

Using the Kano Two-Dimensional Quality Model to Evaluate Service Quality of Resort Hotels

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Summary

This study used six resort hotels in Taitung as examples, and “SERVQUAL” scale and the Two-Dimensional Quality Model to measure the service quality of resort hotels. The findings can serve as reference for resort hotels to improve services. Results showed that among resort hotel quality improvement indicators, there are 5 one-dimensional quality elements (O), 15 critical quality elements (M), 2 indifferent quality elements (I), but no attraction quality elements (A). This means that most tourists consider most services as critical, thus, resort hotel operators must continuously provide more intricate and customized service quality to increase tourist satisfaction, or it will adversely affect the willingness of tourists to stay at hotels. It is suggested that other than basic service quality, hotel operators should offer tourists more service items that surprise and excite them, and create more attraction quality elements in order to increase corporate profit.

Key words:

resort hotels, Kano Two-Dimensional Quality Model, service quality

1. Introduction

Service quality is very important, however, past studies discuss service quality only in terms of one-dimensional quality concepts. After Japanese scholars Noriaki Kano, Fumio Takahashi, and Nobuhiko Seraku, et al. (1984) proposed the Two-Dimensional Quality Model, they discovered that, when some quality elements are present, it may not make customers feel satisfied, but may cause customer dissatisfaction or neutrality. Therefore, it is necessary to separately discuss “satisfaction” and “dissatisfaction” in service quality. The Kano Model describes the relationships between customer satisfaction and product quality, and between customer satisfaction and some type of service quality [1], combining service quality with services and products that provide the most optimal service quality to tourists. Limited by human and material resources, this study only used six resort hotels in Taitung as examples,

and “SERVQUAL” scale and the Two-Dimensional Quality Model to measure the service quality of resort hotels. The

findings can serve as reference for resort hotels to improve upon services.

2. Literature Review

Resort hotels are public facilities that are located in tourist areas or scenic locations that provide food, lodging, leisure facilities, and services, which are combined with local natural resources to help people relax their bodies and minds, while being entertained, and in turn, resort hotels gain reasonable profit [2]. It is impossible to standardize the services themselves, the processes of services, and the methods of services, thus, there are no objective measurement standards, rendering the measurement of service quality even more difficult. In 1985 Parasuraman, Zeithaml, and Berry (PZB) [3] proposed the “SERVQUAL” scale to measure service quality; in 1998 the system was simplified to service quality bases of five measurable aspects, namely, “tangibility,” “reliability,” “assurance,” “responsiveness,” and “empathy.” This study adds the aspect of “entertainment” of resort hotel leisure facilities, activities, and travel-related services, for a total of six aspects for measurement. Based on these definitions, a 22 item scale, with reliability and validity, is designed, where the survey method is used to measure service quality.

Takahashi Fumio and Noriaki Kano cited Herzberg’s work motivation, the “M-H Theory,” and used this as a basis in naming the “M-H character of quality.” In 1984 [1], they formally proposed the “two-dimensional quality” model and empirical research. The so-called “two-dimensional quality” refers to when quality elements (quality of products or services) are present; it may not achieve customer satisfaction, and may sometimes cause customer dissatisfaction or neutrality. Application of the Two-Dimensional Quality Model originated in the development and detection of product quality in the manufacturing industry. Perspectives based on the Two-Dimensional Quality Model primarily explore the satisfaction and feelings of customers regarding quality, and measurement methods are more focused on the subjective understanding of customers [4]. In addition, the Two-Dimensional Quality Model

is also applied in the service industry to measure different types of quality, and observe customer understanding of quality classifications [5][6]. The Kano Two-Dimensional Quality Model not only proposed theoretical models, but also practical actions. Unlike the theories that focus on exploring customer preferences, the Kano Two-Dimensional Quality Model places greater emphasis on the expectations of customers, and discusses factors that affect customer satisfaction [7]. The quality elements are described clearly and definitively, with classifications of quality elements that more easily distinguish between the needs of different customers [8].

3. Research Design and Method

3.1 Kano's service quality measurement model

This study used the quality improvement indicators proposed by Matzler and Hinterhuber (1998) [9], with five levels, to evaluate

subject expectations, including “like” “must be,” “neutral,” “can live with,” and “dislike.” The formula is as follows:

Indicator of increased satisfaction =

$$(A + O) / (A + O + M + I) \quad (\text{Eq. 1})$$

Indicator of decreased dissatisfaction =

$$(O + M) / (A + O + M + I) \quad (\text{Eq. 2})$$

A: attraction quality elements; O: one-dimensional quality elements; M: must be quality elements; I: indifferent quality elements

When indicator of increased satisfaction is close to 1, it means that the element is important in affecting customer satisfaction; similarly, when indicator of decreased dissatisfaction is close to 1, it means that the element is important in affecting customer dissatisfaction.

3.2 Research framework

This study used the six service aspects of “tangibility,” “reliability,” “assurance,” “responsiveness,” “empathy,” and “entertainment,” and uses Kano two-dimensional quality classifications to measure the service quality of resort hotels.

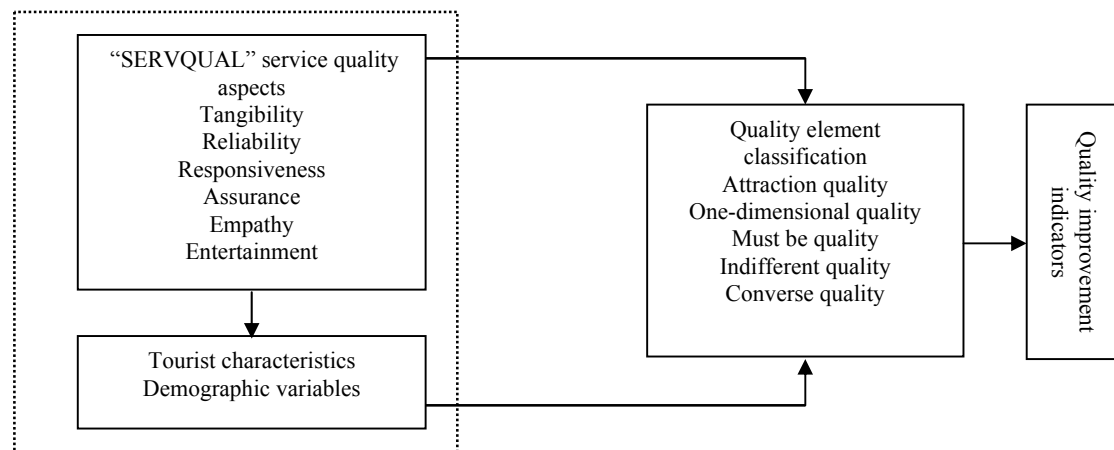


Figure 1 Research Framework

Source: this study

4. Empirical Results and Analysis

This study selected legal resort hotels with over 60 rooms in significant scenic areas of Taitung County for its research scope. The six selected hotels as research subjects are the Rainbow Hotel, Toong Mao Resort & Hotel, Hoya Resort, Toyugi Resort, Lu Ming Hotel, and the Chief Spa Hotel. A total of 450 questionnaires were distributed, 386 valid questionnaires were retrieved; with the rate of valid retrieval at 85.78%.

4.1 Reliability and sample analysis

Both the scale and construct reliability α values of this study are greater than 0.7, which shows that the questionnaire aspects and question items have high reliability. Frequency statistics are used to analyze the subject data, it was found that 57.5% were women, and 42.5% were men. Most, or 25.9%, were in the age group of

31~40, 32.6% were in the service industry, 37.6% had university educations, and 53.1% of traveling members were families or parents and children. Most tourists, or 49.2%, lived in the south, and most, or 64.2%, were staying in these hotels for the first time.

4.1 Service quality classification analysis of the Kano Model

This study used Kano quality classification, as proposed by Kurt, Matzler, and Hinterhuber (1998), as the basis, and classified four overall quality items, namely items of attraction quality (A), one-dimensional quality (O), must-be quality (M), and indifferent quality (I). The item selected by the “relative majority” were used as the result of quality classification. The purpose of “relative majority” is to show those with a higher ratio of total frequency within the quality type among quality types for different variables. (As shown in Table 1)

Table 1. Kano two-dimensional service quality classifications and characteristic analysis

<i>quality elements</i>	<i>A</i> (%)	<i>O</i> (%)	<i>M</i> (%)	<i>I</i> (%)	<i>Element</i> <i>classification</i>	<i>Coefficient of</i> <i>increased</i> <i>satisfaction</i>	<i>Coefficient of</i> <i>decreased</i> <i>dissatisfaction</i>
1. The hotel has appropriate room facilities	4.922	40.415	44.560	10.104	M	0.45	4.922
2. The make-up quality of hotel rooms is sufficiently clean	3.627	45.855	43.264	6.995	O	0.47	3.627
3. The hotel provides sufficient dining facilities and services	9.845	38.342	35.751	16.062	O	0.48	9.845
4. The service personnel are suitably dressed and are professional in appearance	6.477	32.642	40.933	19.948	M	0.39	6.477
5. Location of the hotel	10.104	27.202	35.751	26.425	M	0.38	10.104
6. The service personnel can correctly provide service information	6.218	33.679	47.150	12.953	M	0.40	6.218
7. The service personnel completed services in the time promised	7.772	32.642	44.041	15.544	M	0.40	7.772
8. The service personnel is capable of resolving customer service problems	6.736	35.492	44.301	13.472	M	0.42	6.736
9. The service personnel can quickly provide required services	7.772	38.342	40.415	13.212	M	0.46	7.772
10. The service personnel will actively provide services	15.285	33.420	26.943	24.093	O	0.49	15.285
11. Fast treatment of customer complaint issues	4.145	40.415	45.337	9.845	M	0.45	4.145
12. You are not concerned about hotel payment methods	3.109	38.601	45.855	12.435	M	0.42	3.109
13. Hotel provides stated services	4.663	38.601	44.301	12.435	M	0.43	4.663
14. You feel safe regarding the hardware and software of the hotel	5.440	34.715	46.114	13.731	M	0.40	5.440
15. The hotel facilities are legitimate	4.663	31.606	52.850	10.881	M	0.36	4.663
16. Hotel service personnel are professional	7.772	32.642	43.005	16.580	M	0.40	7.772
17. The service personnel provides individual services based on your needs	11.140	31.606	33.161	24.093	M	0.43	11.140
18. The service personnel actively provide services and polite greetings	13.472	37.565	26.166	22.798	O	0.51	13.472
19. You consider the open hours of hotel facilities are convenient	9.585	32.124	31.865	26.166	O	0.42	9.585
20. The hotel has sufficient leisure facilities	12.694	25.907	32.383	28.756	M	0.39	12.694
21. The hotel provides sufficient leisure activities (such as events in the evenings)	17.358	19.430	19.430	42.746	I	0.37	17.358
22. The hotel can arrange tourist travel services	16.839	23.834	18.912	40.155	I	0.41	16.839

Source: This study

5. Conclusions and Suggestions

According to the Kano two-dimensional service quality classifications and characteristics analysis, among resort hotel quality improvement indicators, there are 5 one-dimensional quality elements (O), 15 must-be quality elements (M), 2 indifferent quality elements (I), but no attraction quality elements (A). This result shows that most tourists have very high demands for the quality of these service quality elements; the majority of tourists consider most services as must-be, thus, when such elements are sufficient, it does not add to satisfaction; however, when they are missing, tourists would become dissatisfied.

Resort hotel operators must continuously provide more intricate and customized service quality to increase tourist satisfaction, or it will adversely affect the willingness of tourists to stay at hotels. Additionally, resort hotels generally lack attraction quality elements; it is suggested that other than basic service quality, hotel operators should offer tourists more service items that surprise and excite them, creating more attraction quality elements in order to increase corporate profit.

References

- [1] Kano, N., Takahashi, F., Gan, S. (1984) "Attractive quality and must-be quality". *Quality Control Monthly* 21(5): 33-41, translated from the Japanese "Quality" Magazine, Vol.14(2): 147.
- [2] Lai, Y. H. (2009) . A Study of Job Standardization on Service Encounter in Resort Hotel. Institute of Leisure, Recreation and Tourism Management, N CYU. Master paper.
- [3] Parasuraman, A., Zithaml V.A., & Berry L. L. (1985), A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(3) : pp. 41-50.
- [4] Lin, S. P., Chen, L. Y., Chan, Y. H., & Chwen S.(2010). Refining Kano's quality attributes-satisfaction' model: A moderated regression approach. *International Journal of Production Economics*. Retrieved March 20, 2010, from 10.1016/j.ijpe.2010.03.015.
- [5] Huang, Y.F., Wu, C.P., Lin, S.W., Sun, Y.R., Huang, Y., Yang, H.Y., Liao, L.H. (2006) "A discussion on customer demands on service quality of Ku Kuan Hot by using the Kano model" *Quality Magazine*, 2006/7, pp.64-72.
- [6] Lee, Y. C., & Huang, S. H.(2009). A new fuzzy concept approach for Kano's model. *Expert Systems with Applications*, 36(3), 4479-4484.
- [7] Jane, A.C. & Dominguez, S.M. (2003) ,Citizens' Role in Health Services : Satisfaction Behavior : Kano's Model, Part 2, *Quality Management in Health Care*, Vol.12, No.1, pp.72-80.
- [8] Wu, Y.H., Lin, C.W., Yang, S.M., Chen, Y.C. (2008) Exploring the demands of customers of Taipei Starbucks coffee chain— using the Kano Model and experiential marketing as a framework, *Journal of Customer Satisfaction*, 4(1), 69-88.
- [9] Matzler, K., Hinterhuber, H.H. (1998), How to make Product development Projects more successful by integrating Kano's model of customer satisfaction into quality function deployment. *Technovation*, 18(1) : pp . 25-38.