



# Evaluation of passengers' buying behaviors toward low cost carriers in Southeast Asia



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## ABSTRACT

The purpose of this paper is to examine how Southeast Asian passengers' attitudes and behaviors affect their buying intention and actual purchase of Low Cost Carrier (LCC) tickets. A research model was developed based on the Theory of Planned Behavior. A survey of 791 passengers was conducted in two major airports in Thailand to test the hypotheses. Results indicated the important role of passengers' attitudes, subjective norms, and perceived behavioral control in LCC passengers' buying behaviors. The paper provides LCCs with useful information about passengers' attitudes and behaviors toward using LCC services, which will help the carriers form necessary strategies to attract more customers.

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## 1. Introduction

A low cost carrier (LCC) is defined as an airline that differentiates itself in the market through reduced ticket prices (Civil Aviation Authority, 2006). LCCs manage to reduce their ticket prices below competitors' prices using different strategies such as: fuel efficiency, careful management of revenue, and yield management. Revenue management and yield management are strategies that use ticket pricing to achieve higher load factors and/or specific earning targets. In addition, in order to reduce operational costs typical LCCs also eliminate business or premium lounges and reduce or even eliminate staffed check-in areas (Civil Aviation Authority, 2006).

The LCC business model has proven to be a strong competitor to the traditional full-service model. The LCC segment has grown significantly in Asia, where the cost gap between full-service carriers (FSCs) and LCCs ranges from 60% to 70% (substantially higher than the 36% gap in U.S. carriers, and the 40% gap in European

carriers) (Smyth and Pearce, 2006). Currently, the biggest LCCs operating in Southeast Asia are AirAsia and Indonesia's LionAir (Bland, 2014). Economic conditions in Southeast Asian developing countries such as Indonesia, Malaysia, and Thailand are considered ideal for the expansion of LCCs because of growing middle classes and a dense population in limited land transportation options (Bland, 2014). Thailand, along with the Philippines, is considered to be one of the friendliest countries for LCC operations and is projected to be a major market for LCCs (Teng and Perry, 2013).

While the LCC model promises lower costs than the full-service model, LCCs may be losing this cost advantage over time as FSCs become more efficient, and LCCs come up against the limits of cost controls (KPMG, 2013). This narrowing of the gap between carriers is not likely to be reduced much further; however, the fact remains that LCCs need to be more competitive in the future in order to maintain their competitive advantages. They need to develop effective marketing strategies to attract more customers. Understanding perceptions and buying behaviors of LCC passengers will enable carriers to develop necessary strategies to improve and enhance their services and offerings to passengers.

LCCs are attracting more attention from the academia, but the LCC literature often assumes that price is the major factor in the LCC decision (Bland, 2014; CAA, 2006). Some studies examined other factors besides price such as booking convenience, in-flight

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services, schedule, safety consideration, and airline image, but found contradicting findings regarding the impacts of these factors (Chang and Hung, 2013; Diggines, 2010; Davison and Ryley, 2010). However, the consumer decision theory suggests that consumers likely choose products or services based on behavioral and attitude factors rather than just solely the price (Blythe, 2013). The underestimation of the importance of attitude and behavioral factors is the major gap in the LCC literature, which limits LCCs from understanding passengers' buying behaviors, and therefore, creates challenges for the carriers in expanding their market share. In addition, there also has not been adequate research on LCCs in the Southeast Asia region, despite the fact that this, with an LCC seat capacity of almost 58%, is one of the largest regions in the world for LCCs (Harbison, 2013).

The purpose of this paper is to fill the gap in the LCC literature by examining factors that influence the passengers' buying behavior toward LCCs in the Southeast Asia region. The research model focuses mainly on attitude and behavioral factors and is developed based on the Theory of Planned Behavior (TPB). This paper adds new insights to the LCC literature, which mainly focuses on economic factors and underestimates the impact of behavioral factors. In addition, LCC passengers in Southeast Asia may have different buying behaviors from Western passengers. O'Connell and Williams (2005) found that price is less important to Malaysian passengers than to Irish passengers. Thus, it is reasonable to hypothesize that passengers in developing countries in Southeast Asia may make airline selection decisions differently than those in Western countries. For that reason, price is not included in this paper, and only attitude and behavioral factors are considered to examine how Southeast Asian passengers' attitudes and behaviors drive their decision to select LCCs. Other external factors such as service quality, airline image, schedule convenience, and airline safety are also excluded from this study due to the inconsistent findings in extant literature regarding the impact of these factors. The focus on passengers' attitudes and behaviors provides carriers with useful understanding and insightful information about the passengers, which could be used to refine services and business practices, potentially making these carriers more competitive.

The paper is organized as follows. Next section reviews the existing literature in customer choice in LCCs, the ground theory, and the research model along with proposed hypotheses. The following section discusses the research methodology and data collection process followed by detailed results of the measurement model, full structural model, and results of the hypothesis testing. The last section discusses the theoretical and practical implications of the research and recommends for future research.

## 2. Literature review and research model

### 2.1. LCC business model

The LCC business model is one of the most recent changes in the general business model of airlines. LCCs use short-haul flights, a flat and straightforward fare and class structure, no partnerships, direct sales, and single-model aircraft fleets. In contrast, FSCs use a hub-and-spoke network, complex fare structures, price discrimination (including multiple service classes), partnerships with other airlines, multiple sales channels, and mixed aircraft fleets (Sabre, 2010). Additionally, FSCs offer a two-class or three-class service (economy, business, and first class), while most LCCs only offer a single class service. LCCs tend to attract infrequent or leisure travelers traveling domestically or regionally, while business travelers and long-haul travelers may be more likely to choose a FSC (Fourie and Lubbe, 2006).

Asia is one of the fastest-growing regions for LCCs with a fierce

competition between national and regional competitors (Bland, 2014). Part of this growth can be attributed to currently inadequate air travel service in many parts of Asia despite its large population. The rising demand for air travel in Southeast Asia in last decade has resulted in rapid growth of LCCs in many countries in the region. A typical example is the air travel market in Thailand. The number of Thai LCC passengers (including international and domestic flights) increased from about 10 million in 2009 to more than 20 million in 2012 (AOT, 2015). This market grew even more rapidly in 2013, with a record of more than 26 million passengers in the LCC segment. Major LCCs in Thailand include Thai AirAsia, Nok Air, and Thai Lion Air (CAPA, 2014). Thai AirAsia reached 10.5 million passengers in 2013, including 4 million international and 6.5 million domestic passengers (CAPA, 2014).

### 2.2. Previous research in LCC selection

Studies have been conducted on the consumer choice of LCCs; most of them focused on price and service quality as major impact factors and used the data collected from Western LCC passengers. Some studies examined passengers' perceptions of LCCs, often in comparison to their perception of FSCs. O'Connell and Williams (2005) studied cross-cultural perceptions across four airlines: Ryanair, Aer Lingus, AirAsia and Malaysia Airlines. The authors used a survey of LCC and FSC passengers and found that the main reason for choosing an LCC over FSC (65%) was the lower price. An exploratory study in China suggested that perceptions of the airline's service level influenced the FSC selection but had much less influence on the LCC selection (Chiou and Chen, 2010). A study in South Africa suggested that this perception might be limited in their usefulness (Diggines, 2010). This study used a questionnaire of airport passengers in Cape Town and Johannesburg and found that most passengers actually did not perceive much difference between LCCs and FSCs except for price.

Another study compared passengers on LCC and FSC routes between Taipei and Singapore (Chang and Hung, 2013). A survey was collected from 338 business passengers to examine factors that encouraged and discouraged the selection of LCCs. Price was found to be an important factor in the selection of LCCs followed by convenience. However, the safety considerations and airline image discouraged the intention to select LCCs.

A LCC study in Turkey surveyed passengers of Pegasus Airlines and found that the most important factors influencing the LCC decision were price, schedule convenience, on-time performance, and safety. Less important factors were travel agent recommendations, type of aircraft, and food and drink (Atalik and Özel, 2007). In addition, Castillo-Manzano and Marchena-Gómez (2010) also indicated that the origin-destination pair, need to transfer, duration of the trip, and weekend travel influenced the LCC selection decision. A study from Malaysia showed similar findings. This study found that desire to control routes, journey purpose, and booking method drove the decision to select a LCC (Ong and Tan, 2010).

Some studies examined passengers' buying behavior in regard to LCCs and FSCs. One study examined records held by the U.S. Department of Transportation and determined that LCC passengers were actually less likely to complain about service quality than FSC passengers (Wittman, 2014). The authors attributed this to lower service expectations, lack of information on how to complain, and differences in qualitative service perceptions (Wittman, 2014). Another study found that LCC passengers were more price-sensitive than FSC passengers, and they readily switch airlines for a cheaper ticket (Diggines, 2010). van Eggermond (2007) found that price was the most important factor for airline passengers, while direct itineraries between destinations was the second most important. Finally, a study of passenger loyalty for German full-

service airlines and LCCs identified two key factors in the formation of passenger loyalty for both airline business models: service quality and price satisfaction (Mikulic and Prebezak, 2011).

The review of existing literature shows important research gaps. First, there is an over-intensive focus and confirmation on price as the dominant impact factor, but very little attention has been paid to the role of passengers' behaviors and attitudes. The inconsistent and contradicting findings on the impact of other external factors such as service quality, airline image, safety consideration, and booking/schedule convenience in existing studies indicate that some important components are missing in this picture. While price could be the main reason driving passengers to choose LCCs, the overemphasis on this factor will hinder the carriers from seeing a big picture of the passengers' buying intention and behavior. The consumer decision theory shows that consumers' attitudes and behaviors have important influences on their buying decision. Second, there is a lack of focus on Southeast Asian carriers despite their rapid growth in recent years. O'Connell and Williams (2005) indicated that unlike European passengers Asian passengers viewed price as a less important factor in deciding LCCs over FSCs. This research fills these gaps in the literature and uses the Theory of Planned Behavior to develop the research model.

### 2.3. Theory of planned behavior

Theory of Planned Behavior (TPB) is a theoretical basis for understanding consumer decisions. The TPB is an attitude-behavioral theory that explains individual behaviors as a result of attitudes (Ajzen, 1991, 2005). The theory incorporates central concepts in the social and behavior sciences to predict and understand customers' behaviors in specified areas (Ajzen, 1991). The TPB is considered an important and influential conceptual framework for the study of human action (Ajzen, 2002).

*Attitude* can be defined as "a person's evaluation of an object of thought" (Pratkanis, 2014, p. 72). This evaluation can occur on a number of different bases including external information, previous experience, or application of related experience. Attitudes can also be formed through cognitive (thought), affective (emotion) processes, or social influences (Pratkanis, 2014). The TPB model states that various kinds of attitudes are important for individuals to form behavioral intentions, which lead to actual behaviors (Ajzen, 2005).

The purpose of the TPB is to explain behaviors of individuals with respect to behavioral intentions they form. These behavioral intentions are influenced by different kinds of cognitions and emotions related to attitudes, normative beliefs or perceptions of specific significant others' preferences (subjective norms), and how much control the consumers believe they exercise over the situation (perceived behavioral control) (Ajzen, 2005). The TPB model consists of five components: Attitudes, Subjective Norms, Perceived Behavioral Control, Behavioral Intention, and Behavior (Ajzen, 2005). Behavioral intention is the outcome variable for the three attitude-related variables, while it is the predictor for the consumer behavior. A brief definition of these components is shown in Table 1.

Fig. 1 shows the relationships between these components in the TPB model. These are derived from Ajzen (1991, 2005), and the relationships can be described briefly as follows. First, Attitudes, Subjective Norms, and Perceived Behavioral Control exert an effect on the Behavioral Intention. Perceived Behavioral Control can also affect the Behavior. In the second stage of the model, Behavioral Intention affects the actual Behavior.

The TPB has been used in the literature to predict various human behaviors, such as health-related activities (Vermeir and Verbeke, 2008), human-environment interactions (Chan and Bishop, 2013), consumer behaviors (Ma et al., 2012), and traveller choice for services (Tsai, 2010; Jalilvand and Samiei, 2012; and Al Ziadat, 2015).

Nonetheless, the application of TPB to passenger choice for LCCs in the Southeast Asia is very limited.

The TPB has been well supported by empirical evidence. Attitudes toward the behavior, subjective norms, and perceived behavior control can predict behavioral intentions with a relatively high accuracy. Armitage and Conner (2001) conducted a meta-analysis to examine the predictive power of TPB models based on analyzing 185 TPB studies in the literature. On average, attitudes, subjective norms, and perceived behavior control accounted for approximately 39% of the variance in behavioral intentions, and the behavioral intentions and perceived behavior control accounted for about 27% of the variance in behaviors (Armitage and Conner, 2001). These results indicated the effectiveness of the TPB in predicting consumer behaviors.

### 2.4. Research model

The research model (Fig. 2) is developed based on the (TPB) theory and consists of five constructs: Attitudes toward LCCs, Subjective Norms, Perceived Buying Control, Passengers' Buying Intention, and Passengers' Buying Behavior. Passengers' Buying Intention and Passengers' Buying Behavior are the endogenous variables, whereas Attitudes toward LCCs, Subjective Norms, and Perceived Buying Control are exogenous variables. Table 2 presents the definitions of these constructs in the model. As addressed before, in order to achieve full understanding of the importance of passengers' attitudes and behaviors in the LCC context price is not included in this model. In addition, other external factors (service quality, airline image, safety consideration, booking convenience, schedule, etc.) are also excluded due to the contradicting findings regarding their impacts on LCC selection.

Overall, using the TPB as the ground theory the research model proposes that attitudes toward LCCs, subjective norms, and perceived behavioral control have indirect influences on the passengers' buying behavior through the buying intention. In addition, perceived behavioral control also has a direct impact on the buying behavior. The first three hypotheses (H1, H2, and H3) relate to the influence of passengers' attitudes toward LCCs, subjective norms, and perceived behavioral control on the formation of their buying intention to select an LCC airline.

**H1.** Attitudes toward LCCs positively influence passengers' buying intention toward LCCs.

**H2.** Subjective norms positively influence passengers' buying intention toward LCCs.

**H3.** Perceived behavioral control positively influences passengers' buying intention toward LCCs.

Hypotheses 4 and 5 are about the influence of perceived behavioral control and passengers' buying intention on passengers' buying behavior.

**H4.** Perceived behavioral control positively influences passengers' buying behavior toward LCCs.

**H5.** Passengers' buying intention positively influences passengers' buying behavior toward LCCs.

## 3. Methodology

In order to test the hypotheses, data was collected through a survey of airline passengers in Don Mueng Airport and Suvarnabhumi International Airport in Thailand. The first part of the survey provides the purpose of the study and a consent form followed by demographic questions. The second and also main part of the

**Table 1**  
Descriptions of TPB components.

Factor	Descriptions
Attitude	Attitudes can be defined as “cognitions and emotions related to the decision that the individual is considering and the extent to which the individual values the behavior”. Attitudes are specific to the object or behavior under consideration. They are determined by specific behavioral beliefs and may vary depending on the strength of the behavioral belief (Ajzen, 1991, 2005).
Behavior	Behavior is the final outcome of the TPB model or the point where the individual acts on the decision. The behavior is the outcome of the cognitive and effective processes where the individual actually takes an action based on the attitudes and other factors identified (Ajzen, 1991, 2005).
Behavioral Intention	The behavioral intention can be defined as “an indication of a person’s readiness to perform a given behavior and is considered to be the immediate antecedent of behavior”. The behavioral intention is formed at the point where the consumer makes an active decision to engage in the contemplated behavior based on their assessment of the three attitude-related variables (Ajzen, 1991, 2005).
Perceived Behavioral Control	Perceived behavioral control (PCB) refers to “people’s perceptions of their ability to perform a given behavior” (Ajzen, 1991). PCB is influenced by control beliefs. For example, this can include whether he or she has the resources or will power to make a particular choice. In consumer decisions, availability of products/services and perceived financial control (whether or not the individual feels he or she has enough money to afford the decision or what the opportunity cost will be) is a relevant understanding of PCB (Cheng et al., 2011). PCB is not directly based on actual behavioral control, although it will probably be related (Ajzen, 2005)
Subjective Norms	Subjective norms are “the perceived social pressure to engage or not to engage in a behavior”. They are based on normative beliefs or individual perceptions of the attitudes of others related to the behavior that is being considered (Ajzen, 2005). A number of different types of norms can be included such as injunctive norms (which are what the individual believes other people think they should do) and descriptive norms (which are what the individual believes other people actually do) (Rivis and Sheeran, 2003). Other subjective norms that may play a role in the decision are moral norms and anticipated affect (how the individual thinks he or she will feel after the behavior), especially for morally-laden behaviors (Rivis et al., 2009).

survey asks participants about five factors: Attitudes toward LCCs, Subjective Norms, Perceived Behavioral Control, Passengers’ Buying Intention, and Passengers’ Buying Behavior. The survey instrument was developed based on the literature review (descriptions of these items are provided in Table 3). The survey questions used a 5-point Likert scale from 1 (“strongly disagree”) to 5 (“strongly agree”). A double translation process, where the author translated the questionnaire to Thai, then had another translator translate it back to English, and compared the results to the original questionnaire, was used to double-check accuracy and fine-tune the translation (Harkness et al., 2004). This resulted in some modifications to the translation, which were incorporated into the final questionnaire.

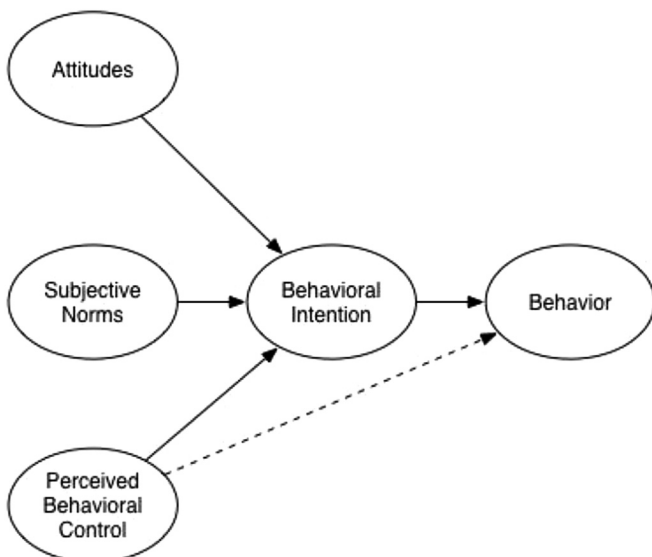
A pilot study with a sample size of 30 passengers was conducted to test the reliability and validity of the instrument. Confirmatory factor analysis was performed using AMOS 22 to test the construct validity. The factor structure had good model fit with all factor loadings greater than 0.7, indicating good construct validity. Cronbach’s alpha was used to test the reliability of constructs. All Cronbach’s alpha values were greater than 0.7, indicating good construct reliability. Based on the results of the pilot study, the

questionnaire was used for the large-scale survey.

In order to select participants, the data collectors chose a position in the check-in areas for LCCs. Using a golf counter, the collector approached each tenth passer-by to request participation in the survey. This helped reduce the sampling bias, since participants were selected randomly. Ten LCCs operating in Thailand were included in the study, including five departing from Don Mueang and five departing from Suvarnabhumi (Table 4).

The survey resulted in a total of 905 responses. After removing incomplete surveys, 881 responses remained. Then, normality assumption was tested and outliers were examined using AMOS 22. This step resulted in deletion of 100 responses that had extreme outliers. The final analysis included 781 responses, which was 86.3% of the total responses.

Table 5 presents the profile information of survey respondents. Overall, the gender distribution of the sample shows that 61% of respondents ( $n = 471$ ) are female. This is not close from the gender proportion in Thailand, with more than 51% of the population being female (Index Mundi, 2016). Nonetheless, it should be noted that the survey targeted air passengers instead of the entire population. This demographic shows that more women travel by air than men, and the results of this study will be interpreted and generalized to this group of passengers. As for the age distribution a majority of respondents are aged from 21 to 30 years (32%) followed by a range from 31 to 40 years (19%). This distribution is similar to Thailand’s age structure, where these are the largest age groups (Index Mundi, 2016). The education level of the sample is relatively high, with 57% of the respondents having at least a Bachelor degree and 25% having a Master degree or higher. This can probably be attributed to the context of air travel, as other airline studies in Thailand also show a relatively high education level (Charoensettasilp and Wu, 2013). As for the income, 52% of respondents have the income of 25,000 baht/month or less, while 48% have the income of more than 25,000 baht/month; this is about the average income in Thailand. As for occupation, the majority of passengers are government officers (32.8%), students (27.5%), and private company employees (20.9%). The higher rate of students is due to the nature of LCCs as budget carriers. As for travel experience, the majority of the passengers travel more than three times a year (35%) or two to three times a year (25%). The remaining 40% could be classified as infrequent or first-time LCC passengers. In addition, most travelers use LCCs for domestic travel (83%), whereas only 12% use LCCs to travel in Southeast Asia, and 5% travel to the broader Asia Pacific



**Fig. 1.** Components and relationships of the TPB. Source: Adapted from Ajzen (2005).

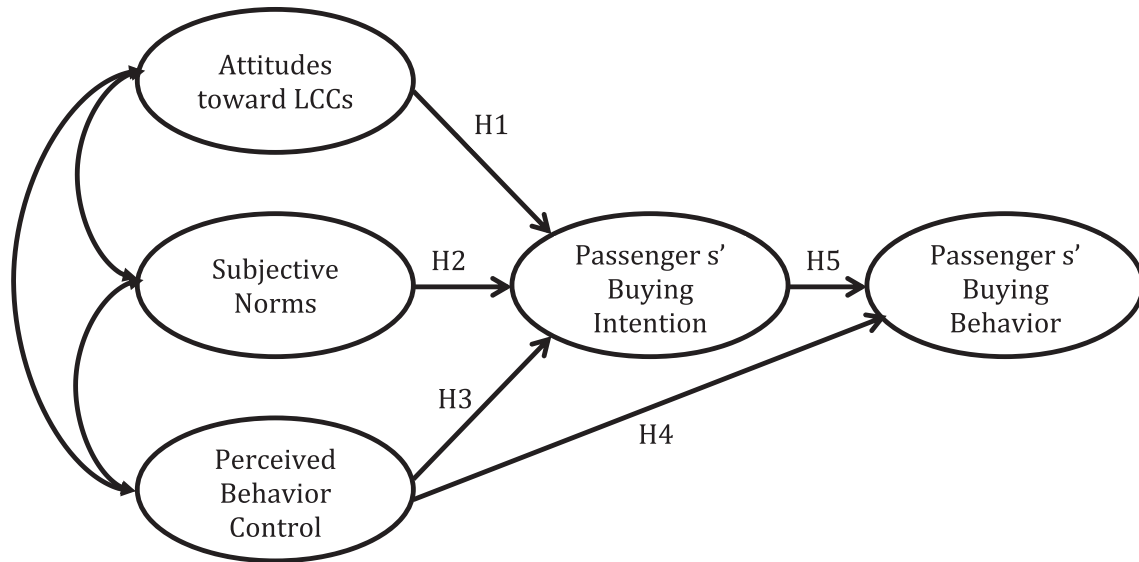


Fig. 2. Theoretical research model.

Table 2  
Construct definitions.

Variable(s)	Operational definitions	References
Attitudes toward LCCs	The value and weight a passenger places on the LCC offering.	Siragusa and Dixon (2009).
Subjective norms	The extent to which the passenger feels it is socially acceptable to use a LCC.	Dodds et al. (1991)
Perceived behavior control	The extent to which the passenger feels able to control choice of LCC or other airlines (such as charter, full-service, or regional.)	Dodds et al. (1991)
Passengers' buying intention	The passengers' intentions to buy a low cost airline ticket.	Dodds et al. (1991)
Passengers' buying behavior	The passenger's actual purchase of LCC tickets.	Dodds et al. (1991)

Table 3  
Factor and item descriptions.

Factors	Items	Description
Attitudes toward LCCs (AT)	A1	Low cost airline is another good alternative choice of airline
	A2	I have a good perception toward low cost airline
	A3	My overall attitude toward low cost airline is positive
Subjective norms (SN)	S1	I fly with low cost airline because my friend/family recommended it
	S2	I feel more confident with the service of low cost airline because my friend/family uses it
	S3	Most of my friends use low cost airline
Perceived behavior control (PBC)	PB1	I have no difficulty to buy the ticket from low cost airline
	PB2	The choice of selecting a type of airline to buy the ticket is entirely up to me
	PB3	I feel the choice of airline selection is under my control
Passengers' buying intention (PBI)	BI1	I would go for a low cost airline when I look for the airline ticket
	BI2	Low cost airline is the first choice for me when thinking to buy the air ticket
	BI3	My intention to purchase ticket from a low cost airline is high
Passengers' buying behavior (PBB)	BB1	I am a regular passenger of low cost airlines
	BB2	I always purchase ticket from low cost airlines
	BB3	I would continue to buy ticket from low cost airlines in the future

region or Australia.

In order to test the hypotheses, the structural equation modeling (SEM) process proposed by Byrne (2010) was performed using AMOS 22. First, the confirmatory factor analysis (CFA) was performed to test the measurement model. Next, reliability and validity of the constructs were evaluated. Reliability of the constructs was assessed using the Cronbach's alpha and composite reliability. Convergent validity and discriminant validity were tested using the average variance extracted (AVE) method (Fornell and Larcker, 1981; Hair et al., 2010). Finally, hypotheses were tested using the

SEM analysis.

## 4. Results

### 4.1. Measurement model

AMOS 22 was used to analyze the data and test the hypotheses. First, CFA was performed to test the measurement model. Construct validity and reliability were assessed following guidelines provided by Nunnally (1978), Fornell and Larcker (1981), Hair et al. (2010),

**Table 4**  
LCCs included in the sample.

Low cost airlines (depart from Thailand)	Airport
Air Asia	Don Mueng
Cebu Pacific Air	Suvarnabhumi International Airport
Jet Star	Suvarnabhumi International Airport
Lao Central Airline	Suvarnabhumi International Airport
Lion Air	Don Mueng
Malindo	Don Mueng
Nok Air	Don Mueng
Scoot	Don Mueng
Thai Smile	Suvarnabhumi International Airport
Tiger Air	Suvarnabhumi International Airport

**Table 5**  
Profile of survey respondents.

Categories	Items	Percentage
Gender	Male	39%
	Female	61%
Age	51–60 years	16%
	41–50 years	16%
	31–40 years	19%
	21–30 years	32%
	20 years or younger	15%
Education	Higher than master's degree	3%
	Master's degree	22%
	Bachelor's degree	57%
	Lower than bachelor's degree	18%
Monthly income	More 55,000 bath	12%
	45,001–55,000 bath	9%
	35,001–45,000	11%
	25,001–35,000 bath	16%
	15,001–25,000 bath	24%
	15,000 bath or less	28%
Frequency of travel via LCCs	More than 3 times per year	35%
	2 to 3 times per year	25%
	Once per year	14%
	Less than one per year	14%
	First time	12%
Purpose of traveling by LCCs	Business	6%
	Study	9%
	Visiting family	14%
	Seminar/conference/training	16%
	Vacation	54%
	Other	1%
Destination	Within Thailand	83%
	Southeast Asia	12%
	Asia Pacific	4%
	Australia	1%

and Byrne (2010). Results of CFA are shown in Table 6. Model fit was assessed using goodness-of-fit index (GFI), the adjusted goodness of fit index (AGFI), the normed fit index (NFI), the comparative fit index (CFI), Normed Chi-Squares, and Root Mean Square Error of Approximation (RMSEA). Byrne (2010) recommended that to achieve good model fit, GFI, AGFI, and NFI should be greater than 0.9, CFI should be greater than 0.93, and RMSEA should be less than 0.06. The fit indices of this CFA model showed good model fit: GFI = 0.963 AGFI = 0.94, NFI = 0.969, and CFI = 0.979. RMSEA is 0.05, also indicating good model fit. Finally, the normed chi-squares ( $\chi^2/df$ ) of 3 also indicates good model fit. Overall, the measurement model has good model fit.

Table 6 also shows the evaluation of reliability. Cronbach's alpha and composite reliability (CR) were calculated and used to test the construct reliability. Both Cronbach's alpha values and CR values are above the suggested values (0.7) for all factors, indicating good

reliability (Nunnally, 1978; Hair et al., 2010). High factor loadings of measured variables to the corresponding factors (above 0.7) and average variance extracted (AVE) value being greater than 0.5 for each factor indicate good convergent validity (Hair et al., 2010). Finally, Table 7 presents the discriminant validity assessment using AVE method proposed by Fornell and Larcker (1981). Results show positive support for discriminant validity because the AVE value for a given construct is greater than the squared values of the standardized correlation of that construct with any other construct in the analysis (Fornell and Larcker, 1981; Hair et al., 2010). In conclusion, the measurement model has good fit and the instrument has good construct reliability and construct validity.

#### 4.2. Structural model

In this section research hypotheses were tested with the structure equation model (Fig. 3). The fit indices also show a good fit of the structural model with the data. GFI, AGFI, and NFI are all above 0.9, and CFI is above 0.93. In addition, RMSEA is below 0.06 and the normed chi-squares ( $\chi^2/df$ ) is 3.

Results of hypotheses testing are summarized in Table 8. AMOS results show that Hypothesis 1 is supported with a standardized regression coefficient of 0.434 at a *p*-value of less than 0.01, indicating that passengers' attitudes toward LCCs have a positive impact on passengers' buying intention. That means the higher the value and weights that passengers place on the LCC offering, the more likely they will intend to buy a LCC ticket. Results also show a positive relationship between subjective norms and passengers' buying intention with a standardized regression coefficient of 0.407 (*p* < 0.01), thus supporting Hypothesis 2. It can be concluded that the higher the extent to which passengers feel it is socially acceptable to use a LCC the more likely they will intend to buy a LCC ticket. Additionally, results do not support Hypothesis 3 (*p* = 0.202), and the relationship between perceived behavioral control and passengers' buying intention is non significant. In other words, there is not enough evidence to conclude that the feeling of being able to control choice of LCC or other airlines will affect passengers' buying intention toward LCCs. On the other hand, the results support Hypothesis 4 with a significantly positive relationship between perceived behavioral control and passengers' actual buying behavior (*p* < 0.01; and the regression coefficient is 0.159). This supported hypothesis indicates that the more passengers feel that they can control choice of LCC or other airlines the more likely they will actually buy a LCC ticket. Finally, Hypothesis 5 is also supported with a standardized regression coefficient of 0.845 (*p* < 0.01). This result indicates that passengers' buying intention has a positive impact on passengers' buying behavior, i.e. passengers who have a positive buying intention toward LCCs will more likely buy the ticket. Overall, the results show that passengers' attitudes toward LCCs and subjective norms have positively indirect impacts on the passengers' buying behavior through their buying intention, and passengers' perceived behavioral control has a positively direct impact on their buying behavior.

The results also indicate that attitudes toward LCCs and subjective norms account for 59.3% of variance in the passengers' buying intention, while perceived behavioral control and buying intention account for 86.6% of the variance in passengers' buying behavior. Thus, this model has a higher predictive power than the average predictive power of TBP studies as reported by Armitage and Conner (2001).

#### 5. Discussions and conclusions

The increasing air travel demand in Southeast Asia has driven the growth of LCCs in the region. Thailand and Philippines are

**Table 6**  
Confirmatory factor analysis, reliability, and convergent validity.

Factors	Items	Standardized factor loading	Cronbach's alpha	Average variance extracted	Composite reliability
Attitude (AT)	A1	0.862	0.870	0.8	0.898
	A2	0.923			
	A3	0.898			
Subjective norms (SN)	S1	0.888	0.862	0.788	0.852
	S2	0.948			
	S3	0.824			
Perceived behavior control (PBC)	PB1	0.752	0.815	0.735	0.883
	PB2	0.919			
	PB3	0.892			
Passenger buying intention (PBI)	BI1	0.904	0.892	0.831	0.954
	BI2	0.941			
	BI3	0.889			
Passenger buying behavior (PBB)	BB1	0.890	0.852	0.792	0.932
	BB2	0.898			
	BB3	0.882			

Fit indices: Chi square/df = 3; NFI = 0.969; GFI = 0.963; AGFI = 0.94; CFI = 0.979; RMSEA = 0.05.

**Table 7**  
Discriminant validity using Average Variance Extracted (AVE) method.

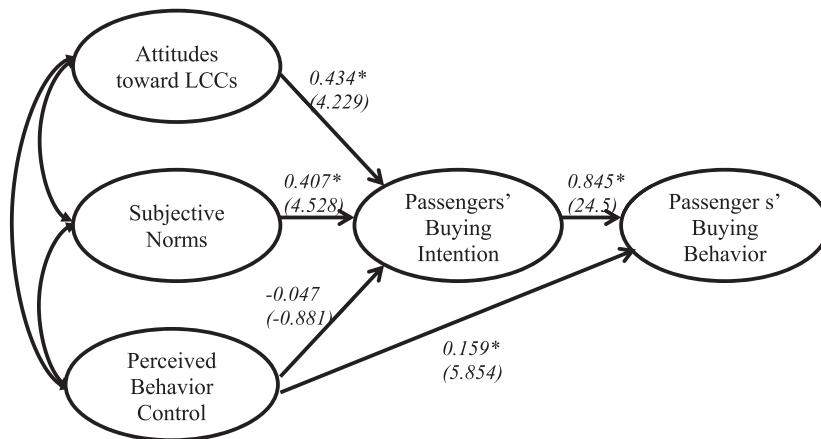
	AT	SN	PBC	PBI	PBB
AT	<b>0.8</b>				
SN	0.581	<b>0.788</b>			
PBC	0.451	0.292	<b>0.735</b>		
PBI	0.497	0.483	0.219	<b>0.831</b>	
PBB	0.535	0.538	0.304	0.786	<b>0.792</b>

Average variance extracted is shown on the diagonal of the matrix. Square of inter-construct correlation is shown off the diagonal.

considered key markets for the LCC segment (Teng and Perry, 2013). Thailand is a very friendly market for LCCs with a growing travel demand from the middle class, whereas other transportation options are very limited for the populated urban areas (Bland, 2014). While price seems to be an obvious reason for passengers to select LCCs, this is not the only factor influencing LCC passengers' buying decision. To gain a big and full picture of how LCC passengers in Southeast Asia intend and decide to choose LCCs as their transportation choice, it is also important to examine how their attitudes and behaviors toward LCCs drive their buying behavior. There is a

relative lack of successful explanation of the choice of LCCs in this region from the existing literature with only a few studies addressing topics like passenger satisfaction and perceptions of service quality; but these studies found inconsistent and contradicting findings regarding the impacts of these factors. This paper aimed at filling these gaps in the literature by examining attitude and behavioral factors and their effects on LCC passengers' buying intention and behavior. The research model was built based on the Theory of Planned Behavior (TPB) and a large-scale survey was collected in two major airports in Thailand to test the model.

Results show that passengers' attitudes toward LCCs and subjective norms have a positive impact on passengers' buying intention, whereas passengers' buying intention and perceived behavioral control have a positive impact on passengers' buying behavior. Hypothesis 1 is supported, indicating the positive impact of passengers' attitude on the buying intention. Specifically, if passengers have positive cognitions and emotions toward LCCs they will likely intend to choose LCCs as their travel mode. Research shows that Asian culture is more conservative in making risky decisions than Western culture (Weber and Hsee, 1999; Cheng, 2010). Due to that cultural difference, Asian customers tend to avoid risks and uncertainty when they make buying decisions



Fit indices: Chi square/df = 3; NFI=0.972; GFI = 0.966; AGFI = 0.943; CFI = 0.981; RMSEA = 0.05

\*p<=0.01; t-value is in parentheses

Fig. 3. Structural model: Hypothesis testing.

**Table 8**  
Summary of hypotheses testing.

Relationships	Standardized regression coefficients	t-value	p-value
Attitudes toward LCCs - > Passengers' Buying Intention	0.434	4.229	<0.01*
Subjective Norms - > Passengers' Buying Intention	0.407	4.528	<0.01*
Perceived Behavioral Control - > Passengers' Buying Intention	-0.047	-0.881	0.202
Perceived Behavioral Control - > Passengers' Buying Behavior	0.159	5.854	<0.01*
Passengers' Buying Intention - > Passengers' Buying Behavior	0.845	24.5	<0.01*

\*Relationships are significant at the significance level of 0.01.

(Quintal et al., 2010; Zheng et al., 2015). Since these passengers are not risk takers, their positive attitudes can be achieved through their perceptions, emotions, and previous travel experience.

Hypothesis 2 is also supported, indicating that subjective norms have a positive effect on LCC passengers' buying intention. Subjective norms include injunctive norms and prescriptive norms (Rivis and Sheeran, 2003). Due to the Asian culture, passengers in Southeast Asia tend to make the buying decision based on recommendations from family or friends, or observations that their family and friends have used and satisfied with the airline services. Once they receive positive recommendations from others and believe that most people use the service of LCCs, they will likely plan to use LCCs for their travel as well.

Hypothesis 3 is not supported, indicating that perceived behavioral control does not influence the buying intention. However, it is worthy to note that Hypothesis 4 is supported, indicating that perceived behavioral control positively influences the actual buying behavior. This is an interesting finding because it proves that passengers' perceived behavioral control has a direct effect on the actual buying behavior rather than an indirect effect through the buying intention. In consumer decisions, perceived behavioral control relates to financial control (whether the consumer can afford it) as well as availability and cognitive capability of making a choice (Ajzen, 2002, 2005; Cheng et al., 2011). Since LCCs in Southeast Asia offer low cost tickets with more availability than FSCs, when passengers feel they can afford the LCC services and have a full control of their decision they will move forward to actually buying the ticket instead of having to go through the planning as an intermediary step. This finding provides more useful and insightful information about Southeast Asian passengers' behaviors in the LCC market.

Finally, Hypothesis 5 is supported, thus confirming the positive relationship between the buying intention and buying behavior. This strong relationship (standardized regression weight is 0.845) indicates that once Southeast Asian passengers make a plan to use LCC services they will most likely go through with that plan and actually purchase the ticket. As discussed before, Asian customers tend to have a higher level of uncertainty avoidance than Western customers. According to Hofstede (1984), high uncertainty avoidance cultures also imply resistance to change. Unlike passengers in the Western regions, passengers in the Southeast Asia tend not to change their mind once they intend to use LCCs for their travel.

This paper has important theoretical and practical implications. From the theoretical perspective, this paper fills the gaps in the LCC literature by examining and proving the importance and effects of attitude and behavioral factors on passengers' buying intention and buying behavior toward LCCs in Southeast Asia. The results confirm that passengers' attitudes and subject norms have indirect positive impacts on the LCC actual buying behavior through the buying intention. In addition, the perceived behavioral control has been shown to have a direct effect on the LCC actual buying behavior instead of an indirect effect. In other words, the final model in this paper is slightly different from the traditional TPB model. This reflects different attitudes and behaviors of LCC passengers in

Southeast Asia in comparison with passengers in Western regions. These differences can be explained by the culture differences between two groups of passengers. Southeast Asian passengers tend to avoid uncertainty, and therefore they are more resistant to taking risks and changing decisions. These findings add useful and valuable insight to the LCC literature, which usually assumes airline passengers are homogenous and neglects the role of cultural differences. Passengers from different regions may have different attitudes toward LCCs and behave differently in the airline selection process. Cultural difference could be an important factor to be included in the TPB model for LCCs.

Additionally, the model has proved to have a very high predictive power compared to the average predictive power of TPB studies in the literature. From a database of 185 TPB studies, Armitage and Conner (2001) reported that on average attitudes, subjective norms, and perceived behavioral control accounted for 39% of variance in the behavioral intention, and perceived behavioral control and behavioral intention accounted for 27% of variance in the actual behavior. The results of this study show a much higher predictive power, with 59.3% of variance in passengers' behavioral intention is accounted by attitudes and subjective norms, whereas 86.6% of variance in passengers' actual buying behavior is accounted by perceived behavioral control and buying intention. The high predictive power of this model indicates its effectiveness in predicting the passengers' buying behavior in selecting LCCs in Southeast Asia.

From the practical perspective, this paper provides the LCCs in the region with useful information about passengers' attitudes and behaviors toward using LCC services, based on that they can form necessary strategies to attract more customers. Although the LCC market is driven by low cost tickets price is not the only factor that affects the passengers' intention and actual buying decision. Their attitudes toward LCCs depend on their perceptions on airlines' services and previous experience. These attitudes will drive them in the airline selection process. Accordingly, airlines should focus on improving the customer experience with their service to retain existing passengers, and, at the same time, enhancing their image and service quality to attract new passengers. In addition, recommendations and confidence from family members and friends have a tremendous effect on passengers' intention to buy LCC tickets. This finding suggests that airlines should have stronger promotional strategies to motivate references from existing passengers to new passengers. The direct impact of perceived behavioral control on the passengers' buying behavior indicates that in addition to offering affordable tickets airlines should enhance their ticket selling services, travel agency channels, and ticket cancellation policies to provide customers with convenience and confidence in ticket purchasing. When passengers have a strong perception that they have a full control of their choice of airlines and tickets, they will likely go ahead and book the flights. Last but not least, it is less likely that passengers in this region will change their mind in buying LCC tickets once they make a plan to do so. This will allow airlines to make a better prediction of their ticket sale numbers, and they should emphasize more on improving passengers' positive



attitudes and behaviors toward LCCs to ensure their business success.

This paper has some limitations. First, price was not included in the research model in spite of its role as the dominant driver in the LCC market. The reason is that since this paper focused mainly on attitude and behavioral factors, the inclusion of price may distort the effects of these factors. Although the absence of price may neglect the interaction between this factor and other factors, this decision allows us to have a clearer and more accurate evaluation of LCC passengers' attitude and behaviors and their effects on the passengers' buying intention and buying behavior. Second, due to the lack of attention on attitude and behavioral factors from the existing literature, the research model of this paper was developed and tested mainly based on the traditional TPB model instead of an expanded one. External factors such as service quality, airline image, safety consideration, booking convenience, and schedule were not considered. Nevertheless, for the same reason mentioned above, it was decided to exclude these factors to focus more on the importance of passengers' attitudes and behaviors. Additionally, the impacts of these factors are found to be inconsistent and contradicting in existing studies. A model with a high number of unreliable variables may result in less than satisfactory model fit, and the role of attitude and behavioral factors may be distorted by the presences of other variables. Finally, this paper focused on how LCC passengers' buying intention and buying behavior rather than comparing between LCC and FSC passengers. However, from the behavioral perspective, LCC and FSC passengers may not necessary behave the same way in the airline selection process. This may require two separate research models for these two types of airlines.

Future research should develop an expanded TPB model to examine LCC passengers' attitude and behaviors in conjunction with other external factors to capture the interrelationships among these factors and how they affect LCC passengers' buying behavior. Additionally, passengers' culture should be included in the model to capture how cultural differences of passengers in different regions may affect their buying intention and behavior. A comparison of the model between Asian passengers and Western passengers in selecting LCCs should be conducted to determine the variable importance distribution in these two regions. In addition, a similar model can be developed for FCS passengers to compare the attitudes and behaviors between passengers of these two carrier types. This could provide useful insight on how passengers' attitudes and behavioral factors may affect their intention to switch from one to another.

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