行政院國家科學委員會專題研究計畫 成果報告

時尚創意汽車旅館服務品質量表之建立與滿意度模型之建構
研究成果報告(精簡版)

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1. **Introduction**

Taiwan's motel industry was established in the early 1980s. In the beginning, people tended to associate motels with negative sexual images (Chang 2009). However, in recent years, boutique motels have started to emerge as a unique business model in Taiwan's motel sector. Boutique motels differentiate themselves from traditional motels by providing a new leisure concept whereby motels are not only regarded as places to stay, but also as places for an exotic experience. Each boutique motel is designed and furnished in a luxurious, themed, and stylish way, and its rooms are uniquely designed and decorated to cater for a variety of customer tastes. For example, some boutique motels incorporate South Pacific island culture and villa style in their design, and provide a spa or even a swimming pool in the room. Boutique motels therefore tout themselves as seven-star motels. Boutique motels have been successful in drawing the attention of many people due to the human desires for variety, novelty, and stimulating experiences. As a result, many tourists even choose boutique motels in preference to hotels as places to stay (Taiwan Tourism Bureau 2009). As the demand for boutique motel accommodation in Taiwan has continued to grow, the number of boutique motels has also grown rapidly. Although exterior and interior designs were initially considered to be the key factors in attracting customers, the experience of successful boutique motels suggests that satisfaction with overall service quality (SQ) determines success or failure among boutique motels.

One possible explanation for this accent on service is that customer satisfaction with aspects of service quality other than motel design influences customers' buying decisions. Customers who experience poor service in a boutique motel stop visiting it and immediately disseminate the negative information to many potential customers. This indicates that boutique motels should adopt a strategy of differentiating themselves from their competitors by means of service quality. However, the extant SQ literature is dominated by studies of service quality in hotels as opposed to other forms of accommodation (e.g., Akbaba 2006; Hsieh, Lin et al. 2008). To apply the results to the boutique motel context, there is a need to modify the traditional conception of hotel SQ. Because the literature on boutique motel SQ (b-SQ) is relatively scant, the first objective of the study was to develop this area of inquiry by employing the Delphi method and scale development procedure proposed by Churchil (1979). The Delphi method is a systematic and interactive method in which a panel of experts is used to generate adequate and representative constructs and items. After obtaining the initial pool of constructs and items for b-SQ, the scale development procedure suggested by Churchill was followed to refine the relationship between the constructs and items proposed.

In 1989, the Swedish customer satisfaction barometer (SCSB) was introduced as

a tool for companies to assess their efforts in achieving customer satisfaction (Fornell 1992). The successful experience of the SCSB has inspired the creation of the American customer satisfaction index (ACSI). The ACSI model was built on the basis of two well-established theories – the quality, satisfaction, and performance (QSP) paradigm and Hirschman's (1970) exit-voice theory. The ACSI model measures the cause-and-effect relationship that runs from the antecedents of customer satisfaction level (customer expectation, perceived service quality, and perceived value) to its consequences (customer complaints and customer loyalty) (see Figure 1). Other similar indices include the European customer satisfaction index (ECSI). Researchers have also conducted customer satisfaction index (CSI) studies in many other countries (e.g., Denmark and Austria), arguing that CSIs can serve as a predictor of company profitability and market value (Anderson, Fornell et al. 1994; Anderson, Fornell et al. 1997; Eklof, Hackl et al. 1999). Although traditional CSI models provide an index for measuring customer satisfaction, they lack the ability to diagnose areas for improvement. To address this issue, this study developed a decomposed customer satisfaction model for boutique motels (the b-CSI) that breaks down b-SQ into five sub-constructs. Decomposed models provide better explanatory power than pure models and can be used as a tool for understanding the factors that lead to better b-SQ (Taylor and Todd 1995).
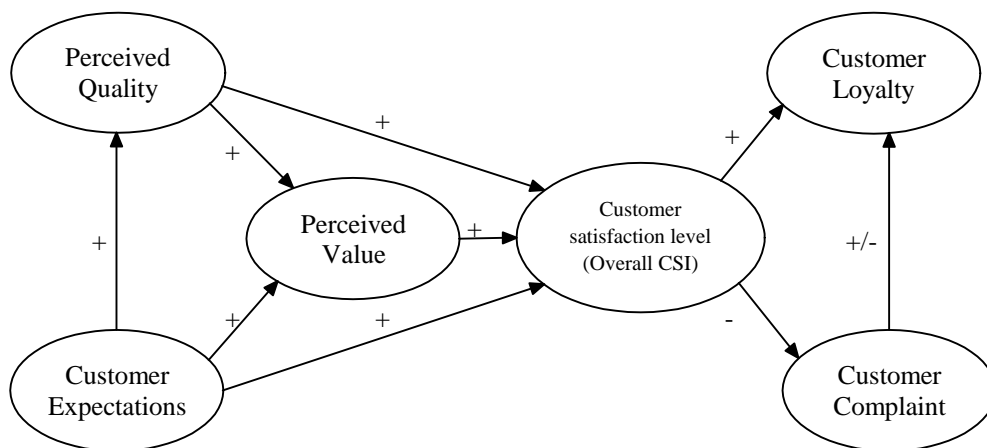

Figure 1. The ACSI model

This study makes important theoretical and practical contributions to the extant literature. On the theoretical side, we propose and empirically test a b-CSI model that is a modified version of the ACSI model. On the practical side, this model can serve as a diagnostic tool for identifying the reasons behind customer satisfaction or dissatisfaction; gauging whether a company's complaints handling procedure is

effective; suggesting how customer satisfaction can be improved; measuring how effective efforts made to improve customer satisfaction have been; and revealing where a company stands on customer satisfaction relative to its competitors. The partial least squares (PLS) method was used to test the b-CSI model and to derive the CSI score. The b-CSI model was tested in the context of a two-year study of fifteen boutique motels in Taiwan, a sample considered adequate to represent the industry as a whole. The analysis was based on empirical data obtained via a self-administered questionnaire.

The organization of this study is as follows. In Section 2, we propose a b-CSI model for the boutique motel. In Section 3, the way in which the sample was derived and the definitions of constructs are given. In Section 4, to demonstrate the model's applicability, we analyze its results. Finally, we conclude with a discussion and provide directions for future research.

2. **b-CSI model**

Figure 2 shows the b-CSI model. It focuses on three key antecedents of customer satisfaction level (corporate image, b-SQ, and perceived value) and two consequences of customer satisfaction level (customer complaints and customer loyalty). The b-CSI model is adapted from the ACSI model, where customer expectation is replaced by corporate image and service quality is replaced by decomposed b-SQ, and one additional relationship is introduced (from corporate image to customer loyalty). In the conventional CSI model, researchers have found that the construct of customer expectation does not have a significant impact on the customer satisfaction level (Martensen, Gronholdt et al. 2000; Johnson, Gustafsson et al. 2001). Researchers, therefore, suggested that the construct of customer expectation be removed from the CSI model. We suggest substituting the construct of corporate image for that of customer expectation in the boutique motel setting.
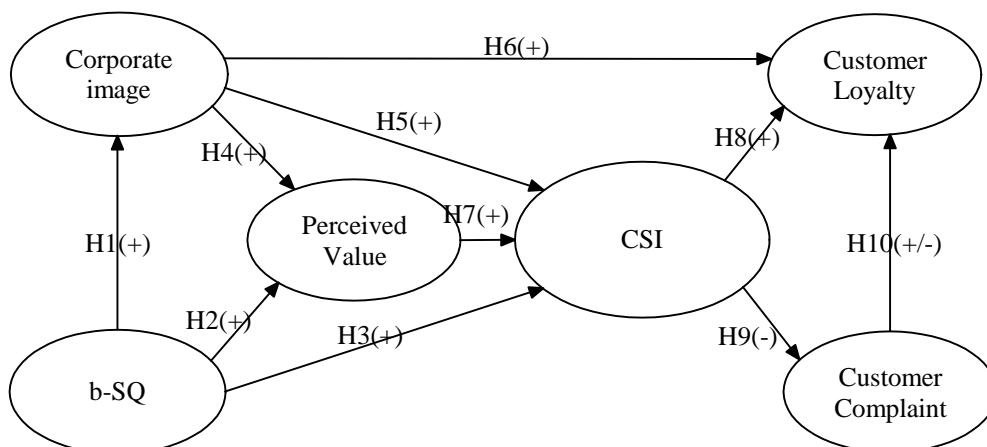
Figure 2. The b-CSI model

3. Methods

3.1. Research design and sample

In the context of fierce competition, it is difficult for boutique motels to rely on exterior and interior decoration alone to sustain competitive advantage because competitors can easily duplicate innovative ideas. In addition, customers are becoming sophisticated enough to know where better services that meet their expectations are available. Thus, maintaining a high level of customer satisfaction is one of the few ways in which boutique motels can achieve a sustainable competitive advantage. Boutique motels are therefore doing their best to listen to customers' needs and wants and to translate this knowledge into attractive products and services. To understand customers' needs and wants, we conducted an empirical test on the boutique motel industry in Taiwan using the decomposed b-CSI model. The process followed in developing this model is depicted in Figure 3.
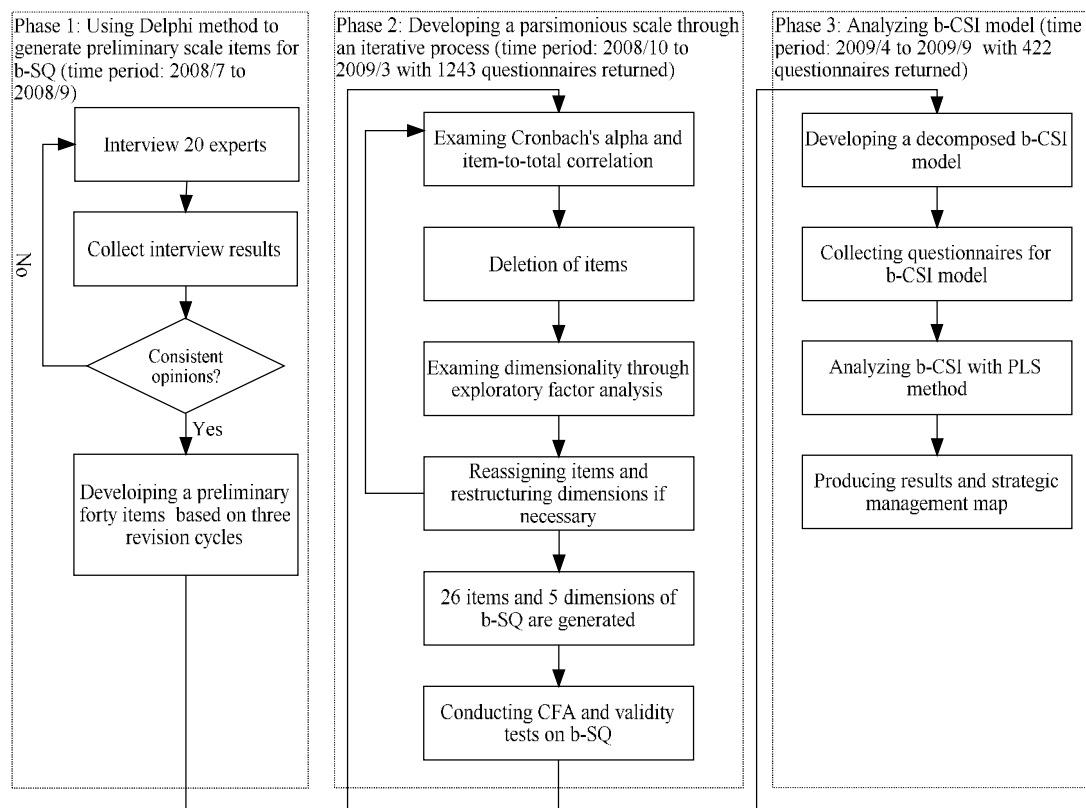

Figure 3. The process for developing a decomposed b-CSI model

4. Decomposed b-CSI model results

The research model was tested using PLS, a structural equation modeling technique that is well suited to highly complex predictive models (Wold 1985). PLS has several strengths that made it appropriate for the b-CSI model, including its ability to handle the nonnormality of the data, and the limited sample size (Hsu, Chen et al. 2006). As a by-product of the PLS design, the estimated weights can be used to construct index scores. These scores represent a uniform and comparable system of measurement that allows for systematic benchmarking over time and across firms. The computer program used for this analysis was the PLS Graph version 3.0 (Chin, 2001).

Before we proceeded, we tested the adequacy of our measurement model by looking at: (1) individual item reliabilities, (2) the convergent validity of the measures associated with individual constructs, and (3) discriminate validity. First, in PLS, item reliabilities are assessed by examining loadings (see Table 5). All loadings of the indicators exceeded the recommended threshold of 0.7 (Carmines and Zeller 1979).

Second, to assess the convergent validity of constructs, researchers using PLS report the internal consistency measure that was developed by Fornell and Lacker (1981), and which is similar to Cronbach's alpha. However, Fornell and Lacker argue that their measure is more appropriate than Cronbach's alpha, because it uses the item loadings obtained with the causal model. Table 5 lists the internal consistency of each reflective construct. All internal consistency reliability measures were above the recommended level of 0.70 (Nunnally 1978). Convergent validity is also verified by examining AVE of each construct. All constructs have AVE larger than the recommended level of 0.50 (Fornell and Lacker 1981). The result shows that the measurement model has adequate internal consistency.

Table 5. Measurement model result

Construct			Loading
Overall Service Quality	**Internal consistency = 0.95**	**AVE = 0.88**	
Overall, the boutique motel provides good accommodation			0.94
The services provided by the boutique motel meets my needs			0.95
the services provided by the boutique motel are reliable			0.92
Corporate Image	**Internal consistency = 0.96**	**AVE = 0.93**	
The overall image of the boutique motel is good			0.96
I believe the boutique motel is trustworthy.			0.96
Perceived value	**Internal consistency = 0.95**	**AVE = 0.91**	
Rating of quality given price			0.96
Rating of price given quality			0.95
Customer Satisfaction	**Internal consistency = 0.96**	**AVE = 0.88**	
The overall customer satisfaction rating for the boutique motel is good			0.92
The performance of the boutique motel has reached my expectations			0.95
The performance of the boutique motel is close to that of my ideal boutique motel			0.94
Customer Loyalty	**Internal consistency = 0.96**	**AVE = 0.91**	
I will visit the boutique motel in the future			0.95
I will recommend my friends to visit the boutique motel			0.96
Customer Complaint	**Internal consistency = 1**	**AVE = 1**	
Over the past three months, have you ever formally or informally complained about the boutique motel?			1.00

To assess discriminant validity, Fornell and Lacker (1981) suggest the use of AVE, which should be greater than the variances shared between the constructs. The comparison can be made in a correlation matrix (see Table 6), including the correlations between different constructs in the off-diagonal elements of the matrix, and the square roots of the AVE for each of the constructs along the diagonal. For adequate discriminant validity, the diagonal elements should be greater than the off-diagonal elements in the corresponding rows and columns. After examining the results, all constructs have adequate discriminant validity, supporting the robustness of the scale's factor structure.

Table 6. Discriminant validity

Latent variables	1	2	3	4	5	6
1. Overall SQ	**0.94**					
2. Corporate Image	0.88	**0.96**				
3. Perceived value	0.84	0.85	**0.95**			
4. Satisfaction	0.86	0.83	0.88	**0.94**		
5. Loyalty	0.75	0.70	0.74	0.82	**0.95**	
6. Complaint	-0.04	-0.03	-0.04	-0.07	-0.05	**1.00**

4.1. Structural equation model

Having established confidence in our measurement model, we examined the main effects. The test of the structural equation model includes an estimation of the path coefficients and R^2 values. The path coefficients indicate the strengths of the

relationships between the dependent and independent variables, and R^2 values represent the amount of variance explained by the independent variables. The overall model explained 83% of the variance in customer satisfaction. In addition, the model explained 71% of the variance in customer loyalty. Considering the fact that a number of factors might affect these construct, the amount of variance explained by this model is good enough, which adds support to the theoretical soundness. To further test the path significance, we employed jackknife methods. All of the path estimates are statistically significant, except for that running from corporate image to customer satisfaction and customer satisfaction to customer complaint (see Figure 4).
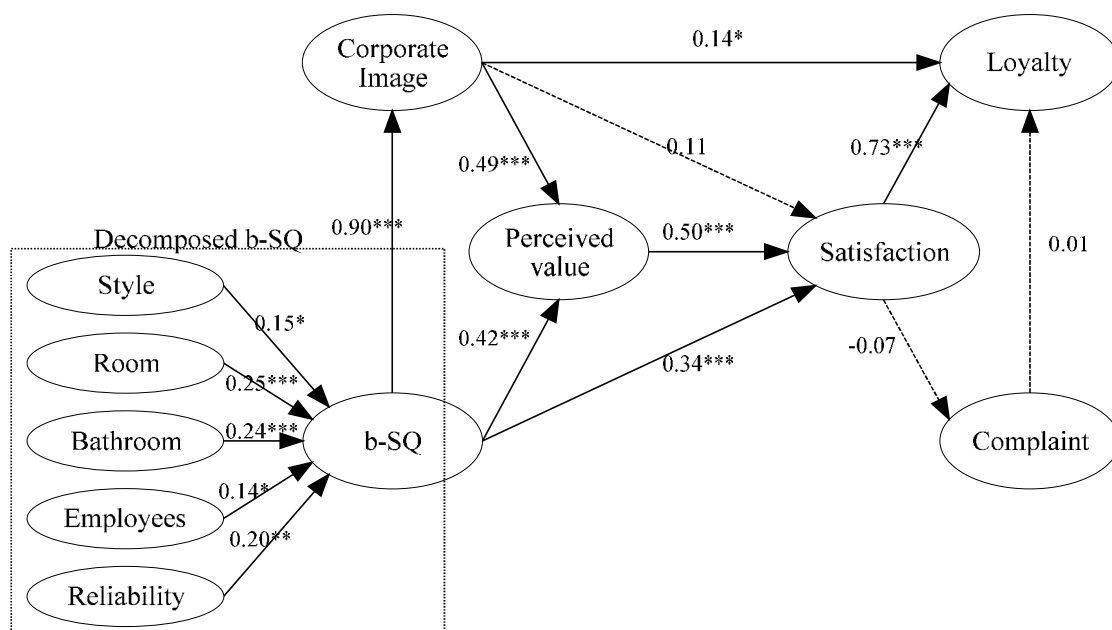

Figure 4. Model results (*p<0.05;**p<0.01;***p<0.001)

To realize the efficacy of a firm's complaint handling capability, we examined the path relationship between customer complaint and customer loyalty. The path coefficient from customer complaint to customer loyalty is not statistically significant (β=0.01, p n.s.). This implies that boutique motels were not effectively handling customer complaints, which meant that complaining customers did not turn into loyal ones.

Customer satisfaction had a positive effect on customer loyalty (β=0.73, p<0.001). Therefore, hypothesis 8 was supported. However, customer satisfaction had no statistically effect on customer complaint (β=-0.07, p n.s.); hence, hypothesis 9 was not supported.

Corporate image was found to be positively associated with customer loyalty (β=0.14, p <0.05) and perceived value (β=0.49, p<0.001). Thus, hypothesis 4 and 6 were supported. However, corporate image had a no statistically effect on customer satisfaction (β=0.11, p n.s.). Thus, hypothesis 5 was not supported. Perceived value had a positive effect on customer satisfaction (β=0.50, p<0.001). Hypothesis 7 was supported. b-SQ showed a positive effect on corporate image (β=0.90, p<0.001), perceived value (β=0.42, p<0.001), and customer satisfaction (β=0.34, p<0.001). Hypothesis 1, 2 and 3 were therefore confirmed.

The CSI score[1] of 80.5 for the boutique motel industry (transformed to a 0- to 100-point scale to facilitate comparisons) is higher than the CSI score of 75 for the hotel industry in the United States in 2009[2]. This suggests that boutique motels are performing quite well in terms of customer satisfaction.

To examine the effects of antecedent constructs on overall CSI, we look at the total effect of each construct (e.g., the total effect of corporate image on overall CSI = [corporate image on overall CSI] + [corporate image on perceived value] x [perceived value on overall CSI]). The total effects of b-SQ, corporate image, and perceived value on overall CSI are 0.82, 0.36, and 0.50, respectively. Accordingly, b-SQ has the greatest impact on overall CSI. To further understand which quality attribute can lead to better b-SQ, we build a strategic management map by breaking down the b-SQ. Based on the results presented in the strategic management map, managers can prioritize areas for improvement.

5. Conclusion and future research directions

Boutique motels have emerged as a unique business model in Taiwan. Boutique motels differentiate themselves from traditional motels by providing a new leisure concept whereby boutique motels are not only seen as places to stay, but also as places for an exotic experience. As a result, boutique motels have been successful in attracting the attention of many people, and many tourists even choose to stay at boutique motels rather than in hotels. Although exterior and interior design were initially considered the key factors for attracting customers, the experience of

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[1]The formula of the CSI score is,

$$CSI\ Score = \frac{\sum_{i=1}^{3} w_i \overline{x_i} - \sum_{i=1}^{3} w_i}{9 \sum_{i=1}^{3} w_i} \times 100,$$

where w_i are the weights.

[2]The ACSI score for the hotel industry can be obtained at:
http://www.theacsi.org/index.php?option=com_content&task=view&id=147&Itemid=155&i=Hotels

successful boutique motels suggests that satisfaction with overall service quality determines success or failure among boutique motels.

To help researchers and managers understand how to achieve a higher level of customer satisfaction, this study developed a decomposed CSI model for the boutique motel industry. In so doing, it makes a number of contributions to the prior literature. From the theoretical perspective, one of the contributions made was to propose and empirically test a decomposed b-CSI model. The process followed in developing the decomposed CSI model comprised three phases. To define the b-SQ construct, we first utilized the Delphi method approach in which an expert panel was formed and convened to bring together knowledge and opinions and eventually achieve a consensus on the definition of b-SQ. The next step was to undertake exploratory and confirmatory factor analyses to determine the factor structure of the b-SQ construct. Five distinct dimensions emerged: attractive style, room, bathroom, employees, and reliability. A decomposed b-CSI model was developed by revising the original CSI model and incorporating the decomposed b-SQ construct. The decomposed CSI model can have better explanatory power than the pure model and is a tool that can be used to develop our understanding of the factors that lead to better b-SQ.

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無衍生研發成果推廣資料

98 年度專題研究計畫研究成果彙整表

計畫主持人：徐聖訓　　計畫編號：98-2410-H-216-014-

計畫名稱：時尚創意汽車旅館服務品質量表之建立與滿意度模型之建構

成果項目			量化			單位	備註（質化說明：如數個計畫共同成果、成果列為該期刊之封面故事...等）
			實際已達成數（被接受或已發表）	預期總達成數(含實際已達成數)	本計畫實際貢獻百分比		
國內	論文著作	期刊論文	0	0	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	0	0	100%		
		專書	0	0	100%		
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力（本國籍）	碩士生	0	0	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	0	0	100%		
國外	論文著作	期刊論文	0	0	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	0	0	100%		
		專書	0	0	100%	章/本	
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力（外國籍）	碩士生	0	0	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	0	0	100%		

	其他成果 (無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等,請以文字敘述填列。)	目前正在投稿國際期刊中

	成果項目	量化	名稱或內容性質簡述
科教處計畫加填項目	測驗工具(含質性與量性)	0	
	課程/模組	0	
	電腦及網路系統或工具	0	
	教材	0	
	舉辦之活動/競賽	0	
	研討會/工作坊	0	
	電子報、網站	0	
	計畫成果推廣之參與（閱聽）人數	0	

國科會補助專題研究計畫成果報告自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現或其他有關價值等，作一綜合評估。

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1. 請就研究內容與原計畫相符程度、達成預期目標情況作一綜合評估
   ■達成目標
   □未達成目標（請說明，以 100 字為限）
   　　□實驗失敗
   　　□因故實驗中斷
   　　□其他原因
   說明：

2. 研究成果在學術期刊發表或申請專利等情形：
   論文：□已發表 □未發表之文稿 ■撰寫中 □無
   專利：□已獲得 □申請中 ■無
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3. 請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）（以 500 字為限）

   時尚創意汽車旅館在台灣已成為現今台灣旅館業界重要角色之一，然而卻沒有一個專屬衡量其特殊性性質之服務品質量表。現今所為時尚創意汽車旅館業界所使用之量表，僅只根據業者據實務界經驗所推估而成；反觀國外並無像台灣擁有如此規模之時尚創意汽車旅館，國外學術報告研究上也僅只針對一般汽車旅館做初步服務品質測量題項簡略編制，而國內極少數研究也僅止於碩士論文中涉略粗淺之一般汽車旅館部分。

   本計畫結合所需業界業者，共同完成適用之量表，方能互利於學術界對於現今這領域之缺憾以及業者未來營運上之需求。最後也祈藉由此次計畫整合與分析業者意見，供以未來政府決策機關對於時尚創意汽車旅館發展之參考準則。