Using analytic network process to measure the determinants of low cost carriers purchase intentions: A comparison of potential and current customers

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ABSTRACT

The goal of this study is to use the analytic network process (ANP) approach to develop an evaluation model which prioritized the relative weights of determinants of low cost carriers (LCCs) purchase intentions between potential and current customers. A field study with 96 potential customers and 84 current customers of LCCs was performed. The results found some similarities and differences between potential and current customers with regard to the determinants of LCCs purchase intentions. With respect to the final weights of these determinants, both customer groups considered "reliability and image" to be the important factor that affects their intentions to purchase LCCs. Additionally, "price and convenience" received a higher weighting by potential customers, while current customers emphasized the importance of "employee services". The evaluation model and the results obtained using it provide a valuable reference for LCC managers who are seeking to facilitate effective customer relationship management.

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1. Introduction

Low cost carriers (LCCs) have reshaped the competitive environment of the airline marketplace and have had a significant effect on the evolution of airline networks, competition, and demand (Aydemir, 2012; Budd et al., 2014; Mason and Aladmari, 2007). Compared to traditional full-service carriers, LCCs have pursued simplicity (no free meals, economy seating), efficiency (Internet sales, strict baggage regulations) and high utilization of assets (standardizing airline fleet and cabins, flying point-to-point) to offer low fares (Chang and Hung, 2013; Huse and Evangelho, 2007). Like any other service industry, the sustainability of the LCC market share may depend mainly on customer purchase intentions (Akamavi et al., 2015; Kim and Lee, 2011; Saha and Theingi, 2009). Accordingly, LCCs can ensure long-term success by responding to the determinants of customer purchase intentions. Mahmoud and Hine (2013) also argued that potential and current customers of transportation services have different amounts of information and use different criteria for making purchase decisions. For LCCs, both initial sales to potential customers and repeat sales to current customers are critical for survival and long-term profitability. To our best knowledge, no study has been undertaken to evaluate the relative importance (weights) of determinants of LCCs purchase intentions between two customer groups — potential customers and current customers.

Previous studies have been conducted to identify the antecedents of customer purchase intentions in the context of LCCs. Some scholars have examined the role of price — convenience attributes (such as low ticket price and convenient booking channel) significantly affect customer intentions to travel via LCCs (Mikulic and Prebezac, 2011; O’Connell and Williams, 2005; Pearsona et al., 2015). Many studies have found evidence that external social support (e.g., positive word of mouth, mass media reports) (Kim and Lee, 2011; O’Connell and Williams, 2005; Saha and Theingi, 2009) and airline image (Chang and Hung, 2013; Yang et al., 2012) are important predictors of intentions to purchase LCCs. Also, other studies have argued that the behavior and performance of LCC employees, which includes the safety of each flight, friendly gestures, the sense of responsibility of the employees toward their work, and the attitudes of the employees toward helping customers, influence customer acceptance of LCCs (Chou, 2015; Fernando et al., 2012; Jiang, 2013; Nagar, 2013; Yang et al., 2012).

The literature has mentioned a broad range of factors that
influence customer intentions to purchase LCCs. Determining the most important influences on customer purchase intentions is crucial and helps LCC managers focus on factors with the highest weight and identify some guidelines to develop effective marketing strategies for initial and repeat sales. The evaluation of determinants of LCCs purchase intentions is potentially very complex due to the multitude of variables that influence the decision process (Kim and Lee, 2011). That is, how to evaluate the relative weights of these factors thus can be considered as a multiple-attribute decision making problem. Different methods can be applied to solve multi-criteria decision-making problems, such as analytic hierarchy process (AHP) and analytic network process (ANP) (Saaty, 1996). AHP is applied to solve the decision-making problem by modeling in a hierarchy, while ANP is used when interdependent relationships exist among decision criteria that cannot be modeled as a hierarchy. In the context of LCCs, customer purchase criteria may exert a mutual influence (for example improving in service efficiency of employees affects the airline image). Consequently, this study applies the ANP approach to evaluate the relative weights of determinants of LCCs purchase intentions between potential and current customers.

This study has two sub-objectives. First, based on reviewing the literature on the main factors that affect customer intentions to purchase LCCs, this study identifies sixteen critical factors and divided them into four dimensions: price and convenience, word of mouth, employee services, and reliability and image. Then this study uses the ANP approach to develop an evaluation model which prioritized the relative weights of determinants of LCCs purchase intentions. The second objective is to identify the perceptual gap between potential and current customers with regard to the evaluation of determinants of LCCs purchase intentions. By examining this gap, this study contributes to LCC managers by further identifying the important guidelines to facilitate effective customer relationship management.

2. Related studies for the determinants of LCCs purchase intentions

2.1. Determinants of LCCs purchase intentions

LCC market share and revenue depend on three things, which are attracting new customers, increasing sales to current customers, and retaining current customers. Hence, understanding the determinants of LCCs purchase intentions across different customer groups (potential and current customers) is critical to ensuring that customer services meet expectations. Studies have identified numerous attributes of LCCs services. For example, a case study by O’Connell and Williams (2005) demonstrated that customers are willing to choose LCCs primarily owing to their low fares. Other considerations that affect intentions to purchase LCCs include convenient flight schedule, the availability of an online booking channel, brand reputation and attractiveness of advertising. Saha and Theingi (2009) proposed a model of LCC service quality that includes tangibles, flight schedules, services offered by flight attendants and ground staff, and word of mouth, and found significant direct or indirect effects of all of these attributes on customer intentions to repurchase. Based on the SERVQUAL scale, Kim and Lee (2011) developed five dimensions of LCC service quality (such as tangibles, reliability, responsiveness, assurance and empathy), and examined the effects of these factors on both favorable behavioral intentions (word-of-mouth communication, purchase intentions and price sensitivity) and unfavorable behavioral intentions (complaining behavior). Mikulic and Prebezac (2011) identified the antecedents of the choice to purchase LCCs. They found that convenient flight schedule, experience of purchasing tickets, check-in efficiency, experience of flying, service reliability, price perceptions and airline image have significant effects on LCCs choice and loyalty.

Yang et al. (2012) also mentioned that service quality (especially in terms of reliability, tangibles, responsiveness and assurance), customer value and airline image are critical determinants of customer behavioral intentions towards LCCs. Chang and Hung (2013) determine that low fares, booking channel, airline image, on-time performance, and safety considerations are the factors that most strongly affect intentions to purchase LCCs. Jiang (2013) developed multiple attributes of LCC services (e.g., ticket prices, comfort and clearness seat, service efficiency, flight safety, on-time performance and courtesy of employees) and found that flight safety is the most important factor in the choice of LCCs, followed by ticket price and on-time performance. Nagar (2013) used four constructs (tangible features, schedules, services provided by ground staff, and services provided by flight attendants) to measure perceived service quality of LCCs and found significant relationships between these perceptions and customer satisfaction.

As shown in Table 1, several studies have been conducted to identify determinants of LCCs purchase intentions. The above studies made significant contributions to our understanding of the factors that significantly affect intentions to purchase LCCs, but more empirical studies are required to explore the relative importance of a comprehensive set of potential determinants of LCCs purchase intentions (Akamavi et al., 2015; Graham and Shaw, 2008; O’Connell and Williams, 2005; Wong and Musa, 2011). Additionally, the differences between decisions to purchase LCCs between potential and current customers warrant further discussion.

2.2. Potential and current customers

Mahmoud and Hine (2013) noted some significant differences in perceptions between potential and current customers with respect to indicators of transportation services. However, most relevant studies have examined only the determinants of the intentions of experienced customers (i.e. current customers) to purchase LCCs (Jiang, 2013; Mikulic and Prebezac, 2011; Saha and Theingi, 2009). Few studies have compared current customer perceptions of LCC services with those of non-experienced customers (i.e. potential customers) during the same period. Therefore, evaluating the relative weights of determinants of LCCs purchase intentions across different customer groups (potential and current customers) is meaningful. In practice, findings concerning potential customer perceptions of LCC services would be help LCC firms attract new customers and expand sales. Findings concerning current customer evaluations of LCC services would be help LCCs firm retain existing customers and boost customer satisfaction. Hence, this study will identify the perceptual gap between potential and current customers with respect to evaluations of determinants of LCCs purchase intentions.

3. Methodology

3.1. Research design

Since the determinants of LCCs purchase intentions have diverse significances and meanings, this study cannot assume each considered criteria to be equally important. Not only are the various factors that affect LCCs purchase intentions interrelated, but some of the sub-factors are also related to each other. These interactions create a complex model whose factors include both inner and outer dependence, and the application of hierarchical analysis cannot solve the problem. Therefore, instead of using the commonly used analytic hierarch process (AHP) approach to assess determinants of
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