

The Effect Employee Commitment on Service Performance through a Mediating Function of Organizational Citizenship Behaviour Using Servqual and Collaborative Filtering Modeling: Evidence From China's Hospitality Industry

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ABSTRACT

This article Centralizes on exploring the potential the effect of employee commitment and service quality, which are the core factors that affect competitiveness in the hospitality industry. This article analyzes the impact of employee commitment on the quality of service through the intermediate function of OCB in empirical research based on integrated models and theories. This study gathered information using surveys and calculated the reliability of the Cronbach-Alpha and used questionnaires are "Working Commitment with "0.766" reliability, Podsakoff OCB "0.846" reliability, SERVQUAL quality of service "0.960" reliability. The samples used in this study were 223 employees in Guangdong hospitality industry. According to the effects of research on the attitudes and role clarity can be positive as it will extend employee engagement and effective politics, but conflict is not and cannot communicate with a commitment to politics through political commitment to extend or decrease. Component examined five unique dimensions of organizational citizenship behaviour by Oregon, including altruism, deontology, magnanimity, civility, Virtue of citizens" as a positive influence on the quality of their services and this can be improved. It is significant to develop and raise the competitiveness of the Chinese hospitality industry.

Keywords: Employee commitment; Hospitality industry; Conscientiousness; Propriety; Altruism; Magnanimity

INTRODUCTION

There is an important study on the introduction of organizational citizenship (OCB). This study focuses primarily on the causes of OCB and its effect on various variables, such as organizational culture, organizational conflict, job satisfaction, organizational justice, organizational communication, and personal characteristics [1-8]. The research Centralized on OCB dates back to the early 1980s, while the focus shifted to China's hospitality industry organizations in the 2000s. The studies on s hospitality industry mostly use the same type of variable [9-11]. Westerly winds, particularly the American studies concerning OCB, were followed by those concerning China's hospitality industry System. This study will examine the application of concepts developed in the Western academic community in a Chinese context. It also checks whether OC and OC differ by gender, work experience, and profession. It

is hoped that this study will share theoretical and practical results [12-14].

The critical motive of the current article is to study the impact of OC on organizational citizenship Behaviour. This study is theoretically significant because it also tests whether the effect of OC on OCB applies to China's hospitality industry. On the other hand, it is virtually essential as the findings of the study may additionally assist China's hospitality industry executives to apprehend employee Behaviour.

The market economy has assorted and giant than before. Organizations and companies around the world are attempting to attain special benefits compared to different opponents to achieve a privileged position. On the other hand, customers and consumers are always looking for us a ready product to offer better service [15].

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Due to growing opposition amongst issuer companies and corporations worldwide, relationship advertising as an appropriate method for putting up and conserving long-term relationship with consumers considered as choices furnished is pretty a remarkable form of offerings as an alternative it is difficult, so a massive number of issuer groups and organizations in the relationship marketing approach and put in pressure its foundations have been inclined [16]. The primary principle of marketing is based totally on respective values include creativity, trust, and commitment, the higher the stage of patron satisfaction of Artbat- no longer simply product or services, the higher the likelihood of consumer loyalty, long service or product, champions, were. Parasuraman says that the perceived exceptional of the customer's judgment about the superiority or advantage of an object. Perceived fantastic is a form of attitude, but it is now not related to delight. In this regard, given that what can assist increase customer pride for more and larger quintessential and essential [17]. It is essential to know how we can improve the quality of customer satisfaction [18]. Marketing pupils nevertheless have now not agreed on a regularly occurring definition of consumer satisfaction. Although it has been found structures [19]. In this regard, given that what can assist amplify customer delight for more and greater quintessential and essential [20].

With the boom in China's economy and its tourism services industry, the hospitality industry has been developed rapidly and at the same time competition has intensified. Service quality is the critical elements for firm survival amid fierce competition. A good employee evaluation system can always help the manager manage the employee well. However, the development of this aspect of hospitality is a shortcoming, especially in China. This makes it difficult for managing employees. So, it is necessary to develop a model which can evaluate the service quality of employee of the hospitality industry.

Antecedents of the service quality of employee have been examined in the manufacturing and hospitality industry in western countries, and it contributes a lot to the development of these industries. Relative works also have been done in China. Without question, it is useful for the managers to design the management strategies and it is helpful to improve the competitiveness of enterprises to a certain level. Though these works are essential to improve the management of hospitality industry in macroscopic aspect, the most effective ways are to control the performance of all employees. A good employee service quality evaluation system can make the managers manage the conditions of every employee well, and this can support their works better. However, the evaluation system is challenging to build, for the output of the employee of hospitality is abstract, and it is difficult to evaluate. To solve is that the problem is especially significant for the Chinese hospitality industry. According to an investigation conducted by Hande Consultant Co. [21], 47 percent of companies pointed out that employee turnover rate was above 10 percent and 13 percent of companies pointed out that the employee turnover rate was as high as 20 percent in 2007. Compared with other Asian countries, China experienced the highest turnover rate, which was as twice as Japan. Many types of research Centralized on this problem to analyze the antecedents of employee commitment and combining these researches to the evaluation of individual employee can help the managers who manage the employee directly to design their management strategies flexibly. It can reduce the turnover rate and improve motivations effectively.

As to the problem mentioned above, this article builds the model to evaluate the service quality of employees in the Chinese hospitality industry. This model is inspired by the method of calculating customer similarity. This method is widely used in the area of product recommendation. The core concept of this method is by calculating the likeness of one customer to one group of customers whose behaviours are known to predict the tone of this customer. By deriving this concept, if the hospitality can build the database of information and performance of some employees which are evaluated, by calculating the similarity of the employee which is needed to be assessed to the known employees in the database to determine the service quality of this employee. It can support the manager to hold the working situations of their employees. The foundation to build this model is to get the information of the employees who are hired in the Chinese hospitality industry. The data is collected from the Guangdong hotel industry which covered the cities of Shenzhen, Shunde, and Dongguan.

In the model of this article, the data will be divided into two parts. The first part is the employees who are viewed as the known, and it is called the training part, while the other part is called the testing part. The information about the training part is known, but the information on the testing part is partly known. The objective of this model is by calculating the similarity between the member of section 2 and the members in part 1 to predict the unknown information of part 2. If it can work, the method can be used in the evaluation of service quality of the employee in the Chinese hospitality industry, and the model can be used to support the managing work of the manager.

The model in this article is called collaborative filtering (CF) which is widely used in calculating the similarity of customers. The definition of CF model is that Collaborative filtering (CF) is the manner of filtering for data or patterns using methods involving collaboration amongst multiple agents, viewpoints, information sources, etc. The method has been used in the area of CD buying recommendation [22]. It is usually used in massive data sets, and it is a technique of making automated predictions (filtering) about the hobbies of a user via collecting preferences or style data from many users (collaborating). The underlying assumption of the CF strategy is that those who agreed in the previous tend to agree once more in the future. The model is useful to predict the potential behaviour of specific people by collecting the information from the known people who have a higher similarity with him. Many algorithms have been developed about this. Inspired by the core concept of these methods and the problems the hospitality industry facing in China, the plans are changed to apply to in this industry. According to the definition of the CF, if there are some critical factors which can affect the service quality of employees and there is a similarity between different employees about these factors. In this view, the service quality evaluation system is very like the product recommendation system. Then the model can be used to solve the problem which has been mention above, and it can be built as the support system for the managing of the Chinese hospitality industry.

Employee commitment, which can be perceived as a set of Behavioural intentions, a motivating force, or an attitude, influences many behavioural outcomes [23]. Committed employees are deemed as those who share the shared values and beliefs espoused by the organization, and who believe that their organizations would continually offer them opportunities to grow in their career paths [24]. So, embracing this belief, they

stay on and are more predisposed to deepen their commitment to the organization, particularly if they are pursuing a promotion. Managers are always seeking ways to generate greater employee commitment and competitive advantages [25].

Two streams of research on employee commitment exist in popular literature: antecedents of employee commitment and consequences of employee commitment. A wide range of antecedents of employee commitment has been identified, including organizational characteristics, job characteristics, and personal characteristics [24], of which, organizational features are more controllable by managers to influence employee commitment.

Meyer and Allen [26] have identified three distinct concepts in the definition of commitment: affective, continuance, and normative commitment. Most of the previous studies have considered the construct of commitment at the aggregate level or explored only one component, such as affective commitment. However, Meyer et al. [27] asserted that the three elements of responsibility were distinct, but related concepts and further research may be encouraged to explore the relationship among the three components.

Our research brings together two aspects of research methodologies: factors analysis and collaborative filtering. The two methods are the two main parts of the service quality evaluation system. Many types of research have been done above these two aspects in many different fields. Moreover, all of these works provide a reference to the study in this article.

LITERATURE REVIEW

This article aims to build a mannequin to evaluate the overall service performance of employees primarily based on the historical past of the Chinese hospitality industry. The theoretical principle of this model is the theory of customer similarity which means by calculating the likeness of one person to a group of specific persons to predict the potential behaviour of the one person. There are many methods to estimate the similarity and all of these methods have both advantages and disadvantages: Sangkil Moon and Gray j. Russell has pointed out the algorithm of the auto-logistic model to predict the purchasing behaviour of potential customers in 2008. This approach is mapping the different products and customers into the frame of axes to calculate the similarity of different customers by computing the distance between the customers and products.

Moreover, in this article, the other methods are pointed out to compare with the autologistic model. The collaborative filtering (CF) model is used in the data mining knowledge discovery which is very similar to the application in this article [22,28,29]. Many kinds of research and models are done to calculate the similarity of customers such as neural network model (NN), principal components logit (PCL) and so on.

Applying the theory of customer similarity is inspired by the article "The service organization: Human resources management is crucial" [30]. Moreover, what has been mentioned above that there are many problems which make the management of employees in the hospitality industry difficult uncommonly in China. Based on these, a question is pointed out that if there are some similarities between different customers and these customers can be divided into different groups, whether the employees in the hospitality industry can be divided into the different groups by using the same method. However, there still a problem to be solved which is

that it is necessary to find the factors which can make a significant effect to the service performance and it can be used to divide the employees who provide a different level of service performance into different groups.

The data is from the questionnaires of the hotels located at Shenzhen, Shunde, and Dongguan. The design of the surveys is based on the works of Guangzhou Philosophy & Social Science Development Eleven-Five Planning 2009 Project and the article of "How service climate impacts on service performance". This article researches the factors which can affect the service climate. In their work, customer feedback, customer orientation, and management practices are pointed out and viewed as the main factors which can affect the service performance of employees significantly. The designing of the questionnaires is also based on the results of this work.

In this article field method used to collect the data. The questions covered both the factors of service climate and commitment of employees. Service climate is described as "the shared perceptions of personnel concerning the practices, procedures, and kinds of behaviours that get rewarded and supported concerning customer service and service quality" [30]. That is, service climate is built on foundations of caring both customers and employees [31].

Arlen [32] in a study known as "organizational citizenship behaviour and quality of customer service," with specific standards of overall performance degree team evaluation and customer service quality has studied the precise unit. The range of units of the chain stores has been chosen. Employees of the department shop chain to 15 OCB to evaluate three dimensions of altruism, loyalty, and assist from external customer's questions and Customers additionally distinct sectors usually based totally on distinct components of quality of services supplied have been graded. A whole of 249 devices with at least 5 employees, "at least for a crew of people" variables have replied. The findings exhibit that two variables, loyalty, and assist from external customers by way of 4 of the pleasant of service "communion, emergency services, knowledge, great products, and services" have a substantial relationship [32].

Organizational citizenship behaviour

Within the literature on OCB, most links are created by Organ's [33] definition: "employee Behaviour based on voluntariness that is not identified within the formal reward system of the organization, yet that helps the organization operate as a whole" [34]. However, this article contains arguments for this definition in different aspects. With the objection of Morrison, who asserts that OCB is part of the formal Functions of employees, definition of access is near this term "contextual performance" in parallel with Motowildo et al. [35] definition, which reads as follows: "the Behaviour that enhances performance in the social and psychological environment where the employees perform their work" [36].

Currently, there is no consensus in the contexts on the dimension describes made in relationships with OCB. Approximately thirty different OCB dimensions were defined within the literature, and they were gathered under seven main topics: helping Behaviour, sportsmanship, OC, organizational loyalty, individual initiative, Virtue of citizens, and self-development Behaviours [37].

The five-dimension (altruism, deontology, magnanimity, civility, and Virtue of citizens) classification developed by Organ [33] is the one that is used the most frequently in the literature [38].

Altruism requires employees to help other employees in the face of problems voluntarily. Consciousness goes beyond the obligations of employees and requires employees to contribute to the functioning of the organization voluntarily, while sportsmanship stands for being tolerant in the face of the disturbances and compulsion caused by the work. Courtesy necessitates employees to foresee the matters that may cause problems for other employees and to make propositions for a solution. Civil virtue, on the other hand, indicates an active and voluntary contribution to the organizational life as a whole [36,38,39].

Relationships between organizational commitment and organizational citizenship behaviour

Some studies of OC and organizational citizenship [40] found a significant connection between OC and OCB, but others found a small relationship [41]. A study was conducted that compared the relationship between organizational behavior and organizational behavior with the third variable, which would reduce the effectiveness of OCB [42], but there is another study that could enhance this effect [43].

This study explores the connection between OC and OCB for China's hospitality industry, so the findings to be obtained from employees from the hospitality industry in Guangdong province in China and not facing the risk of losing their job unless a major crime is committed may provide useful results concerning the relationship of OC and OCB.

David Martin Ruiz [44] in an article known as "The effect of customer loyalty, organizational citizenship Behaviour" that the study questionnaire has four hypotheses are formulated as follows:

The results suggest that organizational citizenship Behaviour staff satisfaction and customer satisfaction, customer Behavioural intentions and excessive high-quality effect and service extraordinary and organizational overall performance In this article additionally had a widespread superb correlation between the organizational citizenship Behaviour, and organizational performance is no relationship [44].

- The study was done by Haghighi and others in 2003, with the theme "service constancy results of service first-rate and patron satisfaction as a mediator," the effects of which are as follows:
- Satisfaction and loyalty are considered to determine the quality of services provided by banks, and take into account the relationship between the quality of service. The researcher exceeded customer expectations in all aspects of the perception of the bank's connection between service quality, satisfaction and loyalty are. The students concluded that exceed consumer expectations in all components of their perceptions of the overall performance of the bank, and the bank's overall performance has been prone in the eyes of respondents.
- Research carried out by Tabarsa and colleagues in 2010 entitled "Factors affecting organizational citizenship Behaviour in an army hospital," the effects of which are as follows:
- The results suggest that the two-track job satisfaction and job satisfaction, trust only the effect organizational justice on OCB is fully approved.
- The study was done by the Farhangi and others in 2006, with the theme "Spirituality in the workplace and their Function in improving organizational citizenship Behaviour," the results of which are as follows:

- The scholars suggest that the organizational citizenship behavior of employees is defined in tasks that are not part of the formal work directly on the formal system, but are not intended to improve the effectiveness of the organization defined actions that are not part of the official duties directly from the formal system of bonuses, but the organization is not intended to increase the effectiveness of the organization.

CONCEPTUAL MODELING: DEFINITION, PURPOSE AND BENEFITS

Interest in theoretical models for modeling is demonstrated by an active research community in this area. Over the past decade, several conferences and journals for conceptual modeling and descriptive books have been allocated more active research community in this domain. Over the final decade, there has been an expansion in the number of conferences and journal articles on conceptual modeling, and an edited e-book on the topic [45,46].

Altogether, theories and empirical research findings cited lookup provided the theoretical model. The study was once based on the hypothesis that environmental elements play a Function Levin 1951, the first-rate foremost and the reactions of the a variety of phenomena primarily based on a model-based testing to verify the organization's commitment to politics, which are supposed to influence attitudes, transparency and conflict of commitment to the organization's politics (political commitment) review and on the other hand, the the effect the policy commitment on organizational citizenship Behaviour (OCB) is specified. The organizational commitment with demonstrations of citizenship Behaviour, Virtue of citizens, and courtesy and altruism dimensions may additionally have an impact on the business enterprise and the neighborhood growing an exceptional base to improve the exceptional of life.

Service quality

The best of a product or carrier of its compliance with the requirements defined for that product or service. Another definition is intended to meet the wants of variety to the consumer [47-52].

Variable In this article to measure the quality of service is the SERVQUAL model using the following conceptual, and operational definition is:

This model analyzes customer gaps and perceptions in terms of quality of service and measures and assesses the quality of services provided in five dimensions:

Five dimensions of service quality in the SERVQUAL model

Following the study was done by the SERVQUAL model in the service industries such as a university, banking, credit cards, repairs, maintenance and communications, the five dimensions mentioned above were counted after the tabulation and integration as follows:

- **Tangibility (Physical Dimensions and Appearances):** Equipment and facilities, the appearance of personnel and environment of the organization and ...
- **Reliability.** The desire to help the customer and deliver the services accurately and reliably.
- **Responsiveness.** A willingness to help the customer and provide timely services.

- **Assurance (security, reliability, polite Behaviour):** Knowledge and skills of employees and their ability to promote and build trust in customers.
- **Empathy (access, understanding customers):** Care and attention of employees to customers when providing services [47].
- Quality of service is measured by the difference between scores, perceptions and expected levels of customer service.

A commitment to the policy: Porter and his duty the level of identification associated with the organization, participation, and involvement in a particular organization [48].

Organizational Citizenship Behaviour (OCB): Fundamental study of organizational citizenship behavior identifies tasks and behaviors that employees often overlook [49].

Attitude: Physiological tendency to result in a specific intention or no pastime to pursue inappropriate faith [50].

Role clarity: Voluntary and assisting colleagues and team of employees in operating particular tasks in a manner some distance past what is expected to be referred [51].

The most authoritative division of various aspects of organizational behavior, created by Oregon citizenship Behaviour is provided by Oregon that is used in various studies. These dimensions are:

Social customs (virtuous citizen, Virtue of citizens): Require the assist of the administrative operations of the organization.

Altruistic (altruism): To help the people entirely voluntary and assisting colleagues and team of employees in operating particular tasks in a manner some distance past what is expected to be referred [52].

A work Ethics (loyalty, deontology): Designated duties in a manner a long way beyond what is expected.

Magnanimity: the emphasis on the positive aspects instead of negative aspects

Propriety (reverence, civility): Consult Before you act, find out before you work and share information with others the operation and exchange of information.

Conflict of the role: The Function of the negative state in which the employee is expected to come from two or more different demands. (See the hypothesized model in Figure S1 Appendix A).

Hypothesis

Part (A)

H₁. Employee commitment to organizational politics has a positive effect on offering a quality of services.

H₂. Employee commitment to organizational politics has a positive effect on organizational citizenship Behaviour.

H₃. Employee commitment to organizational politics has a positive effect on offering a quality of services through organizational citizenship Behaviour.

H₄. Organizational citizenship Behaviour has a positive effect on offering quality of services.

Part (B)

H₅. Employee attitude has a positive effect on a commitment to organizational politics.

H₆. Employee Role clarity has a positive effect on a commitment to organizational politics.

H₇. Employee Conflict of the role has a positive effect on a commitment to organizational politics.

Part (C)

H₈. Altruism between employees has a positive effect on offering a quality of services.

H₉. Deontology between employees has a positive effect on offering a quality of services.

H₁₀. Magnanimity between employees has a positive effect on offering a quality of services.

H₁₁. Civility between employees has a positive effect on offering a quality of services.

H₁₂. The virtue of citizens between employees has a positive effect on offering a quality of services.

METHODOLOGY

A questionnaire has been used "Commitment Questionnaire employees contains 24 questions related to (Attitudes, Role clarity, Conflict of the role, commitment to politics, work ethic and organizational citizenship features staff) that prevent the accumulation of additional data. What conscience cannot be checked? Also In this article to measure different dimensions of organizational citizenship Behaviour questionnaire independent "organizational citizenship Behaviour Podsakoff" consists of 21 questions related to (philanthropy, civil manners and courtesy, sportsmanship, work ethic, excellence, confidence, potential to respond, concrete Being assurance, job delight and quality of service) used and ultimate questionnaire "SERVQUAL service quality scale" consists of 22 questions associated to (tangibles, reliability, responsiveness, assurance, empathy) and this part also describes how to collect statistics survey is. 240 questionnaires were distributed, and 223 of them are retained.

This article will be based on the purpose of the study is applied because with the use of Behavioural science and management theories and some statistic on the population of the conclusions is that for these agencies and institutions that are usable in the subject of society and are applicable. In phrases of methodology in research and post-event correlation, and a library is a vicinity in the classification and field trials. To acquire the statistics from the questionnaires' workforce commitment, organizational citizenship Behaviour Podsakoff, SERVQUAL service quality "is used. After Determine sample size for statistical analysis hypotheses using descriptive statistics, including "frequency, percentage, mean and standard destruction and distribution charts and indicators, statistics and correlations to the questionnaire" inferential analysis "Pearson correlation test" Describe the assumptions described in the descriptive and dependent statistical analysis of software «SPSS» is used.

The sample is calculated from the parameter value of 0.05 d. Since the sample size is accurate, the sample size is 223. In all censuses, 223 questionnaires and 223 samples were analyzed.

Data statistic and filling the missing data

Due to this aim, 223 employees, 40.4% of whom were women (90 persons) and 59.6% male (133 persons), and 15.7% (35 persons)

were minor than 25 years old, 62.3% (139 persons) Of them were 25 to 40 years old and 22% (49 persons) were rather than 40 years old; on the other hand, 47.1% (105 persons) had association education, 27.4% (61 persons) had a Bachelor's level, and 25.6% (57 persons) had master education and higher, and 12.1% (27 persons) had a job background minor than 5 years, 58.3% (130 persons) had a job background from 6 to 10 years, 14.8% (33 persons) have a job background of 10 to 20 years, and in the end 14.8% (33 persons) have a job background rather than 20 years. (See related Table S1 in Appendix B).

Total scale, subscale correlation

As it is seen in Table S2 see Appendix C, the correlation of all subscales scores with Overall rating commitment questionnaire is higher than 0.4, and this table shows that all subscales have a sufficient correlation with the Overall rating questionnaire. On the other hand, the internal consistency of the questionnaire was obtained using Cronbach's alpha coefficient of 0.776, which shows that the questionnaire has a high internal consistency. The same thing applies organizational citizenship Behaviour questionnaire.

As shown in Table S2 see Appendix C, the correlation of all subscales scores with Overall rating organizational citizenship Behaviour questionnaire is higher than 0.4 and shows that all subscales have a sufficient correlation with the overall rating questionnaire. On the other hand, the internal consistency of the questionnaire, using the Cronbach's alpha coefficient, was 0.846, which shows that the organizational citizenship Behaviour questionnaire has a high internal consistency. The same thing applies quality services questionnaire.

As seen in Table S2 see Appendix C, the correlation of the score of all subscales with Overall rating quality of service delivery is higher than 0.4 and shows that all subscales have a sufficient correlation with the Overall rating questionnaire. On the other hand, the internal consistency of the questionnaire using Cronbach's alpha coefficient was 0.960 which indicates that the quality of service delivery questionnaire has a high internal consistency.

Describe the sub-question in each questionnaire

As shown in Table S3 see Appendix D. The standard deviation of the subconscious is lower than that of other subclasses, which indicates that this subclass has a smaller distribution of responses. From an organizational citizenship behavior questionnaire point of view:

In Table S3 see Appendix D, it follows that the standard destruction of the subscale of Virtue of citizens is lower than other subscales, which reflects the scattering of fewer responses to this subscale. As well as about the quality of a service questionnaire:

Table S3 see Appendix D, also shows that the standard destruction of the subscale of tangibles is lower than other subscales, which reflects the less dispersion of responses to this subscale.

Review of statistical assumptions

For the use of parametric statistics, the establishment of two hypotheses is mandatory. First, the distribution of the variables under study should have a natural distribution. The second assumption is the consistency of the variance of the groups compared. This section discusses the results of these two assumptions.

Checking natural data distribution: Tables S4 see Appendix E, show the results of the Kolmogorov-Smirnov test to examine the distribution of data related to the variables in the research. As shown in this table, according to P, the distribution of data variables is normal ($p < 0.05$).

Analysis consistency of the variance for compared groups: Table S5 see Appendix F, shows the results of the Levine test to examine the congruous variance of the groups. As shown in this table, according to the p-value, the variance of the data between all of the compared groups is congruous ($p < 0.05$).

From the (Table S6.) it is concluded that the variances are congruous among all groups. So, all the conditions for testing the hypotheses are parametric. In the next section, the examination of the hypotheses is examined.

DATA ANALYSIS

Collaborative filtering model

The definition of the collaborative filter in Wikipedia is that collaborative filtering (CF) is the system of filtering for records or patterns the usage of techniques involving collaboration among multiple agents, viewpoints, records sources, etc. In this article, it is used to predict the service performance of employees in the Chinese hospitality industry. Because with the boom in China's economy and its tourism services industry, many problems come out in the management of employees in hospitality as we mentioned above. This model is widely used in internet retailers. In this model, the person correlation coefficient is used to compute the similarity of employees based on available employee information. The model takes the form:

$$[Forecast E_i] = b + \sum_{j \in Eset} \frac{r_{ij}(EF_j(T) - b)}{K_i} \quad (1)$$

Where $Forecast E_i$ is the predicted service performance of an employee i and r_{ij} is the correlation coefficient between employee i and employee j ? The parameters b and K_i are the base Response rate which can be expressed as

$$b = \frac{\sum_{j \in Eset} EF_j(T)}{size(Eset)} \quad (2)$$

Moreover, the parameter K_i can be expressed as

$$K_i = \sum_{j \in Eset, i \neq j} r_{ij} \quad (3)$$

We define the base rat to be the overall proportion of calibration employees whose service performances have been valued. The parameter $Eset$ is the employee group which has high similarity with the employee needed to be valued. The size of this group is flexible. It can get by setting the fixed number or set the threshold value of the correlation coefficient. In this model, the multiunit value is tested. The size $Eset$ is also related to the size of the train data set. The 230 employees in this model are divided into two groups randomly as the model required. One group is the train data set while the other is the test data set. The service quality of employees in the train data set is known while the service performance of employees in the test data set is assumed unknown and it needs to be predicted by using the collaborative filtering model. In the above equation, all of the employees i represent

the employees in the test data set and the service performance of r_{ij} need to be evaluated while r_{ij} representing the employees in the train data set; they are used for forecasting service performance of r_{ij} in the test data set. The real value of the service performance of employees in the test data set is also known. By comparing the real value and the predicted value, the effectiveness of the model can be tested.

In the above equation, there still is a parameter r_{ij} which is not known. As known, r_{ij} is the correlation coefficient between employee i and employee j . Because the employee i and the employee j are located into the different groups, so the parameter can express as a matrix. Moreover, the mathematical expression r_{ij} is

$$r_{ij} = \frac{\sum_{f=1}^5 (EF_{if} - \overline{EF_i})(EF_{jf} - \overline{EF_j})}{\sqrt{\sum_{i=1}^5 (EF_{if} - \overline{EF_i})^2} \sqrt{\sum_{m=1}^5 (EF_{jm} - \overline{EF_j})^2}} \quad (4)$$

In this equation, the parameter $\overline{EF_i}$ and $\overline{EF_j}$ can also be expressed as

$$\overline{EF_i} = \sum_{f=1}^5 EF_{if} \quad \overline{EF_j} = \sum_{f=1}^5 EF_{jf} \quad (5)$$

The parameter r_{ij} is a matrix, and the element in the matrix is the correlation coefficient between employee i and employee j . Moreover, it also can be viewed as the similarity between different employees. The matrix r_{ij} is related to the parameter $Eset$ because every row of the matrix can be viewed as the similarity of the employee i to all employees $Eset$ in the train data set. It is necessary to sort every row of the matrix r_{ij} and to select the employees to have high similarity with the employee need to be valued. The number of selected employees who are eligible to be used to evaluate the service performance of the specified employee is the size of $Eset$.

The size of $Eset$ is not fixed. The designer of the model designs it, and the best size is dependent on the data source. Up to now, the mannequin has been built, but there nevertheless some problems. One problem is that the denominator in the right part of the equation (4) may be zero. If the denominator of this equation is zero, there is no meaning. There are some methods to deal with this problem. The easiest way is that set a mark to this element in the matrix r_{ij} if the corresponding employee is needed when predicting the service performance of the employee in the test data set. This element can jump to select the next element. Moreover, of course, this method has a disadvantage which limits the maximal number of $Eset$ it means that it will affect the size of $Eset$.

Moreover, of course, there are many other methods to deal with this issue. In this article, this value will not be deleted. The method of medium value is used. If the denominator of the equation (4) is zero, this value is not possible to be calculated.

Moreover, the missing data can be filled by using the medium value of this row. In this condition, this value may be used in the further process, and it may be not used. It depends on the size of $Eset$.

Two aspects of the collaborative filtering (CF) model should be noted here. First, the CF model is not estimated by a statistical procedure. More specifically, it has neither an error term nor a parameter to estimate. Accordingly, once correlations are computed, equation (1) is used to compute the expected value of service performance. Second, the summation over employees i is interpreted to mean summation over a group of neighborhoods of the employee with high correlations relative to the employee j [53-57].

Then the model can be work. Moreover, the service performance of employees in the test data set can be predicted by using the similarity with the employees in the train data set. The result will be discussed in the following part.

Result analysis

Before analyzing the result, it is necessary to make some illustrations about the target. To get the accurate data, the questions about the target in the questionnaires are raised in three times in different styles. The target is the mean value of these three questions. It is an avoid the condition that the employee fill in the blank arbitrary and it can make the data more accurate. The questions about the target obey the same rule of the questions about the factors. That means each item in the scales was measured using seven-point Likert scale 1 (strongly disagree) to 5 (strongly agree). That means the expected predicting result of the service performance is also the number from 1 (strongly disagree) to 5 (strongly agree).

As to the assessment of the results of the CF model, there are many staple standards to test the model performance. Mean absolute destruction (MAD), hit rate (HR), the Gini coefficient and variance analyses are general measures used to analyze the result. The mean absolute can be express as

$$MAD = \sum_e |PE - RE| / N \quad (6)$$

The PE is the predicting service performance of employees in the test data set, and the $Eset$ is the real value of service performance. It can be view as the gross error of the system. Moreover, the hit rate can express how many predicting values hit the real value.

As mentioned above, each item in the scales was measured using seven-point Likert scale 1 (strongly disagree) to 5 (strongly agree). The service performance of employees is also measured in this method. So, the service performance is divided into seven levels, and the employees can also be divided into seven groups based on their service performance. So, the predicting result is presented as the number from 1 to 5 by using the collaborative filtering model. The primary objective of the article is to build the model to evaluate the service performance of different employees which can provide support to the management in the hospitality in China. So, in this model, the hit rate (HR) is the best measurement to evaluate whether the model is efficient. The real meaning of hit rate in this model means the rate the employees are assigned to the right group which is corresponded to the real service performance of them.

223 employees from the hospitality industry in Guangdong province in China are studied in this article, and the 223 employees are divided into train data set and test data set with each group of 112 employees. The service performance of employees in the test group is needed to be directed. The expected result is that each employee in the test group will get a predicting number which corresponds to the group number, and the employees in the same group are expected to have the same service performance.

In this mode when the size $Eset$ is 50, all of the 112 employees in the test data set are assigned to the right group. That means that the hit rate is 100% in this condition. The results are perfect to prove the efficiency of the collaborative filtering model. Moreover, it is also proved that it is useful to use this model to build a service performance evaluation system for hospitality in China.

In summary, the result of the authentic research hypotheses is as follows:

H₁. The correlation coefficient between two variables is the result of employee commitment to corporate politics and quality of service is equivalent to (0.434). So, the commitment to grant quality services with the aid of their personnel to the organizational policy stage has a substantial correlation is (0.000), so there is an effective, high-quality Correlation between two variables, two variables, which means that every employee's commitment to organizational politics are similar quality of services supplied via them will be higher and better. (See in Appendix G).

H₂. The correlation coefficient between two variables is the result of employee commitment to politics, and organizational citizenship Behaviour is equal to (0.264). So, the commitment to politics and organizational citizenship Behaviour by their employees in a meaningful relationship is (0.000), so there is an effective, high-quality Correlation between two variables in the sense that any amount of high employee engagement politics as well as citizenship Behaviour their organization will be better and better. (See in Appendix G).

H₃. The correlation coefficient between the variables obtained through OCB employee commitment to politics on providing quality service is equal to (0.446). So,, the staff commitment to politics through the provision of quality services by their organizational citizenship Behaviour has a significant correlation is (0.000) level, so there is an effective, high-quality correlation between these three variables, which potential that each employee's commitment to politics is high compared to the same organizational citizenship Behaviour and provides better quality services by them and will be higher. (See in Appendix G).

H₄. The correlation coefficient results between two variables, Organizational citizenship Behaviour on providing quality service is equal to (0.230). So, organizational citizenship Behaviour by their high-quality services at (0.001) is a significant relationship, so there is an effective, high-quality correlation between these two variables, which means that any amount of Organizational citizenship Behaviour is high, as well as providing quality service the better, they will be higher. (See in Appendix G).

H₅. The resulting correlation coefficient between two variables attitude employee commitment to organizational politics is equal to (0.440). So, the attitude of the employee's commitment to enterprise-level politics had a full-size correlation is (0.000); So, there is an effective Correlation between two variables, which capacity that anything the attitude is up to the commitment of personnel to organizational politics, they will be higher and better. (See in Appendix G).

H₆. The correlation coefficient results between two variables, Role clarity and employee commitment to organizational politics is equal to (0.374). So, the Clarity of the enterprise-wide employee engagement policy has a significant correlation (0.000); So, there is an effective Correlation between two variables in the sense that any amount of Role Clarity is high as compared to the same commitment to organizational politics by their employees better and higher. (See in Appendix G).

H₇. The correlation coefficient results between two variables: Conflict of the role with employee commitment to organizational politics is equal to (0.027). So, the Conflict of the role with employee commitment to organizational politics, the significant level (0.05) or (0.691) more massive hypothesis is rejected, and these two variables have no significant relationship with every other; in other

words, in this sample is no legitimate cause there was a full-size relationship does no longer approve. (See in Appendix G).

H₈. The correlation coefficient results between two variables: one's altruism providing quality service is equal to (0.290). So, the altruistic individual to providing quality services at (0.001) is a significant relationship, so there an effective Correlation between two variables, which means that no depend on how excessive the rate of altruism, as nicely as supplying quality services by using them to better and higher. (See in Appendix G).

H₉. The resulting correlation coefficient between two variables is the Deontology of providing quality services at (0.456). So, the Deontology of providing quality services at the level of (0.000) is a significant relationship, so there is an effective Correlation between two variables, which means that no depend on how excessive the quantity of Deontology as nicely as supplying quality services utilizing them as nicely better and higher. (See in Appendix G).

H₁₀. The resulting correlation coefficient between two variables on providing quality services to personal magnanimity is (0.198). The generosity of persons to grant quality services at (0.003) is a significant relationship, so there is an effective Correlation between two variables, which means each of the individual magnanimity as nicely as provide high-quality services even better by them and will be higher. (See in Appendix G).

H₁₁. The resulting correlation coefficient between two variables civility to provide a quality service is equal to (0.381). So, the civility to provide a quality service at a significant correlation is (0.000), so there is strong positive Correlation between two variables in the sense that any amount of civility of up to, they also provide higher quality services by way of the equal ratio will be higher. (See in Appendix G).

H₁₂. The correlation coefficient between two variables is the result of the Virtue of citizens in providing quality service is equivalent to (0.207). So, the Virtue of citizens of the provision of quality services at (0.001) is a significant relationship, so there is an effective Correlation between two variables in the sense that any amount of Virtue of citizens as well as provide high-quality service by them, better and higher. (See in Appendix G).

CONCLUSION

In conclusion, this article suggests that there are several factors which have significant effects on employee commitment and service performance. The present study has examined how various components of impact employee commitment and service performance, by using empirical evidence from hotels of Guangdong province in China. This is the first-time data of China are used to analyze its hospitality industry. Compared with most of the extant research in this area, this article combines employee commitment and service performance, and the research process covers the whole lifecycle of the employee.

This article Centralizes on factors of managerial support, co-employee relationship, Function ambiguity, customer orientation, and customer feedback. Using these factors as antecedents of employee commitment and service performance, we analyze the influence of these factors. This article also explores the connection between these factors and the connection between employee commitment and service performance, based on Mayer. It is significant for the Chinese hospitality industry. However, the

shortcoming is that the data cover only the Guangdong province, i.e., it cannot represent all of China because the culture in south China is different from north China. Future research can collect detailed data to represent the whole of China. The size of data used in this research is not enough to train the model and calculate the employee similarity well. So, a model is not built in this article. Instead, only the potential application is pointed out. So, in future research, if the research in the article can be combined with the application in human resources management that may make a critical improvement for the Chinese hospitality industry.

The effect Organizational citizenship Behaviour such as purchaser satisfaction, customer loyalty, religious and social capital, image and prestige rises outside, so it is advocated to make stronger the organization's corporate identity, expand trust and organizational justice in their organizational coverage priority.

Today, the customer-oriented organization has become one of the central slogans. So, the fact that protection of corporate resources, social customs, and altruism as critical elements of Organizational citizenship Behaviour has mutual interaction with the customer. According to one of the motives, the other will be extra fertile. So, organizations should strive to strengthen the various components of Organizational citizenship Behaviour and customer-Centralized organization in the shadow of their performance guarantee.

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