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國際觀光旅館行銷資源與能力關聯性之研究-以資源基礎觀點
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行政院國家科學委員會補助專題研究計畫 ■ 成 果 報 告
□期中進度報告

國際觀光旅館行銷資源與能力關聯性之研究

-以資源基礎觀點

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共同主持人：
計畫參與人員：

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中　華　民　國 99 年 8 月 13 日

COMPETITIVE MARKETING STRATEGIES DECISION-MAKING BASED ON MARKETING RESOURCES AND CAPABILITIES: EVIDENCES FROM HOSPITALITY INDUSTRY IN TAIWAN

ABSTRACT

This study attempts to identify specific resources and capabilities of tourist hotel by developing an evaluation framework of marketing strategy on the grounds of the resource-based view (RBV) and competitive advantage. Due to the complexity and difficulty of allocated specific resources and capabilities, selecting a competitive marketing strategy is a kind of multiple criteria decision-making (MCDM) problem. The analytic network process (ANP) method is a relatively new MCDM method that can overcome the independent restrictions in traditional MCDM methods. This empirical study affirms that the differentiation strategy is the best competitive marketing strategy because it focuses on the allocation of specific and limited resources and capabilities toward sustainable competitive advantage. The results of this study also suggest that practitioners increase their ability to concentrate on different aspects in their decision-making process to capture synergy.

Key Words: resources-based view (RBV); marketing resources and capabilities; marketing strategy; tourist hotel.

INTRODUCTION

A firm's sustainable competitive advantage relies on its resources and capabilities to successfully perform the managerial function in its environment. The practitioners' comfort depends on a complicated competitive environment characterized by diminished profit margins. In order to maximize executive benefits, and generate revenues simultaneously, practitioners should deliberate critical resources and expenses. By leveraging marketing resources, it is argued that firms will be in a stronger position to succeed in the marketplace (Hooley *et al*. 2005; Srivastava *et al*. 1998).

In the last 20 years, greater emphasis has been placed on the role of marketing considerations in the managerial process, underscoring the important role that marketing plays in contributing to a firm's competitive success (Brooksbank *et al*., 1992; 2003). It is highly recognized that proper marketing should enter the managerial process at its early stages (Wind, 1987). To pursue increased revenue and profits concurrently, practitioners should select a solid marketing strategy from an assorted range of tactics. Various strategic choices invlve the need for reasonable implementation and control actions in a diverse-set of functional units.

According to the Resource-Based View (RBV)(Wernerflet, 1984), the firm's ability to develop distinct marketing strategies enhances its ability to adapt to the changing competitive environment and improves its survival prospects (Esteve-Pérez & Mañez-Castillejo, 2007). With regards to marketing strategy, many researchers believe that strong devices are essential to a company's competitive advantage. In other words, the company successfully utilized their resources in comparison with other competitors (Hooley *et al*., 2005;

Barney, 1991; Grant, 1991). Past studies revealed that firm's managerial performance depends on marketing resources and capabilities (Srivastava *et al.*, 1998; Luo *et al*., 2005; Hooley *et al.*, 2005). However, marketing resources and capabilities have to fit the appropriate marketing strategy so as to capture the proper business performance. Previous studies demonstrated the relationship between a company's marketing tactics performance (Hughes and Morgan, 2008; Edelman *et al*., 2005). However, in measuring a firm's competitive advantage successfully, there is a critical issue of how companies can better evaluate and select a favorable marketing strategy. For instance, tourist hotels utilize specific resources and capabilities to generate reasonable benefits and improve their competitive advantage in order to attract guests..

Selecting what kinds of marketing strategies to use depends on the available resources and capabilities, even in the case of tourist hotels. Marketing strategists should consider a large number of complex factors in evaluating and selecting marketing strategies. Multi-criteria decision-making (MCDM) methods are helpful in reaching important decisions that cannot be determined easily. The underlying principle of MCDM is that decisions should be made with the use of multiple criteria (Cheng *et al*., 2005). Chou *et al*. (2008) used the MCDM methods of fuzzy set theory, linguistic value, hierarchical structure analysis, and fuzzy analytic hierarchy process to select international tourist hotel location. However, it is better to employ MCDM methods for solving a certain problem effectively rather than employing it for decisions concerning a firm's marketing resources and capabilities.

Since problems associated with the strategic marketing system are becoming more complex, it appears difficult to handle with the use of just a single set of guidelines or decision model. The analytic network process (ANP) is a general theory that provides a ratio scale, derived from judgments and measurement, and distributes the influence between factors of a particular decision (Saaty, 1996). Many traditional MCDM methods are based on the independence assumption. However, in many situations, the relationships between individual criterions are not completely independent (Shee *et al*., 2003).

The ANP has successfully been applied in many studies, such as Lin *et al*. (2009), Shang *et al*. (2004), Agarwal & Shankar (2002) and Lee & Kim (2001). Despite the importance of marketing strategy decision-making to the hospitality industry, there is few empirical evidence regarding its effectiveness and attractiveness. Given the advantages of the ANP, the current study employs it to offer business practitioners and marketing strategists a set of guidelines for designing and implementing competitive marketing strategies by allocating the appropriate resources. Marketers and marketing strategists may find the ANP a useful aid when distributing a company's resources in order to achieve a particular strategy. Applying the ANP could also help marketers overcome the limitations of the traditional analytic hierarchy process (AHP) method with the use of an easier one. This study expands the application of ANP by focusing on the service industry, and provides controls for market-level influences by restricting itself to the hotel sector.

The rest of paper is organized as follows: Section 2 presents a competitive advantage and market resource literature review for marketing strategy. Section 3 derives ANP determinations for marketing strategy including a hierarchical framework for alternatives, and ANP method steps to apply in the proposed framework. Section 4 presents the empirical illustration of tourist hotels in Taiwan. Finally, implications and further research findings for practitioners are underlined and the limitations are acknowledged in Section 5.

THE MARKETING STRATEGY PROBLEM CONCERN

For several years now, there has been stiff competition within the hospitality industry of Taiwan. As the standard of living improvements, people generally appear to spend more and more of their disposable time on leisure trips. Based on the Monthly Report on Tourist Hotel Operations in Taiwan, a total of 63 tourist hotel practitioners offered over 18,348 rooms to meet the recreational demands of guests in September of 2009. Moreover, at the beginning of 2003, many hotel accommodation ventures penetrated the critical point of time for investment, and they preferred operating hotels to attractions. Therefore, with this current competition, there is a great need to examine one's competitive advantage, which requires practitioners to speculate on managerial implementations exhaustively.

Marketing strategy and marketing resources

For several decades, one of the main themes to dominate the marketing strategy literature has been the RBV of a firm (Barney, 1991; 2001; Wernfelt, 1984). Although the preliminary concept of RBV can be traced back to Selznick's (1957) concept of organizational distinctive competence, the so-called RBV has challenged the excessive determinism of Porter's (1980) view of competition (Wernerfelt, 1984), emphasizing the importance of key resources in achieving a competitive advantage (Panayides, 2004). Porter (1991) also stressed that core resources and capabilities of intangible assets could create exhilarating competitiveness for an organization. Both within and across the marketing and RBV domains, Srivastava *et al*. (2001) pointed out that the common emphasis of leveraging resources to create and sustain value for an organization's stakeholders should not be surprising, given the considerable fit between marketing realities and the assumption. Furthermore, according to the general strategic development of Porter (1985), Hooley *et al*. (1992) proposed the generic marketing strategy (GMS) to capture the competitive advantage.

Deliberation is essential in acquiring a sustainable competitive advantage (Fodness, 2005). In the boundaries of RBV, sustainability of competitive advantage can be accomplished with a bundle of resources and capabilities possessed by a particular organization (Kaleka, 2002). Some research works have attempted to explore this association by empirical examination of specific competitive strategies and their implications in terms of company performance (Panayides, 2004; Slater & Narver, 1994; Dess & Davis, 1984). Lynch *et al*., (2000) demonstrated that resource-based and product-market strategies can been associated with improved performance. As a result, the relationship between a competitive marketing strategy and a corporation's performance has also been recognized in the context of hotel marketing practicing.

In another study, Kaleka (2002) pointed out that different combinations of resources and capabilities can be identified as drivers of cost, service, and product advantage. Nonetheless, the capability to build enduring relationships with customers emerged as vital in achieving all three types of competitive advantage for industrial exports. The cost advantage is associated with the cost of goods sold, product cost per unit, and selling price to customers; service advantage covered technical support and after-sales service, product accessibility, delivery speed and reliability; and product advantage is designated by superior quality, packaging, and design and style of the product (Kaleka, 2002; Grant, 1998; Kim & Lim, 1988). In consonance with views of Teece (1976), placing the emphasis upon the effective utilization of

firm-controlled distinctive capabilities and resources practitioners could result in defensible positions against competitive forces.

In terms of competitive strategy, Porter (1980) introduced a typology of three generic strategies for creating a defensible position and outperforming competitor in a given industry, including overall cost leadership, differentiation and focus (Panayides, 2004). Dess & Davis (1984) stated that enterprise units had to seek either a low-cost or a differentiation strategy for marketing practicing. With respect to cost strategy, practitioners may be in a superior position to achieve cost decrement, when they find the acquisition and development of necessary resources immediately. In the differentiation strategy, the resource-based theory of a firm suggests that similarity in resource requirements among rival companies may increase competition (Barney 1991; Peteraf 1993). In addition, Boyt & Harvey (1997) stated that differentiation through offering superior customer service is especially important, while Grant (1998) pointed out that successful product/ service differentiation could be achieved through innovations and improvements across different parts of the value chain.

On the basis of focus strategy of Porter, Panayides (2004) investigated the impact of the major thoughts of marketing and market segmentation as the fundamental precursor to a focused strategy and an important product-market strategy. Wind (1987) also pointed out that market segmentation should be esteemed as crucial to business success. The benefits of market segmentation may be widespread, ranging from understanding customer needs and delivering customer value to achieving competitive advantage and improved organizational performance (Panayides, 2004; Dibb & Simkin, 2001).

From the above discussions about marketing strategy, it is not difficult to comprehend how marketing unique and specific resources and capabilities of firms are important and why they gained and sustained competitive advantage for organizations. Undoubtedly, practitioners should bring the resources and capabilities into full play, and incorporate them into their marketing strategies. Despite the importance of competitive advantage to the hospitality industry, there are only a few cases with empirical evidence supporting its effectiveness and attractiveness. According to the findings of Short's (2003) research, hotel managers do not use a strategic-choice model when pursuing a particular competitive strategy. Therefore, the current study is based on the RBV to evaluate the marketing strategy of the hospitality industry. These marketing strategies are identified as differentiation strategy, segmentation strategy and cost leadership strategy.

Allocating marketing resource for hotel marketing strategy

Following the increased focus on the RBV in competitive strategy research, Brewer & Hensher (2001) stated that strategic capacity, which defines the enduring resources and capabilities, is potentially more sustainable than that based solely on product and market positioning. Resources and capabilities that are valuable, rare, inimitable and non-substitutable (Barney, 1991) make it possible for businesses to develop and maintain a competitive advantage, making it necessary to utilize them for superior performance (Srivastava *et al*., 2001; Grant, 1991; Wernerfelt, 1984). In addition, the resources for competitive advantage are viewed as those that possessed the combined traits of enabling the provision of competitively superior value to customer (Barney, 1991); being difficult to duplicate by competitors (Dierickx & Cool, 1989); and whose value could be appropriated by the organization (Collis & Montgomery, 1995).

From the perspectives of Mroz (1998), Teece *et al*. (1997), and Garvin (1998), there appears to be a consensus regarding the need to consider sources of competitive advantage at a level of aggregation that reflects organizational processes (Kaleka, 2002). Moreover, Kaleka (2002) emphasized that sources which influence the competitive advantage could be of two board types: resources and capabilities. Resources represent assets controlled by firms that are used as inputs to organizational processes including experiential resources, scale of operation, financial resources and physical resources. The capabilities concern the organizational ability to combine, develop and use its resources in order to create competitive advantage including information, customer relationship building, product development and supplier relationship building.

Furthermore, Srivastava *et al*. (1998) stated that market-based assets met both criteria of marketing specific and the desired RBV attributes (Srivastava *et al*., 2001). Market-based resources are divided into relational market-based assets and intellectual market-based assets. The relational market-based resources are associated with external organizations that are not owned or fully controlled by the firm. These include relationships with and perceptions held by external stakeholders of customers, channels, strategic partners, and eco-system. The intellectual market-based resources associated with internal and entrenched assets residing within the firm's boundaries, comprising kinds and levels of knowledge about the environment, know-how to leverage intra-organizational relationships and process-based capabilities (e.g., market innovation know-how or customer relationship management) (Srivastava *et al*., 2001). Stewart (1997) divided resources and capabilities into three types of intellectual capabilities including human capital which refers to the employees' knowledge, technology, capabilities and experience of the whole organization; structural capital, pertaining to the technology invention data, publication and process of the whole organization; and customer capital, referring to the relationship between organization and customer (Lin, 2005). The above discussions of Srivastava *et al*. (1998, 2001) and Stewart (1997), it revealed that not all resources and capacities can be owned or fully controlled by an organization.

Many resources developed and underpinning marketing activities are be potentially significant advantage-generating resources. Hooley *et al*. (2005) encapsulated their resources that gain value in the market-place, into the term marketing resources, includes market-based resources and marketing support resources. Marketing resources are the resources that could be immediately deployed in the market-place to create or maintain competitive advantage, such as customer linking capabilities, market innovation capabilities, human resource assets and reputational assets. On the other hand, marketing support resources serve primarily to support marketing activities and contribute indirectly to competitive advantage, including managerial capabilities and market orientation (Hooley *et al*., 2005).

The tourist hotel is a typical service industry, offering individual services for travelers. Aside from the physical facility, the travelers' needs include the service provided by employees (Tsaur *et al*., 2004; 2005). Regarding to hotel competitive marketing resources and capabilities, they may be specifically classified as: managerial capabilities, customer linking capabilities, market innovation, human resource assets, and reputational assets. Managerial capabilities may be identified as inside-out capabilities (Day, 1994), and is usually treated as a traditional business function for operation management including the production and delivery of goods and services that concern the transformation of raw inputs into outputs that customers valued (Hammer & Champy, 1993). Customer linking capabilities is the strategic necessity for attracting and increasing guests' patronage (Sigala, 2005). Day (1994) pointed out that the most important marketing

resources of any organization are the outside-in or customer-linking capabilities. Hooley *et al*. (2005) stated that these aspects combined the abilities to identify customer wants and needs together with the capabilities to create and build appropriate relationship with their customers. The notion of market innovation refers to food service technology, which offers differentiation and cost leadership in strategic terms (Rodgers, 2007). Han *et al*. (1998) assert that it is the ability to innovate product or service in the marketplace. These capabilities need to connect through functions, relying on the firm's tacit skills and know-how, resulting in an innovation in the firm that could not be easily duplicated by competitors (Hooley *et al*., 2005).

Tourist hotels belong to labor-intensive industries that have more employees to provide and deliver customer-tailored service for a variety of travelers. As such, it is the duty of human resource management to develop the potential of each individual within the hotel towards the achievement of customer satisfaction and organization goals (Patterson *et al*., 1990). Alleyne *et al*. (2006) found that all hotels perceived human resource management as performing well, given the focus on quality and targeting high spending tourists. In addition, Bonaccorsi (1992) determined that large-scale organizations could allocate more human resources to customer service-related functions. Cho *et al*. (2006) evaluated the impact of human resource management practices on organizational performance in the lodging and restaurant industries, and found that some of human resource management practices had significant effects on turnover rate of non-managerial employees. Finally, reputational assets are based on the reliability and reputation of the tourist hotel among customers, suppliers and distributors. Resembling intangible resources and capabilities, reputational assets also are critical assets to create sustainable competitive advantage. Reputation and brand takes time to develop and build, and is intrinsically complex as it is difficult to add value for customers, help create defensible competitive positions, and duplicate to competitors (Hooley *et al*, 2005; DeChernatony & MacDonald, 1992).

The current study takes an epistemological perspective on RBV and argues that practitioners should inspect their own resources, and allocate their limit marketing resources in control of managerial implementation. The includes their managerial capabilities, customer linking capabilities, market innovation capabilities, human resource assets and reputational assets such as Lin & Wu (2008), and Lin *et al*. (2009). Not all resources, however, are of equal importance in creating competitive advantage (Barney, 1991). Practitioners have to re-check their organizational growth internally, and face the critical problem of inferior competitiveness which can be due to the neglect of internal core resources and capabilities, not the change of environment. Based on the above discussions, the present study employs ANP to appropriately allocate the hotel's owned and specific resources and capabilities and make a practicable decision for marketing strategists in accomplishing the hotel's final goal of marketing strategy.

THE ANALYTIC NETWORK PROCESS

The ANP is the general form of the AHP (Saaty, 1980), which is used in multicriteria decision making to release the restriction of hierarchical structure (Huang *et al*., 2005). Saaty (1996) suggested that the use of AHP to solve the problem of independence on criteria and alternatives and the use of ANP to solve the problem of dependence among criteria and/or alternatives. The process to solve the ANP decision-making model is as follows.

Build the model construction and problem structure

Prior to conducting data collection, a conceptual model for decision problem should be developed. A hierarchy is a particular type of system, based on the assumption that the entities can be grouped into disjoint sets, with the entities of one group influencing the entities of other groups (Saaty, 1980). This is the most important part in the qualitative component of ANP as Figure 1 drives all criteria for the overall goal. In the current paper, the emphasis is put on the eigenvalue approach of the ANP, which is an extension of an AHP and special interest for comparative analysis.

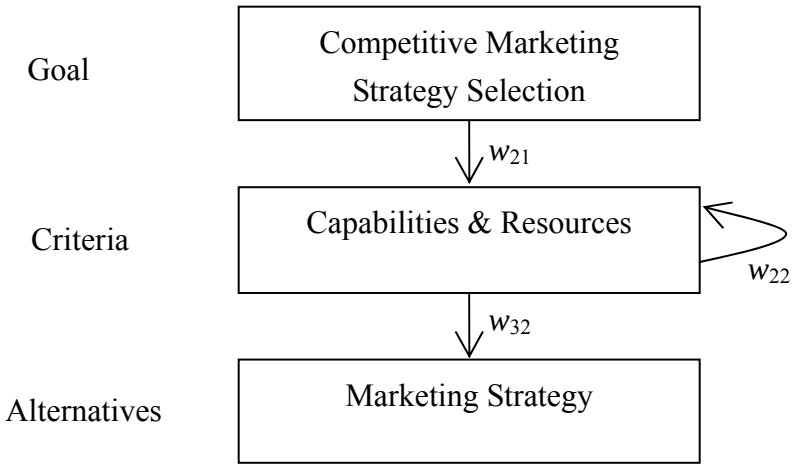

Figure 1 The conceptual framework

Determine the pairwise comparisons matrices for the model element

An "expert poll" is the best source for the sample data used in ANP, because ANP is a method mainly in organizations for decision-making. In ANP, the relative important values are determined similar to AHP using pairwise comparisons (Karsak *et al*., 2002), especially evaluations, allowing dependencies both within inner dependence and outer dependence (Saaty, 1996). Before conducting pairwise comparisons, we interview the practitioners of tourist hotels to build the evaluation framework. Pairwise comparisons are carried out by one of the experts for a single decision maker for each node of the evaluation framework. Each rated score in the questionnaire corresponds to each matrix of criteria. The rating of each pairwise comparison is based on the Saaty's 9-point priority scale. Additionally, Kurttila, Pesonen, Kangas, & Kajanus (2000) pointed out that numerical techniques would be used to drive quantitative values from verbal comparisons.

The troubling problem of ANP is to provide impartial and consistent comparison values for pairwise comparisons. In addition, as it is well know, no two experts will make the same decision by pairwise comparison. So, in order to assign weights to the evaluation criteria, there is a need to set up a broad expert poll, and ask them for a common consensus for the evaluation framework. The questionnaire is created in accordance with the associated criteria of the evaluation framework. The numerical scale used is a nine-point scale, where "1" equals importance, "3" is a "slightly" superior importance, "5" is "some" superiority, "7" is a "considerable" superiority and "9" is "outright" superiority, with the even numbers in between applied if necessary. Consequently, four pairwise comparison matrices are obtained for the model elements, and each

perform the pairwise comparison process and the geometric mean of all evaluations is also used to obtain the required pairwise comparison matrix.

Construct and solve the supermatrix

Saaty (1996) stated that the feedback approach, a generalization of the idea of a hierarchy, is used to derive priorities in a system with interdependent influences. Saaty also pointed out that an ANP model is implemented following three steps. All of the interactions among the elements should be evaluated by pairwise comparisons so as to construct the framework of the problem. In addition, a supermatrix, a matrix of influences among the elements, should be obtained by these priority vectors. The supermatrix is derived from limiting powers to calculate the overall priorities, so the cumulative influence of each element on every other element with which it interacts is obtained (Saaty & Vargas, 1998). The generalized supermatrix of the hierarchy with three levels used in this paper is as follow:

$$W = \begin{array}{c} \\ Goal(G) \\ Criteria(C) \\ Alternatives(A) \end{array} \begin{array}{c} \begin{array}{ccc} G & C & A \end{array} \\ \begin{bmatrix} 0 & 0 & 0 \\ w_{21} & w_{22} & 0 \\ 0 & w_{32} & I \end{bmatrix} \end{array} \qquad (1)$$

where w_{21} is a vector that represents the impact of the goal on criteria, w_{32} is a matrix that represents the impact of criteria on each one alternative, w_{22} and w_{33} are identity matrices that represent the inner dependence of criteria and the inner dependence of alternative. $\boldsymbol{W}$ is a partitioned matrix because its entries are composed of the vectors obtained from the pairwise comparisons. Since $\boldsymbol{W}$ is a column stochastic matrix, its limiting priorities depend on the reducibility and cyclicity of that matrix. If the matrix is irreducible and primitive, the limiting value is obtained by raising $\boldsymbol{W}$ to powers such as equation (2) to get the global priority vectors (Saaty & Vargas, 1998).

$$\lim_{k\to\infty} W^k \qquad (2)$$

Finally, after the supermatrix is assured of column stochastic, it is raised to a sufficient large power until convergence occurs (Saaty, 1996). That is, the supermatrix is then raised to limiting powers to be $\boldsymbol{W}^{2k+1}$, where k is an arbitrarily large number to capture all the interactions and to obtain a steady-state outcome.

THE DECISION MODEL OF MARKETING STRATEGY SELECTION

The first step is to build a decision model for evaluation. In order to select the competitive marketing strategy, we have attempted to build up a hierarchy structure to evaluate the firm's capabilities and resources using ANP method. We used relevant literatures as reference to identify the key criteria to determinate competitive marketing strategy for the tourist hotel, refer to Figure 2. As mentioned, the first level of evaluation framework is that the ultimate goal of strategic decision is "competitive marketing strategy selection." There are three marketing strategies for our selection model, including differentiation strategy,

segmentation strategy and cost leadership strategy. In determining which one is the best measurable criterion should be used in the second level of evaluation framework, including managerial capabilities, customer linking capabilities, market innovation capabilities, human resource assets and reputational assets. By determining the relative importance of each measurable criterion, we will be able to create evaluation indicators essential for achieving the overall goal. Finally, each marketing strategy in the third level of evaluation framework will be prioritized based on the importance for each measurable criterion.

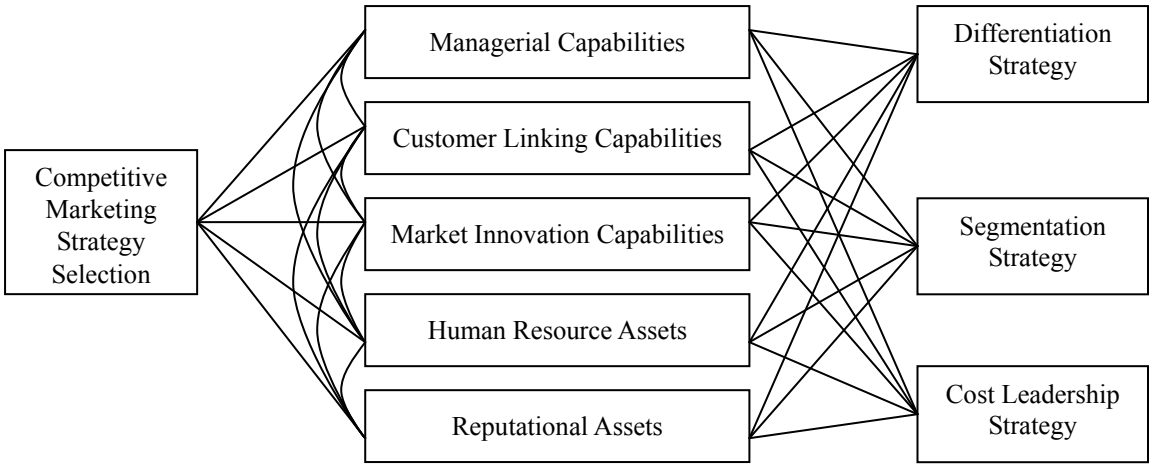

Figure 2 The network structure of competitive marketing strategy selection

In this study, a questionnaire was prepared for 11 tourist hotel managers. The questionnaire was created in accordance with the associated criteria of the evaluation framework. Pairwise comparisons were carried out by one of the experts for a single decision maker for each node of the evaluation framework. Each rated score in the questionnaire corresponds to a matrix of criteria. The rating of each pairwise comparison was based on the Saaty's nine-point priority scale. Experts were asked to rate the questionnaire again in situations involving matrixes with unacceptable consistency ratio (CR) values. To improve the consistency of pairwise comparisons, the concept of the comparison framework mentioned above was carefully explained to each expert, who was asked to quantify the comparison values for all criteria and alternatives accordingly.

Based on the comparison results in Table 1, the evaluation criterion that has the most effect upon competitive advantage is assigned to the customer linking capabilities, and its weight is calculated to be 0.261. Both managerial capabilities and reputational assets obtained priority weights of 0.221. Then, market innovation capabilities and human resource assets obtained priority weights of 0.160 and 0.137, respectively. The consistency index (CI) was calculated to be 0.01, whereas the consistency ratio (CR)=0.01/1.12=0.009<0.1. And, in that, "1.12" is a random consistency index, according to Saaty (1980). In all cases, the experts stayed within this constraint. Saaty (2000) set the acceptable levels of the CR to yield satisfactory results, including less than 0.1 for the matrix with $n \geq 5$, less than 0.08 for n=4, and less than 0.05 for the matrix with n=3. Given the key point to provide impartial and consistent values for the pairwise comparison, it is necessary to avoid inconsistency and biased comparison as far as possible.

Table 1 Comparison of the five criteria with respect to the overall goal

	MC	CLC	MIC	HRA	RA	*w*
MC	1	0.836	1.725	1.130	1.058	0.221
CLC	1.196	1	1.314	2.330	1.163	0.261
MIC	0.580	0.636	1	1.364	0.740	0.160
HRA	0.885	0.429	0.733	1	0.574	0.137
RA	0.945	0.860	1.351	1.741	1	0.221
					CR=	0.009

Note: MC: managerial capabilities, CLC: customer linking capabilities, MIC: market innovation capabilities, HRA: human resource assets, RA: reputational assets, *w*: weight, and *CR*: consistency ratio.

In Table 2, the three marketing strategies were rated pair by pair with respect to the respective marketing resources and capabilities, showing the relative weights and CR values. The CR values of all matrices are acceptable: less than 0.1. The results given in Table 2 indicated significantly that the different strategy is the best choice in term of customer linking capabilities (0.465), market innovation capabilities (0.410), human resource assets (0.472), and reputational assets (0.529). Moreover, the cost leadership strategy is the good strategy for managerial capabilities (0.436).

Table 2 Comparisons of marketing strategy with respect to the each marketing capabilities and resources

	MC				**CLC**				**MIC**			
	DS	**SS**	**CLS**	***w***	**DS**	**SS**	**CLS**	***w***	**DS**	**SS**	**CLS**	***w***
DS	1.000	1.277	0.668	0.308	1.000	1.790	1.456	0.446	1.000	1.058	1.000	0.340
SS	0.783	1.000	0.619	0.255	0.559	1.000	0.853	0.253	0.945	1.000	1.038	0.331
CLS	1.497	1.616	1.000	0.436	0.687	1.173	1.000	0.301	1.000	0.963	1.000	0.329
			CR	0.003			***CR***	0.000			***CR***	0.001

	HRA				**RA**			
	DS	**SS**	**CLS**	***w***	**DS**	**SS**	**CLS**	***w***
DS	1.000	1.825	1.058	0.404	1.000	1.677	2.006	0.478
SS	0.548	1.000	0.655	0.230	0.596	1.000	1.038	0.272
CLS	0.945	1.526	1.000	0.366	0.499	0.963	1.000	0.250
			CR	0.001			***CR***	0.002

Note: MC: managerial capabilities, CLC: customer linking capabilities, MIC: market innovation capabilities, HRA: human resource assets, RA: reputational assets, DS: differentiation strategy, SS: segmentation Strategy, CLS: cost leadership strategy, *w*: weight, and *CR*: consistency ratio.

The supermatrix ***W*** was inserted with vectors and matrices, as w_{21}, w_{22}, w_{32} and *I*, respectively. It is important to note that the supermatrix included the eigenvector of the matrix that compared the five marketing resources and capabilities with respect to selecting the competitive marketing strategy. Other eigenvectors are the matrices formed because of the interdependence among marketing resources and capabilities. In the current study, we supposed that the overall interdependence existed among the marketing resources and

capabilities. So, equal weights were used in place of w_{22}. Because of the effect of cyclicity in the supermatrix, and the weighted supermatrix should be obtained before limiting the power to converge. Then, the initial completed supermatrix is shown in Table 3.

Table 3 The initial completed supermatrix, $\boldsymbol{W}$

	Goal	MC	CLC	MIC	HRA	RA	DS	SS	CLS
Goal	0	0	0	0	0	0	0	0	0
MC	0.221	0.2	0.2	0.2	0.2	0.2	0	0	0
CLC	0.261	0.2	0.2	0.2	0.2	0.2	0	0	0
MIC	0.160	0.2	0.2	0.2	0.2	0.2	0	0	0
HRA	0.137	0.2	0.2	0.2	0.2	0.2	0	0	0
RA	0.221	0.2	0.2	0.2	0.2	0.2	0	0	0
DS	0	0.308	0.446	0.340	0.404	0.478	1	0	0
SS	0	0.255	0.253	0.331	0.230	0.272	0	1	0
CLS	0	0.436	0.301	0.329	0.366	0.250	0	0	1

Note: MC: managerial capabilities, CLC: customer linking capabilities, MIC: market innovation capabilities, HRA: human resource assets, RA: reputational assets, DS: differentiation strategy, SS: segmentation strategy and CLS: cost leadership strategy.

In the current study, convergence is stable at $\boldsymbol{W}^{13}$ with cyclical ratios, and the limit supermatrix, which shown the long-term stable values, is shown in Table 4. For marketing strategy, the overall priorities are given by the bottom left corner of $\boldsymbol{W}^{13}$. For the goal of the decision problem, the alternative with the largest priority index should be selected. The differentiation strategy, with a relative importance value of 0.397, is the best marketing strategy for selecting the competitive marketing strategy, followed by cost leadership strategy with a value of 0.335 and segmentation strategy with a value of 0.268.

Table 4 The limit supermatrix, $\boldsymbol{W}^{13}$

	Goal	MC	CLC	MIC	HRA	RA	DS	SS	CLS
Goal	0	0	0	0	0	0	0	0	0
MC	0	0	0	0	0	0	0	0	0
CLC	0	0	0	0	0	0	0	0	0
MIC	0	0	0	0	0	0	0	0	0
HRA	0	0	0	0	0	0	0	0	0
RA	0	0	0	0	0	0	0	0	0
DS	0.397	0.397	0.397	0.397	0.397	0.397	1	0	0
SS	0.268	0.268	0.268	0.268	0.268	0.268	0	1	0
CLS	0.335	0.335	0.335	0.335	0.335	0.335	0	0	1

Note: MC: managerial capabilities, CLC: customer linking capabilities, MIC: market innovation capabilities, HRA: human resource assets, RA: reputational assets, DS: differentiation strategy, SS: segmentation strategy, and CLS: cost leadership strategy.

DISCUSSION AND CONCLUSION

The effective managerial implementation started with the tourist hotel's specific resources, capabilities, and strategy decision making. Marketing strategy selection is a kind of MCDM problem, which can be easily resolved using MCDM methods. In this study, we propose that the success of marketing strategy decision-making depends on a firm's resources and capabilities. An ANP is a precious method of MCDM that may help to select the appropriate marketing strategy for competitive advantage, adopting the owner-managers point of view as reflected by goal approach. The advantage of the ANP is not only appropriate for both qualitative and quantitative data, but it also overcomes the issue of interdependence and feedback among all clusters (Huang *et al*., 2005). The key for the ANP is to determine the relationship structure between all features in advance (Lee & Kim, 2001). Thus, the emphasis has been on comparing the competitive advantage of tourist hotels in terms of managerial capabilities, customer linking capabilities, market innovation capabilities, human resource assets, and reputational assets.

The results of this study point out that customer linking capabilities, managerial capabilities and reputational assets of the tourist hotel play crucial roles in influencing the achievement of competitive advantage. This conclusion corroborates existing evidence from the relationship marketing literature (Kaleka, 2002; Ganesan, 1994), emphasizing the importance of customer linking capabilities in capturing a superior competitive advantage in the market. With respect to customer linking capabilities, managers of tourist hotels should understand what customers need, and offer superior levels of customer service and support so as to maintain and enhance relationships with key target customers. Additionally, the practitioners who chased up customer closeness must assess firm resources in relation to customer desires (Stank *et al*., 1998).

Regarding managerial capabilities, managers should elaborate their administrative capabilities through strong financial management and good service management. Tourist hotels possess the strength in the competitive advantage of the service industry, including structural elements and managerial elements. So, the tourist hotel could combine customer linking capabilities and managerial capabilities to reach its full potential. Using a data-mining method in managerial functions enables considerable customer relationship management. In addition, service innovation also has its beginning in searching consumptions information so as to realize the preferences of customers. Moreover, reputational assets also play an important role for competitive advantage. They could reduce the cognitive uncertainty and build loyalty among customers. Finally, the differentiation strategy focuses on creating unique service and product by brand image, technology, characteristics, customer-tailed service, and service network.

Managers in tourist hotels are therefore offered a comprehensive framework that can help them identify critical resources and capabilities of competitive advantage within their hotels. Contrary to expectations, the differentiation strategy is the best strategy for the tourist hotel. Mired in the predicament of complicated competitive environment, practitioners should recognize their distinguishing characteristic of specific resources and capabilities in their hotel. Specifically, it is important to increase the awareness of specific and limited resources and capabilities and their proper use in tourist hotels. It might increase their ability to concentrate on different aspects in their decision-making process so as to capture *synergy*. Lastly, the contribution of this current study is to extend the practical applications of ANP to the marketing field. In the long run, it could effectively overcome the problems by using ANP with multiple elements mutuality. It could also spend more time and cost to conduct expert for interdependency of criteria among marketing resources

and capabilities, including managerial capabilities, customer linking capabilities, market innovation capabilities, human assets and reputational assets so as to improve the evaluation framework more accurately.

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國科會補助專題研究計畫項下出席國際學術會議心得報告

日期：99 年 7 月 28 日

計畫編號	NSC 98-2410-H-041-007		
計畫名稱	國際觀光旅館行銷資源與能力關聯性之研究-以資源基礎觀點		
出國人員姓名	吳正雄	服務機構及職稱	嘉南藥理科技大學餐旅管理系 助理教授
會議時間	99 年 7 月 13 日至 99 年 7 月 16 日	會議地點	澳門，澳門旅遊學院(IFT)
會議名稱	(中文)第 16 屆亞太觀光協會年會 (英文)16th Asia Pacific Tourism Association (APTA) Annual Conference		
發表論文題目	(中文)整合德菲法與網路層級分析法評選行銷策略之研究 (英文) **THE APPLICATION ON INTEGRATING DELPHI AND ANP METHODS FOR EVALUATING B&B MARKETING STRATEGY**		

一、參加會議經過

16屆APTA年會於2010年7月13至16日舉行，共為期4天。第一天為APTA年會，由會員參加；第二天至第四天為論文發表。三天共計舉辦38場次的討論會議，其中包括口頭發表場次、海報發表場次，以及Special Sessions三大類。本人因非APTA會員之故，因而未前往參加APTA board meeting。於7/14自台灣出發前往澳門，抵達澳門國際機場已午後，隨即前往會議現場報到；並下榻APTA主辦單位所安排之Sofitel飯店。早晨搭乘主辦單位所安排之交通車前往澳門旅遊學院，進行研討。本人之文章安排在7/16的下午Concurrent Session 6場次，進行口頭發表，發表前先將個人的簡歷提供給場次主持人。該場次主持人為Dr. Ilian Assenov (Prince of Songkla University, Phuket, Thailand)，與主持人簡短互動後；隨即進行報告前的電子簡報資料上傳及測試事宜。報告的題目為" THE APPLICATION ON INTEGRATING DELPHI AND ANP METHODS FOR EVALUATING B&B MARKETING STRATEGY "。共計報告13分鐘左右，而後五分多鐘的時間由與會的人員針對報告內容提問，主要的提問多在於德菲法的應用之過程與限制之討論。

二、與會心得

此次赴澳門參加2010 16th APTA國際學術研討會，可發現餐旅觀光領域之學者在相關領域上均積極投入且有豐碩研究成果，因此此行收獲很多。另外，進行意見交流時，亦發現各國學者均由不同角度提出精闢的見解與相關研究的激盪，使後學能在此一研究方向能有更深層之認識。

三、考察參觀活動(無是項活動者略)

無。

四、建議

2010 16th APTA 國際學術研討會共計收錄153篇論文，其中包括129篇口頭發表論文，及24篇海報發表論文，依Destination Management, Restaurant Management, Hotel Marketing/ Management, Travelers' Behavior, General Topics, IT & Tourism, Forecasting, Hospitality Management, HRM, Community-based Tourism, Sustainable Tourism, Casino Management, Tourism Policy/ Planning, Brand Equity/ Branding, and Financing/ Accounting等等不同研究議題。由於，將研究主題做明顯區分，因此可利用研究發表機會讓該領域的研究者進行相關研究交流，促使研究趨勢能最更為深入的認識與交流。

五、攜回資料名稱及內容

1. 研討會會議議程及論文摘要集一本；
2. 研討會會議論文全文光碟片一片；

六、其他

1. 本研討會參加論文：共153篇論文。
2. 研討會會場：澳門 澳門旅遊學院(IFT)。
3. 場次：三天分成38個場次與2場Keynote Speech。
4. 進行方式：報告人簡報時間為15分鐘，結束後由主持人引導現場與會人士發問並討論。

行政院國家科學委員會補助國內專家學者出席國際學術會議發表論文

THE APPLICATION ON INTEGRATING DELPHI AND ANP METHODS FOR EVALUATING B&B MARKETING STRATEGY

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ABSTRACT

The current study integrates the modified Delphi method and the analytic network process (ANP) method to evaluate the competitive marketing strategy, fitting the specific marketing resources and capabilities. Based on the resource-based view (RBV), this study attempts to identify specific marketing resources and capabilities of small ventures and develops an evaluation framework of marketing strategy in the unique conditions of service industry. Before determining marketing strategy, this study builds the marketing strategy evaluation model to confirm the important roles of marketing resources and capabilities. The current study verifies the evaluation model for the B&B industry. After broadly reviewing literatures in service industries, the study determines sub-criteria of marketing resources and capabilities by the modified Delphi method, and interviews B&B experts to construct the hierarchy and interdependence of evaluation model. Then, this study applies the ANP method to compute weights of criteria, and ranks alternatives of marketing strategies. The finding indicates that the segmentation strategy is the best strategy for B&Bs. Further, the current study emphasizes the importance of allocating specific marketing resources and capabilities to evaluate and select the appropriate marketing strategy so as to capture sustainable competitive advantage for B&B practitioners.

Keywords: Delphi, ANP, Marketing Strategy, B&B

INTRODUCTION

Marketing is a distinguishing feature as a unique function to make a corporation distinct from organizations in human society (Boyett and Boyett, 2003). Corporations currently face a difficult

competitive environment characterized by diminished profit margins. Corporations must pay increased attention to creativity in generating strategic directions, rigorously evaluate strategic options for achieving multiple and interdependent objectives, and maintain vision and focus to ensure effective utilization of resources (Wind, 1987). Underlying the aim of maximizing executive benefits, while simultaneously generating revenue, it is necessary to consider which firm resources and expenses are critical. However, marketing resources have been conceived as an antecedent to marketing strategy (Hooley, Greenley, Cadogan, & Fahy, 2005). To pursue increased revenue and profits, ventures should select one from a diverse range of marketing strategies. During the past twenty years, an increased emphasis has been placed on the role of marketing considerations in management. It is widely recognized that the marketing function should enter the managerial process during its early stages (Wind, 1987). Various strategic choices imply the need for reasonable implementation and control actions in a diverse set of functional units. Especially in relation to marketing strategy, grounded in the resource-based view (RBV) of the firm (Wernerflet, 1984), more researchers tend to emphasize the value of firm resource possession by focusing on those resources that create and sustain competitive advantage (Barney, 1991; Grant, 1991; Slotegraaf, Moorman, & Inman, 2003).

During recent decades, one of the main themes dominating the marketing strategy literature has been the RBV of the firm (Phillips, Davies, & Moutinho, 2001; Wernerfelt, 1995). Recent years have seen much interest in the role of marketing resources in contributing to creating a competitive advantage and thus enhancing firm performance. By leveraging marketing resources, firms should gain a more competitive market position. Therefore, based on RBV, it is suggested that competitive advantage originates in proper resource deployment resources better than competitors (Barney, 1991; Hooley *et al*., 2005; Srivastava, Christensen, & Fahey, 1998). That is, firms should allocate resources appropriately to generate reasonable benefits, and thus further enhance their competitive advantage. In current marketing strategy implementation, market competition depends upon marketing strategy evaluation. Before deciding marketing strategy, practitioners would rather consider the specific resources and capabilities in corporations, than adjust their strategies to the inconstant circumstances. In addition, due to RBV, it could be critical to realize the differentiation and to allocate effectiveness among various resources and capabilities for promoting managerial performance.

Grounded in RBV, practitioners have to grasp rarity, monopoly, originality and heterogeneity of resources and capabilities to enhance the core competition so as to improve competitive advantage and profit (Prahalad and Hamel, 1990; Mahoney and Pandian, 1992). By efforts on marketing strategy, practitioners employ inner resources and capabilities and differ from other competitors. Even in specific condition, corporations could achieve customers' demand and needs to capture competitive advantage and niche profit. While evaluating marketing strategy, practitioners have to deliberate the appropriate marketing organization structure to pursue better marketing performance (Vorhies and Morgan, 2005). In past, many studies merely investigated whatever resources and capabilities influence operation performance. But, these studies are deficient in how resources and capabilities should fit strategy alternatives for synergy. So, in evaluating marketing strategy, practitioners should seek inner specific marketing resources and

capabilities to fit marketing strategy so as to pursue market competition advantage. For marketing implementation, via RBV, it is the most critical point for practitioners to determine the appropriate marketing strategy in accordance with inhered strategic resources and capabilities.

During recent years, the hospitality industry has seen strong competition in Taiwan. Numerous hotel accommodation ventures have penetrated the critical investment horizon, and have operated B&B located near the places of attraction. B&B practitioners have invested significantly in their lodging facilities which compare favorably with resorts or leisure hotels. These B&B practitioners could offer surplus rooms for leisure travelers, and offer a lodging experience linked with the local characteristics of nature, culture, and ecotourism activities. According to the monthly tourism report of the Tourism Bureau in 2005, at the start of 2003, 65 B&Bs had been approved to offer 280 rooms for leisure travelers, but by the end of 2005, over 1194 B&Bs offered over 4800 rooms in the recreation hospitality market. Due to be steadily on the increase for leisure demands, practitioners offer the lodging service made to imitate other competitors. Not yet get a clear understanding of the specific for inner resources and capabilities, practitioners could not present the B&B's particular for the current challenging competitive market. While evaluating the appropriate marketing strategy, it is critical task to detect specific marketing resources and capabilities inhered in B&B. Previous studies revealed that marketing resources and capabilities generate operational performance fro corporate (Srivastava *et al*., 1998; Luo *et al*., 2005; Hooley *et al*., 2005). However, marketing resources and capabilities have to fit the appropriate marketing strategy so as to capture business performance. Past studies demonstrated the relationship among marketing resources and capabilities, strategy and performance (Hughes and Morgan, 2008; Edelman *et al*., 2005). Despite the importance of marketing resources and capabilities to performance, there is a lack of empirical support regarding how to evaluate the appropriate marketing strategy depend upon the specific marketing resources and capabilities. The main purpose of the current study is to build marketing strategy evaluation model based on RBV and to clarify the marketing resources and capabilities in B&B, so as to evaluate the appropriate marketing strategy for B&Bs.

According to the unique alternative, it is not conscientious and careful for decision-making in the complex and competitive environment. Decision-maker either accepts or rejects the alternative merely so as to this way could not reflect the practical problem. So that, it is unable to make a decision in the multi-dimensions and multi-objectives situation using the unique alternative. Most previous studies were conducted by traditional methods to evaluate the alternatives such as minimum cost approach, maximum benefit approach and cost-benefit analysis. Nevertheless, in the complex and multi-objectives decision situation, most problems should be present and evaluated via mass related information, not unique and measurable criteria. Therefore, it is objective to apply multiple criteria decision making (MCDM) methods for evaluating alternatives. Based on inner dependency of marketing resources and capabilities criteria, to evaluate marketing strategy belongs a MCDM problem. Through the feedback procedure from marketing resources and capabilities criteria, the managers could determine the appropriate marketing strategy significantly.

The analytic network process (ANP) method overcomes the inner dependency of criteria. To evaluate alternatives via ANP method not only consider practical limitation for inter-dependent relationship among criteria and alternatives, but also the final outcomes must reach decision goal.

Consequently, the current study first was conducted the related literatures interview and modified Delphi method so as to determine criteria and sub-criteria for marketing resources and capabilities. Furthermore, the study was conducted to build a marketing strategy evaluation model, the ANP evaluation framework. For computing the weights of the alternatives, it is necessary to classify marketing resources and capabilities and to determine the evaluation criteria for marketing strategy. Hence, the main purpose of the current study is to build hierarchy framework for evaluating marketing strategy and to present the conduct process for B&B.

METHOD

This study presents two phases for building the B&B marketing strategy evaluation model. In the beginning, it is to build the evaluation process. The study presents the steps of ANP model, and determines the evaluation criteria by modified Delphi method and expert interview. Second, it is to design ANP questionnaire for survey, and to analyze by ANP. Therefore, the current study is to construct the B&B marketing strategy evaluation model with Microsoft Excel and Super Decision software, and the evaluation process shown as Fig. 1.

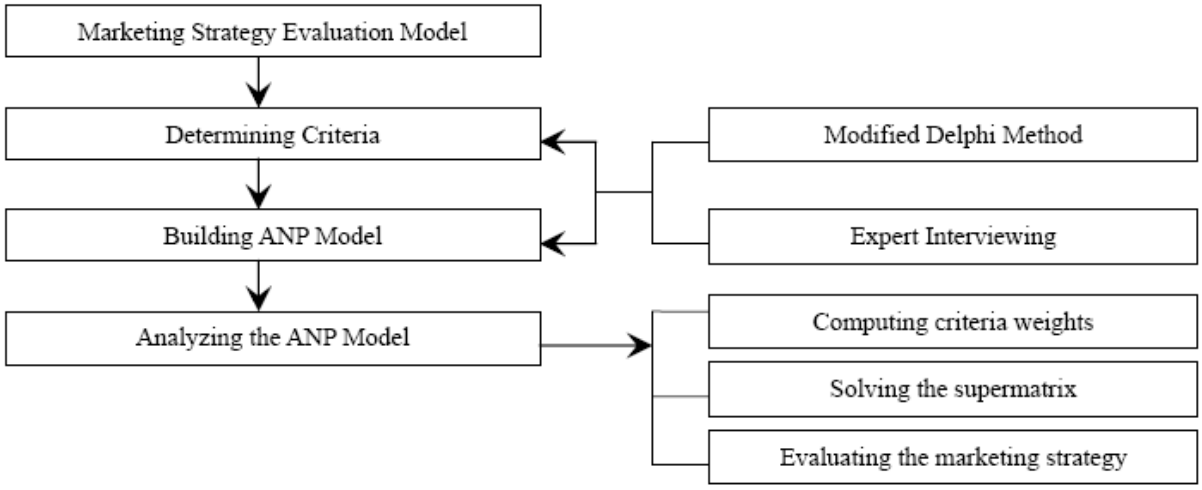

Figure 1. Evaluation Process for Evaluating Marketing Strategy

1. Construct the framework for evaluating marketing strategy

(1) To determine the evaluation criteria for marketing strategy

First, according to the related literatures of marketing strategy and marketing resources and capabilities, it is necessary to clarity the evaluation problem for evaluating marketing strategy. After generalizing the competitive marketing resources and capabilities which are related to marketing strategy, the study determines evaluation criteria for marketing strategy.

(2) To build the framework for evaluating marketing strategy

After affirming the evaluation criteria, the study presents the network framework for evaluating marketing strategy via modified Delphi method and expert interview, included goal, criteria and alternatives.

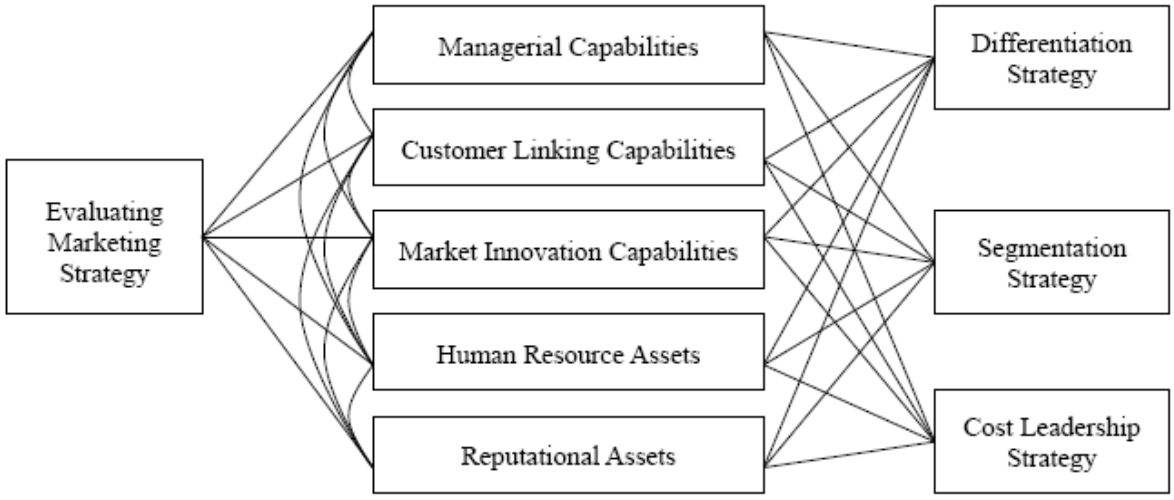

Figure 2. The framework of Evaluating Marketing Strategy

(3) To design expert questionnaire and survey

An "expert poll" is the best source for the sample data used in ANP, because ANP is a method mainly in organizations for decision-making. In order to assign weights to the evaluation criteria, there is a need to set up a broad expert poll, and ask them for a common consensus for the evaluation framework. The questionnaire is created in accordance with the associated criteria of the evaluation framework. The numerical scale used is a nine-point scale, where "1" equals importance, "3" is a "slightly" superior importance, "5" is "some" superiority, "7" is a "considerable" superiority and "9" is "outright" superiority, with the even numbers in between applied if necessary.

(4) To conduct the pairwise comparison

In ANP, the relative important values are determined similar to AHP using pairwise comparisons (Karsak, Sozer and Alptekin, 2002), especially evaluations, allowing dependencies both within inner dependence and outer dependence (Saaty, 1996). Pairwise comparisons are carried out by one of the experts for a single decision maker for each node of the evaluation framework. Each rated score in the questionnaire corresponds to each matrix of criteria. The ratting of each pairwise comparison is based on the Saaty's 9-point priority scale. Additionally, Kurttila, Pesonen, Kangas, and Kajanus (2000) pointed out that numerical techniques would be used to drive quantitative values from verbal comparisons.

(5) To compute the eigenvalue and eigenvector

After finishing the pairwise comparison, the eigenvectors are computed for each matrix as the relative weights. Then, according to dependent relationship among criteria, the relative weights are put into the position for the initial supermatrix.

(6) To solve the supermatrix

The supermatrix is integrated by some sub-matrices, which are extra dependency and inner dependency relationship among criteria and sub-criteria. And, the un-weighted supermatrix is

converged at the powers. Finally, convergence is stable with cyclical ratios, and the limit matrix represents the long-term stable values, as the limiting supermatrix.

(7) To select the competitive marketing strategy

Via above steps, the relative weights for relationship among criteria are solved for criteria and alternatives. Finally, the alternative with high weight is the best marketing strategy.

2. The analytic network process (ANP)

Saaty (1996) stated that the feedback approach, a generalization of the idea of a hierarchy, is used to derive priorities in a system with interdependent influences. Saaty also pointed out that an ANP model is implemented following three steps. All of the interactions among the elements should be evaluated by pairwise comparisons so as to construct the framework of the problem. In addition, a supermatrix, a matrix of influences among the elements, should be obtained by these priority vectors. The supermatrix is derived from limiting powers to calculate the overall priorities, so the cumulative influence of each element on every other element with which it interacts is obtained (Saaty and Vargas, 1998). The generalized supermatrix of the hierarchy with three levels used in this paper is as follow:

$$W = \begin{array}{c} \\ G \\ C \\ SC \\ A \end{array} \begin{array}{c} \begin{array}{cccc} G & C & SC & A \end{array} \\ \begin{bmatrix} 0 & 0 & 0 & 0 \\ w_{21} & w_{22} & 0 & 0 \\ 0 & w_{32} & w_{33} & 0 \\ 0 & 0 & w_{43} & I \end{bmatrix} \end{array} \tag{1}$$

where w_{21} is a vector that represents the impact of the goal on criteria, w_{32} is a matrix that represents the impact of criteria on each one alternative, w_{22} and w_{33} are identity matrices that represent the inner dependence of criteria and the inner dependence of alternative. W is a partitioned matrix because its entries are composed of the vectors obtained from the pairwise comparisons. Since W is a column stochastic matrix, its limiting priorities depend on the reducibility and cyclicity of that matrix. If the matrix is irreducible and primitive, the limiting value is obtained by raising W to powers such as equation (2) to get the global priority vectors (Saaty and Vargas, 1998).

$$\lim_{k\to\infty} W^k \tag{2}$$

Finally, after the supermatrix is assured of column stochastic, it is raised to a sufficient large power until convergence occurs (Saaty, 1996). That is, the supermatrix is then raised to limiting powers to be W^{2k+1}, where k is an arbitrarily large number to capture all the interactions and to obtain a steady-state outcome.

FINDINGS

In this study, a questionnaire was prepared for 11 B&B experts. The questionnaire was created in accordance with the associated criteria of the evaluation framework. Pairwise comparisons were carried out by one of the experts for a single decision maker for each node of the evaluation framework. Each rated score in the questionnaire corresponds to a matrix of criteria. The ratting of

each pairwise comparison was based on the Saaty's nine-point priority scale. Experts were asked to rate the questionnaire again in situations involving matrixes with unacceptable consistency ratio (CR) values. To improve the consistency of pairwise comparisons, the concept of the comparison framework mentioned above was carefully explained to each expert, who was asked to quantify the comparison values for all criteria and alternatives accordingly.

Based on the comparison results in Table 1, the evaluation criterion that has the most effect upon competitive advantage is assigned to the customer linking capabilities, and its weight is calculated to be 0.276. The market innovation capabilities obtained priority weights of 0.254. Then, reputational assets, managerial capabilities and human resource assets obtained priority weights of 0.174, 0.163 and 0.132, respectively. The consistency index (CI) was calculated to be 0.001, whereas the CR=0.001/1.12=0.009<0.1. In all cases, the experts stayed within this constraint. Saaty (2000) set the acceptable levels of the CR to yield satisfactory results, including less than 0.1 for the matrix with n≥5, less than 0.08 for n=4, and less than 0.05 for the matrix with n=3. Given the key point to provide impartial and consistent values for the pairwise comparison, it is necessary to avoid inconsistency and biased comparison as far as possible.

The supermatrix $\boldsymbol{W}$ was inserted with vectors and matrices, as w_{21}, w_{22}, w_{32}, w_{33}, w_{43}, and I, respectively. It is important to note that the supermatrix included the eigenvector of the matrix that compared the five marketing resources and capabilities with respect to selecting the competitive marketing strategy. Other eigenvectors are the matrices formed because of the interdependence among marketing resources and capabilities. Because of the effect of cyclicity in the supermatrix, and the weighted supermatrix should be obtained before limiting the power to converge. Then, the initial completed supermatrix is shown in Table 2.

Table 1. Pairwise Comparison Summary with Respect to the Goal

	C1	C2	C3	C4	C5	*w*
C1	1	0.634	0.631	1.248	0.885	0.163
C2	1.576	1	1.106	2.233	1.559	0.276
C3	1.584	0.904	1	1.947	1.446	0.254
C4	0.801	0.448	0.513	1	0.831	0.132
C5	1.381	0.641	0.687	1.204	1	0.174
					λ_{max}=	5.049
					CI=	0.01
					CR=	0.009

Note: C1: MC(managerial capabilities),C2: CLC (customer linking capabilities), C3:MIC (market innovation capabilities), C4: HRA(human resource assets), and C5: RA(reputational assets), *w*= relative importance weights, and *CR*: consistency ratio.

In the current study, convergence is stable with cyclical ratios, and the limit supermatrix, which shown the long-term stable values, is shown in Table 3. For marketing strategy, the overall priorities are given by the bottom left corner of $\boldsymbol{W}$. For the goal of the decision problem, the alternative with the largest priority index should be selected. The segmentation strategy, with a relative importance value of 0.382, is the best marketing strategy for selecting the competitive marketing strategy,

followed by differentiation strategy with a value of 0.351 and cost leadership strategy with a value of 0.267.

Table 2. The Initial Completed Supermatrix

	G	C1	C2	C3	C4	C5	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9	SC10	SC11	SC12	SC13	SC14	SC15	SC16	SC17	SC18	S1	S2	S3
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C1	0.163	0.495	0	0.143	0.183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C2	0.276	0.250	0.350	0.102	0.431	0.589	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C3	0.254	0.085	0.192	0.582	0.231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C4	0.132	0.078	0.193	0.084	0.074	0.162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C5	0.174	0.091	0.265	0.089	0.081	0.249	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SC1	0	0.289	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SC2	0	0.101	0	0	0	0	0.333	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SC3	0	0.433	0	0	0	0	0.310	0.366	0	0	0	0	0	0	0	0	0	0	0	0.342	0	0.256	0	0	0	0	0
SC4	0	0.176	0	0	0	0	0.357	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SC5	0	0	0.244	0	0	0	0	0	0.199	0	0	0.260	0.299	0.400	0	0	0	0	0	0.324	0	0	0	0	0	0	0
SC6	0	0	0.174	0	0	0	0	0	0	0	0	0	0.346	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SC7	0	0	0.334	0	0	0	0	0	0.218	0	0	0.269	0	0	0	0	0	0	0	0	0	0.264	0	0	0	0	0
SC8	0	0	0.248	0	0	0	0	0	0.191	0	0	0	0.356	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SC9	0	0	0	0.254	0	0	0	0	0	0	0	0	0	0	0	0.550	0.600	0	0	0	0	0	0	0	0	0	0
SC10	0	0	0	0.178	0	0	0	0	0	0	0.343	0	0	0	0	0	0.400	0	0	0	0	0	0	0	0	0	0
SC11	0	0	0	0.192	0	0	0	0	0	0.366	0	0	0	0	0.177	0.450	0	0	0	0	0	0	0	0	0	0	0
SC12	0	0	0	0.172	0	0	0	0	0	0.345	0	0	0	0	0.185	0	0	0	0	0	0	0	0	0	0	0	0
SC13	0	0	0	0.204	0	0	0	0	0	0.289	0	0	0	0	0.195	0	0	0	0	0	0	0	0	0	0	0	0
SC14	0	0	0	0	0.550	0	0	0.346	0	0	0	0.240	0	0	0.217	0	0	0	0.450	0	0	0.235	0	0	0	0	0
SC15	0	0	0	0	0.450	0	0	0.287	0	0	0	0.230	0	0	0	0	0	0	0	0.334	0	0	0	0.450	0	0	0
SC16	0	0	0	0	0	0.397	0	0	0.184	0	0.324	0	0	0.600	0.226	0	0	0	0.550	0	0	0	0	0	0	0	0
SC17	0	0	0	0	0	0.286	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.550	0	0	0
SC18	0	0	0	0	0	0.317	0	0	0.208	0	0.333	0	0	0	0	0	0	0	0	0	0	0.245	0	0	0	0	0
S1	0	0	0	0	0	0	0.243	0.182	0.437	0.523	0.386	0.307	0.305	0.328	0.381	0.357	0.406	0.393	0.326	0.337	0.294	0.432	0.293	0.327	1	0	0
S2	0	0	0	0	0	0	0.312	0.463	0.383	0.202	0.346	0.443	0.447	0.444	0.355	0.398	0.304	0.292	0.426	0.369	0.336	0.322	0.525	0.404	0	1	0
S3	0	0	0	0	0	0	0.445	0.354	0.181	0.274	0.268	0.249	0.248	0.229	0.264	0.245	0.290	0.315	0.248	0.294	0.370	0.246	0.182	0.270	0	0	1

Table 3. The Limiting Supermatrix

	G	C1	C2	C3	C4	C5	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9	SC10	SC11	SC12	SC13	SC14	SC15	SC16	SC17	SC18	S1	S2	S3
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C1	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116
C2	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
C3	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246	0.246
C4	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131
C5	0.174	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012
SC1	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
SC2	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
SC3	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068
SC4	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
SC5	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103	0.103
SC6	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035
SC7	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072
SC8	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051
SC9	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075
SC10	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063
SC11	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051
SC12	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023
SC13	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023
SC14	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
SC15	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084
SC16	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118
SC17	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056
SC18	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086
S1	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351
S2	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382
S3	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267

CONCLUSION

Evaluating marketing strategy is a kind of MCDM problem, and MCDM methods could deal with the problem. The main propose of this study is the success of marketing strategy decision-making depends on firm's resources and capabilities. An ANP was used to evaluating the marketing strategies for competitive advantage, adopting the owner-managers point of view as

reflected by goal approach. The emphasis has been on comparing the competitive advantage of B&B in terms of managerial capabilities, customer linking capabilities, market innovation capabilities, human resource assets, and reputational assets.

Through reviewing the relative literatures and considering the practical experience, the evaluation process consists of the following steps: (1) to determine the evaluation criteria for marketing strategy; (2) to build the framework for evaluating marketing strategy; (3) to design expert questionnaire and survey; (4) to conduct the pairwise comparison; (5) to compute the eigenvalue and eigenvector; (6) to solve the supermatrix; (7) to select the competitive marketing strategy.

In the current study, the results pointed out that customer linking capabilities, market innovation capabilities and reputational assets of the B&B play the most important roles in influencing the competitive marketing strategy. The contribution of the current study lies in the practical implementation for integrating modified Delphi and ANP methods in order to the proposed process could be utilized by marketing strategists in a real industry to determine the appropriate marketing strategy.

To integrate modified Delphi and ANP methods is successfully applied to the case described here. The systematic process for marketing strategy determination in practical implementation could be easily extended to the decision-making for other managerial problems. Furthermore, in the practical and complex managerial environment, developing a decision-making support process could be considered as a critical issue for marketing strategy in the managerial implication.

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無研發成果推廣資料

98 年度專題研究計畫研究成果彙整表

計畫主持人：吳正雄	計畫編號：98-2410-H-041-007-
計畫名稱：國際觀光旅館行銷資源與能力關聯性之研究-以資源基礎觀點	

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	1	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	1	1	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	1	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	1	1	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。)	無.

	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。

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 技轉：□已技轉 □洽談中 ■無 其他：(以 100 字為限)
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)