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# Long-haul low cost airlines: Characteristics of the business model and sustainability of its cost advantages



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### A R T I C L E I N F O

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## ABSTRACT

Existing academic literature is inconclusive about characteristics and viability of the long-haul low cost airline business model, whereas several airlines of this type are emerging. This article aims to validate its defining characteristics by clustering a sample of 37 transatlantic airlines using principal component and hierarchical cluster analyses along a newly constructed long-haul airline business model framework. To contribute to the evaluation of business model viability, cost differences between clusters are uncovered subsequently followed by a discussion of their sustainability. Key findings include the characterization of the emerging long-haul LCC business model and its significant differences from existing legacy hub and leisure carrier models. On a cluster average, 33% lower unit costs compared to legacy hub carriers were identified, of which 24 percentage points were evaluated as sustainable.

#### 1. Introduction

Low cost carriers (LCCs) such as Ryanair and Southwest Airlines have revolutionized short- and medium-haul<sup>1</sup> airline markets across the world since the 1990s. The validity of the business model is proven practically through higher profitabilities (cf. Corbo, in press). Additionally, many academic studies of short-/medium-haul LCCs were conducted, which agree on common underlying principles of the business model (cf. Fu et al., 2011; de Wit and Zuidberg, 2012; Cho et al., 2015; Fageda et al., 2015; Fu et al., 2015).

LCCs that target long-haul markets (i.e., flights with stage lengths longer than 4000 km) are a more recent phenomenon. Since the 2000s, carriers of this type have emerged in the Asia-Pacific region, foremost AirAsia X in 2003 and Jetstar in 2007. Since 2015, this type of airline has also emerged in the North Atlantic market, for example Eurowings long-haul, Norwegian long-haul, Westjet long-haul and Wow air. Existing academic literature is inconclusive about the defining characteristics of the long-haul LCCs (cf. Morrell, 2008; Daft and Albers, 2012; De Poret et al., 2015; Whyte and Lohmann, 2015). Evenly important, there is no consistent view of the economic viability of long-haul LCCs. For example, Moreira et al. (2011) state that the "viability of long-haul LCC operations must be highly questionable". On the other hand, Daft and Albers (2012) note that "regular low cost, long-haul operations are possible if the traditional full-service carrier product is effectively unbundled and suitable trunk routes can be identified.".

To fill this gap in the literature, this paper aims to validate the defining characteristics of the long-haul LCC business model. To this end, we adapt and enhance an existing airline business model framework. This framework builds the foundation for the subsequent clustering of airlines using principal component and hierarchical cluster analyses. Furthermore, to contribute to the discussion on long-haul LCC business model viability, average stage-length adjusted cost differences between clusters are compared. The sources of cost advantages and their sustainability are discussed in further detail.

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<sup>&</sup>lt;sup>1</sup> For the purpose of this paper, short- and medium-haul operations include flights with stage lengths up to 4000 km as defined by Eurocontrol (2005).

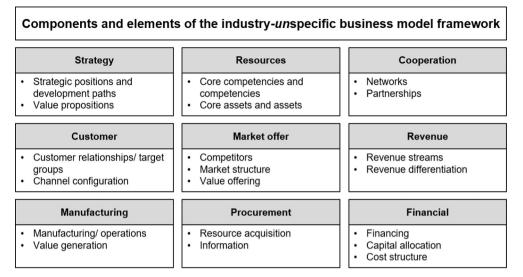


Fig. 1. Components and underlying elements of the industry-unspecific business model framework, adapted from Wirtz et al. (2016).

Besides the academic novelty, there is also practical relevance for this study. Airline managers are monitoring the contemporary long-haul LCC development closely, as the entries of LCCs into the short-/medium-haul market in the 1990s and 2000s have lowered profitability of many legacy hub carriers or forced them to restructure (Franke, 2004). Policy makers need to be aware of shifts in long-haul growth away from primary to secondary airports, for example. This knowledge is key to re-evaluate infrastructure policies and allocate resources early on.

This paper is structured as follows: Section 2 presents a review of previous studies on airline business model frameworks and on long-haul LCCs. Section 3 reasons the focus on the North Atlantic market, Section 4 introduces the methods used to determine the business model clusters and to evaluate cost differences. Section 5 presents and discusses the results of the two analyses. Section 6 concludes this paper and suggests further research.

#### 2. Literature review

This section begins with a comparison of existing airline business model frameworks, followed by a review of previous studies that examined the phenomenon of long-haul LCCs including their cost characteristics.

#### 2.1. Previous studies on airline business model frameworks

Research on business models has become an important aspect for both academia and management with the purpose to accurately describe a company's value generation system with a manageable number of components (Wirtz et al., 2016). In this study, we aim to structurally analyze and cluster different airlines using this business model approach. As we intend to leverage existing airline business model frameworks, we reviewed existing industry-specific frameworks in this section. Furthermore, we related these frameworks to the latest research on industry-unspecific business model research to ensure that the frameworks cover the value generation system exhaustively.

Wirtz et al. (2016) summarize the current state of general, industry-unspecific, research on business models and provide a framework summarizing the findings of previous studies. Fig. 1 depicts this framework with strategic components *Strategy, Resources,* and *Cooperation,* market components *Customer, Market offer, Revenue,* and operations components *Manufacturing, Procurement,* and *Financial.* Underlying elements of each component are summarized beneath the component name within each of the boxes.<sup>2</sup>

From an industry-specific perspective, two different airline business model frameworks have been developed and applied or enhanced several times, as indicated in Table 1. Mason and Morrison (2008) developed the *Product and organizational architecture* framework, which was enhanced by Lohmann and Koo (2013) and Jean and Lohmann (2016). This framework differentiates between the product and the organizational architecture of an airline. The product aspect contains service quality elements that relate the product to consumer preferences, namely connectivity, convenience, and comfort. The organizational architecture describes the vertical structure, production and distribution/sales elements (Mason and Morrison, 2008).

The second key airline-related framework stems from Daft and Albers (2013) and was applied and enhanced by Daft and Albers (2015). It differentiates between *corporate core logic, configuration of value chain activities,* and *assets.* 

To evaluate which of the existing frameworks is closest to the industry-unspecific framework, we allocated elements from Mason

<sup>&</sup>lt;sup>2</sup> To harmonize nomenclature from different authors, this work describes over-arching dimensions of the framework as *components* and underlying, more descriptive dimensions as *elements*. Individual variables within these elements are referred to as *items*.

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