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A quantitative means of comparing competitive advantage among airlines with heterogeneous business models: Analysis of U.S. airlines

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ABSTRACT

Increasing heterogeneity amongst airline business models makes objectively comparing their competitive advantage increasingly difficult. In this study, we develop an instrument that objectively quantifies the competitive advantage of airlines within a single market, the US. The data sample includes nine US airlines with product and financial data gathered from 2011 to 2013. The consolidated data enable the calculation of a product index and a cost index. The product index incorporates four sub-indices (revenue, connectivity, convenience and comfort), while the cost index incorporates three sub-indices (unit cost, aircraft and labour). The developed model enables the identification of the hybrid business models that are successfully pursuing an integrated cost leadership and differentiation strategy. The results also confirm that competitive heterogeneity exists whilst demonstrating that competitive advantage can be mutually exclusive to the respective airline's strategic proposition.

1. Introduction

Academic studies have demonstrated that airline business models are diverging from the two homogeneous strategic archetypes (e.g., Jean and Lohmann, 2016; Lohmann and Koo, 2013). This new level of competitive heterogeneity amongst airlines challenges Porter (1985) original competitive advantage (CA) theory, which stated that firms could either compete on the basis of cost or differentiation. In the airline context, the Laker Airways example from the 1980s demonstrates the risks of pursuing both a cost and differentiation strategy. Skipping forward three decades, the airline industry is now served by a spectrum of airline business models that compete both regarding cost and differentiation.

For example, JetBlue, an airline identified by academics as presenting a 'hybrid' business model proposition (Dostaler and Flouris, 2006), maintains a mission to offer a differentiated product at a cost-effective price. Their pursuit of an integrated strategy suggests that an airline can compete both regarding product and cost. Firms that pursue an integrated strategy are considered to be more adaptable to shifting macroeconomic and microeconomic conditions.

Competitive heterogeneity has made comparisons between airlines increasingly more difficult. Without distinct cost or product advantages, CA stems from overall value creation, which is achieved primarily through innovations or technology in the supply chain (Holloway, 2008). Comparing traditional key performance indicators (KPIs) such as cost per available seat mile (CASM) and revenue per available seat mile (RASM) in isolation is currently considered ineffective. Instead, a holistic assessment of both the airline and the market is required to identify value created and thus overall CA.

This paper aims to conceptualise an instrument through which CA can be quantified and thus compared among airlines with heterogeneous business models. The conceptual model assumes that competitive heterogeneity exists within the airline industry. An instrument that measures CA is beneficial to airline managers at a strategic level. The paper also considers the hypothesised integrated cost leadership and differentiation strategy (integrated strategy), developing a technique by which the results can be applied to the 'airline realised business strategies' model. This model was originally conceived by Dostaler and Flouris (2006), enabling the identification of successful integrated strategies.

2. Literature review

2.1. Strategic context

2.1.1. Airline business models

Early airline strategy literature recognised that airlines follow Porter (1985) CA model. The traditional strategy included pursuing either a cost leadership strategy (low-cost carrier – LCC model or 'Southwest model' original proposition) or a differentiation strategy (full-service network carrier – FSNC model). Alamdari and Fagan (2005) noted that LCCs started to diverge from the traditional LCC

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model by offering additional products and services. Button and Ison (2008) and Button (2012) cast doubt over the sustainability of the pure LCC business model. This divergence from the LCC archetype has been described as hybridisation. Airlines such as JetBlue openly state that their strategy is to pursue a hybrid business model. The 'JetBlue Experience' offers a differentiated product at a cost-effective price (JetBlue Airways Corporation, 2014). Dostaler and Flouris (2006) hypothesised that hybridisation could be considered an integrated cost leadership and differentiation strategy.

The Airlines-within-airlines (AWA) model is a strategic response by FSNCs to combat the rise of LCCs. The AWA model enabled FSNCs to pursue a cost leadership or focus strategy by operating a portfolio of airlines in various market segments (Graham and Vowles, 2006). As discussed by Whyte and Lohmann (2015), the Jetstar portfolio of five airlines, owned mostly in part by Qantas, remains one of the most successful examples of AWA. The AWA model ended in the United States following the discontinuation of Ted in 2009; however, it continues to be successful throughout both Europe and the Asia-Pacific region, which jointly account for over 90% of worldwide AWAs (Pearson and Merkert, 2000). The vulnerabilities to an FSNC by pursuing an AWA strategy are discussed by Gillen and Gados (2008).

Charter airlines can be defined as an 'airline that provides point-to-point services to popular holiday and leisure destinations, often as part of an inclusive tour (also known as a package tour)' (Whyte and Lohmann, 2017, p. 113). Charter airlines can be considered another business model that tends to conform to the homogeneity of LCCs but operates with a focus strategy.

Of the business models currently in play, hybridisation, AWAs and charter airlines are all strategic responses to the heterogenic competitive landscape within the industry. Although the traditional business models still exist as a benchmark, the degree of conformity to those archetypes now varies through a phenomenon referred to as business model convergence (Daft and Albers, 2013, 2015).

2.1.2. Conceptualising airline business model convergence

Alamdari and Fagan (2005) demonstrated that contemporary LCCs were diverging from the traditional LCC archetype. They identified Ryanair and Easyjet as the airlines that conformed most closely to the original LCC model, but even those two maintained only 79% conformance (Alamdari and Fagan, 2005, p. 384). Tsoukalas et al. (2008) and Belobaba et al. (2009) further demonstrated that FSNCs are also diverging from the traditional FSNC archetype. Their studies also demonstrated a narrowing of unit costs between US-based LCCs and FSNCs during the period between 1995 and 2006. This continued divergence from both strategic propositions is now collectively known as 'airline business model convergence' (Daft and Albers, 2013, 2015). Traditionally, business model convergence represents a weakening in an airlines' strategic position; however, 'convergence also has positive effects if it reflects the diffusion of efficient processes and practices among firms' (Daft and Albers, 2013, p. 47). Airline business model convergence has raised questions regarding the possible existence of an integrated cost leadership/differentiation strategy (see Fig. 1).

2.1.3. Integrated cost leadership/differentiation strategy

Porter (1985) CA literature considers the risks associated with being 'stuck in the middle' and identifies Laker Airways as the classic example. Dostaler and Flouris (2006) revisited Porter's theory and introduced the concept of an 'integrated cost leadership/differentiation strategy' in an airline context, or put more simply, the 'best cost-provider'. As described by Dostaler and Flouris (2006), an integrated strategy is achieved by creating value through optimising the trade-off between product and cost. For that reason, this model has also been referred to as the 'trade-off model'. Dostaler and Flouris (2006) draw on the more recent works to create a case for an integrated strategy. They propose a simple, objective method for measuring an airlines' effectiveness with this strategy (referred to as the 'airline realised business strategies' model). Although it proposes a simple method for joint comparison of cost versus differentiation, this model is limited in that it stops short of providing a method of quantifying cost and differentiation for the purposes of comparison.

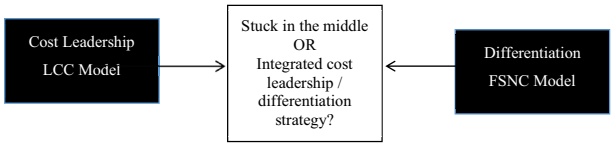

Fig. 1. Business model divergence from homogeneous strategic archetypes. Adapted from Dostaler and Flouris (2006).

Although a method to determine cost and differentiation for comparison is not presented by Dostaler and Flouris (2006), other authors have created relevant methods that can be adapted to this model. Pearce and Smyth (2006), Tsoukalas et al. (2008) and Belobaba et al. (2009) all apply the delineated unit cost method for a cost model comparison between airlines. In this method, the unit costs of the respective airlines are corrected for labour costs, fuel costs, distribution costs, transport-related costs and other related infrastructure costs. The actual delineation technique applied by the aforementioned authors is dependent upon the accounting policies of the airlines being compared. Methods for differentiation comparisons have been developed by Lohmann and Koo (2013), building on the work of Mason and Morrison (2008). Currently, holistic methods for comparing airline business models within the literature have been shown to be both qualitative and quantitative.

2.2. Academic techniques for comparing airline business models

2.2.1. Qualitative techniques

A qualitative analysis of business model convergence was conducted by Jarach et al. (2009). Their case study analysed survey results from senior executives from six European airlines. The consensus among the respondents was that all airlines, regardless of their business model, were competing for the same passengers. Business travellers were considered to be the most lucrative client base, and the LCC respondents were willing to offer greater flexibility to secure their business. Therefore, despite their lack of quantitative data, these results are important, as they highlight a series of conscious decisions made by airline managers to strategically shift their business model.

Using O'Connell (2007) template, Pearson et al. (2015a,b) assessed the strategic capability of 22 Asian FSNCs to compete with LCCs. Although using a quantitative approach through the use of mathematical formulae, the data set is qualitative, as it uses senior managers' responses to 74 questions posed by the researchers. This qualitative methodology is endorsed by IATA as an effective tool for measuring strategic capability, as it enables comparisons between airlines with non-homogenised financial reporting practices. Effective comparisons can thus be made between airlines based in different countries as well as airlines owned privately or by the government that choose not to report specific financial data. Where homogenised financial data is available, quantitative methodologies can effectively be employed.

2.2.2. Quantitative techniques

The application of quantitative methodologies for business model comparison mitigates the subjective results that are attained through the aforementioned qualitative survey methods. However, a quantitative business model analysis using financial data is not without risk, as emphasised by Karwowski (2016). Differing accounting policies between airlines can skew the results. The following three quantitative methods, which rely on homogenised financial data, are worthy of note.

Mason and Morrison (2008) examined the product and organisational architecture (POA) of six European LCCs from 2005 to 2006. Product architecture identifies three components of service quality: