The influence of internal service quality on employee job satisfaction at Taiwan-listed international tourist hotels: using organisational culture as the moderator

Gao-Liang Wang
Takming University of Science and Technology
Taipei, Taiwan

ABSTRACT: The purpose of this study was to verify the influence of a good internal-service quality on employee job satisfaction. The case is based on international tourist hotels, publicly traded on the Taiwan Stock Exchange, with organisational culture being the extraneous variable. Entry-level workers and section chiefs (or employees at higher levels) in the room service and catering departments of Taiwan-listed international tourist hotels were interviewed to collect data for the research. While convenience sampling was used to yield knowledge from the population, the Linear Structural Equation Modelling (SEM) was adopted to verify the goodness-of-fit effects of the overall model, structural model and measurement model. Findings from this study show that at Taiwan-listed international tourist hotels, a satisfying internal-service quality and organisational culture have a significant interactive influence on employee job satisfaction.

INTRODUCTION

The service sector has been expanding at an incredible speed in recent years, thanks to extensive government support. Tourism (or the smokeless industry), among all service industries, is considered a highlight (beside the technology industry) in industrial development plans worldwide. In fact, tourism is an integrated service industry that comprises hotels, providers of catering and recreational services, with hotels at its core [1]. In researching the hotel industry, Fitzenz found that the greatest problem currently facing hotels is the flow of human resources, which means hotels should improve employee job satisfaction by enhancing the quality of internal service to retain competent employees and, subsequently, bolster the organisation’s performance [2].

Hartline, Maxham and Mckee believe that the tremendous influence of organisational culture on employees’ behaviour and performance is clearly reflected in employee-customer interactions [3]. Robbins also argued that organisational culture would have a considerable effect on what behavioural role(s) an employee chooses to take on. In other words, whether organisational culture is an influential or extraneous factor behind employee job satisfaction is a topic worth discussing [4].

Consequently, this study scrutinised Taiwan-listed international tourist hotels, to build a research model based on the literature and, then, verify its goodness-of-fit effects. The specific purposes of this study are:

1. To verify and understand whether a good organisational culture has a positive and significant influence on employee job satisfaction at Taiwan-listed international tourist hotels;
2. To verify and understand whether a good internal-service quality has a positive and significant influence on employee job satisfaction at Taiwan-listed international tourist hotels;
3. To verify and understand whether a good organisational culture and internal service quality have significant interactive influence on employee job satisfaction at Taiwan-listed international tourist hotels.

LITERATURE REVIEW

This section explores how findings from previous studies are linked to the topic of this study, and infers hypotheses from the literature review, while establishing a research framework. The relevant theories and studies include:

Internal Service Quality

The notion of internal-service quality was first proposed by Sasser and Arbeif, who regarded employees as internal customers. The so-called internal-service quality actually applies a combination of such notions as marketing and
service quality to the internal aspect of a business [5]. Tangible quality of internal services involves personnel training, incentive programmes and employee welfare measures, while intangible quality involves the accessibility to an organisation’s internal communication channels and/or the degree of autonomy for an employee exercising his/her authority on the job. Among the scholars and experts worldwide, who have defined internal service quality, Hallowell, Schilesinger and Zornitsky believe an organisation/business wishing to deliver good-quality external services must first offer satisfying internal services that meet the needs of employees [6]. According to Lin, a crucial part of internal service quality is how the employees of each organisational unit deliver services to the other internal customers. He further stated that each individual in an organisational unit is supposed to offer fellow employees good-quality services, so as to achieve better performance while reducing waste/costs [7]. Hallowell et al noted that internal service quality is the satisfaction an employee shows for the services obtained from internal service providers. Citing the conceptual pattern of Service-Profit Chain, Heskett et al argued that internal service quality involves the design of workplace and components of work tasks, the employee recruitment/development/rewards/recognition, and also the tools for customer services [8]. They also noted that a good internal-service quality will help enhance employee satisfaction [8]. All in all, many scholars believe that an organisation must first improve the internal-service quality in order to render good external services, and it is imperative that an organisation provide satisfying tools, policies and procedures, teamwork, management, goal-oriented cooperation and training, and further increase employee job satisfaction [6].

In summary, this present study adopted the notion proposed by Hallowell et al as the conceptual definition of internal service quality [6]. In the meantime, it took into consideration the Service-Profit Chain conceptual pattern presented by Heskett et al, as well as the dimensions of internal service quality induced by Hallowell et al [6]. After interviews with senior experts in the industry, the definition of internal service quality was incorporated with the model of internal service quality currently demonstrated by employees at international tourist hotels, with factors irrelevant to entry-level employees ignored (e.g. work design, employee recruitment/development/rewards/recognition, and also the tools for customer services [8]). They also noted that a good internal-service quality will help enhance employee satisfaction [8]. All in all, many scholars believe that an organisation must first improve the internal-service quality in order to render good external services, and it is imperative that an organisation provide satisfying tools, policies and procedures, teamwork, management, goal-oriented cooperation and training, and further increase employee job satisfaction [6].

Organisational Culture

Daft considers organisational culture a pool of all organisation members’ values, presumptions, beliefs, awareness and thoughts, which in turn provides the members with a code of behaviour that reflects how they really feel and what value the most [9]. Organisational culture, an important factor for the evaluation of corporate competitiveness, reflects particular corporate characteristics and is closely related to business core competitiveness. A term frequently mentioned in discussions of organisational behaviour, organisational culture is shaped and evolves over a long period of time. Definitions and perspectives of organisational culture; however, vary among scholars worldwide [10].

Li deemed organisational culture to be a product of an organisation’s operations of inner systems and interactions with the external environment over the long term. It is an integration of values, beliefs, awareness, thoughts and actions within an organisation. The intangible organisational culture, nevertheless, visibly controls the actions and performance of an organisation and its members as well, shaping what the organisation displays on a day-to-day basis [11]. Mitchell and Yate said organisational culture is the sum of values, beliefs and understandings shared among organisation members [12]. Robbins said organisational culture is a perception consistent throughout the organisation with shared characteristics. Such a descriptive culture is a differentiating factor among organisations and combines systematic variables at the individual, group and organisation levels [4]. In his study, Zeng defines organisational culture as a demonstrated pattern of common beliefs and expectations of an organisation [13], while Daft holds the definition that organisational culture is the significant values, beliefs, ways of thinking and code of conduct shared among all organisation members [14]. Liu mentioned in his paper that a good organisational culture may enhance both the efficacy and productivity of an organisation [15].

Cameron classified organisational culture into the following four types according to the introversion-extroversion of policy focus and the flexibility control of organisational structure:

1. Consensual Culture: Organisational culture of this type is rather flexible and inward-facing with a work environment inclined to openness and harmony, so all employees feel included in a large family. Organisations with a consensual culture are usually conservative, unwilling to take risks or change, flexible, and focus on internal ties. Such a culture places a high value on organisational cohesion and attaches great importance to interpersonal relationships when assessing a member’s performance. Highly flexible and internal-oriented, a consensual culture emphasises openness, commitment and morale.

2. Developmental Culture: The developmental culture tends to be flexible and open, with a focus on organisational innovation and challenges. It shows aggressiveness and trust in employees; hence, the capacities to take greater risks and implement drastic changes. To enhance flexibility and the wellbeing of employees, organisations with this type of culture put great emphasis on external activities and assess employees’ performance mainly according to how hard-working they are, which prompts the organisation’s members to seek growth as their behavioural motive. The developmental culture is highly flexible and external-oriented, with a focus on innovation, adaptability, growth and obtaining resources.
3. Rational Culture: Organisational culture of this type stresses cost control, work efficiency, as well as performance-related competition between groups or employees. Businesses with a rational culture are willing to take greater risks for changes. The rational culture is a stabilised, well-controlled one that focuses on external activities and evaluates employee performance mostly according to work performance, hence the employees’ task-oriented behavioural motives. Such a culture is highly controlled and external-oriented, with a focus on explicit goals, productivity and achievements.

4. Hierarchical Culture: Inclined to control and inward-facing, hierarchical culture is known for clearly defined hierarchy of responsibilities and a bureaucratic system, with all work procedures stipulated and standardised. Such a culture gives employees a sense that the corporate management is built on a foundation of control and power; hence, the rather conservative employee behaviours. Hierarchical culture is intended for stability, control, and well-adjusted internal practices/ties. Organisational learning under hierarchical culture is implemented strictly in accordance with rules, with explicit and specific criteria unexceptionally applied to employee-performance assessments. Such a culture is highly controlled and internal-oriented [16].

Hsu et al noted that organisational culture includes innovative, human-oriented and team-oriented cultures [1].

To summarise the aforementioned arguments, this present study adopted The sum of values, beliefs and understanding shared among organization members as the conceptual definition of organisational culture, which can be regarded as a package of important values, beliefs, ways of thinking and code of behaviour shared by all organisation members, or a perception consistent throughout the organisation with shared characteristics. Such a descriptive culture is a differentiating factor among organisations and combines systematic variables at the individual, group and organisation levels. This study evaluates organisational culture using the dimensions proposed Hsu et al [1].

Employee Job Satisfaction

The concept of employee job satisfaction was first put forth by Hoppock as the subjective reactions or satisfaction displayed by employees both physically and mentally with regard to the work environment [17]. Meanwhile, employee satisfaction is also called job satisfaction [18]. According to Smith, Kendall and Hulin, job satisfaction is the result of a worker explaining the distinctive nature of his/her job based on a particular referential dimension. Whether a specific work situation affects job satisfaction involves many other factors, such as the comparison of good/bad jobs, comparison with colleagues, how competent an individual is, and the previous work experiences possessed by a worker [19]. Schneider and Zornitsky defined employee job satisfaction as an employee’s attitude or feelings toward his/her job [20], compared to the definition presented by Carlino and DeFina that employee job satisfaction is the general attitude an employee holds toward his/her duties [21]. Locke considers employee job satisfaction the pleasant/positive emotional response of a person who evaluates his/her duties or work experiences [22]. Since the notion proposed by Locke is the most academically cited one [23][24], it was adopted in this study as the conceptual definition of employee job satisfaction.

According to Ghiselli, job satisfaction refers to the aggressive sentiment resulting from work experiences and includes such work-related dimensions as the variation in (and nature of) work tasks, feedback, inter-colleague relationship and opportunities to perform tasks [25]. Arnett, Laverie and Melane defined job satisfaction as an employee’s general evaluation of his/her work, which is influenced by the employee’s position on job, incentive/control mechanism, work environment and management system [26]. Robbins said job satisfaction is a worker’s attitude toward his/her work as a whole. The more satisfied the worker is, the more positive an attitude he/she assumes toward work [4]. Meanwhile, Smith, Kendall and Hulin proposed five dimensions of job satisfaction, namely the job itself, job promotions, salary, supervisors and co-workers [19]. The existing Taiwanese studies pertaining to job satisfaction mostly adopt the definition of referential framework, which is why job satisfaction has been measured in a multi-dimensional approach [27]. But since the best definition of job satisfaction remains disputed, this present study adopts the evaluation dimensions proposed by Smith et al: 1) the job itself; 2) job promotions; 3) salary; 4) supervisor; and 5) colleagues [19].

The Influence of Organisational Culture on Employee Job Satisfaction

Yu said employees working under an innovative and aggressive culture tend to have higher job satisfaction and are happier with their job growth, safety, achievements and promotions [28]. Among all types of organisational cultures, Lan said the innovation-supporting one is positively related to leadership satisfaction, administration, employees’ advanced learning and colleague satisfaction. A conservative and bureaucratic culture, nevertheless, is negatively related to leadership satisfaction [29]. Xu concluded his study by noting the partially significant and positive influence of organisational culture on job satisfaction and work performance [30]. Chen believes a manager who ignores the formation and evolution of organisational culture will eventually be strapped for management resources amid severe difficulties in business operations. It is also imperative for the manager to pay attention to the gap between employees’ self-perceptions and how their managers perceive them. This will avoid discrepant cultural values within the organisation [31]. In his study of non-military personnel at the Ministry of National Defence, Wang argued that organisational culture is statistically related to both job satisfaction and resignation [32]. Zhuang reported a significant and positive relation between the organisational culture of international tourist hotels (which may be market-oriented,
employee-oriented, or team-oriented) and job satisfaction. That is, the more employees at international tourist hotels identify themselves with the organisational culture, the higher the job satisfaction [33].

One may derive the following hypothesis from the aforementioned analyses even if they do not focus on Taiwan-listed international tourist hotels:

Hypothesis 1 (H1): A good organisational culture has a positive and significant influence on employee job satisfaction at Taiwan-listed international tourist hotels.

The Influence of Internal Service Quality on Employee Job Satisfaction

Cai discussed the relationships between internal service quality, employee satisfaction, organisational commitment and customer-oriented behaviours at Bank A. She concluded that a part of the internal service quality significantly affects employee satisfaction [34]. While Tsai named internal service quality as the factor that affects employee satisfaction [35], Zhang extended Tsai’s argument to include factors such as internal marketing, gender, education background, seniority and remuneration [36]. Heskett et al [8] and others, argued that the quality of internal work affects employee satisfaction [37]. Hallowell et al considered internal-service quality extremely important as satisfying internal services may improve the service-rendering competency and job satisfaction of employees, which in turn affects the quality of external services. They mentioned the strong connection between internal service quality and job satisfaction, and how that connection is more important than employees’ satisfaction with remuneration and benefits. Moreover, they said an organisation or business wishing to deliver good-quality external services must first offer satisfying internal services that meet employees’ needs [6]. Sun pointed out the positive and significant relationship between internal service quality and employee satisfaction [38].

One may derive the following hypothesis from the aforementioned analyses even if they do not focus on Taiwan-listed international tourist hotels:

Hypothesis 2 (H2): Internal service quality has a positive and significant influence on employee job satisfaction at Taiwan-listed international tourist hotels.

And yet, whether or not organisational culture and internal service quality exert a synergetic effect on employee job satisfaction is an issue worth discussing; hence, the third derived hypothesis:

Hypothesis 3 (H3): Organisational culture and internal service quality exert a significant interactive influence on employee job satisfaction at Taiwan-listed international tourist hotels.

RESEARCH METHOD

Based on the research motives, purposes and literature review described above, the author derived the research hypotheses and established a conceptual research framework, as shown in Figure 1.

Designing the Questionnaire

The questionnaire in this study was designed on the basis of Multi-Dimension Measurement according to each observable dimension. It uses a 7-point Likert Scale to measure each answer, with 7 being strongly agree and 1 being
strongly disagree. A higher point represents a higher degree of agreement, and vice versa. Data collected from the samples were centralised, so the sum of scores given to all questionnaire items after deducting the average is zero. That way, the multicollinearity between independent and extraneous variables is erased to test their interactive influence better.

The following mathematical equation illustrates the centralisation concept: \( \Sigma (X_i - \bar{X}) = \Sigma N = 0 \). The 12-item questionnaire of organisational culture was patterned after the one proposed by Hsu et al, with additional adjustments [1]. The 16-item questionnaire of internal service quality was patterned after the ones proposed by Heskett et al [8] and Hallowell et al [6] with additional adjustments. The 10-item questionnaire of employee job satisfaction was patterned after the one proposed by Smith et al, with additional adjustments [19]. Besides, Common Method Variance (CMV) problems tested by the Confirmatory Factor Analysis (CFA) comparison method do not exist in the questionnaire as shown in Table 1 [39].

Table 1: The results of CMV test.

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>DF</th>
<th>( \Delta \chi^2 )</th>
<th>( \Delta DF )</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Factor</td>
<td>1356.6</td>
<td>15.2</td>
<td>1116.3</td>
<td>9</td>
<td>0.000</td>
</tr>
<tr>
<td>Multi-Factor</td>
<td>240.3</td>
<td>14.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sampling Method

This study conducted a questionnaire-based survey on the entry-level workers and section chiefs (or employees at higher levels) in the room service and catering departments of Taiwan-listed international tourist hotels, selected using convenience sampling. Thirty copies of the expert questionnaire were distributed in a pilot-test. A post-test was conducted after modifying the questionnaire in accordance with expert suggestions. Of the 310 copies of the official questionnaire distributed, 243 valid copies were returned at a response rate of 78.4%.

Data Obtained from Questionnaire and the Measurement Model

To verify the research framework proposed, a linear SEM was applied to CFA of the research model’s framework. The questionnaire was divided into three latent variables (i.e. organisational culture, internal service quality and employee job satisfaction), each containing several observable/explicit variables.

The survey was conducted using these observable/explicit variables, with several questionnaire items categorised under each of them. After processing data collected from the survey, files were created for the primary data. Although the questionnaire design was based on Multi-Dimension Measurement, either Dual Measurement or Single Measurement was adopted to make sure the computer software-aided data processing went as expected [40]. Table 2 shows the number of questionnaire items under implicit and explicit variables in this study, along with their reference resources.

Table 2: Number of Questionnaire Items for Implicit Variables and Observable Variables.

<table>
<thead>
<tr>
<th>Implicit Variables (Unobservable Variables)</th>
<th>Explicit Variables</th>
<th>Total Number of Questionnaire Items</th>
<th>References for Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employee remuneration</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employee training and job promotions</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teamwork</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Organisational culture (Mo)</td>
<td>Innovativeness</td>
<td>4</td>
<td>Hsu et al [1]</td>
</tr>
<tr>
<td></td>
<td>Member-oriented</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team-oriented</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Employee job satisfaction (Y)</td>
<td>The job itself</td>
<td>2</td>
<td>Smith et al [19]</td>
</tr>
<tr>
<td></td>
<td>Job promotions</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Salary</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supervisors</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Colleagues</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

RESULTS AND ANALYSIS

Linear Structure Model Analysis

The CFA is an analytical approach opposite to the Exploratory Factor Analysis (EFA). This study conducted a CFA of three unobservable/implicit variables (i.e. organisational culture, internal service quality and employee job satisfaction). Consisting of the Structural Model and Measurement Model, a SEM provides an effective solution to the cause-effect
relation between implicit/latent variables. The models verified in this study are divided into three parts: 1) verifying the goodness-of-fit of the Measurement Model; 2) verifying the goodness-of-fit of the Structural Model; and 3) verifying the overall model’s goodness-of-fit to make sure it conforms to the goodness-of-fit indices. That is, the goodness-of-fit of the overall SEM was judged with related goodness-of-fit indices [41].

Analysing Fit of Measurement Model

The factor loading of latent/implicit variables and manifest/explicit variables mainly measures the intensity of linear correlation between explicit and implicit variables. A factor loading close to 1.0 indicates the explicit variable is relatively capable of measuring the implicit one. In this study, the factor loading of all explicit variables was between 0.7 and 0.9; hence, the satisfying reliability. Consequently, all explicit/manifest variables in the model’s measurement system are capable of appropriately measuring the implicit/latent variables.

Moreover, the Average Variance Extracted (AVE) is used to calculate the explanatory power of variance between implicit/latent variables and explicit/manifest ones; the higher the VE value, the greater reliability and convergent validity of the latent/implicit variables. Usually, the AVE value must be larger than 0.5 to indicate that the explanatory variance of explicit variables is larger than measurement error [42]. In this study, all AVEs are larger than 0.5; hence, the explicit variables’ excellent reliability and convergent validity (See Table 3 and Figure 2).

Table 3: Judgment indicators of measurement system in the model.

<table>
<thead>
<tr>
<th>Unobservable/Implicit Variables</th>
<th>Observable Variables</th>
<th>Factor loading</th>
<th>Variance Extracted (VE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal service quality (X)</td>
<td>X1C</td>
<td>0.83</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>X2C</td>
<td>0.81</td>
<td>0.66</td>
</tr>
<tr>
<td>Organisational culture (Mo)</td>
<td>M1C</td>
<td>0.79</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>M2C</td>
<td>0.78</td>
<td>0.63</td>
</tr>
<tr>
<td>X*Mo</td>
<td>X1M1C</td>
<td>0.84</td>
<td>0.65</td>
</tr>
<tr>
<td></td>
<td>X2M2C</td>
<td>0.85</td>
<td>0.66</td>
</tr>
<tr>
<td>Employee job satisfaction (Y)</td>
<td>Z1C</td>
<td>0.88</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>Z2C</td>
<td>0.87</td>
<td>0.66</td>
</tr>
</tbody>
</table>

Analysing Fit of Structure Model

Path Analysis Results of Structure Model

After the overall model passed the goodness-of-fit test, Table 4 shows such results as the parameter estimates, SE and Critical Ratio (CR) between implicit variables. Table 4 also indicates that at Taiwan-listed international tourist hotels, internal service quality and organisational culture (X*Mo) have a significant interactive influence on employee job satisfaction (Y) (c=0.732).

Table 4: Path analysis results of the structural model.

<table>
<thead>
<tr>
<th>Path Coefficients between Implicit Variables</th>
<th>Estimate</th>
<th>SE</th>
<th>CR</th>
<th>P</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal service quality (X) → Employee job satisfaction (Y)</td>
<td>0.591</td>
<td>0.034</td>
<td>17.382</td>
<td>***</td>
<td>a</td>
</tr>
<tr>
<td>Organisational culture (Mo) → Employee job satisfaction (Y)</td>
<td>0.532</td>
<td>0.041</td>
<td>12.976</td>
<td>***</td>
<td>b</td>
</tr>
<tr>
<td>X*Mo → Employee job satisfaction (Y)</td>
<td>0.732</td>
<td>0.043</td>
<td>17.023</td>
<td>***</td>
<td>c</td>
</tr>
</tbody>
</table>

Note: * indicates P<0.05; ** indicates P<0.01; *** indicates P<0.001

Coefficient of Determination

Also known as Squared Multiple Correlation (SMC), the Coefficient of Determination is the degree of explanatory power of the independent variable regarding the dependent variable under each implicit variable. In other words, the $R^2$ value shown in Table 5 indicates that the implicit independent variable has adequate explaining ability on the implicit dependent variable respectively. Path coefficient of determination is presented in Table 5.

Table 5: Coefficients$^2$ (Hierarchical regression).

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.866$^a$</td>
<td>0.750</td>
<td>0.736</td>
<td>0.317</td>
<td>0.014</td>
<td>179.218</td>
<td>2</td>
<td>97</td>
<td>0.000</td>
</tr>
<tr>
<td>2</td>
<td>0.875$^b$</td>
<td>0.766</td>
<td>0.749</td>
<td>0.412</td>
<td>0.017</td>
<td>7.024</td>
<td>1</td>
<td>96</td>
<td>0.002</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Mo and X  
b. Predictors: (Constant), Mo, X and Mo*X
Table 6 was derived from Table 5.

Table 6: Coefficientsa.

<table>
<thead>
<tr>
<th>Coefficients of Determination</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal service quality (X) and Organisational culture (Mo) versus Employee job satisfaction (Y)</td>
<td>0.736</td>
</tr>
<tr>
<td>Internal service quality (X), Organisational culture (Mo) and X*Mo versus Employee job satisfaction (Y)</td>
<td>0.749</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Mo and X

The Indices of Fit of the Overall Model

The purpose of adopting SEM in the modelling phase of this study is to explore the relationship between unobservable variables within the Structural Model, to examine whether the Measurement Model has measurement reliability or not, and also to measure the overall goodness-of-fit effect of this study using such indices as χ², df, GFI, AGFI, NFI, CFI, RMR and RMSEA.

In most cases, it is required that χ²/df <5, 1>GFI>0.9, 1>NFI>0.9, 1>CFI>0.9, RMR<0.05 and RMSEA<0.05 [43] [44]. The goodness-of-fit of the overall model in this study is satisfying, given the fact that χ²/df <5 and GFI, AGFI and NFI are all larger than 0.90, with the RMR value being smaller than 0.05, as shown as in Table 7.

Table 7: Assessment of fit of the overall model.

<table>
<thead>
<tr>
<th>Determination index</th>
<th>Fit value</th>
<th>χ²</th>
<th>df</th>
<th>GFI</th>
<th>AGFI</th>
<th>NFI</th>
<th>CFI</th>
<th>RMR</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12.705</td>
<td></td>
<td>14</td>
<td>0.913</td>
<td>0.907</td>
<td>0.906</td>
<td>0.905</td>
<td>0.013</td>
<td>0.014</td>
</tr>
</tbody>
</table>

Standardised Results of SEM Analysis

Figure 2 indicates the result of computer-aided standardisation of the model’s overall framework.

Analytical Testing of Path Effect for the Structural Model

For the test of the extraneous variable, this study performed a hierarchical regression analysis (see Table 5) followed by centralised hierarchical regression analyses and t-tests of Y versus X, Mo and X*Mo. These analyses were intended to
test whether the significance of regression coefficient \( c \) is substantiated (i.e. whether \( c \) is zero or not). The test results are shown in Table 8.

### Table 8: Coefficients\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardised Coefficients</th>
<th>Standardised Coefficients</th>
<th>( t )</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>3.826</td>
<td>1.182</td>
<td>2.456</td>
<td>4.911</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>9.743</td>
<td>0.913</td>
<td>10.932</td>
</tr>
<tr>
<td></td>
<td>Mo</td>
<td>6.871</td>
<td>0.433</td>
<td>15.344</td>
</tr>
<tr>
<td></td>
<td>2 (Constant)</td>
<td>4.032</td>
<td>1.561</td>
<td>2.456</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>9.183</td>
<td>0.725</td>
<td>12.381</td>
</tr>
<tr>
<td></td>
<td>Mo</td>
<td>6.383</td>
<td>0.316</td>
<td>2.292</td>
</tr>
<tr>
<td></td>
<td>X*Mo</td>
<td>14.317</td>
<td>0.431</td>
<td>12.684</td>
</tr>
</tbody>
</table>

\( a \). Dependent Variable: Organisational Effectiveness (\( Y \))

From Table 8 we know that \( t \) is larger than 2. Table 4 also shows that the Path Coefficient of \( Mo*X \) versus \( Y \) is 0.732, indicating the extraneous effect of \( Mo*X \) on \( Y \).

The above-mentioned analysis generated the following verified results:

1. Internal service quality has a positive and significant effect on employee job satisfaction at Taiwan-listed international tourist hotels with a 0.59 standardised path coefficient that supports H1 (Hypothesis substantiated).
2. Organisational culture has a positive and significant effect on employee job satisfaction at Taiwan-listed international tourist hotels with a 0.53 standardised path coefficient that supports H2 (Hypothesis substantiated).
3. Internal service quality and organisational culture have a positive and significant interactive influence on employee job satisfaction, with a 0.73 standardised path coefficient that supports H3 (Hypothesis substantiated).

### CONCLUSIONS AND SUGGESTIONS

#### Conclusions

The following specific conclusions are derived from the aforementioned data analyses and results:

1. As for SEM verification, the SEM established in this study has a satisfying goodness-of-fit in terms of the Measurement Model, Structural Model and the overall structure; hence, a good model fitting.
2. Conclusions with regard to the verification of practices at Taiwan-listed international tourist hotels are that the internal service quality and organisational culture have a significant interactive influence on employee job satisfaction at Taiwan-listed international tourist hotels, which in turn signifies the positive extraneous effect of organisational culture in this study. When the extraneous and independent variables simultaneously exert a significant interactive influence on the dependent variable, neither the independent nor extraneous variable will affect that dependent variable significantly.

#### Contributions of the Present Study

1. Contributions to business practices at Taiwan-listed international tourist hotels - While the previous studies of Taiwanese tourist hotels tend to focus on EFA, this present study performed modelling on the summarised results of previous literature in related fields. It also verified the model’s goodness-of-fit to find out if it has satisfying goodness-of-fit effects. Consequently, this study is a CFA-based one that addresses a crucial topic regarding business practices. Not only is that topic worth further research in relevant fields, the research results also provide a highly valuable reference for decision makers at Taiwan-listed international tourist hotels.
2. Innovative applications of methodology - The previous literature pertaining to Taiwan-listed international tourist hotels usually conducted exploratory research using the multi-regression analysis and rarely used the CFA-based research framework that takes into consideration the implicit variables’ extraneous effects. But since the chief dimensions of this present study are implicit variables, CFA and linear SEM appear suitable as the measurement tool and model framework respectively. That explains why this study is relatively innovative in terms of its methodology.

#### Limitations and Suggestions

1. During the model-building process, this CFA-based study should ensure the verification model is as simple as possible and avoid complicated ones with a poor goodness-of-fit. That is why this study focuses solely on how internal service quality affects the employee job satisfaction, with organisational culture being the extraneous variable.
ACKNOWLEDGEMENTS

The author highly appreciates the support kindly granted by his university regarding this study, as well as the valuable advice of Prof. Sheng-Hsiung Hsu, Prof. Thun-Yun Kao, Prof. Shu-Man Wang, Dr Yen-Luan Chen and Dr Yu-Je Lee, his dear colleagues, on research and analysis. The author would like to take this opportunity to express his utmost appreciation for their assistance, without which he could not be able to finish this study as expected.

REFERENCES


182
42. Fornell, C. and Larcker, D., Structural equation models with unobservable variables and measurement error. *J. of Marketing Research*, 18, 1, 39-50 (1981).