

## The performance of ISO certification based on consumer perspective: A case study of a travel agency

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This study mainly employed structural equation modelling to investigate the impact of a travel agency passing ISO certification on consumer's perceived quality, brand image, brand attitude, brand preference, and purchase intention. A well-known ISO-certified travel agency in Taiwan was selected as a case. A total of 500 valid questionnaires were collected for further analysis. The research findings showed that informing the consumer about a travel agency passing ISO certification could more directly enhance consumer's perceived quality and brand image and indirectly improve consumer's brand attitude, brand preference, and then purchase intention. Thus, a travel agency passing ISO certification was an important message and key antecedence to enhance consumers' purchase intention.

**Keywords:** ISO certification; perceived quality; brand image; brand attitude; brand preference; purchase intention

### Introduction

The prosperous development of global tourism industries in recent years has led to the trend of local residents visiting overseas destinations. In Taiwan, the leisure tour population has grown year by year, and the main proportion of outbound travellers has been gradually shifted from business travellers to pleasure-seeking ones. Besides, the number of travel agencies in Taiwan also increased year by year. In face of consumer's growing demands from travel agencies, competition in the tourism industry will be more intensive than ever. However, how should consumers choose the right travel agency? How do they perceive the quality of a travel agency? And how should travel agencies improve service quality and enhance consumer's purchase intention? All these issues should be paid attention to by travel agencies.

The travel agencies were required to make more efforts to improve quality so as to gain more market share in the international market. One of the significant methods to present quality for travel agencies is ISO certification. The major consequences of ISO certification include 'improvement of customer's recognition of product quality', 'improvement of international client's attitude towards product and service', and 'improvement of corporate and brand image' (Nuland, 1990). Therefore, after enterprises pass ISO certification, improvements in consumers' perceived quality, brand attitude, and brand image are the results that are most satisfactory to enterprises. However, from the consumer's perspective, what is the perceived quality of travel agency or firms certified by ISO? Can ISO certification really increase brand image? Can it further

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influence consumer's brand attitude, brand preference, and purchase intention? These issues are worthy of further discussion.

Many enterprises seek ISO certification from production orientation for the improvement of product quality but without really probing into the performance of ISO certification based on consumers and marketing orientation. Therefore, this study selected the tourism industry as the research focus and an ISO-certified travel agency, Phoenix Tours International Inc., as an example to investigate since it had passed ISO 9001 certification. This study aimed to explore whether when consumers were informed about Phoenix Tours passing ISO certification, it would enhance their perceived quality and travel agency's brand image and would further influence consumer's brand attitude, brand preference, and finally purchase intention. The research results could serve as a practical reference for travel agencies and also provide a new perspective for the academic arena about ISO certification.

## **Literatures and research hypotheses**

### ***ISO certification***

In this study, ISO certification means a firm or product has passed the ISO quality system which considers 'quality assurance' of products or services as a basic element of a company. It provides information for customers to make judgements about products' or services' quality. By ISO certification, consumers are allowed to directly judge the quality of various firms and also travel agencies (Elmuti, 1996; Nuland, 1990).

The motivations for enterprises to pass ISO certification are various, including 'increase product/service quality', 'increase operational consistency', 'seek total quality management', 'reduce cost by minimising quality defects', 'expand or maintain market share and consumers' purchase intention', 'meet the demands of customers and firms', 'improve competitive advantages', 'promote brand image', and 'as a useful tool of marketing (Singels, Ruel, & Water, 2001; Vloeberghs & Bellens, 1996). Besides, Payner and Porter (1991) found that the main benefits of ISO certification include 'enhancement of customers' attitude toward the product', 'attraction of new customers', 'reduction in inefficiency', 'retention of existing customers', 'enhance consumers' brand preference', 'increase of internal control', 'improvement in internal discipline and material waste', and 'the access to new markets'. Based on consumer's perspective, we sum up the major influencing factors on purchase intention, which are consumers' perceived quality, brand image, brand attitude, and brand preference; these all can be the measure index about the effect of ISO certification.

### ***Perceived quality***

Perceived quality can be defined as the consumers' judgment about a product's or service's overall excellence and value (Holbrook & Corfman, 1985; Zeithaml, 1988). Here, it means tourists' perception of the overall quality of a travel agency. Perceived quality is the ability of certain products, compared with other alternative products, to satisfy customers' needs. It is the consumer's judgement of the superior value and function of a certain product (Monroe & Krishnan, 1985; Parasuraman, Zeithaml, & Berry, 1988). Steenkamp (1990) proposed that perceived quality is a judgement of value for the appropriateness derived through the cognitive process in which consumers consciously or unconsciously process related quality cues and quality attributes for certain individuals and situations.

When consumers make purchase decisions, they will judge by the perceived quality. Aaker (1996a, 1996b) and Lam and Zhang (1999) pointed out that consumers will refer to previous impressions when they judge the quality of a certain product. The sources of the previous impressions include information provided by salespersons, media, word of mouth, distribution channels, or brand identity.

Generally, the perceived quality of a travel agency can be defined as the perceived overall value or the subjective level of satisfaction with the quality of a certain travel agency compared with other brands.

### ***Brand image***

Brand image is an important key factor that influences consumers' purchase behaviours. Consumers infer a certain product by brand image and then they make their purchase decision (Phelps, 1986). Brand image is usually considered by consumers as an external cue to evaluate product (Bigne, Sanchez, & Sanchez, 2001; Richardson, Dick, & Jain, 1994). Consumers will use brand image to infer a travel agency. Thus, brand image is the key to the success of a travel agency.

Brand image is the value of the brand held by consumers (Keller, 1993). It can be divided into three types: functional image (associated with travel agency attributes such as quality, performance, and effectiveness), abstract image (associated with attributes unrelated to travel agency such as improvement of self-image, social status, and mental pleasure), and organisational image (associated with corporate innovation and social responsibility such as travel agency's ability and reliability) (Aaker, 1996a, 1996b; Biel, 1992).

### ***Brand attitude***

Brand attitude means one's attitude towards a brand, that is, the consumer's total evaluation towards a brand, which forms consumer's brand decision behaviour (Keller, 1993). Brand attitude is the preference and tendency of consumers under a certain stimulation or advertisement exposure (Lutz, Mackenzie, & Belch, 1986). Fishbein and Ajzen (1975) developed a multi-attribute attitude model and proposed that all the brand attitudes depend on the intensity of associations between the main attributes and benefits of the brand. Lane and Jacobson (1995) added esteem to evaluate brand attitude; and Srinivasan (1979) pointed out that image preference is also a criterion for the evaluation of brand attitude. Consumers' brand attitude towards a travel agency can be formed by consumers' confidence, experiential benefits, symbolic benefits, or functional benefits. Sometimes attitude can be formed through less careful decisions, such as a simple inspiration or personal decisions (Keller, 1993). For instance, when consumers lack the momentum or ability to evaluate a certain travel agency, they may use external cues, such as store appearance or brand reputation, to infer the quality of the travel agency and form consumers' attitudes towards a travel agency.

### ***Brand preference***

Aaker (1991) proposed that brand preference is the consumer's general and overall description of a certain brand. He proposed a four-scale measurement for brand preference which includes liking, respect, friendship, and trust.

Oliver (1999) conceived that preference also indicates the element of brand loyalty. Brand preference can help us distinguish whether one purchase from a certain travel

agency is due to a repeated and habitual behaviour or driven by brand benefits. Punj and Hillyer (2004) explained that favorable brands have a higher strength of preference. But when equally excellent brands are simultaneously existent, the availability of awareness will weaken the relationship between attitude and preference.

Punj and Hillyer (2004) further explained that the formation and reinforcement of brand preference do not necessarily require practical purchase or use. If a certain brand is continuously exposed in a marketing activity, such as an advertising activity or positive word-of-mouth, brand preference will also be formed on non-target clients and markets.

### ***Purchase intention***

Purchase intention refers to one's subjective judgement about whether one will purchase in the future (Blackwell, Miniard, & Engel, 2001). It can be the possibility or tendency of one person engaging in a specific activity or practical purchase behaviour (Engel, Kollat, & Blackwell, 1995; Smith & Swinyard, 1982).

Some studies have pointed out that the association between presented attitudes and practical behaviours is low (Allan, 1969). That is to say, attitude is usually not enough to for direct prediction of behaviours, probably because 'intention' is not considered. Thus, purchase intention is a key factor for prediction of purchase behaviours (Ajzen & Fishbein, 1980; Blackwell et al., 2001; Engel et al., 1995; Solomon, 2002). When forecasting one's behaviour, behavioural intention is usually a precise indicator (Engel et al., 1995). In other words, behavioural intention is a process of presenting any behaviour and the decision for behaviour emergence (Ajzen & Driver, 1991). To be succinct, predicting one's purchase behaviours through behavioural intentions will lead to more precise predictions for a travel agency.

### ***Relationships between 'level of awareness for passing ISO certification' and 'perceived quality' and 'brand image'***

The major benefits of passing ISO certification are 'improvement in customer's recognition of the product quality' and 'enhancement of corporate and brand image' (Nuland, 1990). So there were close relationships between ISO certification, perceived quality, and brand image. Vloeberghs and Bellens (1996) and Singels et al. (2001) discovered that the internal incentive for enterprises to promote ISO certification is to enhance product quality, and the external incentive is to enhance brand image in the market. Thus, after enterprises pass ISO certification, improvements in perceived quality and brand image are the most direct effects.

To sum up, if a travel agency passing ISO certification is informed to consumers, the perceived quality and brand image can be enhanced. Thus, the following hypotheses were proposed.

*H1:* Level of awareness of a travel agency passing ISO certification will positively affect perceived quality.

*H2:* Level of awareness of a travel agency passing ISO certification will positively affect brand image.

### ***Relationship between 'perceived quality' and 'brand image'***

Consumers apply their perceived quality to evaluate brand image (Chowdhury, Reardon, & Srivastava, 1998; Zins, 2001). Monroe (1990) pointed out that brand image will be

encoded by consumers as an index of perceived quality. Nguyen and LeBlanc (1998) discovered that consumers' perception of the bank will directly affect their opinion about the bank image. Chinen, Jun, and Hampton (2000) also found that lower perceived quality will indeed reduce consumer's perception of the brand image. Wang, Lo, and Hui (2003) pointed out that service quality and product quality have positive influence on bank image. Schniederjans, Cao, and Olson (2004) studied consumer's impression for products made in China and pointed out that product quality will affect consumers' impression of products or stores. To sum up, perceived quality will positively influence brand image. Thus, the following hypothesis was proposed.

*H3: Perceived quality will positively affect brand image.*

#### ***Relationship between 'brand image' and 'brand attitude'***

Darling (1981) proposed that brand image is consumers' attitude for related associations of a brand. Han (1989) also conceived that brand image will affect consumers' attitude towards a certain product brand. When consumers are unfamiliar with a certain product, brand image will have a halo effect, which they can use to deduce product attributes. The deduced belief will indirectly influence their brand attitude. When they are familiar with a certain product, brand image will become a concept, which may turn into a belief of product attributes and directly influence their brand attitude. Thus, brand image has a positive and direct impact on brand attitude. Thus, the following hypothesis was proposed.

*H4: Brand image will positively affect brand attitude.*

#### ***Relationship between 'brand attitude' and 'brand preference'***

When equally excellent brands are simultaneously existent, the availability of awareness will weaken the relationship between brand attitude and brand preference (Aaker, 1991). Thus, consumers tend to purchase awareness brands based on brand preference. However, a positive brand attitude has a higher strength of preference (Punj & Hillyer, 2004). The preference strength will be directed by consumers' attitudes towards a certain brand in comparison with other brands. Thus, brand attitude has a positive and direct impact on brand preference. The following hypothesis was proposed.

*H5: Brand attitude will positively affect brand preference.*

#### ***Relationship between 'brand preference' and 'purchase intention'***

Brand preference will affect one's purchase decisions and behaviours, so consumers will tend to purchase or not to purchase products of a certain brand (Howard & Sheth, 1969). When consumers hold higher preference for the brand, they have better evaluations of the brand. Their purchase intention and behaviours will also be enhanced. Preference is a necessary condition for the evaluation of intentions (Blackwell et al., 2001; Solomon, 2002). For instance, if one likes a certain travel agency, he may not necessarily purchase from it. But if he has purchased from it, he must have certain preference for the travel agency.

Brand preference is an extremely important factor for consumer's purchase intention. When a certain brand meets consumers' preference, they will have more purchase intention (Fishbein, 1963; Higie & Murphy, 1991; Kamins & Marks, 1991). Cobb-Walgren,

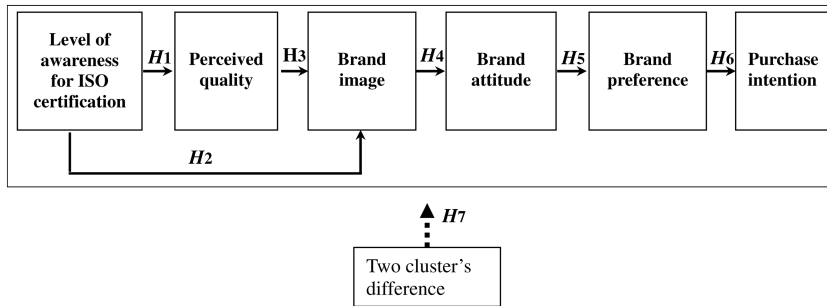


Figure 1. Research framework.

Ruble, and Donthu (1995) discovered that higher brand equities would lead to a stronger level of brand preference and influence purchase intention. Based on the above literature, the following hypothesis was proposed.

*H6:* Brand preference will positively affect purchase intention.

### *Difference between two clusters*

For the purpose of exploring the effect of ISO certification on consumers' purchase intention, the study divided the surveyed subject into two clusters: experimental group (those who were informed that this travel agency has passed ISO 9001 certification), and control group (those who were not informed that this travel agency has passed ISO 9001 certification), to analyse the difference between two clusters on each perspective. Based on this purpose, this study proposes the following hypothesis.

*H7:* There are significant differences between the experimental group and the control group on six performance perspectives.

### **Research framework**

According to the aforementioned literature and hypotheses, this study aimed to establish the research framework (Figure 1) and further applied structural equation modelling (SEM) to verify the proposed hypotheses. It can be seen from Figure 1 that when consumers are exposed to a certain travel agency, the level of their awareness of the travel agency passing ISO certification will affect their perceived quality and brand image, and further affect brand attitude and brand preference. Finally, their purchase intention will also be affected. That is the first time added ISO certification enters as an antecedent variable into the relationship structure of consumer's purchase intention. In addition, this study compares experimental group and control group to explore the different performance between these two clusters.

### **Methodology**

#### *Questionnaire design and measurement variables*

According to the related literature and a focus group of 10 tourists, an initial questionnaire was designed. Subsequently, the initial questionnaire was used for pretest. For the pretest, 35 tourists were selected as a sample through convenience sampling. The results of the interviews showed that the questionnaire was appropriate for use in further research,

since the factor loadings and item-to-total correlations coefficients were all above 0.6 and the Cronbach's  $\alpha$  of each factor was greater than 0.70 (Wortzel, 1979).

The questionnaire was composed of seven sections. These sections are explained as follows.

- (1) *Level of awareness of passing ISO certification*  
This study defined the level of awareness of passing ISO certification as 'the level of consumer's awareness of the travel agency already certified by ISO'. For this perspective, five questions were developed, and Likert's seven-point scale was adopted in the measurement.
- (2) *Perceived quality*  
According to Grewal, Monroe, and Krishnan (1998) and Brucks and Zeithaml (1991), the 4 perspectives of perceived quality were organised. These 4 perspectives included performance, durability, value, and innovation. Based on these 4 perspectives, 12 questions were developed. Likert's 7-point scale was adopted in the measurement.
- (3) *Brand image*  
According to Aaker (1996a, 1996b) and Biel (1992), nine questions were designed to extract research subjects' brand image for travel agency. Likert's seven-point scale was also adopted.
- (4) *Brand attitude*  
According to Morris, Woo, Geason, and Kim (2002), this study designs questions to evaluate consumer's attitude towards a travel agency. A total of five questions were designed, and Likert's seven-point scale was also adopted.
- (5) *Brand preference*  
This study employed the perception for brand preference provided by Haley and Case (1979) to develop three questions for the evaluation of brand preference towards the travel agency. Likert's seven-point scale was adopted in the measurement.
- (6) *Purchase intention*  
According to Zeithaml (1991), Dodds, Monroe, and Grewal (1991) and Grewal et al. (1998), three measurement items were designed to measure consumers' purchase intentions. These items were also evaluated on a Likert's seven-point scale.
- (7) *Demographic variables*  
In this study, the background of consumers including gender, education, occupation, monthly income, travel frequency, etc., were control variables. These items were evaluated by a nominal scale.

### ***Sampling and data collection***

In this study, Phoenix Tours International Inc., which had passed ISO 9001 certification, was selected as a research case and outbound tour consumers of this company as research subjects. The questionnaires were distributed in Taiwan Taoyuan International Airport to Phoenix Tours' customers who were waiting or checking in for flights. The questionnaires and surveyed subjects were divided into two groups: experimental group (those who were informed that this travel agency has passed ISO 9001 certification) and control group (those who were not informed that this travel agency has passed ISO 9001 certification). For the control group, photos and bold texts were used to remind travellers that 'Phoenix Tours is the focus of this research'. For the experimental group, it was noted on the questionnaire that 'The travel agency has passed ISO 9001 certification', and the research staff



Table 1. The sample structure and travel frequency.

Variables	Items	Times	Proportion (%)
Gender	Male	267	53.4
	Female	233	46.6
Education	Primary or below	37	7.4
	Secondary	145	29.0
	College	145	29.0
	University	128	25.6
	Graduate school	45	9.0
Occupation	IT	59	11.8
	Service	213	42.6
	Agriculture	14	2.8
	Manufacture	95	19.0
	Student	27	5.4
	Civil servant or army	33	6.6
	Others	59	11.8
Travel companions	Relatives	222	44.4
	Friends	168	33.6
	Others	110	22.0
Age	20 or under	54	10.8
	21–30	123	24.6
	31–40	172	34.4
	41–50	106	21.2
	50 or more	45	9.0
Average income (NT\$) per month	20,000 or under	60	12.0
	20,001–40,000	241	48.2
	40,001–60,000	145	29.0
	60,001 or more	54	10.8
Travel frequency per year	2 or under	300	60
	3–4	135	27
	5–6	37	7.4
	7 or more	28	5.6
Information resource	Web research	212	42.4
	Media and advertise	124	24.8
	Relatives and friends recommendation	137	27.4
	Others	27	5.4

would orally remind the surveyed subjects that ‘Phoenix Tours is the focus of this research, and it has passed ISO 9001 certification’ before they answered the questionnaire.

The sampling period spanned 2 weeks, and a total of 510 copies of questionnaires were distributed. Excluding questionnaires with incomplete or obviously unattended answers, 250 copies were collected from the control group, and another 250 copies were collected from the experimental group. Finally, 500 copies were collected, and the valid response rate was 90.9%. The structure of samples is shown in Table 1.

## Research results

### *Validity and reliability analysis*

After the investigation, the reliability and validity of the questionnaire were tested first. Cronbach’s  $\alpha$  reliability coefficient was conducted to evaluate the reliability of the



scale. The results showed that all the perspectives in the two groups' data had a reliability value higher than 0.75, indicating a good consistency of all the scales (Wortzel, 1979).

Subsequently, factor analysis was used to test the convergent validity of the questionnaire. The results in Tables 2 and 3 showed that all the variables under each perspective could be categorised into one factor and had a factor loading higher than 0.6. The total variance explained of all the factors was higher than 60%. Therefore, the two groups' data had good convergent validity.

### *Structural model analysis*

This study applied analysis of moment structure to conduct a path analysis of the structural relationship model and investigate the correlations among the six perspectives, including level of awareness of passing ISO certification, perceived quality, brand image, brand attitude, brand preference, and purchase intentions. The cause-and-effect relationship among the variables and the impact of these variables on purchase intention were further discussed.

This study used chi-square and  $\chi^2/\text{df}$  value, GFI (goodness-of-fit index), AGFI (adjusted goodness-of-fit index), NFI (normed fit index), CFI (comparative fit index), RMR (root mean square residual), and RMSEA (root mean square error of approximation) to test the fitness of the developed structural equation model according to Carmines and McIver (1981), Bagozzi and Yi (1988), and Joreskog and Sorbom (1989). The results can be analysed as follows.

#### *Control group: consumers are not informed that Phoenix Tours has passed ISO certification*

The analysis results showed that the proposed model had a chi-square value of 581.798 and  $\chi^2/\text{df}$  was 1.107, which was compliant with the criterion proposed by Etezadi-Amoli and Farhoomand (1996) that it should be smaller than 3. RMR was 0.046, which was compliant with the criterion proposed by Bentler (1990) that it should be smaller than 0.05. GFI was 0.890 and AGFI was 0.861, which were near the criterion of 0.9; NFI was 0.908 and CFI was 0.990, which were greater than 0.9. All these values were compliant with the criterion proposed by Bentler (1982), Danes (1984), and Hair, Anderson, Tatham, and Black (1998). RMSEA was 0.021, which was compliant with smaller than 0.05 standard proposed by Joreskog and Sorbom (1984) and Bagozzi and Yi (1988). To sum up, this model had a good level of fit. Meanwhile, it is shown in Table 4 that the relationships among various variables and perspectives were significant, so all the measurement variables were effective.

*Findings from control group's model.* It can be discovered from Figure 2 that there was a significant positive relationship between the level of awareness for passing ISO certification and perceived quality (coefficient was 0.218,  $p < 0.01$ ). Thus, *H1* was supported. In other words, if the level of awareness of passing ISO certification is higher, customers' perceived quality will be higher.

There is no significant relationship between the level of awareness for passing ISO certification and brand image (coefficient was 0.097,  $p$ -value was 0.053). Thus, *H2* was not supported. In the control group, the level of awareness for passing ISO certification does not directly affect brand image.

Table 2. Factor analysis and reliability test (control group).

Perspective (mean)	Measurement variable (mean)	Factor loading	Eigenvalue	Explained variance (%)	Cronbach's $\alpha$
Level of awareness for passing ISO certification (4.6312)	A1. I have already known this brand has passed ISO certification before today (4.1800)	0.894	3.131	62.618	0.8459
	A2. The message about the certification of this brand is conspicuous (4.1440)	0.921			
	A3. The information about passed ISO certification of this brand is widely available to the public (4.2165)	0.914			
	A4. It is necessary for travel agency to pass ISO certification (5.3200)	0.592			
Perceived quality (4.7603)	Performance (4.6947)	0.827	2.023	67.418	0.7574
	B2. I think this travel agency can satisfy my tourism demands (4.7680)	0.793			
	B3. I think the total performance of this travel agency is excellent (4.6600)	0.843			
Durability (4.9027)	C1. I think the quality of this travel agency is consistent (4.8765)	0.858	2.222	74.058	0.8241
	C2. I think this travel agency is highly reliable (4.9640)	0.871			
	C3. I think this travel agency is stable (4.8680)	0.853			
Value (4.7200)	D1. This travel agency can provide high-quality products (4.7600)	0.832	2.242	74.725	0.8294
	D2. This travel agency can provide values that customers deserve (4.6840)	0.903			
	D3. This travel agency provides valuable services (4.7160)	0.857			
Innovation (4.7240)	E1. I think this travel agency is different from travel agency of other brands (4.7400)	0.856	2.196	73.193	0.8160
	E2. I think this travel agency is more advanced than other competitors (4.6840)	0.903			
	E3. I think this travel agency provides innovation that meets consumer's needs (4.7480)	0.805			

(Continued)

Table 2. Continued.

Perspective (mean)	Measurement variable (mean)	Factor loading	Eigenvalue	Explained variance (%)	Cronbach's $\alpha$		
Brand image (4.8422)	Functional Image (4.8267)	F1. Travel agency of this brand has a good image (4.8760) F2. Travel agency of this brand provides honest labels and descriptions (4.7680) F3. Travel agency of this brand provides good quality assurance (4.8360)	0.843 0.862 0.862	2.197	73.217	0.8170	
	Abstract image (4.8213)	G1. I feel satisfied and happy after I join travel of this brand (4.7040) G2. I have positive associations with this brand (4.8440) G3. Most of the messages related to this travel agency are positive (4.9160)	0.827 0.910 0.809	2.167	72.231	0.8056	
		Organise image (4.8787)	H1. This company is creative (4.7720) H2. This company has good reputation (4.9765) H3. The image of this company will increase consumer's confidence (4.8880)	0.815 0.871 0.841	2.128	70.940	0.7939
Brand attitude (4.8016)			I1. I think this travel agency is good (4.8160) I2. I like the tour arrangement of this travel agency (4.7000) I3. I think it is pleasant to use this brand's product (4.7920) I4. I think this brand is attractive (4.8480) I5. I hold positive opinions about this brand (4.8520)	0.763 0.771 0.7763 0.820 0.773	3.049	60.977	0.8398
	Brand preference (4.6627)		J1. I prefer travel agency of this brand (4.7520) J2. When I choose travel agency, I will choose this brand (4.6440) J3. When I choose travel agency, I will not think twice and choose this product directly (4.5920)	0.812 0.878 0.832	2.122	70.724	0.7907
		Purchase intention (4.7707)	K1. I will continue to choose travel agency of this brand (4.7800) K2. I will choose this brand as my first consideration (4.7960) K3. I am willing to recommend travel agency of this brand to other people (4.7360)	0.848 0.916 0.844	2.271	75.709	0.8376

Table 3. Factor analysis and reliability test (experimental group).

Perspective (mean)	Measurement variable (mean)	Factor loading	Eigenvalue	Explained variance (%)	Cronbach's $\alpha$
Level of awareness for ISO certification (4.9392)	A1. I have already known this brand has passed ISO certification before today (4.6200)	0.819	3.150	62.998	0.8513
	A2. The message about the certification of this brand is conspicuous (4.6120)	0.918			
	A3. The information about passed ISO certification of this brand is widely available to the public (4.6280)	0.894			
	A4. It is necessary for travel agency to pass ISO certification (5.3840)	0.673			
Perceived quality (5.1077)	Performance (5.2227)	0.808	2.097	69.887	0.7840
	B2. I think this travel agency appears as advertised (5.0800)	0.865			
	B3. I think the total performance of this travel agency is excellent (5.1480)	0.834			
Durability (5.2720)	C1. I think the quality of this travel agency is consistent (5.3600)	0.842	2.133	71.116	0.7947
	C2. I think this travel agency is highly reliable (5.2720)	0.852			
	C3. I think this travel agency is stable (5.1840)	0.836			
Value (4.9467)	D1. This travel agency can provide high-quality products (4.9920)	0.798	2.306	76.881	0.8490
	D2. This travel agency can provide values that customers deserve (4.9120)	0.919			
	D3. This travel agency provides valuable services (4.9360)	0.908			
Innovation (4.9893)	E1. I think this travel agency is different from travel agency of other brands (4.8760)	0.864	2.382	79.408	0.8679
	E2. I think this travel agency is more advanced than other competitors (5.0200)	0.929			
	E3. I think this travel agency provides innovation that meets consumer's needs (5.0720)	0.879			

(Continued)

Table 3. Continued.

Perspective (mean)	Measurement variable (mean)	Factor loading	Eigenvalue	Explained variance (%)	Cronbach's $\alpha$
Brand image (5.1942)	F1. Travel agency of this brand has a good image (5.4600)	0.790	2.102	70.056	0.7858
	F2. Travel agency of this brand provides honest labels and descriptions (5.1280)	0.842			
	F3. Travel agency of this brand provides good quality assurance (5.1240)	0.876			
Abstract image (5.0987)	G1. I feel satisfied and happy after I join travel of this brand (4.9640)	0.808	2.073	69.107	0.7740
	G2. I have positive associations with this brand (5.1200)	0.886			
	G3. Most of the messages related to this travel agency are positive (5.2120)	0.797			
Organise image (5.2467)	H1. This company is creative (5.0720)	0.788	2.215	73.823	0.8156
	H2. This company has good reputation (5.3000)	0.894			
	H3. The image of this company will increase consumer's confidence (5.3680)	0.892			
Brand attitude (5.1680)	I1. I think this travel agency is good (5.2640)	0.769	3.238	64.767	0.8630
	I2. I like the tour arrangement of this travel agency (4.9920)	0.797			
	I3. I think it is pleasant to use this brand's product (5.0040)	0.823			
	I4. I think this brand is attractive (5.2000)	0.830			
	I5. I hold positive opinions about this brand (5.3800)	0.803			
Brand preference (4.9027)	J1. I prefer travel agency of this brand (5.1320)	0.857	2.407	80.246	0.8690
	J2. When I choose travel agency, I will choose this brand (4.8120)	0.932			
	J3. When I choose travel agency, I will not think twice and choose this product directly (4.7640)	0.897			
Purchase intention (5.0413)	K1. I will continue to choose travel agency of this brand (4.9960)	0.880	2.403	80.112	0.8743
	K2. I will choose this brand as my first consideration (5.0920)	0.935			
	K3. I am willing to recommend travel agency of this brand to other people (5.0360)	0.869			

Table 4. Analysis of relationships among various perspectives, factors, and variables (control group).

Regression weights	Estimate	p-Value	Regression weights	Estimate	p-Value
A1 ← Level of awareness for passing ISO certification	0.913	0.000	F3 ← Functional image	0.762	0.000
A2 ← Level of awareness for passing ISO certification	0.979	0.000	G1 ← Abstract image	0.788	0.000
A3 ← Level of awareness for passing ISO certification	0.951	0.000	G2 ← Abstract image	0.836	0.000
A4 ← Level of awareness for passing ISO certification	0.304	0.000	G3 ← Abstract image	0.760	0.000
B1 ← Performance	0.713	0.000	H1 ← Organise image	0.693	0.000
B2 ← Performance	0.631	0.000	H2 ← Organise image	0.817	0.000
B3 ← Performance	0.787	0.000	H3 ← Organise image	0.747	0.000
C1 ← Durability	0.788	0.000	I1 ← Brand attitude	0.797	0.000
C2 ← Durability	0.788	0.000	I2 ← Brand attitude	0.706	0.000
C3 ← Durability	0.773	0.000	I3 ← Brand attitude	0.683	0.000
D1 ← Value	0.817	0.000	I4 ← Brand attitude	0.712	0.000
D2 ← Value	0.806	0.000	I5 ← Brand attitude	0.675	0.000
D3 ← Value	0.835	0.000	J1 ← Brand preference	0.807	0.000
E1 ← Innovation	0.837	0.000	J2 ← Brand preference	0.707	0.000
E2 ← Innovation	0.815	0.000	J3 ← Brand preference	0.625	0.000
E3 ← Innovation	0.933	0.000	K1 ← Purchase intention	0.808	0.000
F1 ← Functional image	0.783	0.000	K2 ← Purchase intention	0.841	0.000
F2 ← Functional image	0.773	0.000	K3 ← Purchase intention	0.813	0.000

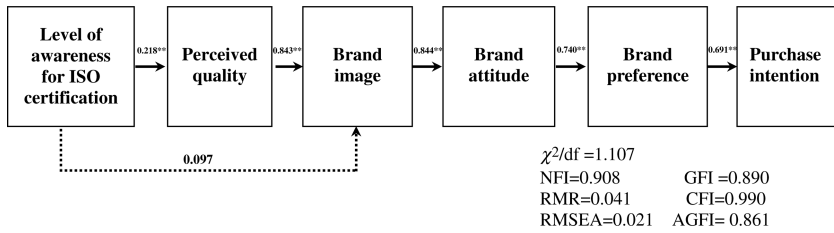


Figure 2. SEM of control group.  
 \*\* $p < 0.01$

In the relationship between perceived quality and brand image, there was a significant positive relationship (coefficient was 0.843,  $p < 0.01$ ). Thus, *H3* was supported. In other words, if consumers have a higher level of perceived quality, the level of brand image will be higher.

There was a significant positive relationship between brand image and brand attitude (coefficient was 0.844,  $p < 0.01$ ). Thus, *H4* was supported. If consumers have a higher level of brand image, the level of brand attitude will be higher.

There was a significant positive relationship between brand attitude and brand preference (coefficient = 0.740,  $p < 0.01$ ). Thus, *H5* was supported. If consumers have a higher level of brand attitude, the level of brand preference will be higher.

There was a significant positive relationship between brand preference and purchase intention (coefficient = 0.691,  $p < 0.01$ ). Thus, *H6* was supported. If consumers have a higher level of brand preference, they will have more purchase intention.

*Experimental group: consumers are informed that Phoenix Tours has passed ISO certification*

The analysis results showed that the proposed model had a  $\chi^2$  value of 565.569 and  $\chi^2/df$  was 1.124, which was smaller than 3 (Etezadi-Amoli & Farhoomand, 1996); RMR was 0.055, which was near the criterion of 0.5 (Bentler, 1990); GFI was 0.899 and AGFI 0.864, which were near the criterion of 0.9; NFI was 0.920 and CFI was 0.990, which were greater than 0.9. All these values were compliant with the criterion proposed by Bentler (1982), Danes (1984), and Hair et al. (1998); RMSEA was 0.022, which was compliant with  $< 0.05$  standard proposed by Joreskog and Sorbom (1984) and Bagozzi and Yi (1988). To sum up, this model had a good level of fit. Meanwhile, it can be discovered from Table 5 that the relationships among various variables and perspectives were significant, so all the measurement variables were effective.

*Findings from the experimental group’s model.* It can be discovered from Figure 3 that there was a significant positive relationship between the level of awareness of passing ISO certification and perceived quality (coefficient was 0.497,  $p < 0.01$ ). Thus, *H1* was supported. In other words, if the level of awareness of passing ISO certification is higher, customers’ perceived quality will be higher.

There is significant relationship between the level of awareness of passing ISO certification and brand image (coefficient was 0.184,  $p < 0.01$ ). Thus, *H2* was supported. In other words, if the level of awareness of passing ISO certification is higher, customers’ brand image will be higher. This result is different from that of the control group.



Table 5. Analysis of relationships among various perspectives, factors, and variables (experimental group).

Regression weights	Estimate	p-Value	Regression weights	Estimate	p-Value
A1 ← Level of awareness for passing ISO Certification	0.832	0.000	F3 ← Functional image	0.849	0.000
A2 ← Level of awareness for passing ISO Certification	0.966	0.000	G1 ← Abstract image	0.724	0.000
A3 ← Level of awareness for passing ISO Certification	0.928	0.000	G2 ← Abstract image	0.877	0.000
A4 ← Level of awareness for passing ISO Certification	0.425	0.000	G3 ← Abstract image	0.686	0.000
B1 ← Performance	0.746	0.000	H1 ← Organise image	0.652	0.000
B2 ← Performance	0.628	0.000	H2 ← Organise image	0.840	0.000
B3 ← Performance	0.940	0.000	H3 ← Organise image	0.849	0.000
C1 ← Durability	0.737	0.000	I1 ← Brand attitude	0.732	0.000
C2 ← Durability	0.795	0.000	I2 ← Brand attitude	0.781	0.000
C3 ← Durability	0.666	0.000	I3 ← Brand attitude	0.821	0.000
D1 ← Value	0.642	0.000	I4 ← Brand attitude	0.733	0.000
D2 ← Value	0.893	0.000	I5 ← Brand attitude	0.830	0.000
D3 ← Value	0.897	0.000	J1 ← Brand preference	0.746	0.000
E1 ← Innovation	0.651	0.000	J2 ← Brand preference	0.943	0.000
E2 ← Innovation	0.831	0.000	J3 ← Brand preference	0.874	0.000
E3 ← Innovation	0.903	0.000	K1 ← Purchase intention	0.683	0.000
F1 ← Functional image	0.493	0.000	K2 ← Purchase intention	0.954	0.000
F2 ← Functional image	0.754	0.000	K3 ← Purchase intention	0.787	0.000

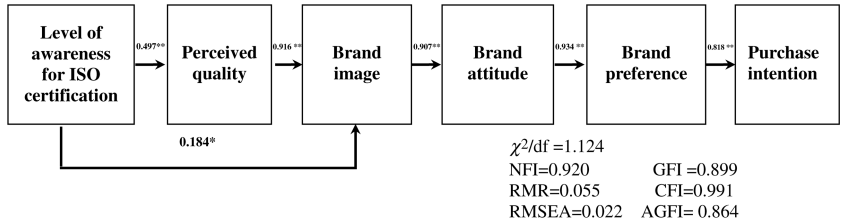


Figure 3. SEM of experimental group.

\*\* $p < 0.01$ , \* $p < 0.05$

There was a significant positive relationship between perceived quality and brand image (coefficient was 0.916,  $p < 0.01$ ). Thus,  $H3$  was supported. If consumers have a higher level of perceived quality, the level of brand image will be higher.

There was a significant positive relationship between brand image and brand attitude (coefficient was 0.907,  $p < 0.01$ ). Thus,  $H4$  was supported. If consumers have a higher level of brand image, the level of brand attitude will be higher.

There was a significant positive relationship between brand attitude and brand preference (coefficient was 0.934,  $p < 0.01$ ). Thus,  $H5$  was supported. If consumers have a higher level of brand attitude, the level of brand preference will be higher.

There was a significant positive relationship between brand preference and purchase intention (coefficient was 0.818,  $p < 0.01$ ). Thus,  $H6$  was supported. If consumers have a higher level of brand preference, they will have more purchase intention.

To sum up, the degree of influence of the six relationship paths of the experimental group was higher than the control group's.

**The variance analysis**

Through MANOVA, Table 6 shows that significant differences existed between the informed group and the not informed group in all six perspectives, which were: level of awareness of passing ISO certification, perceived quality, brand image, brand attitude, brand preference, and purchase intention. Thus,  $H7$  was supported. The six perspectives' averages indicated that all the values of the informed group were larger than those of the not informed group. Evidence can be shown that when consumers are informed that the travel agency has been ISO certified, their level of awareness of ISO certification, perceived quality, brand image, brand attitude, brand preference, and purchase intention will be relatively enhanced. Thus, informing about ISO certification is an effective marketing skill.

**Conclusion and implications**

**Conclusion and discussion**

This study selected one ISO-certified travel agency in Taiwan, Phoenix Tours International Inc., to be a case to investigate the impact of the level of awareness of passing ISO certification on consumer's perceived quality, brand image, brand attitude, brand preference, and purchase intention. The conclusion can be summarised as follows.

**The conclusion from SEM**

Nuland (1990) discovered that after enterprises passed ISO certification, improvements in perceived quality and brand image were most satisfactory to them. The empirical analysis of this

Table 6. Variance analysis between two groups.

Factor and item	Mean			
	Control group	Experimental group	F	p-Value
<i>Level of awareness for ISO certification: 4.7448</i>				
Pillai's trace = 0.028	4.6312	4.9392	3.584	0.007*
Wilk's lambda = 0.972			3.584	0.007*
A1. I have already known this brand has passed ISO certification before today	4.1800	4.6200	10.978	0.001*
A2. The message about the certification of this brand is conspicuous	4.1440	4.6120	13.632	0.000*
A3. The information about passed ISO certification of this brand is widely available to the public	4.2160	4.6280	11.067	0.001*
A4. It is necessary for travel agencies to pass ISO certification	5.3200	5.3800	0.373	0.542
<i>Perceived quality: 4.9340</i>				
Pillai's trace = 0.164	4.7603	5.1077	7.957	0.000*
Wilk's lambda = 0.836			7.957	0.000*
B1. I think this travel agency can satisfy my tourism demands	4.7680	5.4400	75.946	0.000*
B2. I think this travel agency appears as advertised	4.6560	5.0800	25.856	0.000*
B3. I think the total performance of this travel agency is excellent	4.6600	5.1480	38.244	0.000*
C1. I think the quality of this travel agency is consistent	4.8760	5.3600	40.199	0.000*
C2. I think this travel agency is highly reliable	4.9640	5.2720	15.615	0.000*
C3. I think this travel agency is stable	4.8680	5.1840	13.994	0.000*
D1. This travel agency can provide high-quality products	4.7600	4.9920	6.575	0.011*
D2. This travel agency can provide values that customers deserve	4.6840	4.9120	5.840	0.016*
D3. This travel agency provides good services	4.7160	4.9360	4.957	0.026*
E1. I think this travel agency is different from travel agency of other brands	4.7400	4.8760	2.159	0.142
E2. I think this travel agency is more advanced than other competitors	4.6840	5.0200	14.257	0.000*
E3. I think this travel agency provides innovation that meets consumer's needs	4.7480	5.0720	13.968	0.000*
<i>Brand image: 5.0182</i>				
Pillai's trace = 0.115	4.8422	5.1942	7.047	0.000*
Wilk's lambda = 0.885			7.047	0.000*
F1. Travel agency of this brand has a good image	4.8760	5.4600	56.577	0.000*
F2. Travel agency of this brand provides honest labels and descriptions	4.7680	5.1280	19.188	0.000*
F3. Travel agency of this brand provides good quality assurance	4.8360	5.1240	12.429	0.000*
G1. I feel satisfied and happy after I join travel of this brand	4.7040	4.9640	8.681	0.003*
G2. I have positive associations with this brand	4.8440	5.1200	10.794	0.001*

(Continued)

Table 6. Continued.

Factor and item	Mean			
	Control group	Experimental group	<i>F</i>	<i>p</i> -Value
G3. Most of the messages related to this travel agency are positive	4.9160	5.2120	12.481	0.000*
H1. This company is creative	4.7720	5.0720	12.056	0.001*
H2. This company has good reputation	4.9760	5.3000	17.271	0.000*
H3. The image of this company will increase consumer's confidence (5.1280)	4.8880	5.3680	32.085	0.000*
<i>Brand attitude: 4.9848</i>				
Pillai's trace = 0.095	4.8016	5.1680	10.431	0.000*
Wilk's lambda = 0.905			10.431	0.000*
I1. I think this travel agency is good.	4.8160	5.2640	30.025	0.000*
I2. I like the tour arrangement of this travel agency	4.7000	4.9920	13.387	0.000*
I3. I think it is pleasant to use this brand's product	4.7920	5.0040	6.821	0.009*
I4. I think this brand is attractive	4.8480	5.2000	19.565	0.000*
I5. I hold positive opinions about this brand	4.8520	5.3800	46.103	0.000*
<i>Brand preference: 4.5114</i>				
Pillai's trace = 0.047	4.6627	4.9027	8.219	0.000*
Wilk's lambda = 0.953			8.219	0.000*
J1. I prefer travel agency of this brand	4.7520	5.1320	22.401	0.000*
J2. When I choice travel agency, I will choose this brand	4.6440	4.8120	3.634	0.050
J3. When I choice travel agency, I will not think twice and choose this product directly	4.5920	4.7640	2.862	0.091
<i>Purchase intention: 5.0665</i>				
Pillai's trace = 0.026	4.7707	5.0413	4.398	0.005*
Wilk's lambda = 0.974			4.398	0.005*
K1. I will continue to choice travel agency of this brand	4.7800	4.9960	5.977	0.015*
K2. I will choose this brand as my first consideration	4.7960	5.0920	11.667	0.001*
K3. I am willing to recommend travel agency of this brand to other people	4.7360	5.0360	10.916	0.001*

\* $p < 0.05$ .

study further verified that when consumers are informed that the travel agency has passed ISO certification (as an experimental group), the level of awareness of passing ISO certification will positively affect consumer's perceived quality and brand image. On the contrary, if they are not informed (as a control group), the level of awareness of passing ISO certification will positively affect consumers' perceived quality but not directly affect brand image. That means informing of the message of ISO certification has a significant impact on travel agents' brand image.

The brand image could be used to express consumers' perceptions and feelings of substantiality and additional attributes of a product (Kirmani & Zeithaml, 1992; Richardson et al., 1994). A product with a better brand image will has a better overall evaluation. Thus, consumers will have a higher level of perceived quality of the product. Through the analyses of this study, this proposition was further verified from both experimental and control

groups. Consumer's perceived quality will positively affect brand image, more in the experimental group.

Brand image would affect consumer's attitude for products. It would directly affect consumers' belief of products' attributes and further affect their overall evaluation of the products through belief (Bellizzi, Krueckeberg, Hamilton, & Martin, 1981; Darling, 1981; Han, 1989; Kirmani & Zeithaml, 1992). Through the verification of this study, both with the experimental group and with the control group, the proposition that brand image will positively influence consumers' brand attitude was supported. Thus, brand image is the influential key to brand attitude, particular in the experimental group.

Aaker (1991) and Punj and Hillyer (2004) found that when consumers have more positive brand attitudes, they will have a higher level of preference. Fishbein (1963), Monroe (1990), Kamins and Marks (1991), and Higie and Murphy (1991) proposed that higher brand preference will lead to more purchase intention. It was also verified in this study, from both the experimental group and the control group, that brand attitudes will positively affect consumers' brand preference and positively affect consumers' purchase intentions. This influence effect was higher in the experimental group.

To sum up, the major influence path of the experimental group was from consumers' awareness that a travel agency has passed ISO certification to perceived quality and brand image, following brand attitude, brand preference, and finally purchase intention. In contrast to the control group, the consumers' awareness of a travel agency passing ISO certification cannot directly influence the brand image. Their major path was from consumers' awareness that a travel agency has passed ISO certification to perceived quality, brand attitude, brand preference, and then purchase intention.

#### *The conclusion from MANOVA analysis*

Significant differences existed between the experimental (informed) group and the control (not informed) group in all six perspectives. When consumers were informed that the studied travel agency had passed ISO certification, the averages of all the perspectives for the level of awareness of passing ISO certification, perceived quality, brand image, brand attitude, brand preference, and purchase intention were higher than those derived from the not informed group. This indicates that the promotion of a travel agency passing ISO certification has positive effects.

#### ***Managerial implication***

ISO certification has been promoted in the world for several years. It has almost become a synonym of 'quality' among the general public. Previous studies of ISO certification focused more on the perspective of 'product quality' and less on the impact of consumers' awareness of ISO certification and few of travel agencies promote the ISO-certificated message in advertising or media.

This study has verified that informing consumers that a travel agency has passed ISO certification has direct effects on their perceived quality and brand image, and brand image also has direct effects on brand attitude, brand preference, and purchase intention. Thus, it is suggested that when travel agencies plan for marketing strategies, they should emphasise that they have passed ISO certification on product DM, advertising or their website so as to increase consumers' perceived quality, brand image, and brand attitude and further enhance their brand preference and purchase intention.

When consumers do not have any preference for any brand, ISO certification will be one of the important indicators of quality for them. Thus, for enterprises planning to get

involved in this competitive market, they can use advertisement to tell the public that their travel agency has passed ISO certification, so as to establish a positive brand image and increase consumer's positive attitude. After consumers are informed of related information via media, they will form perceptions and attitudes for the brand and have more purchase intention.

In recent years, the tourism industry in Taiwan has attempted to sell their products overseas. Quality assurance is an essential element for them to compete in international markets. As ISO is a certification of international quality standards, it is suggested that travel agencies clearly label the mark of passing ISO certification on their products. Therefore, when foreign or domestic consumers make purchase decisions, they will have more confidence in the products and increase their purchase intention.

### ***Research limitations and suggestions for further studies***

Due to time constraints and limitation of resources, not every aspect could be covered in this study. However, some suggestions are still proposed as a reference for follow-up studies. In this study, only Phoenix Tours International Inc. was selected as the research case. If a different industry type were selected, different research findings might be derived and result in different conclusions. Therefore, it is suggested that follow-up studies could include different industry types or more companies which have passed ISO certification, to investigate the impact of different market phenomena and important influence factors as a practical and valuable reference for service providers.

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