

2.1 Low transaction cost

Low-cost transactions with better quality always attract to the customers and in result increase the FP (Pereira-Moliner et al., 2012). Jones (1987) defined ‘transaction’ as the transfer of goods and services across the firm boundary. Transaction cost theory enlightens the significance of cost which is linked to the exchange process. Transaction cost theory describes micro and the macro level relationship between groups which are interlinked with the exchange process of the firm (Nas, 2016; Williamson, 1973). At the macro level, it discusses the reduction in transition cost which associates with a choice of the firm, market classification and hybrid types of organisations with traditional perspectives (Williamson, 1973, 1991). However, at the micro level, it focuses on the types of the transaction cost within the firm (Stiles et al., 2001; Willcocks and Lacity, 2016). Scholars explained that the micro concept of the transaction cost inside the firm which relates to customers, firm and management level (Chathoth, 2007; Stiles et al., 2001). Altogether, it is clear that the transaction cost directly affects the FP.
Scholars described that IT plays a significant role in the hotel industry and FP (Melián-González and Bulchand-Gidumal, 2016; Siguaw and Enz, 1999). IT with its multiple uses and cost efficiency (Zimmermann and Rentrop, 2014) in the hotel industry is very common in all over the world like the USA and other developed countries (Siguaw et al., 2000). In the hotel industry, the transaction starts with the reservation process and the first step is pre-reservation. Traditionally, customers who require hotel reservation contact with the hotel management through telephone/personal approach or ask their agents to get the information for the reservation. Sometimes, customers also get information through online (website) regarding reservation. Direct access to the customers at the interface of the online system from the hotel not only increases customer satisfaction, but also decreases the transaction cost (Chathoth, 2007; Wang et al., 2012).

All large chains in the hotel industry are shifted or shifting to IT-based automated reservation and marketing system (Sigala et al., 2001). Previous studies have confirmed that IT improves the efficiency and effectiveness of hotel operations and increases the customer satisfaction level (Law and Jogaratnam, 2005). Wang et al. (2015) and others argued that the contents of IT-based instruments (website) affect the online reservation performance. Hotels offer two ways (front desk and online automated system) for check-in (registration) and transaction confirmation. Front desk staff is available for customers, to help them in getting information, reservation and transaction confirmation. In the second option, firms offer an online automated system where customers can get the information, reservation and transaction confirmation without the help of the front desk. The first option has a high transaction cost to the firm and also a difficult and time-consuming process for the customers; however, the second option creates a win-win situation for the hotel as well as for customers by saving cost and time (Bergen and Ridder, 2004; Willcocks and Lacity, 2016). Chathoth (2007) confirmed that IT-based reservation system decreases the transaction cost and improves customer satisfaction and FP. Several authors confirmed that low transaction cost (LTC) has a positive relationship with FP (Crook et al., 2013; Wacker et al., 2016). Therefore, it is proposed that:

H1a LTC has a positive association with firm financial performance.

H1a IT mediates the association between LTC and firm financial performance.

2.2 Tangible and intangible services

According to the internal marketing theory, the satisfaction of internal customers (employees) impacts on the satisfaction of external customers (buyers) (Awan et al., 2015). Customers’ satisfaction directly affects the firm financial performance. Internal customers are ready to ‘go the extra mile’ for the external customers’ satisfaction and increase in the FP. High motivation level of employees energises them to deliver not only high quality, tangible (facilities that customers can touch and feel, i.e., room, furniture, etc.) (Manhas and Tukamushaba, 2015) and intangible (customers cannot touch and feel, i.e., fast food delivery, decoration of the hotel, peaceful environment) (Chathoth, 2007; Sadeh, 2003; Yu et al., 2013) services but also increase the FP.

Tough rivalry in hotel industry enforces the hotel management to offer innovative and suitable tangible and intangible service (TIS). Service firms are always in a struggle to sensible diagnosing the market trends and changing the behaviour of customers. However, the decision-making regarding future services depends on available information and behaviour of the customers and market behaviour. IT can play a
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significant role to develop and manage the information system of the firms (Berezina et al., 2015; Connolly et al., 2001). Through an effective MIS, a hotel can take the best decision to offer TISs and may uplift the sales trend of the firm (Sadeh, 2003). Customers’ satisfaction is regarding intangible services like the decoration of the room, colour sense and design motivates them for future visits and indirect marketing of the hotel. MIS can be used for data analysis based on customers’ feedback and preferences. This analysis will be helpful to adopt customers’-oriented services (Berezina et al., 2015; Chathoth, 2007). With improved intangible and tangible services, customer loyalty towards the firm will be increased (Tamwatin et al., 2015).

IT plays an important role in improving the performance of hotel services and customer satisfaction (Prasad et al., 2014). For instance, record keeping of the customers through IT, drinks and food facilities at specific locations in the hotel can be offered through IT-based electronic machines. It will help to maintain a record of expected future/seasonal visits of the customers (Domke-Damonte and Levens, 2002). Online ‘check out system’ minimises the queue at the front desk, increases customer satisfaction and hotel performance and decreases the hotel operational activities (Berezina et al., 2015; Melán-González and Bulchand-Gidumal, 2016). Several scholars confirmed that TIS with innovative technology can enhance FP (Prasad et al., 2014; Ramanathan et al., 2016). Tamwatin et al. (2015) and other researchers concluded that high quality, TIS have a positive impact on customer and FP (Manhas and Tukamushaba, 2015; Yu et al., 2013). With reference to internal marketing theory and above-mentioned references, it is hypothesised that:

H2a Better TIS have a positive association with FP.
H2b IT mediates the association between TIS and FP.

2.3 Customer-oriented approach

In literature, various theories are discussed regarding customer satisfaction in different perspectives. Assimilation theory: post use of a product or service evaluation based on the expectation and the actual product or service performance which determines the satisfaction level of employees (Della Corte et al., 2015). Cue utilisation theory: it suggests that every product and service have internal and external cues which determine its quality and customer satisfaction level (Kassinis and Soteriou, 2015). Disconfirmation theory: it defines the direction and impact of disconfirmation by comparing the expectations and performance of the services (Jalilvand, 2017; Oliver, 1981). Impact and direction of post experience disconfirmation lead toward the customer satisfaction level. The authors relate disconfirmation theory with IT in the context of hotel industry (Zehrer et al., 2011). Equity theory: it explains customer satisfaction that reward to the customer should be equal to his investment and expectations (Wu and Ding, 2015). Customised services minimise the gap between customer expectations and service performance (Yinan et al., 2014). A decrease in the gap between expectation and performance helps to increase the FP. Previous studies suggest that customer satisfaction is directly related to the desires of the customer (Piccoli et al., 2017; Schneider et al., 1999). Administration of the firm should focus on customers’ satisfaction through better performance in services (Kumar et al., 2001). For competitive advantage, a services firm should find the ways to make customer delight and surprise. Customer satisfaction leads toward betterment in
firm financial performance. Customer-oriented approach (COA) is an ultimate requirement for customer satisfaction and better FP.

IT can perform a significant role to implement the COA and increase in firm financial performance (Piccoli et al., 2017). Open feedback from customers and employees through MIS can be very helpful to design the customised services package for customer satisfaction. MIS can be helpful for customers’ happiness and surprises. For instance, birthday wish, discount offer messages and token gifts, etc. (Li et al., 2015; Schneider et al., 1999). Several authors explain the relationship between IT, customer satisfaction and firm financial performance in the hotel industry (Hua et al., 2015; Velázquez et al., 2015). Several authors described that customer focused operational and marketing practices have a positive effect on FP (Tajeddini, 2010; Tang, 2014; Vega-Vázquez et al., 2016). Customer orientation affects the market performance of a hotel through the expansion of service abilities (Tang, 2014). Josiassen et al. (2014) suggested that hotels should improve customer relationship management capabilities because it has a positive effect on firm financial performance. In a recent meta-analysis of ‘tourism performance measurement by combining tourism and hospitality research’, it is also confirmed that customers-oriented workplace practices have a positive effect on FP in the hotel industry (Jalilvand, 2017; Piccoli et al., 2017; Sainaghi et al., 2017). Thus, it is proposed that:

H3a  COA has a positive association with FP.
H3b  IT mediates the association between COA and FP.

2.4  Research model

\[
\text{FP} = \beta_0 + \beta_1 \text{LTC} + \beta_2 \text{TIS} + \beta_3 \text{COA} + \mu \quad \text{(direct effect)}
\]

\[
\text{FP} = \beta_0 + \beta_1 \text{LTC} \ast \text{IT} + \beta_2 \text{TIS} \ast \text{IT} + \beta_3 \text{COA} \ast \text{IT} + \mu \quad \text{(mediating effect of IT)}
\]

FP = firm performance, LTC = low transaction cost, TIS = tangible and intangible services, COA = customer-oriented approach, IT = information technology.

3  Research methodology

3.1  Context and sample

In this study, we used ‘convenience sampling technique’ and selected 280 employees from the hotel industry (Beijing, China) of different management cadres as the sampling unit. All participants selected with minimum experience of three years and currently working on some supervisory level. For the convenience of the participants, we designed a bilingual questionnaire (English and Chinese). Through an administrative survey approach, key content of the questionnaire also briefed to the employees. Personal contact and e-mail-based approaches were used to contact the employees and collection of data. We spent four months in data collection and only 192 participants sent back properly filled and complete questioner; therefore, the response rate was 68%.
3.2 Common method bias

We used classical survey process and statistical control method to curtail the common method bias issues (Bari et al., 2016; Chung et al., 2015). After statistical analysis (factor analysis), we confirmed that there are no common method bias issues in the data.

3.3 Constructs measurement

All constructs are evaluated through a structured questionnaire adapted from different previous studies with some amendments by considering the present paper objectives and context. The following items are designed to measure employees’ perceptions about FP with and without IT services. All constructs and their items are premeditated at five points Likert-type scale where ‘1’ linked to ‘strongly disagree’ and ‘5’ linked to ‘strongly agree’. To what extent do you agree or disagree with the statements used in the following constructs:

- **LTC:** The questions of this construct are adopted from the scales developed by Kim and Li (2009) and Liang and Huang (1998). This construct consists of 04 items with Cronbach’s alpha value 0.833.
- **TIS:** The questions of this construct are adopted from the scale developed by Albayrak et al. (2010). TIS construct consists of four items with Cronbach’s alpha value 0.790.
- **COA:** The questions of this construct are adopted from the scale developed by Saxe et al. (1982). This construct consists of four items with Cronbach’s alpha value 0.815.
- **IT:** IT is measured in five dimensions (online booking and registration, front office and back office applications, guest-related interface applications and management system). The questions of this construct are adopted from the scales developed by Ham et al. (2005). IT construct consisting of five items with Cronbach’s alpha 0.872.
- **FP:** FP is measured on financial dimensions, i.e., growth in sales, profit margin, operating profit and return on investments. The questions of this construct are adopted from the scale developed by Ramanathan et al. (2016). FP construct consists of five items with Cronbach’s alpha value 0.868.

3.4 Structural equation modelling (SEM-PLS)

Stoelting (2002) explained that structural equation modelling (SEM) or path analysis based upon a linear equation system. It is useful in the investigation of the causal relationship between two or more than two variables. The key factor behind the success of SEM is a measurement of latent variables as well as testing the relationship between latent variables simultaneously (Hair et al., 2016). Among 2nd generation multivariate data analysis methods, SEM is the most popular statistical technique. SEM is likewise helpful in exploratory (theory development) as well as confirmatory studies (theory
verification) (Hair et al., 2016). Kyei-poku (2002) highlighted that partial least squares, structural equation modelling (PLS-SEM) provides four main benefits to the researchers which include explicitly hypothesised relationships, a high degree of accuracy is supplementary to theory, the full picture of complex models are permitted and a proper framework for developing and verifying theories and constructs (Hair et al., 2016).

SEM simultaneously helps to estimate and examine the research model through the collected data (Sarstedt et al., 2014). PLS-SEM is an appropriate substitution of covariance-based SEM (CB-SEM) to estimate the theoretically justified cause-effect relationship models, especially when the data is based on perception (Hair et al., 2013). The present study uses PLS-SEM through Smart PLS-3 to confirm the hypotheses as suggested and employed in many previous studies (Hair et al., 2013; Reimann et al., 2010; Sarstedt et al., 2014). PLS-SEM is a suitable methodology for a complex research model as in this study direct and indirect relationships between dependent and independent constructs need to be measured. Smart-PLS is a comparatively good tool for small data (N = 192).

4 Results and analysis

PLS-SEM comprises with two-step approach to measure the study model, model assessment and model evaluation.

4.1 Model assessment

4.1.1 Indicator reliability, internal consistency reliability and convergent validity

Table 1 explains that all 22 indicators of five constructs have individual indicator reliability values (outer loadings) that are close to or higher the preferred level of 0.70. Composite reliability (CR) is used to measure the internal consistency reliability of the model. Several scholars (e.g., Hair et al., 2013; Sarstedt et al., 2014) recommended CR as a substitute technique of Cronbach’s alpha for the measurement of internal consistency reliability. Hair et al. (2013) explained that during exploratory research, values of CR between 0.6–0.7 are considered acceptable, values between 0.70–0.95 are good and exceeding 0.95 are problematic (Lin et al., 2016). In Table 1, all values of CR are meeting the required criteria which indicate the internal consistency reliability of the model. Convergent validity determines the degree to which a variable converges with its indicators by enlightening the items’ variance through the average variance extracted (AVE). Table 1, explains that AVE values of all constructs are above from the threshold level of 0.5 (Hair et al., 2013; Lin et al., 2016).

4.1.2 Discriminant validity

We used two methods to measure the discriminant validity of this study model. First, as per Fornell-Larcker criterion, the square roots of AVE in each latent construct determine the discriminant validity, if this value is higher than the correlation values with all other latent constructs (Fornell and Larcker, 1981; Lin et al., 2016). Table 2 depicts that
discriminant validity for all constructs has been established. Second, heterotrait-monotrait ratio (HTMT) is an alternative approach to assessing the discriminant validity of the model. As depicted in Table 2, if the HTMT values are less than 0.90, it indicates that discriminant validity has been established between two reflective variables (Henseler and Sarstedt, 2013).

**Table 1** Model measurement

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>OLs</th>
<th>CR</th>
<th>AVE</th>
<th>$R^2$</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTC</td>
<td>LTC-1</td>
<td>0.858</td>
<td>0.886</td>
<td>0.661</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTC-2</td>
<td>0.816</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>LTC-3</td>
<td>0.811</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTC-4</td>
<td>0.763</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIS</td>
<td>TIS-1</td>
<td>0.742</td>
<td>0.862</td>
<td>0.610</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>TIS-2</td>
<td>0.737</td>
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<td></td>
<td>TIS-3</td>
<td>0.797</td>
<td></td>
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<tr>
<td></td>
<td>TIS-4</td>
<td>0.842</td>
<td></td>
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<tr>
<td>COA</td>
<td>COA-1</td>
<td>0.761</td>
<td>0.878</td>
<td>0.644</td>
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<tr>
<td></td>
<td>COA-2</td>
<td>0.821</td>
<td></td>
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<tr>
<td></td>
<td>COA-3</td>
<td>0.803</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>COA-4</td>
<td>0.823</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td>IT-1</td>
<td>0.807</td>
<td>0.901</td>
<td>0.661</td>
<td>0.661</td>
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<tr>
<td></td>
<td>IT-2</td>
<td>0.827</td>
<td></td>
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<tr>
<td></td>
<td>IT-3</td>
<td>0.770</td>
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<tr>
<td></td>
<td>IT-4</td>
<td>0.803</td>
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<tr>
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<td>IT-5</td>
<td>0.857</td>
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<tr>
<td>FP</td>
<td>FP-1</td>
<td>0.833</td>
<td>0.900</td>
<td>0.661</td>
<td>0.714</td>
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<td></td>
<td>FP-2</td>
<td>0.814</td>
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<td></td>
<td>FP-3</td>
<td>0.734</td>
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<tr>
<td></td>
<td>FP-4</td>
<td>0.878</td>
<td></td>
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<tr>
<td></td>
<td>FP-5</td>
<td>0.880</td>
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</tbody>
</table>

**Table 2** Discriminant validity

<table>
<thead>
<tr>
<th>Fornell-Larcker criterion</th>
<th>COA</th>
<th>FP</th>
<th>IT</th>
<th>LTC</th>
<th>TIS</th>
<th>HTMT ratio</th>
<th>COA</th>
<th>FP</th>
<th>IT</th>
<th>LTC</th>
<th>TIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COA</td>
<td>0.802</td>
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<td></td>
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<td></td>
<td>COA</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>FP</td>
<td>0.753</td>
<td>0.813</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FP</td>
<td>0.898</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td>0.724</td>
<td>0.786</td>
<td>0.812</td>
<td></td>
<td></td>
<td></td>
<td>IT</td>
<td>0.852</td>
<td>0.891</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LTC</td>
<td>0.602</td>
<td>0.656</td>
<td>0.678</td>
<td>0.813</td>
<td></td>
<td></td>
<td>LTC</td>
<td>0.691</td>
<td>0.728</td>
<td>0.754</td>
<td></td>
</tr>
<tr>
<td>TIS</td>
<td>0.731</td>
<td>0.748</td>
<td>0.752</td>
<td>0.685</td>
<td>0.781</td>
<td></td>
<td>TIS</td>
<td>0.884</td>
<td>0.869</td>
<td>0.879</td>
<td>0.800</td>
</tr>
</tbody>
</table>

Note: A significance level of p-value (p < 0.05).
4.2 Model evaluation

4.2.1 Coefficient of determination, cross-validated redundancy

The rule of thumb is $R^2$ values $\geq 0.75$; $\geq 0.50$ and $\geq 0.25$ are considered substantial, moderate and weak respectively (Ali and Park, 2016; Sarstedt et al., 2014). In the present study, The $R^2$ (coefficient of determination) values of dependent variables (IT and FP) are 0.661 and 0.714 respectively (Table 1). A stone-Geisser $s'$ $Q^2$ (cross-validated redundancy) value higher than zero for any dependent variable indicates that projected relevance of the paths is acceptable (Lin et al., 2016; Sarstedt et al., 2014). Through blindfolding technique, in the present study model, $Q^2$ values for dependent variables (IT = 430, FP = 461) are significantly above from zero.

4.2.2 Standardised root mean square residua

Third, SRMR is the relevant model fit assessment criterion for PLS-SEM-based reflective measurement model. In the present study, common factor model SRMR (Table 1) value is 0.08 that is less than the criteria value of 0.10 which indicates that discriminant validity has been established (Henseler and Sarstedt, 2013).

4.2.3 Collinearity statistics

Variance inflation factor (VIF) values verify the collinearity issues in the data. The results of the present study depict that VIF values of endogenous constructs are within 1.964 to 3.052 (Table 3). It indicates that collinearity issues are not there as all VIF values are $< 5$ (Hair et al., 2013).

<table>
<thead>
<tr>
<th></th>
<th>COA</th>
<th>IT</th>
<th>LTC</th>
<th>TIS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IT</strong></td>
<td>2.242</td>
<td>---</td>
<td>1.964</td>
<td>2.695</td>
</tr>
<tr>
<td><strong>FP</strong></td>
<td>2.546</td>
<td>2.951</td>
<td>2.144</td>
<td>3.052</td>
</tr>
</tbody>
</table>

Note: A significance level of p-value ($p < 0.05$).

4.3 Hypothesis verification (direct relationship)

Table 4, all exogenous constructs LTC ($\beta = 0.109, p < 0.05$), TIS ($\beta = 0.197, p < 0.05$) and COA ($\beta = 0.296, p < 0.05$) have a significant direct effect on endogenous construct FP which indicates that these three strategies can helpful to enhance the firm financial performance. Therefore, based on above mentioned direct significant relationships among constructs, the hypotheses H1a, H2a and H3a are accepted.

4.4 Hypothesis verification (indirect relationship)

The present paper used the non-parametric bootstrapping method to measure the mediating effect (Ali and Park, 2016; Hair et al., 2013). However, there is no mutual agreement exists on whether the association between the independent variable and dependent variable has to be significant before including the potential mediator (Ali and Park, 2016; Bari et al., 2016; Zhao et al., 2010). Scholars have explained that the only
condition for mediation is the indirect effect has to be significant (Ali and Park, 2016; Bari et al., 2016). Furthermore, if the indirect effect is significant, the mediator absorbs some of the direct effect (Bari et al., 2016; Hair et al., 2013).

Table 4  Direct relationship

<table>
<thead>
<tr>
<th>Direct effect</th>
<th>Path coefficient (t-value)</th>
<th>Confidence interval (95%)</th>
<th>P-value (0.05%)</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTC → FP</td>
<td>0.109(1.98)</td>
<td>(0.002–0.214)</td>
<td>0.049</td>
<td>Accepted (H1a)</td>
</tr>
<tr>
<td>TIS → FP</td>
<td>0.197(2.79)</td>
<td>(0.054–0.334)</td>
<td>0.005</td>
<td>Accepted (H2a)</td>
</tr>
<tr>
<td>COA → FP</td>
<td>0.285(3.80)</td>
<td>(0.145–0.437)</td>
<td>0.000</td>
<td>Accepted (H3a)</td>
</tr>
<tr>
<td>LTC → IT</td>
<td>0.247(4.03)</td>
<td>(0.128–0.365)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>TIS → IT</td>
<td>0.348(4.59)</td>
<td>(0.208–0.505)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>COA → IT</td>
<td>0.321(4.91)</td>
<td>(0.183–0.442)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>IT → FP</td>
<td>0.359(4.39)</td>
<td>(0.188–0.505)</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

Note: Significance level of p value (p < 0.05).

Table 5  Indirect relationship

<table>
<thead>
<tr>
<th>Indirect effect</th>
<th>Direct effect (t-value)</th>
<th>Indirect effect (t-value)</th>
<th>Total effect</th>
<th>VAF (%)</th>
<th>Exploration</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTC → IT → FP</td>
<td>0.108 (1.98)</td>
<td>0.089 (2.980)</td>
<td>0.194</td>
<td>45.87</td>
<td>Partial mediation</td>
<td>Accepted (H1b)</td>
</tr>
<tr>
<td>TIC → IT → FP</td>
<td>0.197 (2.79)</td>
<td>0.125 (3.005)</td>
<td>0.322</td>
<td>38.81</td>
<td>Partial mediation</td>
<td>Accepted (H2b)</td>
</tr>
<tr>
<td>COA → IT → FP</td>
<td>0.285 (3.80)</td>
<td>0.115 (3.609)</td>
<td>0.401</td>
<td>28.67</td>
<td>Partial mediation</td>
<td>Accepted (H3b)</td>
</tr>
</tbody>
</table>

Notes: VAF greater than 80% indicates full mediation, equal to or greater than 20% and equal to or less than 80%. VAF shows partial mediation while less than 20% VAF indicates no mediation effect (Ali and Park, 2016; Bari et al., 2016).

Through Smart PLS software, the bootstrapping technique is used to evaluate the mediation effect of IT on FP. 2,000 randomly drawn samples with replacement at the 0.05% level of significance are used. Mediation effect is calculated through ‘variance accounted for’ (VAF) technique. Table 5, explains that all three exogenous constructs (LTC, TIS and COA) have partial mediation effect (VAF = 45.87%, 38.81% and 28.67%) on FP. Therefore, hypotheses H1b, H2b and H3b are accepted.

5 Importance-performance matrix analysis (PLS-SEM, IPMA)

IPMA or impact performance map analysis is a progressive method introduced in PLS-SEM analysis (Hair et al., 2016). IPMA improves the typical PLS-SEM outcomes reporting of path coefficient evaluations, considering the average values of the latent construct scores (Hair et al., 2016). The aggregate effects depict the predecessor variables’ importance for the target construct (endogenous construct) and their average latent construct scores depict their performance (Hair et al., 2016). The objective behind IPMA analysis is to find which predecessor construct has relatively high/low importance and performance for the target variable (endogenous construct).
There are four exogenous/predecessor constructs LTC, TIS, COA and IT and one endogenous construct FP. Subject to everything remained the same, one-unit increase of the predecessors’ (LTC, TIS, COA and IT) performance, increases the performance of the target variable (FP) by the size of the predecessors’ un-standardised total effect/importance (Hair et al., 2016). Table 6 explains that COA has the highest performance (29.273) and highest importance (0.399) on FP in the present study model. Therefore, COA is the most significant practice that has the highest performance and highest importance/total effect on FP. It means COA is the most effective workplace practice to increase the firm financial performance.

Table 6

<table>
<thead>
<tr>
<th>Predecessor construct</th>
<th>Direct effect</th>
<th>Indirect effect</th>
<th>Total effect/importance</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTC</td>
<td>0.110</td>
<td>0.093</td>
<td>0.203</td>
<td>22.203</td>
</tr>
<tr>
<td>TIS</td>
<td>0.207</td>
<td>0.131</td>
<td>0.338</td>
<td>26.707</td>
</tr>
<tr>
<td>COA</td>
<td>0.284</td>
<td>0.115</td>
<td>0.399</td>
<td>29.273</td>
</tr>
<tr>
<td>IT</td>
<td>0.373</td>
<td>-</td>
<td>0.373</td>
<td>28.235</td>
</tr>
</tbody>
</table>

Notes: LTC: low transaction cost, TIS: tangible and intangible service, COA: customer-oriented approach, IT: information technology.

6 Discussion

There is an ongoing growing competitive environment in services industries of China, especially in the hotel industry. To compete in such a rivalry scenario, a manager always tries to come up with such a unique way to get a competitive advantage and enhance its firm’s market share. By taking into account this situation, we propose workplace practices and IT-based framework with the empirical investigation to increase the market share (financial performance) of a hotel firm in China. First, the present paper investigates the relationship between three (workplace practices) exogenous constructs (LTC, TIS and COA) and one endogenous construct firm financial performance in the context of hotel industry (Beijing) China. Second, this study evaluates the mediation effect of IT between these workplace practices and firm financial performance.

The results of this study confirm the positive and significant relationship among these three workplace practices (LTC, TIS and COA) firm financial performance (Table 4) which also support the results of previous studies (Chathoth, 2007; Stiles et al., 2001). The results of this study also endorse and contribute to the transaction cost theory, Cue utilisation theory, expectancy disconfirmation theory, go the extra mile theory, assimilation theory and internal marketing theory (Awan et al., 2015; Della Corte et al., 2015; Kassinis and Soteriou, 2015; Williamson, 1973). To enhance the impact of these workplace practices, we empirically investigate the mediation effect of IT between LTC, TIS and COA and firm financial Performance in the hotel industry in China. The results of the study confirm the partial mediation (Table 5) effect of IT between these workplace practices on FP. These results are in line with previous studies (Albayrak et al., 2010; Chathoth, 2007; Della Corte et al., 2015; Ham et al., 2005; Phiri and Fang, 2013; Siguaw et al., 2000). The full nomological setup is displayed at Figure 1 and results of PLS-SEM also characterised to answer the main questions of the study.
An investigation of the relationship between workplace practices

Figure 1  Developed research model

Notes: LTC = low transaction cost; TIS = tangible and intangible services; COA = customer-oriented approach; IT = information technology; FP = firm performance.

In the present study, IT as mediator partially mediates the relationship between three exogenous variables (LTC, TIS and COA) and FP (Table 5). However, the level of partial mediation is not the same. IT performs highly partial mediation effect (45.87%) between LTC and FP. IT performs comparatively less mediation effect (38.81%) between TIS and FP than LTC. The relationship between COA and FP seeks lowest mediation effect of IT (28.67%). The results of the present study confirm that an LTC is most successful workplace practice through IT to enhance the firm financial performance (growth in sales, profit margin, operating profit and return on investments (mediating effect). Along with the LTC, two other workplace practices (TIS and COA) also have a significant effect on firm financial performance with the support of IT. Thus, the results of the present study indicate that to enhance the financial performance of a hotel, these three workplace practices and IT can play an important role. However, IMPA explains that COA has highest performance and importance to firm financial performance (direct effect) as compare to other two workplace practices (LTC, TIS). Figure 1, explains all important results (direct and indirect effects) of the present study.

7 Managerial implications

The present study has several important managerial implications. First, all workplace practices (LTC, TIS, COA) are important and help to satisfy the customers and hotel financial performance. Therefore, it is recommended that managers should consistently improve and sustain effective workplace practices. Second, IT is really important to
enhance the effectiveness of workplace practices and firm financial performance. Thus, management of the hotel should adopt latest MIS and IT-based workplace practices to enhance the FP. Third, IPMA recommended that COA is most important to enhance the FP. Thus, the core focus of hotel management should be the customers’ choice and customised services with the support of IT.

8 Limitations and future research directions

Along with numerous theoretical and managerial implications, the present study has a couple of limitations. First, data for the present study were collected from experienced and supervisory level employees of different hotels in Beijing, China only. Thus, generalisability and application of findings in other countries or terrestrial locations should be done with care. Future research can be conducted by selecting a larger sample from a wider range of hotel employees from other cities of China. Second, the present study based on cross-sectional data; therefore, the role of constructs and their theorised consequences is linked at one point of time. In future, longitudinal studies are recommended. Third, in the present study, hotel employees evaluate the impact of IT on hotel financial performance. Employees evaluate the impact of IT in five areas (online booking and registration, front office and back office applications, guest-related interface applications and management system) of the hotel, on the five-point rating scale. In future, the impact of IT on hotel performance in customer perspective, i.e., guest satisfaction and loyalty may be investigated (Ham et al., 2005). Fourth, we used multiple approaches to increase the survey return of the present study; however, the present study still undergoes the issue of comparatively modest sample size (Bari et al., 2016). In upcoming studies, this problem can solve by using other data collection approaches such as open-ended questionnaires, personal interviews, etc.

9 Conclusions

The present study conducts an inquiry into the relationship between workplace practices (LTC, TIS and COA) and financial performance of hotel firms in China. The role of IT is examined as a mediator between the relationship of workplace practices and firm financial performance. The results of the present study confirm that workplace practices and firm financial performance have a significant relationship in the context of China hotel industry. IT as a mediator, partially/complementary mediates the relationship between workplace practices and firm financial performance. The present study analysis and results are based on the feedback collected from hotel employees. As a future research direction, analysis on the feedback from hotel customers is recommended.

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References


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