



# Airline co-branded credit cards—An application of the theory of planned behavior



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## ABSTRACT

A customer with an airline co-branded credit card could enjoy not only the benefits of a traditional bank-issued credit card but also additional privileges such as access to the airline membership club lounges in airports. Based on data collected from Taiwan, this study investigated the key antecedents of customers' behavioral intentions in using/adopting an airline co-branded credit card within the Theory of Planned Behavior (TPB) framework. Empirical findings demonstrate that consumers' perceived benefits of airline co-branded credit cards, attitude toward airline co-branded credit cards, subjective norms and perceived behavioral control are all positively and significantly correlated. Meanwhile, consumers' perceived benefits of airline co-branded credit cards could be further categorized into generic, core, expected, and augmented benefits. Empirical findings suggest that the airlines should invest in the airline co-branded credit cards campaign to enhance consumers' value perception of the co-branded cards and attract cardholders' frequent usage. The airlines should also inform their current and potential customers the main reasons and/or added benefits (e.g., no foreign transaction fee) why air travelers should use the co-branded credit cards to purchase air transport services in order to further penetrate the target market and generate fruitful profits.

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## 1. Introduction

The airline industry grows rapidly but suffers from intrinsically low-profit margins (Hanlon, 1999; IATA, 2014) and high volatility of returns (Tugores-García, 2012). Koch's 80/20 principle (1998) suggests that twenty percent of the most profitable customers account for eighty percent of the sales revenue in many businesses. The 80/20 principle could be used to explain why companies keenly attempt to identify their most profitable customers, and maintain long term relationships with them through strategic co-branding programs. Examples in the airline industry include airline alliances, celebrity-featuring aircraft livery, celebrity endorsements, co-branded credit cards, and so on.

Despite the terminological similarity, global airline alliances are different from co-branding alliances (Blackett and Boad, 1999), which involves the creation of a new long-term master brand, such as SkyTeam, Oneworld, and Star Alliance. More specifically, co-branding alliances are supported by the endorsement of the

participants' brands in the areas of operations, technical aspects, and marketing activities (Weber, 2003; Wang, 2014). For example, celebrity-featuring aircraft livery promotes the perceived value of the airline with a unique painting style to decorate the aircraft, enabling certain airlines to differentiate its aircraft from its competitors (Wang and Waros, 2015a,b). Additionally, celebrity endorsements attract customers by conveying perceived attractiveness, truthworthiness, and expertise from the celebrity endorsers to the airline (Basusta, 2009; Qantas, 2014; Virgin Atlantic, 2013; Air New Zealand, 2013; Emirates Airline, 2014; Ricki, 2013). Notably, airline co-branded credit cards<sup>1</sup> are often linked to the airline's frequent flyer programs with the intention to expand market share by pushing member-earned miles for eligible spending on the card, eventually providing privileges that extend beyond travel.

Membership cards are designed to offer comprehensive customer service but offer no financial transaction functions (Liu et al., 2012). In contrast, airline co-branded credit cards are

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<sup>1</sup> Airline co-branded credit cards typically carry the brand of the airline or FFP in addition to the credit card or bank brand (Boer and Gudmundsson, 2012).

typically co-issued by a commercial bank and an airline, and this type of credit cards could offer unique frequent passenger rewards such as upgrades from coach to business class, free tickets, priority check-ins, baggage allowances, and access to business lounges in certain airports (Martín et al., 2011). Similar to the partnership between airlines and banks, other partners in frequent flyer programs (FFPs) include rental car enterprises and hotel corporations, to less conventional participants, such as food retailers and restaurants. Brand identifiers on credit cards, such as logos and color schemes, allow such cards to be easily identified.

A good stock of literature on this subject signifies that co-branding is a wonderful strategy as it facilitates an associate brand to gain promotion synergies (Samu et al., 1999), as well as customer feelings toward parent brands. Literature suggests that the co-branding strategy is adopted when a new brand is to be launched in the competitive market; a weak brand is present in the existing market, or establishing the brand image. According to Akram et al. (2014), co-branding not only builds a better brand but also tarnishes the existing brand equity. Therefore, selection of an appropriate partner jacks up the brand equity of each partner.

The innovative airline co-branded credit card program enables both airline companies and financial institutions to transfer positive associations of original brand names to a co-branded product (Washburn et al., 2000). The “spillover effect” from brand alliance may be influenced by consumers’ prior attitudes toward each single brand (Simonin and Ruth, 1998). Chang (2009) further showed that co-branders aim to pursue three levels of co-branding including market share, brand extension, and global branding. Still, Liu et al. (2012) revealed that co-branding is a likely win-win strategy for both strategic partners whether the brand equities before the co-branding alliance were high or low. In fact, Continental Airlines and Bank of Marine Midland launched the world’s first co-branded program in the USA and has become a spotlight in the bank card industry.

Despite the publication of several co-branding studies (Thompson and Strutton, 2012; Ashton, 2011; Walchli, 2007; Helmig et al., 2007; Kumar, 2005; Servais and Bengtsson, 2005), a review of the extant marketing literature reveals the existence of two main research gaps. First, the extent to which co-branded marketing really encourages the card holders to frequently use their co-branded credit cards is unknown. Second, the relative importance of key influential factors on card users’ intentions to use credit cards is also unknown. As such, this study attempts to examine the impacts of co-branded marketing in the context of airline co-branded credit cards. Using consumer survey data collected in Taiwan, a major market for co-branded credit card programs, the present study addresses how perceived benefits of the airline co-branded credit cards influence consumers’ attitudes toward airline co-branded credit cards, and their perceived behavioral control, and their intention to use airline co-branded credit cards.

## 2. Conceptual framework and hypotheses

Several scholars have addressed the benefits of airline alliances and loyalty programs. Weber (2005) examined consumers’ perceptions of the services offered by airline alliances, service failures and recovery (Weber and Sparks, 2004). Tsantoulis and Palmer (2008) and Tiernan et al. (2008) studied the quality convergence and performance of airline alliances, while Janawade (2013) investigated the attributes of consumers’ perceived value of international airline alliances. Interestingly, although these research studies investigate consumers’ perceptions toward the benefits of airline alliances, few considered the co-branding collaboration between airlines and banks (Liu et al., 2012; Akram et al., 2014;

Thompson and Strutton, 2012; Ashton, 2011). Since the most important purpose of co-branding is to provide value to the consumers of co-branding partners (Akram et al., 2014), consumers’ perceived value of brand alliance must be investigated.

Given the increasing competition in the airline industry, it’s easier for consumers to switch among various airline brands today than in the past (Srinivasan et al., 2002; Cui et al., 2003). Airline companies that respond sluggishly to these changes will likely suffer the unfavorable consequences, so having solid marketing management strategies are becoming more important (Budiarti et al., 2013). As such, the perceived benefits of airline co-branded credit cards, and the relationships between the perceived benefits of airline co-branded credit cards, consumer’s attitude, perceived behavioral control, subjective norm and consumer’s intention to use airline co-branded credit cards warrant more thorough investigations (Kalligiannis et al., 2006). This study aims to investigate the influence of airline co-branded credit card campaigns on the target customers’ likely increased intentions in using the card. Built upon the renowned Theory of Planned Behavior (TPB; Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980), a theoretical model was developed in the context of co-branded airline credit cards. A consumer survey was developed and distributed to international flight passengers in the Taiwan Taoyuan Airport. This study specifically examined the effects of consumer perceived benefits of airline co-branded credit cards on their intention to use these cards (see Fig. 1) using the structural equation modeling (SEM) technique. The following sections of this paper are organized as conceptual framework and hypotheses, methodology, empirical findings and discussions, conclusion, contribution and managerial implications.

### 2.1. Co-branding

To gain more visible marketplace exposure, marketers often seek opportunities to co-brand with strategic partners and thereby to fend off competitive threats and to share the burdens of promotion (Liu et al., 2012). Park et al. (1996, p.453) defined co-branding as “pairing two or more brands (constituent brands) to form a separate and unique brand (composite brand)”. The overall evaluation of a brand alliance may be influenced by consumers’ prior attitudes toward each single brand (Simonin and Ruth, 1998). Examples of co-branding adopters include joint promotions between McDonald’s and Disney and the joint advertising of the Apple Macintosh Powerbook and the movie Mission Impossible (Grossman, 1997). Finally, physical product integration may occur when one branded product is inextricably linked with the other (Rao and Ruekert, 1994), for example Ruffles potato chips and K.C. Masterpiece barbeque sauce flavoring.

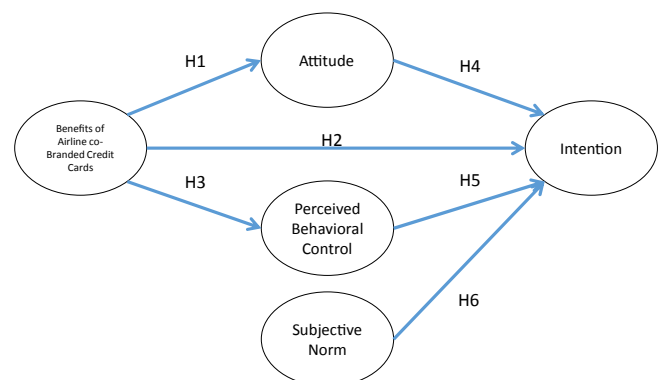


Fig. 1. Conceptual model.

Empirical research evidence regarding the effectiveness of co-branding in practice is limited. [Park et al. \(1996\)](#) suggested that a composite brand name can favorably influence subjects' perceptions of the composite brand and that complementarity between the primary and secondary constituent brands is a more important factor in the success of the composite brand strategy than a positive evaluation of the secondary brand. [Simonin and Ruth \(1998\)](#) reported that consumers' attitudes toward a particular brand alliance influences their attitudes toward the individual brands that comprise that alliance. [Washburn et al. \(2000\)](#) suggested that co-branding could be a win-win strategy for both strategic partners, regardless of the equities of the constituent brands before the co-branding alliance. [Chang \(2009\)](#) suggested that co-branders typically seek effectiveness on three levels – market share, brand extension, and global branding. [Liu et al. \(2012\)](#) suggested that affective loyalty to a bank and a department store, as well as the perceived benefits of a credit card, positively influence consumers' attitudes toward bank/department store co-branded credit cards.

Other than the empirical findings summarized above, most co-branding studies simply describe relevant strategies ([Hillyer and Tikoo, 1995](#); [Rao and Ruekert, 1994](#)) or consider the advantages and disadvantages of co-branding arrangements (e.g. [Krishnan, 1996](#); [Rao and Ruekert, 1994](#); [Farquhar, 1994](#)). One unique feature of the present study lies in its exploration of the co-branding strategy by two intangible service providers (i.e., an airline company and a financial institution).

## 2.2. Co-branded credit cards, airlines, and FFPs

Increased credit card usage in the increasingly complex global marketplace has motivated commercial banks and retailers to form strategic networks and co-branded programs ([Achrol and Kotler, 1999](#)). In 1986, Continental Airlines and the Bank of Marine Midland launched the world's first co-branded program in the USA. In 1987, American Airlines introduced the Citibank AAdvantage card, a co-brand or affinity credit card, which attracted a great deal of attention in the airline and financial industries. Currently, issuing co-branded credit cards has become one of the most popular marketing practices in credit card industry ([Liu et al., 2012](#)), and co-branded credit cards are now offered by department stores, airline companies, online gaming companies, jewelry businesses, and real estate enterprises ([Dong, 2010](#)).

Research suggests that, in comparison with both traditional credit cards and membership cards, co-branded cards in the retail, entertainment and airline industry are more likely to provide a higher degree of consumer engagement ([Akram et al., 2014](#); [Liu et al., 2012](#)). Since rewards are now synonymous with co-branded credit card programs, the important question is not whether a card offers rewards, but whether the card offers the right mix of tangible benefits (rewards, points and discounts) and soft benefits (such as concierge service or special event access) to drive additional sales for the co-brand partner, while generating revenue and income for the involved partners. Of every 100 people who use a credit card that is branded with the American Express, Discover, Visa or MasterCard logo, 58 are estimated to be users of co-brand/affinity cards ([David, 2013](#)). For every 100 people who have a retail store/internet store co-branded card, 64 have used the card in the previous 30 days, indicating a high degree of usage and a high degree of cardholder engagement ([Packaged Facts, 2013](#)). Airline co-branded credit cards ranked third in usage, at only one percentage point less than entertainment and/or retail co-branded credit cards ([Packaged Facts, 2013](#)).

With respect to the airline sector, frequent flyer programs have been claimed to modify the landscape of air transport competition ([Martín et al., 2011](#)). The main objective of FFPs is to improve

customer loyalty while providing a more consistent revenue stream for airlines. FFPs are based on the idea that passengers stay loyal if switching airlines involves relatively high cost ([Klemperer, 1995](#)). Many airlines have frequent-flyer programs designed to encourage air travelers' enrollment in the program to accumulate points (also called miles, kilometers or segments) which may then be redeemed for air travel or other rewards. Points earned under FFPs may be based on the class of fare, distance flown on that airline or its partners, or the amount paid. There are other ways to earn bonus points, such as spending money at associated retail outlets, car rental partners, hotels or other associated businesses. Points can be redeemed for air travel, certain goods or services, or travel perks (e.g., travel class upgrades, airport lounge access, or priority bookings).

[Gallacher \(1997\)](#) asserted that major alliance partners strengthen ties between FFPs because this strategy has a greater effect on business class passengers than other marketing strategies. Therefore, airline co-branding credit cards are typically tied to frequent flyer programs ([Akram et al., 2014](#)). Under a co-branded credit card scheme, a cardholder earns miles for eligible spending on the card ([Boer and Gudmundsson, 2012](#)). [Sorensen \(2008\)](#) estimated that frequent flyer credit cards generated more than \$4 billion in revenues for seven US airlines that were considered in the analysis. Delta Airlines, for example, received one billion dollars in 2008 from American Express for advanced purchases of SkyMiles frequent flyer miles ([Delta Air Lines, 2010](#)). Similarly, in 2009, American Airlines entered into an arrangement under which Citibank paid one billion dollars to pre-purchase AAdvantage miles ([American Airlines, 2010](#)). Recently, the U.S. airline co-brand credit card is estimated to contribute approximately \$55 billion to American Express' 2012 U.S. consumers, small business, and corporate card purchase volume ([Packaged Facts, 2013](#)).

As to the difference between airline co-branded credit cards and frequent flyer programs (FFPs), the former integrates the attributes of credit cards with benefits far greater than what most FFPs can offer. Frequent-flyer programs can be seen as a certain type of virtual currency, one with a unidirectional flow of money to purchase mileage points but no exchange back into money. Under the co-brand credit card scheme, the member earns miles for eligible spending on a co-branded credit card (co-branding refers to the fact that the card typically carries the brand of the airline or FFP in addition to the issuing banks' logos). Airlines realized that the co-branded credit card partners would deliver significant revenue streams given the reach in terms of customers and eligible spending ([Boer and Gudmundsson, 2012](#)).

## 2.3. Theory of planned behavior (TPB)

To investigate typical consumers' intentions to use airline co-branded credit cards, this study relied on two well-known behavioral theories; namely, the theory of reasoned action (TRA; [Fishbein and Ajzen, 1975](#); [Ajzen and Fishbein, 1980](#)) and the theory of planned behavior (TPB; [Ajzen, 1991](#)). The theory of reasoned action states that individual behavior is determined by an individual's intention to perform a certain activity, which is influenced by attitude and subjective norms. On the other hand, not all behaviors are under volitional control ([Ajzen, 1991](#)), and the theory of planned behavior incorporates the additional construct of perceived behavioral control to address this issue. According to the theory of planned behavior, behavioral intention is a function of attitude toward the behavior, subjective norms and perceived behavioral control ([Fishbein and Ajzen, 1975](#)).

Attitude toward a behavior is the individual's positive or negative evaluation of performing the behavior and can be determined by accessible beliefs about the consequences of the behavior. That

is, a person who believes that performing a certain behavior will lead to positive outcomes is likely to hold a favorable attitude toward performing the behavior. Subjective norm refers to a person's perception of social pressure to perform or not perform a certain action. A subjective norm is also assumed to be a function of beliefs, namely an individual's beliefs that specific individuals or groups would approve or disapprove of performing the behavior. Finally, perceived behavioral control refers to the sense of self efficacy or the ability to complete a task. Perceived behavioral control is also assumed to be a function of beliefs about the presence or absence of factors that facilitate or impede performance of the behavior. Therefore, the more required resources and opportunities individuals think they possess and the fewer obstacles or impediments they anticipate, the greater the perceived control over the behavior. In sum, people are likely to adopt and use an airline co-branded credit card when they evaluate this decision positively, when they experience social pressure to use an airline co-branded credit card (as they don't want to be the last person to adopt an airline co-branded credit card in their social group), and when they believe that they have the means and needs to do so.

Intention is a key criterion variable in a typical TPB model. Although intention has been considered an important construct in tourism, hospitality, and travel research (Alvarez and Campo, 2014; Aye et al., 2013; Horng et al., 2012; Chen and Chen, 2010; and Casalo et al., 2010), research on intention to use a specific airline co-branded credit card is scarce. In this present study, we examine the direct impact of consumers' perceived benefits of airline co-branded credit cards on intention to use the co-branded credit cards, and the indirect influence of consumers' perceived benefits of airline credit cards on the antecedents of the TPB framework, i.e., attitude and perceived behavioral control, which in turn exert their influences on consumers' intention to use airline co-branded credit cards.

Although the ways in which consumers may act to express their affection toward their favorite credit cards can vary depending on the intensity of the affection toward the bank and/or the airline, research (Akram et al., 2014) shows that positive affection toward the bank and/or the airline can be transferred to the product, which in turn leads consumers to develop a positive attitude toward the co-branded credit cards. In addition, the consumers' level of affection can be used to predict the acceptance of the product, including the intention to use or purchase the product. In addition, research (Akram et al., 2014) further suggests that it is important for marketing practitioners to ensure that consumers' perceived benefits of airline co-branded credit cards actually conform to the consumers' needs. Based on the discussions above, we propose:

**H1.** *Consumers' perceived benefits of airline co-branded credit cards will positively influence consumers' attitude toward airline co-branded credit cards.*

**H2.** *Consumers' perceived benefits of airline co-branded credit cards will positively influence consumers' intention to use airline co-branded credit cards.*

**H3.** *Consumers' perceived benefits of airline co-branded credit cards will positively influence consumers' perceived behavioral control toward using airline co-branded credit cards.*

Finally, three additional hypotheses are developed on the basis of the theory of planned behavior, and these hypotheses address the relationship between consumers' intentions to use the airline co-branded credit cards and three key antecedents.

**H4.** *Attitude toward airline co-branded credit cards will positively influence consumers' intentions to use airline co-branded credit cards.*

**H5.** *Subjective norm regarding airline co-branded credit cards will positively influence consumers' intentions to use airline co-branded credit cards.*

**H6.** *Perceived behavioral control toward airline co-branded credit cards will positively influence consumers' intentions to use airline co-branded credit cards.*

### 3. Methodology

As noted earlier, the proposed model is based upon the Theory of Planned Behavior (TPB) framework. In addition to the three well-documented antecedents (i.e., "attitude," "subjective norm," and "perceived behavioral control"), we propose that the "perceived benefits of airline co-branded credit cards" has a direct and indirect impacts on card holders' "perceived behavioral intentions". All question items in the survey were adopted from extant consumer behavior literature, and the wordings were slightly modified to fit the context of the study. Specifically, the variables included in the proposed model include attitude (Ajzen, 1991; five items), subjective norm (Ajzen, 1991; five items), perceived behavioral control (Ajzen, 1991; four items), intentions (Kuhl, 1985; Ganesh et al., 2000; Gómez et al., 2006; Fock et al., 2005; and Oliver, 1997, 2010; six items), and perceived benefits of airline co-branded credit cards (Park, 2010; Martín et al., 2011; Boer and Gudmundsson, 2012; and Akram et al., 2014; thirteen items). All items adopted in this study are measured using five-point Likert-type scales. With the help of exploratory factor analysis (EFA), thirteen items of perceived benefits of airline co-branded credit cards were sub-grouped into four factors. After reviewing marketing mix definitions in Levitt's (1980) and Kotler and Keller's (2007) notable work, the four aspects were named as generic benefits (three items); core benefits (three items); expected benefits (four items); and augmented benefits (three items).

Notably, since the scales were adapted from extant measures that are written in English, the questionnaires used in Taiwan are translated from English to Mandarin Chinese in a tripartite process that included language, back-translation, and a third-party re-translation. This process adds a few rigorous layers to reaffirm the extent to which the translation was conducted adequately and in a conceptually consistent manner (Kotabe and Helsen, 2000).

A non-probability convenience sampling approach was employed to administer 500 questionnaires to travelers at Taiwan's Taoyuan International Airport during the month of June in 2014. Specifically, few trained business graduate students followed the mall-intercept method to approach passengers who were waiting for their flights at different times of the day, each day of the week, over a one-month period. This study focused on people over the age of 20 who were financially independent in an effort to represent potential holders of airline co-branded credit cards as faithfully as possible. Further, to ensure that respondents are airline co-branded credit card holders, a filtering question (i.e., "Have you ever had or used an airline co-branded credit card?") was used to focus only on airline co-branded credit card holders at first. A total of five hundred questionnaires were distributed, and 398 usable samples were obtained after excluding the incomplete ones, yielding a 79.6% response rate from those who agreed to participate. The sample characteristics are summarized in Table 1. Next, EFA was employed again to check whether there was any notable deviation from the structure of the adapted constructs. Notably, this study examined whether the data conformed to the multi-normality requirement because this is a key assumption of the Structural Equation Modeling (SEM) technique (McDonald and Ho, 2002). The next stage was to test the proposed model in a two-stage structural equation framework. Specifically, confirmatory factor analysis

**Table 1**  
Sample characteristics.

Characteristics	Category	Full sample N = 398	
		#	%
Gender	Male	183	46.0
	Female	215	54.0
Marital status	Married	181	45.5
	Single	217	54.5
Age	Under 30 years	86	21.6
	31–40 years	217	54.5
	41–50 years	74	18.6
	Above 51 years	21	5.3
Education	Under junior high school	6	1.5
	Senior high school	16	4.0
	College	278	69.8
	Graduate school	98	24.6
Occupation	Student	18	4.5
	Government or education	29	7.3
	Financial industry	213	53.5
	Information industry	31	7.8
	Service industry	49	12.3
	Medical industry	1	0.3
	Bio-technology	4	1.0
	Free occupation	13	3.3
	Manufacturing industry	28	7.0
	Others	12	3.0
	Residence	Northern Taiwan	380
Middle Taiwan		15	3.8
Southern Taiwan		2	0.5
Eastern Taiwan		1	0.3
Average monthly income	Less than 20,000	16	4.0
	20,001–40,000	100	25.1
	40,001–60,000	130	32.7
	60,001–80,000	87	21.9
	More than 80,001	65	16.4
Annual leisure expenditure	Less than 30,000 NTD	70	17.6
	30,001–60,000 NTD	111	27.9
	60,001–90,000 NTD	85	21.4
	90,001–120,000 NTD	42	10.6
	120,001–150,000 NTD	39	9.8
	More than 150,001 NTD	51	12.8
Annual frequency by airplane	1–2 times	203	51.0
	3–5 times	146	36.7
	6–9 times	40	10.1
	More than 10 times	9	2.3
Annual frequency of airline credit card consumption in air transport/tourism services or products	1–2 times	227	57.0
	3–5 times	127	31.9
	6–9 times	29	7.3
	More than 10 times	15	3.8
Annual expenditure of airline credit card consumption in air transport/tourism services or products	Less than 30,000 NTD	127	31.9
	30,001–60,000 NTD	140	35.2
	60,001–90,000 NTD	53	13.3
	90,001–120,000 NTD	37	9.3
	120,001–150,000 NTD	19	4.8
	More than 150,001 NTD	22	5.5

Note: “N” means number of survey respondents.

(CFA) was performed to assess construct validity before a structural path analysis was conducted to examine the research hypotheses (see Table 2).

It is worthy to note that common method variance (CMV) presents a potential problem in behavioral research (Bagozzi and Yi, 1990; Cote and Buckley, 1987, 1988; Williams et al., 1989). Thus, we employed procedural remedies to assess and deal with a likely CMV issue (Podsakoff et al., 2003). These procedures included: temporal, proximal, psychological, or methodological separation of measurement; protecting respondent anonymity and reducing evaluation apprehension; counterbalancing question order; and improving scale items (Carson, 2007). Notably, after applying the CMV remedy procedure, the Unmeasured Latent Method Construct (ULMC,  $p$ -value = 0.950) revealed an insignificant common method

bias (Richardson et al., 2009). When comparing the difference of CFA from single factor and multi-factor structure (Lindell and Whitney, 2001), the  $\Delta\chi^2 = 485.092$ ,  $\Delta df = 32$ ,  $p$ -value < 0.05 ( $\Delta\chi^2/\Delta df = 15.159$ ), which indicates that the validity of this study was not affected by common method bias (Carson, 2007).

According to Levitt (1980) and Kotler and Keller (2007), core product refers to the basic product, and the focus is on the purpose for which the product is intended. When it comes to airline co-branded credit cards, bonus miles during birth month, discount on in-flight, duty-free products, special services and priority for seamless global trips (priority access to VIP lounge, boarding, reservation services and luggage handling) are likely to lead potential consumers' applications for an airline co-branded credit card. Examples for generic products in the context of airline co-

**Table 2**  
Results of EFA analysis on benefits of airline co-branded credit card.<sup>a</sup>

Benefits	Generic benefits	Expected benefits	Augmented benefits	Core benefits
● Welcome gifts for submission or approval of application.	0.858			
● First transaction reward.	0.790			
● No annual fee, or reduced annual fee.	0.707			
● Airline miles in all instances.		0.543		
● Travel insurance services.		0.790		
● Free pickup and reserved parking services.		0.758		
● Better airline ticketing services.		0.519		
● VIP medical services.			0.838	
● Free tickets and seat upgrade.			0.570	
● Special rates on tickets and hotels for frequent flyers.			0.563	
● Discount on in-flight, duty-free products.				0.784
● Bonus miles during birth month.				0.695
● Special services and priority for seamless global trips (Priority access to VIP lounge, boarding, reservation services and luggage handling).				0.519
Accumulated variance explained	24.089	45.241	63.231	80.639

<sup>a</sup> Note: Results of EFA was generated from principal component analysis, with varimax rotation; meanwhile, Kaiser-Meyer-Olkin 0.958, Barlett test 4383.792, df = 78, p-value < 0.05.

branded credit cards include reduced annual fee, new member gifts, or first transaction reward. On the other hand, expected products in an airline co-branded credit card refer to all aspects that a card applicant anticipates to get when he/she applies for an airline co-branded credit card. The EFA findings reveal that expected elements of an airline co-branded credit cards include earning airline mileages in all transactions, free pickup and reserved parking services, travel insurance services, and better airline ticketing services. Finally, the augmented product refers to all additional factors which sets the airline co-branded credit card apart from that of the competition, and particularly involves brand identity and image. In addition to the former three kinds of benefits of airline co-branded credit cards, augmented benefits of airline co-branded credit cards includes VIP medical services, free tickets or seat upgrade, and special rates on tickets and hotels for frequent flyers.

The sample size ( $n = 398$ ) was considered large enough to compensate for likely model misspecification and model complexity (Hair et al., 2006). This study also checked for possible univariate and multivariate outliers, which reveal no significant violations. Specifically, the outcome showed that the value of kurtosis ranged from  $-0.58$  to  $1.26$  and that the value of skewness ranged from  $-0.29$  to  $0.86$ , which satisfied the evaluation criteria (ranging from  $-2$  to  $+2$ ) suggested by Mardia (1985).

The proposed measurement model was estimated using LISREL 8.80 (Joreskog and Sorbörn, 1989, 1993). The goodness of fit indices are summarized in Table 3. The Chi-square statistics were significant at the 0.05 level, not an unusual finding with a relatively large sample (Doney and Cannon, 1997). The values for the comparative fit index (CFI), the non-normed fit index (NNFI), the root mean square error of approximation (RMSEA), and the standardized root mean residual (SRMR) were considered acceptable for the proposed model, based on the criteria suggested by Hu and Bentler (1999): 0.95 for CFI and NNFI, 0.06 for RMSEA, and 0.08 for SRMR. With a battery of acceptable goodness-of-fit indices on the SEM model performance, no effort was made to modify the model specifications.

#### 4. Empirical results

The maximum likelihood estimation procedures were used to examine relationships among perceived benefits of airline co-

branded credit cards and its sub-dimensions, perceived benefits of airline co-branded credit cards, attitude, perceived behavioral control, subjective norm, and intention (Table 4). The analytic framework is depicted in Fig. 2.

Empirical findings reveal that all significant relationships between latent constructs match the hypothesized directions. The perceived benefits of airline co-branded credit cards were significantly and positively reflected by four types of benefits (generic benefits, core benefits, expected benefits, and augmented benefits), supporting H7a, H7b, H7c, and H7d. Meanwhile, perceived benefits of airline co-branded credit cards have a significant and positive impact on attitude (H1), intention to use (H2), and perceived behavioral control (H3). Finally, attitude, perceived behavioral control, and subjective norm also have positive and significant impacts on airline co-branded credit card holders' intentions to use the cards, supporting H4, H5 and H6.

#### 5. Conclusions

This study examines the contents of the perceived benefits of an airline co-branded credit card in a SEM framework to demonstrate the effects of the perceived benefits of an airline co-branded credit card on attitude, intention and perceived behavioral control; attitude on intentions, perceived behavioral control on intentions, and subjective norm on intentions. The findings herein provide valuable information concerning the perceived benefits of airline co-branded credit cards. Airline companies and other service providers are encouraged to consider developing more competitive and profitable co-branding strategies. Based on the results herein, the following conclusions are drawn:

##### 5.1. The perceived benefits of an airline co-branded credit card is positively and significantly reflected by four sub-dimensions

The relationship between the perceived benefits of an airline co-branded credit card and its sub-dimensions are all empirically confirmed. Among the constructs associated with airline co-branded credit cards (i.e., generic benefits, core benefits, expected benefits, and augmented benefits), the most important benefits of airline co-branded credit cards are the augmented benefits, followed by expected benefits, generic benefits, and core benefits of airline co-branded credit cards.

**Table 3**

Measurement scales and summary statistics.

<i>Benefits of airline co-branded credit cards (Mean = 3.98, Reliability = 0.96, AVE. = 0.89)</i>	
<b>Generic benefits–</b>	
● No annual fee, or reduced annual fee.	
● Welcome gifts for submission or approval of application.	
● First transaction reward.	
<b>Core benefits–</b>	
● Bonus miles during birth month.	
● Discount on in-flight, duty-free products.	
● Special services and priority for seamless global trips (priority access to VIP lounge, boarding, reservation services and luggage handling).	
<b>Expected benefits–</b>	
● Airline miles in all transactions.	
● Free pickup and reserved parking services.	
● Travel insurance services.	
● Better airline ticketing services.	
<b>Augmented benefits–</b>	
● VIP medical services.	
● Free tickets and seat upgrade.	
● Special rates on tickets and hotels for frequent flyers.	
<b>Attitude (Mean = 4.24, Reliability = 0.88, AVE. = 0.87)</b>	
● My/using airline co-branded credit card in the future would be __. -Bad: Good	
● My/using airline co-branded credit card in the future would be __. -Unpleasant: Pleasant	
● My/using airline co-branded credit card in the future would be __. -Foolish: Wise	
● My/using airline co-branded credit card in the future would be __. -Useless: Useful	
● My/using airline co-branded credit card in the future would be __. -Unfavorable: Favorable	
<b>Subjective norm (Mean = 4.12, Reliability = 0.92, AVE. = 0.88)</b>	
● If I use airline co-branded credit on buying travel related products or services, most of the people who are important to me would. -Disapprove: Approve	
● Those who are important to me think it is OK to use airline co-branded credit on buying travel related products or service. -Unlikely: Likely	
● Most people who are important to me will look up to me if I use airline co-branded credit for buying travel related products or services. -Unlikely: Likely	
<b>Perceived behavioral control (Mean = 3.89, Reliability = 0.76, AVE. = 0.81)</b>	
● For me to use airline co-branded credit on buying travel related products or service is __. -Difficult: Easy	
● I can imagine times when I might use airline co-branded credit on buying travel related products or services even if I had not/planned to. -Unlikely: Likely	
● If I want to, I can use airline co-branded credit on buying travel related products or services. -Strongly disagree: Strongly agree	
● Even if I had a good reason, I could not bring myself to use airline co-branded credit on buying travel related products or services. -Unlikely: Likely	
<b>Intentions (Mean = 4.01, Reliability = 0.81, AVE. = 0.85)</b>	
● I am willing to recommend the use of this airline co-branded credit card to others. -Strongly disagree: Strongly agree	
● I am willing to use this airline co-branded credit card in the future. -Strongly disagree: Strongly agree	
● I will recommend this airline co-branded credit card brand to my family. -Strongly disagree: Strongly agree	
● I will recommend that my family purchase tourism relevant products/services using this airline co-branded credit card. -Strongly disagree: Strongly agree	
● I prefer to use this airline co-branded credit card when I travel abroad. -Strongly disagree: Strongly agree	
● I will keep using this airline co-branded credit card in purchasing tourism relevant products and services in the future. -Strongly disagree: Strongly agree	

**Table 4**

Structural parameter estimates and goodness-of-fit indices.

Hypothesized paths	H	Standardized estimate
Perceived benefits of airline co-branded credit card → Attitude	H1	0.348(4.970**) <sup>a</sup>
Perceived benefits of airline co-branded credit card → Intentions	H2	0.548(9.813**)
Perceived benefits of airline co-branded credit card → Perceived Behavioral control	H3	0.408(5.643**)
Attitude → Intentions	H4	0.569(9.940**)
Perceived behavioral control → Intentions	H5	0.472(7.129**)
Subjective norm → Intentions	H6	0.323(4.471**)
<i>Perceived benefits of airline co-branded credit card → Generic benefits</i>	H7a	0.836(8.515**)
<i>Perceived benefits of airline co-branded credit card → Core benefits</i>	H7b	0.768(8.182**)
<i>Perceived benefits of airline co-branded credit card → Expected benefits</i>	H7c	0.869(8.920**)
<i>Perceived benefits of airline co-branded credit card → Augmented benefits</i>	H7d	0.921(9.487**)
Fit statistics: $\chi^2 = 863.427$ , ( $p < 0.05$ , $df = 352$ ), $\chi^2/df = 2.453$ , $GFI = 0.843$ , $CFI = 0.971$ , $RMSEA = 0.048$		
		$N = 398$

\*\*Denotes  $p \leq 0.05$ .<sup>a</sup> The values shown in parentheses are the corresponding t-statistics.

According to the empirical results, consumers with positively perceived good benefits of airline co-branded credit cards are more likely to associate the use of airline co-branded credit cards in the future with positive feelings like pleasant, wise, useful, and favorable. Further, consumers who enjoy the benefits embedded with airline co-branded credit cards are more willing to recommend the use of this airline co-branded credit card to others, to use this airline co-branded credit card in the future, and they will recommend that their family purchase tourism-related products/services using an airline co-branded credit card. Furthermore, consumers

prefer to use an airline co-branded credit card when they travel abroad and will keep using this airline co-branded credit card in purchasing tourism-related products and services in the future. In addition to attitude and intentions, consumers' positively perceived benefits of airline co-branded credit cards will lead to better perceived behavioral control. That is, if using airline co-branded credit on buying travel-related products or services is easier for them, they are more likely to visualize times when they might use airline co-branded credit on buying travel related products or services even if they had not/planned to use the card.

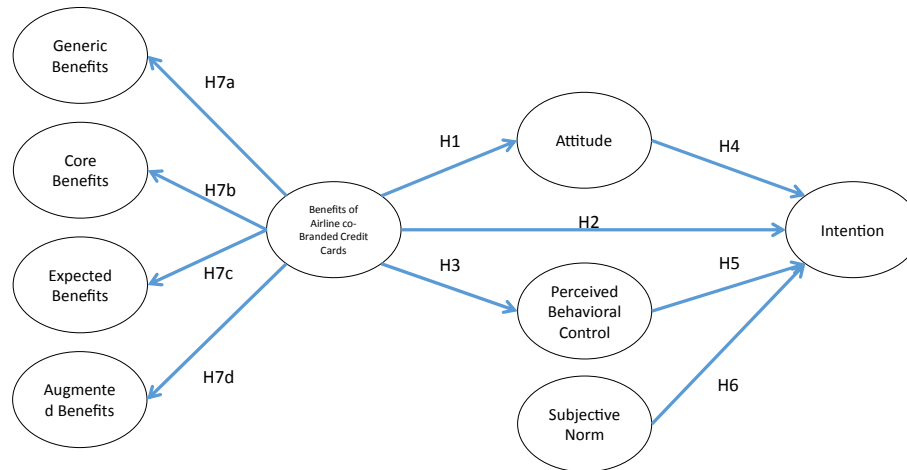


Fig. 2. Proposed structural equation model.

### 5.2. Attitude, perceived behavioral control, and subjective norm improve brand intention

Based on the empirical findings, attitude toward using airline co-branded credit cards in the future would be crucial in determining consumers' intentions to use this card. Thus, consumers who associate the frequent usage of airline co-branded credit cards in the future with positive attitudes (e.g., good, pleasant, wise, useful, and favorable) are more willing to recommend the use of this airline co-branded credit card to others, to use airline co-branded credit cards on purchases, and will recommend their family purchase tourism-related products/services using this airline co-branded credit card. Furthermore, they prefer to use an airline co-branded credit card when they travel abroad and will keep using this airline co-branded credit card in purchasing tourism-related products and services in the future.

As to perceived behavioral control, whenever consumers feel that using airline co-branded credit on buying travel-related products or services is easier for them, they are more likely to visualize times when they might use airline co-branded credit cards on buying travel-related products or services even if they had no plan to, they can use airline co-branded credit for buying travel related products or services if they want, and they are more likely to bring themselves to use the airline co-branded credit card.

In addition to attitude and perceived behavioral control, the exogenous construct, subjective norm also yields positive influence on intention to use. In sum, consumers are more willing to recommend the use of this airline co-branded credit card to others, to use this airline co-branded credit card in the future, recommend this airline co-branded credit card brand to their family, and will recommend their family purchase tourism-related products/services using this airline co-branded credit card. Furthermore, they prefer to use this airline co-branded credit card when they travel abroad and will keep using this airline co-branded credit card in purchasing tourism relevant products and services in the future.

## 6. Contributions

Companies that are heavily involved in the tourism business such as international air carriers, multi-national hotel chains and cruise-ship companies (Weaver, 2005) have worked with financial institutions to issue co-branded credit cards. To our knowledge, this is the first study that demonstrates how benefits of airline co-branded credit cards, attitude, and perceived behavioral control

may influence air travelers' behavioral intentions to use airline co-branded credit cards.

According to the empirical findings, airlines can influence consumer intentions to use by enhancing customer's attitude, and the perceived behavioral control through issuing airline co-branded credit cards. Given the increasing challenges in nurturing and sustaining consumer's purchase intentions, the results of this study contribute to co-branding collaborations in two unique ways. First, the proposed model contributes to existing literature by specifying how air travel service providers can enrich consumer perceptions of airline co-branded credit cards by presenting major benefits derived from partnering with a longer list of networks, retailers, and service providers. The role of airline co-branded credit cards in shaping customer value and benefits is empirically examined in the present study. Second, this study evaluates how perceived benefits of airline co-branded credit cards impact customer perceived brand equity, brand preference, and behavioral intentions. These two research questions were assessed in the context of ubiquitous two service industries (i.e., airline services and financial services).

## 7. Limitations

A number of limitations are identified:

- (1) The list of potential benefits was derived from existing promotional materials of airline co-branded credit cards, and, therefore, reflects the claims of operators. However, consumers are not necessarily aware of these claimed benefits, nor do they necessarily see them as important. To complement this work, it would be of relevance to conduct in-depth qualitative research with travelers. This would enable a rich investigation of the benefits sought by travelers, their perceptions of current benefits, potential disadvantages and other nuances.
- (2) This study solicits airline travel passengers' perceptions on their usage of airline co-branded credit cards. As such, additional research with a focus on the organizational perspectives (e.g., higher employee morale, positive corporate image) would provide additional insights on the performance of issuing airline co-branded credit cards.
- (3) Empirical findings are based on the perceptions of a convenience sample of Taiwanese travelers. As culture may play a crucial role in the TPB framework, it would be beneficial for



future research studies to replicate the findings using international airline travelers across countries/cultures.

- (4) In order to have a better understanding of the respondents' profile, it would be helpful to include a few additional demographic questions such as the number of airline co-branded credit cards owned and the most preferred benefits of airline co-branded credit cards.

## 8. Managerial implications

A wide range of studies have applied the TPB to various consumer decision situations. Although a handful of research studies have employed the TPB framework to investigate travelers' airline selection decisions (Buaphiban, 2015), air travel attitudes and behaviors (Davison et al., 2014), electronic ticket sales strategy (Alroaia and Fatorehchi, 2015), intentions to purchase low-cost airline e-tickets (Maneechot and Chirapanda, 2014), online airline ticket purchase behavior (Bigné et al., 2010), and the use of credit cards (Rutherford and Devaney, 2009). However, to the best knowledge of the authors, no research has examined the use of airline co-branded credit cards or FFPs in the TPB framework.

The conceptual framework of this study addresses the relationship between benefits of airline co-branded credit cards and card holders' intentions to use the cards. Built upon the theory of planned behavior, this study empirically assesses card holders' perceived benefits of airline co-branded credit cards on attitude, perceived behavioral control, and intention to use. Empirical findings suggest that the airlines should invest in the airline co-branded credit card campaign to improve consumers' perception of brand equity. Managerially speaking, the airlines should inform the current and potential customers the reasons/benefits of paying for air transport services using the airline's co-brand credit cards. Restated, the airlines should consider segmenting their customers into several groups and promulgate different marketing programs for customers of various characteristics in order to achieve efficient results. In addition to allied globally aggressively, airlines should deliver a total solution of customer oriented air transportation that can upgrade customers' perceived benefits of airline co-branded credit cards and intention to use them. Accordingly, both the financial institutions and the airlines could generate fruitful profits.

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