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An investigation of key competitiveness indicators and drivers of full-service airlines using Delphi and AHP techniques

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ABSTRACT

The purpose of this study was to identify and prioritize the key competitiveness indicators and drivers of full-service airlines. To achieve this, the study used a two-phase, sequential exploratory mixed methods research that was initiated with a qualitative phase (Delphi technique), and followed by a quantitative phase (Analytic Hierarchy Process technique). The results of the qualitative phase revealed that full-service airlines need to pay attention to the 12 key indicators and 15 key drivers to evaluate and improve their competitiveness status, respectively. The key identified indicators include quality, safety, price, connectivity, timeliness, flight frequency, profitability, productivity, cost, market share, customer loyalty, and revenue growth, and the key identified drivers are including bargaining power of customers, bargaining power of suppliers, rivalry among existing competitors, government policies, physical resources, financial resources, human resources, technological resources, reputational resources, flight operations capabilities, engineering and maintenance capabilities, marketing and services capabilities, finance and property capabilities, personnel capabilities, and strategic alliances. Further, the results of the quantitative phase demonstrated that profitability is the most important key competitiveness indicator, closely followed by productivity. It was also found that generally bargaining power of customers is the most powerful key competitiveness driver, and followed by financial resources. However, the results revealed that the ranking of the key competitiveness drivers with respect to each indicator differs significantly. The findings of this research provide important implications for the evaluation and improvement of the competitiveness status of full-service airlines.

1. Introduction

Research on tourism competitiveness has received considerable attention in the recent years (Dwyer et al., 2004; Hudson et al., 2004; Ritchie and Crouch, 2003, 2000). To create a competitive tourism industry, the competitiveness of its constituent firms including full-service airlines should be enhanced, because as Porter (1990) stated they are firms that compete in international markets, no industries or nations. Furthermore, air transport is one of the pillars of The Travel & Tourism Competitiveness Index (Blanke and Chiesa, 2013). It is the most preferred form of transportation for most types of tourism, particularly long-haul destinations (Graham et al., 2008). Considering inbound tourism by mode of transport indicates that the use of air transport has been increased gradually in the recent years. While, in 2004 only 43% of international tourists selected air transport as their primary mode of travel, in 2013 slightly over half of travelers (53%) arrived at their destination by airlines (UNWTO, 2014, 2005).

Overall, the business models of airlines can be categorized into two types of full-service and low-cost (Eller and Moreira, 2014; Hunter, 2006). In contrast to low-cost airlines that "focus on cost reduction in order to implement a price leadership strategy on the markets they serve" (German Aerospace Center DLR, 2008, p. 8), full-service airlines "focus on providing a wide range of pre-flight and onboard services, including different service classes and connecting flights" (German Aerospace Center DLR, 2008, p. 5). Full-service airlines are established from former national carriers, but their ownership structure varies among different countries. While there are many fully privatized full-service airlines in USA, most of African and Asian countries only have one state-owned full-service airline. On the other hand, European countries include a diverse spectrum of full-service airlines, from completely privatized to partially privatized to state-owned (Vidović et al., 2013).

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Despite the key role of full-service airlines to create a prosperous and successful tourism industry (Gunn, 2002; Middleton and Clarke, 2001), they are now faced with fierce competition among themselves due to the quick increase in fleet size and flight frequency resulted from deregulation and liberalization (Austria, 2000; IATA, 2011). In addition, as Citrinot and Bailey (2006) argued there are some signals that airline market has reached its maturity, such as increased competition from full-service airlines on mutual routes and tough competition resulting from the entries of low-cost airlines.

Despite of several studies concerning the airline competitiveness, such as Chang and Yeh (2001), Lee et al. (2005), and Torlak et al. (2011), there has not been conducted any research on the key competitiveness indicators and drivers of full-service airlines to help full-service airlines faced with numerous competitive challenges to know how to evaluate and improve their competitiveness status. Hence, this research was aimed to identify and prioritize the key competitiveness indicators and drivers of full-service airlines.

2. Competitiveness indicators

Indicator is "a quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect changes connected to an intervention, or to help assess the performance of a development actor" (OECD/DAC, 2010, p. 25). In the context of airline industry, competitiveness indicators refer to those factors that indicate the competitiveness status of an airline in comparison with its competitors. Through informing full-service airlines of their competitiveness position, these indicators provide a rational foundation towards the enhancement of full-service airlines competitiveness.

To identify the competitiveness indicators of full-service airlines, two sources were used: definitions of firm competitiveness and past studies concerning airline competitiveness. How competitiveness is evaluated depends on how it is defined (Belkacem, 2002), so the identification of indicators for evaluating competitiveness depends on the definitions of competitiveness. Since the focus of this paper is competitiveness at the firm level (full-service airlines), only the definitions of firm competitiveness that describe the concept of full-service airlines competitiveness were reviewed. Additionally, there have been several studies conducted by the researchers as well as the practitioners that focused on the evaluation of airline competitiveness. The competitiveness status of full-service airlines can be measured in terms of some indicators, such as efficiency (Assaf and Josiassen (2011), Joo and Fowler (2014), Hannigan et al. (2015), Li et al. (2012), Mallikarjun (2015), Tavassoli, et al. (2014), Wu et al. (2013, 2011)); effectiveness (Tavassoli et al. (2014)); operation scale (Li et al. (2012), Wu et al. (2013, 2011)); financial situation (Li et al. (2012), Wu et al. (2013)); safety level (Li et al. (2012), Vlachos and Lin (2014)); price (Chua (2015), Fageda et al. (2011), Huettinger (2013), Vlachos and Lin (2014)); quality (Mellat Parast et al. (2015), Mellat Parast and Fini (2010), Wang and Wu (2013), Wu et al. (2013)); productivity (Mellat Parast and Fini (2010), Jenatabadi and Ismail (2014), Wang et al. (2014)); cost (Eller and Moreira (2014), Forsyth and Dwyer (2010), Mellat Parast and Fini (2010), Wang et al. (2014)); profitability (Jenatabadi and Ismail (2014), Mellat Parast and Fini (2010)); loyalty (Vlachos and Lin (2014)); on-time performance (Vlachos and Lin (2014)); flight frequency (Jenatabadi and Ismail (2014), Vlachos and Lin (2014)); schedule (Vlachos and Lin (2014)); internationality (Wu et al. (2011)); market share (Jenatabadi and Ismail (2014), Wu et al. (2011)); and revenue (Jenatabadi and Ismail (2014)). Table 1 displays the identified indicators and their operational definitions and references. Nonetheless, they are validated through a third source, i.e. interviewing with airline experts, as illustrated in section 5.1.

3. Competitiveness drivers

Driver is defined as "people, knowledge, and conditions (such as market forces) that initiate and support activities for which the business was designed" (WebFinance, Inc., 2015, "Business Drivers"). In the context of airline industry, competitiveness drivers refer to those factors that drive the overall competitiveness of an airline by improving the competitiveness indicators. In fact, competitiveness drivers are the most influential factors by which full-service airlines can outperform their competitors and enhance their excellence and viability in the long-term.

The competitiveness of full-service airlines can be improved by some drivers, such as strategic alliances (Amankwah-Amoah and Debrah (2011), Casanueva et al. (2014), Huettinger (2013), Ramón-Rodríguez et al. (2011), Uddin and Akhter (2011)); human resources (Jenatabadi and Ismail (2014), Vlachos and Lin (2014), Wu et al. (2013, 2011)); exchange rate (Forsyth and Dwyer (2010)); aircraft (Eller and Moreira (2014), Vlachos and Lin (2014)); frequent flyer programs (Vlachos and Lin (2014)); reputation (Vlachos and Lin (2014)); inflight food & drinks (Vlachos and Lin (2014)); advertising (Jenatabadi and Ismail (2014)); gross domestic product (Jenatabadi and Ismail (2014)); inflation rate (Jenatabadi and Ismail (2014)); national culture (Huettinger (2013)); government policies (Amankwah-Amoah and Debrah (2011), Huettinger (2013), Wang and Wu (2013)); market liberalization (Amankwah-Amoah and Debrah (2011), Huettinger (2013)); management (Eller and Moreira (2014), Wang and Wu (2013)); scarce resources (Amankwah-Amoah and Debrah (2011)); investment (Wang and Wu (2013)); intangible resources (Pearson et al. (2015)); and network characteristics (Eller and Moreira (2014)).

To identify the competitiveness drivers of full-service airlines in this research, typical theories on firm competitiveness were reviewed with focusing on two dominant theory streams, namely the market-based view (MBV) and the resource-based view (RBV). However, like indicators, the identified drivers are also validated through a third source, i.e. interviewing with airline experts, as illustrated in Section 5.1.

The market-based view of the firm competitiveness believes that a firm can find its competitive advantage by considering the market conditions. Accordingly, the position of company in the market is the determinant factor of its success. It focuses on opportunities and threats in the markets and its approach is outside-in. The market-based view is formed based on the structure-conduct-performance (SCP) paradigm, and Porter's models, including five competitive forces model, competitive strategies, value chain model, and diamond model (Porter, 1990, 1985, 1980). Among them, the five competitive forces model explains how the competitiveness of firms in a given industry depends on the five market forces, as illustrated in Table 2. Many researchers recognized the contribution of Porter's models and frameworks by applying them within the airline industry, such as Albers et al. (2005), Kilinc et al. (2012), Lau (2009), Narangajavana et al. (2014), Nataraja and Al-Aali (2011), and Nhuta (2012). Therefore, the first group of competitiveness drivers or external drivers of full-service airlines consists of the five market forces proposed by Porter (1980).

On the other hand, the resource-based view of the firm competitiveness believes that a firm can attain competitive advantage by implementing its valuable resources and capabilities (Rumelt, 1984; Wernerfelt, 1984). Resources are those assets connected to the firm semi-permanently (Maijoor and Witteloostuijn, 1996; Wernerfelt, 1984). They refer to "the inputs into the organization's value chain" (Javidan, 1998, p. 62). On the other side,