Mediating Effect of Strategic Alliance between Product Innovation and Organizational Performance in the Tourism Industry

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Abstract: Organizational capability of adopting countermeasure when facing frequent environment changes is the key to industrial survival. This study mainly aims to explore the relationships among product innovation, organizational culture, strategic alliance, and organizational performance in the tourism industry. Research participants were Taiwan travel agencies. A stratified random sampling approach on senior managers with decision-making power and familiar with internal strategies was utilized to collect data. Out of 1987 distributed questionnaires, 507 usable responses were received. SPSS 12.0 and LISREL 8.7 were used to analyze data. The results show that the degree of industry investment positively influences strategic alliance tendency and strategic alliance tendency positively affects organizational performance. However, organizational culture has no impact on strategic alliance. This study provides deep understanding of product innovation and strategic alliance in the tourism industry and offers the industry with useful implications for sustainable development.

Keywords: Product innovation; strategic alliance; organizational performance

1. Introduction

Travel industry is a middleman in the tourism industry and plays a critical role of integrating upstream resources (i.e., hotel, airline industries) and offering products and services to consumers (Carroll and Siguaw, 2003; Huang et al., 2004). The business of travel industry includes overseas travel industry, foreign tourist travel planning, transportation agents for Airline Company, and domestic travels, etc. (Tourism Bureau, 2009). However, transportation convenience has also brought about tremendous competition in the global travel market. Since the travel industry is limited regarding market factors and there is a considerable difference between slack and peak seasons, it is extremely crucial for travel agencies to develop innovative and creative travel products in order to attract diverse stratum customers, grasp more potential and obtain higher performance (Wolfe et al., 2004; Dabas and Manaktola, 2007; Huang, 2006). It is noted that the organizational performance of travel industry is considerably affected by the level of internal and external cooperation within the industry. In other words, under strategic alliance, joined organizations have different cooperative purposes. Hence, the choice of strategic alliance is one of the critical factors to promote organizational performance, which in turn exerts further vital impact on travel industry performance.

Among various types of strategies tourism managers utilize to achieve competitive advantage, strategic alliance is favored due to its benefit in collecting per advantage of alliance partners for reaching mutual operational goals and performance between alliances (Huang, 2006). In other words, tourism allies within the same or different industries through strategic alliance can be able to analyze their organizational structures, culture, growth strategy, product scope, and market construction as well as promptly obtain external professionalism and advantages to promote their own capabilities (Blodgett, 1991). Due to competitiveness, the tourism industry not only takes organizational goals to choose cooperative partners but also considers future cooperative partners’ product innovative capability since product innovation is viewed as the key of industrial sustainability and competitive advantages according to the resource based theory. Leonard and Sensiper (1998) also propose that innovation is a motive power of maintaining competitive advantages for the majority of industries. In this era, in order to satisfy tourism customer demands, the development of product innovation is oriented toward customer value. Hence, product innovation is perceived as the
core resource and capability of the tourism industry. Due to this point, no matter the allies are within the same or different industries, they can be able to assess alliance partners’ product innovative capability in strategic relationships.

Since travel products have high duplications, continually innovation is extremely important. Especially, the alliance of tour agencies becomes more important in the context of Taiwan due to the smaller scale of Taiwan’s travel agencies in comparison with international tour agencies. Hence, this study aims to take the Taiwan tourism industry to explore the mediating effect of strategic alliance between product innovation and organizational performance. Post mails were utilized to deliver questionnaires to top managers within the industry. Accordingly, the research purposes are as follows:

- Exploring the impact of product innovation on strategic alliance tendency
- Exploring the impact of strategic alliance tendency on organizational performance

2. Literature Review

2.1 Tourism Industry and Product Features

According to the 2nd clause and the 8th item of Taiwan Development Tourism Regulation, tourism industry takes charge of planning for overseas trips, and completing visa procedure on behalf of tourists, arranging travel itinerary and accommodation, and providing services for obtaining compensation. The 10th clause advances the definition of tourism industry as “a profit-creation career through the approval from Taiwanese central agency designs travel itinerary, boarding, and lodging, provides tour leaders and tour guides, takes charge of commission sale and transportation ticket purchase as well as overseas trip planning and visa procedure completion on behalf of tourists for obtaining commission”. This definition has effectively proven that the sales scope of the tourism industry has expanded to more issues such as arranging travel itinerary, board and lodging, and providing tour guides. Hence, it can be seen that the tourism industry is a human-centered service industry in which “human” is not only a service object but also the main asset. Therefore, the success of the tourism industry strongly depends on human-related factors including owners, employees, tour leaders, tour guides, and tourists (March, 1997; Butler et al., 2002). In the tourism industry, travel agencies act as the middleman between customers and the industry (i.e. airline companies, hotels, food and beverage industry) for selling travel products and services to customers and obtaining commission as the major revenue source (Buhalis and Licata, 2002; Carroll and Siguaw, 2003; Tsai et al., 2004; Lubbe, 2005).

Tourism industry is a kind of career that provides travel-related services and convenience to customers. Hence, entrepreneurship in travel agencies is conducted in accordance with equipped professional travel knowledge, experience, and collected information in order to provide customers with the best assistance and travel services. As a sequence, the features of the travel industry cover the features of middleman and service industry (Buhalis and Licata, 2002; Alamdari and Mason, 2006). Through the strategic alliance within the same and different industries, travel agencies can efficiently provide customers with more services and concessions (Jarach, 2002; Goh and Uncles, 2003).

2.2 Product innovation

Lokshin (2009) proposes product innovation to be the frequency of successful practice on innovative products in the past two years and radical product innovation achievement in the same period, also views the radical innovation and valuable innovation as two different kinds of novelty level. Verryzer (1998) refers product innovation as the creation of new products, services, and procedures, in which innovation can be viewed as the continual evolution. In line with this, Rochford and Rudelius (1997) divide product innovation into three different points including (1) Consumer points: whether the new products are capable to provide consumers with more benefits that consumers themselves perceive based on the cognitive level; (2) Industry points: whether the industry has newness on new products’ related market, technologies, and manufacturing methods; meaning that if there is newness on products, it can be referred to as product innovation; and (3) Market points: whether new products are equipped with the features that cannot be found in existing products. In other words, the main aim of product innovation is to create new market. In this era of limited resources, rapidly advance technology innovation, and intense global competitive environment, industry capability to develop core competitiveness is perceived as the critical factor to sustainability and competitiveness (Shieh and Wang, 2010).

On exploring the relationships between market orientation and product innovation, Laforet (2008) puts forward that in terms of customers, product innovation is the adaptation of the new products to customer experience and consuming types. The lower adaptation shows tremendous needs for the higher newness on new products. In terms of organizations, innovation refers to the new products that have low similarity with the previous marketed and sold products. Therefore, innovation not only focuses on technologies but also includes marketing,
product orientation, and service method innovations. Previous studies have pointed out that industry when being engaged in innovative activities will not only be affected by strategic factors of research and development, manufacturing, and marketing (Grunwald and Kieser, 2007; Kok and Creemers, 2008) but also by its own innovative capability and the external environment to generate different product innovation performance. In other words, in the process of product innovation, the industry will be considerably affected by environmental risk uncertainty and its resources (Strandholm et al., 2004). Hence, in order to effectively satisfy customer demands, innovations are oriented toward customer-value-oriented innovations. Therefore, it can be observed that the main driver of innovation comes from external market demands. The final goals of proceeding industrial R&D are to satisfy customer demand and to solve customer problems. It is assumed that the development of new products play a critical role to industry sustainability and development since it can promote organizational competitiveness and help create win-win prospects (Lee, 2010).

It is noted that Sands and Warwick (1977) divide product innovation into nine types, namely (1) improving existing product functions, (2) new applications of existing products, (3) products provided with totally new functions, (4) products provided with added functions, (5) products presented to the new markets, (6) products sold by lower unit cost, (7) products which integrate existing products and other products, (8) changes in product appearance, and (9) product degradation. According the level of newness, Santarelli and Piergianni (1996) categorize product innovation into five levels which are (1) complete innovative products which include different product functions and are produced using new technologies, (2) part betterment products which refine some product attributes, (3) assembled products which collocate products to create new assemblies, (4) differentiated product, and (5) processing innovative product. According to the aim of this paper to explore the impact of product innovation on strategic alliance tendency, this study adopts the ideas of above researchers to develop measurement items for product innovation.

2.3 Strategic Alliance

Strategic alliance refers to an operational type adopted by the industry. In the process of alliance, the participant industry can learn and achieve knowledge capability from partners and then transfer and implement in their own organizational operations in order to build up an effective approach for enhancing industrial competitive advantages (Chothoth and Olsen, 2003). Porter and Fuller (1986) propose that strategic alliance is a formal and long-term relationship between firms. However, it is noted that although there are some connections among firms, they cannot be taken as a merger. From the impact of different strategic alliance approaches on intangible value, strategic alliance has become a commonly adopted method by industries for rapidly obtaining professionalism from outsiders and improving own capabilities. Through mutually beneficial process, alliance firms maintain their commitment interdependently. If any side changes its benefit, the mutual strategic alliance performance might be affected or reduced. However, strategic alliance cannot be taken as a merger under formal and long-term connections. Therefore, strategic alliance is a kind of cooperative approach to promote two or more firms’ advantages and help achieve strategic goals (Wong and Kwan, 2001). Strategic alliance is a voluntary and spontaneous cooperative agreement between industries which mutually exchange, share, contribute, and develop resources including capital, technologies, or specific assets to pursue and achieve competitive benefits among partners (Das and Teng, 2000; Dube and Renaghan, 2000). Porter and Fuller (1986) divide strategic alliance into three main aspects which are (1) value activities including technical developed alliance, operative and rear service alliance, marketing alliance, sale alliance, service alliance, and multiple-activity alliance, (2) allied approach including traditional joint venture, non-stock equity alliance, and minority stock equity alliance, and (3) geographic location including single country alliance and cross-country alliance.

Bronson et al. (2001) propose that the tourism industry is mainly composed of small firms in contrast to their suppliers which are normally large firms such as airline companies. The traditional solving method for this imbalance is the collective strategic approach. For instance, same trade alliances refer to group construction that can offer participant industries with cost reduction and shared risk to achieve higher level of economic performance. Hence, strategic alliance between tourism operators and same businesses would certainly benefit their competitiveness. This is the major reason for continually increasing strategic alliances between tourism industries and the same businesses. However, strategic alliance between tourism industries has complicated construction. Strategic alliances usually contain inter-mixed vertical and horizontal relationships, as reflected in the up-stream and down-stream relationships in the alliance between synthetic travel agencies and retail travel agencies supply chain. Nevertheless, the majority of synthetic travel
agencies concurrently operate direct sale business; hence, horizontal competitive relationships exist. Rindfleisch and Moorman (2001) address that vertical alliance and horizontal alliances possess totally different contracture. Although Hu and Korneliussen (1997) explore performance between same business alliances, there remain lots of questionable points of whether the results applied to the tourism industry need to be clarified by this study.

From the above description, it is noted that strategic alliance is an internal organizational relationship formed by two or more organizations which mutually share goal, strive for benefit and highly dependence (Kale et al., 2000), and contribute different resources and technologies through various ways to better achieve complementary resources and capability between alliances to pursue the common largest benefits. This study adopts Porter and Fuller (1986)’s taxonomy for establishing measurement items for strategic alliance.

**H1:** The level product innovation investment will influence strategic alliance tendency.

### 2.4 Organizational Performance

Organizational performance refers to the level goal achievement conducted by organizations. It presents efficiency and efficacy applied by the organization and the conducted follow-up direction of resource distribution (Lokshin et al., 2009). Venkatraman and Ramanujam (1986) through measuring performance separate this concept into three respective dimensions which are (1) Financial performance: the growth and profit rate of organizational sales; (2) Business performance: except financial indicators, it includes market share, new product launching, product quality, etc.; and (3) Organizational effectiveness: consists of organizational morale, employee attitude, and customer satisfaction.

In the research of market-orientated organizational culture and performance proposed by Homburg and Pflesser (2000), performance is divided into two dimensions based on the comparative rule, namely market performance and financial performance. It is noted that market performance is affected by organizational marketing activities; hence, firms need to understand customer satisfaction, customer value, and whether or not to attempt to attract new customers in order to achieve expected growth goals and market share expansion. Concerning financial performance, this outcome is measured by organizational sales volume by asking the question “How much sales volume is strived by strategic enterprise?” On exploring organizational performance, Delancy and Huselid (1996) propose that organizational performance measurement includes product quality, new product and service development, the capability of attracting talents, and customer satisfaction. In line with this research stream, Harrigan (1988) suggests different types of strategic alliance will exert different impacts on organizational performance, thus firms’ organizational performance vary. Taking joint venture as an example to compare the minority of benefit with a majority of benefit, it could be found that a minority of benefit have higher successful rate. In other words, different types of alliance brought different organizational performance.

The travel industry probably covers overseas tourism, domestic travel, receiving and taking charge of foreign guests for sightseeing, and acting as transportation agents for airline companies. Currently, there is no specifically compromised measurement for measuring travel industry performance. This is due to the fact that different travel agencies possess different operational businesses model and have their own measurements. Hence, it is difficult to measure the overall organizational performance of the tourism industry. Taking this point, this study adopts and modifies the idea of Delaney and Huselid (1996) in order to obtain specific and useful measure items for organizational performance.

**H2:** The tendency of strategic alliance will effect on organizational performance

### 3. Methodology

#### 3.1 Research Framework

The main aim of this study is to explore the mediating impact of strategic alliance between product innovation and organizational performance. Based on the research purpose, this study developed the research framework of organizational performance in the tourism industry as presented in Figure 1.

![Figure 1. Research framework](http://www.lifesciencesite.com)

3.2 Surveys

Survey questionnaires were adopted as research instrument. The stratified random sampling technique was utilized to collect data. The Taiwan travel agencies selected for this study were based on the total number of 2948 travel agencies with qualification approval tourism industry’s license, stated in the annual statistics of the Taiwan Tourism
Bureau (MOTC) (Tourism Bureau, 2011). Among those, 402 were synthetic travel agencies, 2357 were Class A agencies, and 189 were Class B agencies.

Due to the sale scope regulated by Tourism Bureau on synthetic travel agencies, Class A travel agencies, and Class B travel agencies, a majority of travel agency development has been concentrates on Class A travel agencies. Hence, synthetic travel agencies and Class B travel agencies decrease substantially. However, in terms of strategic implementation, the sale scope was widely emphasized on synthetic travel agencies, which in turns leads to their advantages in selecting among a wide range of product innovation and strategies. Taking this reality, this study increases the ratio on distributing questionnaires to synthetic travel agencies in order to balance between strategic implementation and practice and to avoid the problem of losing focal points on strategic choice if only focusing on Class A travel agencies.

3.3 Questionnaires

The questionnaire consists of four sections which are product innovation (7 items), strategic alliance (8 items), organizational performance (7 items), and participants’ background information, respectively.

3.4 Data analysis

This study utilized SPSS 12.0 and LISREL 8.7 to analyze the data. First, reliability and validity were tested by analyzing research samples. Then, the Structural Equation Modeling (SEM) approach was used to examine the causal relationships among proposed variables in the research model.

3.5 Pilot test

The generated questionnaire was reviewed on whether there were questions that did not fit the current domestic tourism industry and refined with the help of an expert in the tourism field and a manager with 25-year experience in Class A travel agency. In the next step, a pilot-test was performed with 8 senior managers who work in synthetic travel agencies, Class A travel agencies, and Class B travel agencies. The results indicated that the survey questionnaire had a sufficient level of reliability and validity.

4. Data analysis

Out of 1987 randomly distributed questionnaires, 507 usable responses were received, indicating a valid response rate of 25.5%. The analysis results were as follows:

4.1 Sample Analysis

Out of 507 participants in this study, 323 were synthetic travel agencies (63.7%), 169 were Class A travel agencies (33.3%) and 15 were Class B travel agencies (3%). About 185 (36.5%) of respondents were male and 322 (63.5%) were female. Among the participants, 12 (2.4%) were chairman, 33 (6.5%) were vice chairman, 69 (13.6%) were assistant managers, and 354 (69.8%) were senior managers. The analysis of position status indicates the majority of participants were senior managers. Regarding years of working, 207 (40.8%) of respondents’ service seniority in the current positions belonged to the 1-5 year group, 131 (25.8%) were from the 5-10 year group, 93 (18.3%) were between 10 and 15 years, and 76 (15.0%) were above 15 years. It is also noted that 116 (22.9%) of respondents’ service seniority in travel agencies were between 1 and 5 years, 134 (26.4%) were between 5 and 10 years, 137 (27.0%) were between 10 and 15, and 120 (23.7%) were above 15 years.

In terms of size, 153 (30.2%) of respondent travel agencies have under 30 employees, 118 (23.3%) have between 31 and 70 employees, 62 (12.2%) have between 71 and 120 employees, and 174 (34.3%) have above 121 employees. Among the participants, 82 (16.2%) travel agencies’ annual revenue were under NT$20 million, 189 (37.3%) were between NT$20-150 million, 110 (21.7%) were between NT$150-600 million, 48 (9.5%) were between NT$600-1,000 million, and 78 (15.4%) were above NT$1,000 million. The result showed that annual revenue generally fell into the NT$20-150 million and NT$150-600 million ranges.

4.2 Hypothesis testing

Reliability was assessed by Cronbach’s α. According to the standardized value suggested by Nunnally (1978), Cronbach’s α coefficient below 0.35 indicates low reliability, in between 0.5 and 0.7 indicates an acceptable reliability, and above 0.7 indicates high reliability. The achieved results for Cronbach’s α coefficient for all constructs in this study were above the benchmark 0.7, thus confirming a high reliability.

This study utilizes the Principal Component Analysis (PCA) approach for testing construct validity. All standardized factor loadings were above 0.5 and the obtained KMO value was 0.81, indicating a goodness-of-fit and construct validity.

In the next step, LISREL were utilized to test overall model fit. The statistic results showed that all indicators met the benchmark (RMSEA=0.050, GFI=0.88, AGFI=0.89, NFI=0.92, NNFI=0.92, CFI=0.97, χ²=1069.22 (p=0.000), and χ²/d.f=2.376), indicating the overall fit for the model.
Finally, the structural equation modeling (SEM) method was employed to examine the proposed relationships and whether they were supported by the conceptual theory. The contents included Parameter Estimation, quantity, and R2. The results showed that product innovation had positively impact on strategic alliance (γ11=0.81, t=10.70), thus hypothesis H1 was supported. This finding implied that level of industrial investment in product innovation did affect the strategic alliance tendency. In addition, the analysis results stated that strategic alliance had positive impact on organizational performance (β21=0.33, t=5.60), which supported the hypothesis H2.

5. Conclusions and Implications
5.1 Conclusions

Through examining the hypothesis H1, the results show that the level of investment in product innovation positively affects firms’ strategic alliance tendency. Therefore, travel agencies should proactively develop innovative travel products in order to effectively increase competitive advantages through offering customers with more choices. Simultaneously, it is critical for travel agencies to actively seek for strategic alliance within the same trades since it can help increase well-known degree and exposure rate as well as bring more business opportunities. Furthermore, the finding presents that the level of product innovation capability of travel agencies within the same trade is a critical factor to consider strategic alliance. In terms of choosing strategic alliance, influential factors such as complementary, relationships with supervisors, distribution, operational stability, and service provision are taken into deep consideration as appraisal basis. Therefore, the level of product innovation invested by alliances will strongly affect these factors. In other words, as one travel agency invests more in product innovation, other travel agencies will be more willing to cooperate with it to co-create extent profits. Hence, when tour agencies plan to implement strategic alliance, they will tend to cooperate with the tour agencies which investing more in product innovation.

The results supporting hypothesis H2 show that strategic alliance tendency positively influences organizational performance. When tour agencies implement strategic alliance, it is difficult to measure organizational performance due to the difference in motivation and resource investments. In other words, since the cooperative purposes of jointly participating organizations under strategic alliance are not the same, there exist different level gaps concerning performance outcomes.

5.2 Implications
5.2.1 Promoting innovative level of travel products

Product innovation is one of the key factors for firms to maintain competitive advantages and sustainability. Since the travel industry is a part of tourism industry, travel products’ attributes contain the features of service products such as intangibility, inseparability, heterogeneity, and perishability. Therefore, product innovation in the tourism industry expresses higher level of importance regarding these service features and has become a useful approach for firms to maintain industrial competitiveness. It is also noted that travel agencies are categorized into three types which are synthetic travel agencies, Class A travel agencies, and Class B travel agencies. Through strategic alliance with other tour agencies, travel agencies can effectively achieve more profits for themselves.

In reality, travel agencies possess different resources. When they accept a commission to sell different plane tickets, they may encounter the difficulties in selling all those tickets. In this context, they can exchange plane tickets with other travel agencies or mutually develop brand-new package tours to sell unsalable plane tickets. In addition, since travel agencies with similar types own similar resources, they can flexibly plan and focus on existing resources. For instance, if there are limited air tickets on two class A tour agencies, they can combine the number of plane tickets and solicit group tours in order to sell more tickets and increase group departure rate. This approach can be found in Cross-Strait strategic alliance between Taiwan and China in conducting direct flights to continually increase flights and promote airlines. In order to achieve more effective alliance, travel agencies in between Taiwan and China can mutually launch innovative itinerary and provide discount to customers.

5.2.2 Embedding interdependent level between strategic alliances

Travel agencies seeking for strategic alliance usually want to obtain more efficient organizational performance. This empirical study proves that strategic alliance tendency has a positive impact on organizational performance. In addition, it is noteworthy that tour agencies participating in strategic alliance will measure organizational presentation in accordance with allied types. In other words, when customer priority is the tendency of the strategic alliance, customer satisfaction and product quality become paramount purposes among allied company. Since higher customer satisfaction leads to better improvement on organizational performance, the purpose of strategic alliance refers to the context that different organizations promote their own
organizational performance and advance organizational goals via cooperative alliance.

In practice, Greenscope tour alliance has provided a good example in offering professional internet platform which can yield other tour agencies to sell group itinerary. The great benefit of this operational model is that whoever joins this alliance can be a product supplier simultaneously. Furthermore, the platform can be used to increase the product contents by taking resources from other travel agencies’ product as references and then create alliance performance. In practice, the majority of synthetic travel agencies bear much pressures of being plane ticket sale agents for airline companies through “Airlines Key Agency” contract arrangements since they must sell out the certain amount of tickets in the appointed time. Therefore, it is suggested that the synthetic travel agencies should closely coordinate with the products of Class A travel agencies to obtain more benefits culturally.

5.2.3 Combining different trades with strategic alliance partners

Currently, due to the intense competition and travel market saturation, travel agencies need to conduct strategic alliance with other firms to expand market, promote market share, and increase profit. An example given is in the Japan airlines industry that travel agencies can ally with banks and available Japan’s Airline Companies. The strategy is to expend money by credit cards and accumulating mileage. Since consumers can use mileage to exchange plane tickets or traveling expenses when reaching prescriptive mileage, they will not only increase the use of credit card to get an extra dividend points but also have concession from accumulating mileage.

From practical viewpoint, if the travel insurance concept can be effectively spread, the market output value of Taiwan annual travel insurance is estimated to reach 22 hundred million. Therefore, Phoenix Tour Agency specially conducts cooperation with Chartis Taiwan Insurance to establish an insurance broker agency for selling travel insurance-related business. In addition, Giant Bicycles, travel agencies, China Airlines, and Mandarin Airlines have signed Memorandum of Understanding (MOU) that uses “Cycling Paradise, Taiwan” as the main theme to expand mutually internal and domestic bicycle travel. This is a typical example of strategic alliance from different businesses including bicycle industry, travel agency, and airlines. Moreover, travel agencies have also mutually cooperated with Cable Television (CATV) to market their travel products on TV channels, increase exposure rate, and promote sales volume. Hence, it is obviously proven that travel agencies will obtain higher level of efficiency when actively participating in strategic alliance.

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