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Discussion of the concepts underlining the source of competitive advantage of modern commercial airlines

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Abstract
The article examines the most prominent theories of strategy, business models and competitive advantage and their applicability to the current situation in the commercial airline industry. The purpose of the article is to explain the basic concepts of strategic management using the example of a very crisis-prone (e.g. COVID-19, geopolitical instability) but socially important industry of civil aviation. Finally, we visualise the strategic concepts discussed and provide ideas for future research on competitive advantage and strategy in commercial airlines.

Keywords: commercial aviation, ancillary revenue, ancillary services, company competitiveness, resource-based view, strategic analysis.

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现代商业航空公司竞争优势的基本概念回顾

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简介
文章回顾了最著名的战略、商业模式和竞争优势理论及其对商业航空业现状的适用性。本文旨在以一个具有重要社会意义的经济部门--民航为例，揭示战略管理的主要概念。 对所讨论的战略概念进行了形象化，并就竞争优势和商业航空公司战略这一主题的未来研究提出了建议。

关键词： 商业航空、额外收入、额外服务、公司竞争力、资源方法、战略分析。

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At the outset, it should be noted that the commercial aviation industry is very crisis-prone, and therefore the macro environment is driving business decisions to increase the revenue and profitability of airlines not only in Russia, but all over the world. For the most of the 21st century, commercial airlines have been battling multiple crises, each more damaging than the last. It is clear that the COVID-19 pandemic was the most impactful crisis the industry has ever experienced, with total international airline revenue falling by more than 50% in 2020 compared to the pre-pandemic

2019[1]. It is obvious that the macro environment has really shaped the aviation industry in general and, clearly, the business models and sources of competitive advantage by which it operates.

For most of its history the commercial airline industry has struggled through one crisis after another. Moreover, according to M. Porter, the commercial airline business is extremely competitive, with low profit margins and a large number of competitors [Porter, 1996]. Thus, this makes it even more difficult to adapt current business practices to the new realities of the changing world order. The most significant of these are those related to public health, economic conditions and geopolitics. Only in the 21st century has the airline industry been hit by at least three major global 'black-swan' events that have derailed the growth process.

The problem of business strategy in the airline industry is therefore very interesting. The discussion addresses the question of how airlines create their competitive advantage from the perspective of the fundamental strategic concepts of 'cost leadership' vs. 'differentiation' [Porter, 1996] and the internal environment analysis approach of the resource-based view (RBV) [Barney, 1991; Grant, 2018].

It then examines the theory of the commercial airline industry itself and previous research on airline competitive advantage to see if it can be applied to the basic approaches considered above. For this part, reference is made to the works of the professors of the University of St. Gallen – A. Wittmer, R. Mueller, T. Bieger. In particular, their book [Wittmer et al., 2021], which is regarded as an almanac for all things related to the business of commercial aviation.

Let's start by defining competitive advantage as a wide range of activities that make up the development, sale and distribution of products or, in our case, services. However, the biggest question of how to do this is still being debated by managers and researchers in many different industries, particularly the commercial airline industry.

When researchers talk about competitive advantage, they usually refer to the famous business strategist – Michael Porter. Therefore, key concepts, derived from this author's work need to be established for this article. In his work 'What Is Strategy?', Porter provides some key insights that are necessary for our discussion. First and foremost, companies must pursue operational efficiency to remain competitive. Operational effectiveness, in the words of Porter, is 'doing similar activities better than competitors do them' [Porter, 1996]. Efficiency contributes to, but does not complete, operational effectiveness. Operational effectiveness includes those practices that enable an organisation to make the best use of its resources, for example, airlines can reduce in-flight service costs or reconfigure the fleet composition to have a single type of aircraft. There are huge differences in the operational effectiveness of companies: some are better at motivating their staff, others are better at using modern technology. These differences are a key source of profitability between competitors as they have a direct impact on cost positions.

Continuous improvement in operational effectiveness is very important for superior earning results, Porter argues, but it is not sufficient most of the time. Practices that underpin in operational effectiveness are easily copied and imitated by competitors. New management techniques, for example, are now often adopted by other companies, no doubt with the help of consultants. Modern technologies are increasingly available and companies are adopting them, following the example of their competitors. As a shining example, over the past decade Russian commercial airlines have adopted comprehensive IT services, from high-quality websites to mobile applications and chat bots. Initially, this took a lot of the cost out of ticket distribution, but as the practice became more commonplace in the industry, its ability to differentiate the company from its competitors diminished.

This brings us to Porter's second argument about the inadequacy of operational effectiveness. The author calls this 'competitive convergence,' which means that companies are becoming largely indistinguishable from each other [Porter, 1996]. The problem surely lies in the very idea of benchmarking, and the more organisations do it, the more similar they become. Therefore, competition based on operational efficiency leads to progress in absolute terms, but almost no improvement in relative terms.

At this stage of the industry's development, the question of profitability and operational efficiency is of paramount importance. But from a strategic perspective, companies are looking for a sustainable competitive advantage [Wittmer et al., 2021]. In simple terms, Porter's definition of sustainable competitive advantage is 'doing different activities or doing similar activities in different ways.' In the case of commercial airlines, the second scenario is more applicable – doing similar activities but doing them slightly differently.

Let's look at the strategy of modern commercial airlines through the prism of the Resource-Based View (RBV), which defines the path to sustainable competitive advantage in a very comprehensive way. The highest theoretical impact is provided by the acclaimed works of J. Barney 1991–2001 on the Resource-Based View. R. Grant [Grant, 2018] also contributes to the theory of RBV, which is used in the research. From this literature, the Resource-Based View approach is considered as an analysis of the organisation's resources, including: tangible, intangible and human; capabilities of different functional areas, such as: corporate functions, operations, information management, marketing, sales and distribution and service. Therefore, with this theoretical background, it is assumed that resources and the right combinations of these resources create capabilities. These capabilities create 'core capabilities,' which in their turn lead to a competitive advantage. Returning to Porter, an organisation's competitive advantage contributes significantly to its performance [Porter, 1996].

Let's take a closer look at these theoretical concepts in more detail. In this article, resources are defined as 'productive assets owned by the firm' [Grant, 2018]. These resources can be categorised as tangible, i.e. financial and physical assets

[1] Effects of Novel Coronavirus (COVID-19) on civil aviation: Economic impact analysis (2022). Montreal, ICAO. https://www.icao.int/sustainability/Documents/COVID-19/ICAO%20COVID-19%20Economic%20Impact_2022%2008%2012.pdf.

that can be measured. For example, an airline's physical resources include aircraft, airport concessions and other facilities. The next category is intangible resources, which are much harder to measure and include customer loyalty, brand image and, of course, corporate culture. And last but not the least, there are human resources, which include the skills, training, experience and efforts of a company's employees. In fact, for commercial airlines, this type of resource is extremely important, especially for the front-line staff who interact directly with passengers.

As Grant suggests, 'resources alone are not productive,' so they need to be combined and mixed in order to form capabilities or, interchangeably, competences. In essence, if a company were to look at capabilities as they are, it would eventually end up in the 'competitive convergence' mentioned above. To avoid this, a concept of 'core competencies' is needed, as introduced by [Hamel, Prahalad, 1989; 1993]. 'Core competencies' are those competencies and capabilities that can create a competitive advantage when properly integrated into the strategic (or business) model.

When considering the importance of resources and capabilities and their potential to be a 'core competence,' the 'VRIO Framework' proposed by [Barney, 1995] is used. The name of the framework is an acronym that stands for Value, Rarity, Imitation, Organisation. The idea behind the framework is to draw conclusions on four key questions: 'Do the resources/capabilities add value?', 'How rare are these resources/capabilities?', 'Is imitation of these resources/capabilities difficult or costly?' and 'Does our organisation make full use of these resources/capabilities?'

Again, as suggested by both Grant and Porter, a sustainable competitive advantage is achieved through the right fit between a core competency and a strategy model. In fact, classical business strategies or sources of competitive advantage are defined by [Porter, 1996]. As we shall see, the classic 'cost leadership' and 'differentiation' strategies fit very well into the most popular 'low-cost' and 'full-service' business models of commercial airlines.

Now to the question of commercial airline business models. Clearly, the differentiation of business models and strategies began long before the COVID-19 pandemic. The liberalisation of the airline industry markets in the US in 1978, which then spread to the rest of the world [Doganis, 2010], created an opportunity for new faces to enter the market. These new players had a very different way of doing business – the low-cost model.

Comprehensive definitions of the two main business models are provided by the professors at the University of St Gallen in Switzerland – A. Wittmer, R. Müller, T. Bieger. In their book, 'Aviation Systems. Managing the Integrated Aviation Value Chain. Second Edition' (2021), the authors define 'full-service network carriers' (FSNC) and 'low-cost carriers' (LCC). First, full-service airlines are those whose strategy is based on 'hub and spoke' networks, a strong brand and prestige service levels. It is important to note that these airlines are usually members of an alliance and tend to focus on business travellers who require premium service and good flight connections [Wittmer et al., 2021]. Second, by definition, the low-cost carriers have traditionally pursued a 'cost leadership' strategy [Porter, 1996]. These companies offer point-to-point networks with limited service levels in order to reduce costs. Moreover, they do not usually participate in any alliances and put a strong focus on dominating specific routes [O'Connell, Warnock-Smith, 2013]. In addition, LCCs have a more uniform fleet of aircrafts, as can be seen from the way *Ryanair* and *Pobeda* operate. They fly only the Boeing 737-8 family, have higher seat densities and, crucially, unbundled fares with ancillary services offered for a fee [Magdalin, Bouzaima, 2021].

Interestingly, researchers have found that some representatives of low-cost carriers have adopted some of the characteristics of the full-service carriers [Lohmann, Koo, 2013] and some FSNCs have also started to use some of the low-cost carriers' solutions to stay competitive, especially the selling of ancillary services. The question arises as to why the full-service carriers would start to drift towards low cost practices.

A study [Fontanet-Pérez et al., 2022] concluded that lowest-fare and lowest-cost models were more stable and successful than full-service strategies in the face of the unexpected crises that the entire industry is constantly facing. The five years leading up to the last major pandemic crisis can be characterised by steady growth in demand. This allowed the commercial airlines to comfortably increase their profitability and the differences were not necessarily due to business models. It was only when the crisis hit that the discrepancies became apparent. The data suggest that having lower operating costs gives an advantage in a situation of sudden drop in demand and therefore opportunities to generate revenue.

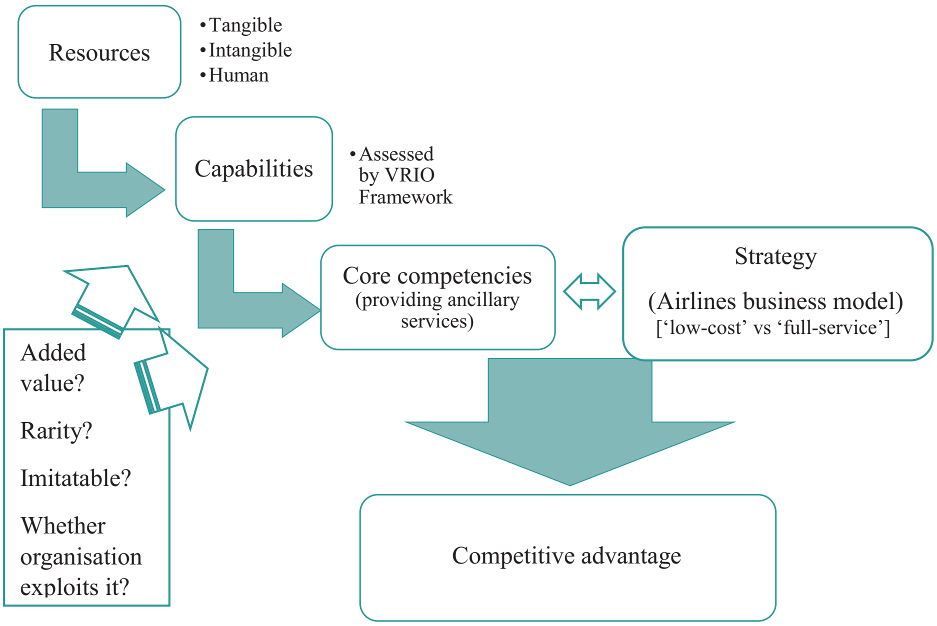
Returning to the discussion of airlines' competitive advantage and strategy, it can be seen that the crisis-prone nature of the industry has really shaped progress towards more profitable business models, with airlines pursuing the operational efficiency suggested by Porter. In addition, the research found that ancillary services are indeed becoming a competitive factor for both 'full-service' and 'low-cost' carriers.

Through the analysis of the existing literature, it is defined that the competitive nature of the airline industry is based on the principles of low marginality, intense rivalry among competing companies and, most importantly, high vulnerability to crisis situations. All in all, the key to the competitiveness of commercial airlines is their ability to withstand market rivalry and survive through crisis situations. Ultimately, the pursuit of a sustainable competitive advantage is essential to the long-term success of any business.

To conclude the discussion paper – a visualisation (Fig. 1) of the strategic Resource-Based View concepts is created to attempt to fit the ancillary services of commercial airlines into these concepts.

Further research clearly implies a thorough investigation of possible core competences that airlines need to develop in order to gain competitive advantage. One of these core

Fig. 1. Place of ancillary services in the RBV analysis



Source: compiled by the author on [Barney, 1991; Grant, 2018; Wittmer et al., 2021].

competences is likely to be the provision of so-called ancillary services that generate additional revenue and provide additional operational efficiency.

As external environment has become more volatile and unpredictable, the airline industry has seen a significant increase in the trend to generate additional revenue to the main passenger revenue – in academic and professional literature this is referred to as 'ancillary revenue,' i.e. revenue generated by offering and selling ancillary services. Over the past decade, the share of ancillary revenue in the total passenger revenue has increased by more than 200%, from 6% of total passenger revenue in 2011 to around 20% – in 2021, on average for all reporting airlines. This trend is strongly supported by the growing number of 'low-cost carriers' (LCCs), as their business model is highly dependent on ancillary revenues. Industry examples such as *Spirit*, *Ryanair* and *Wizz Air* generate around half of their total turnover from ancillary revenues [The 2022 yearbook.., 2022]. But even the 'full-service network carriers' (FSNCs) are realising the value of offering ancillary services. On average, the major US carriers (*Alaska Air*, *American Airlines*, *Delta*, *Southwest* and *United*) generate 22.2% of their total revenue from ancillary services [The 2022 yearbook.., 2022].

Commercial airlines around the world are turning to increased ancillary revenue generation, especially in times of crisis. An analysis of industry reports shows that in the pandemic year of 2020, the decline in ancillary revenues was less than the decline in total passenger revenues. More importantly, the recovery of ancillary revenues is twice as strong as that of total passenger revenues – 54% year-on-year growth in 2021 compared to 24% year-on-year growth in the same year [The 2021 Yearbook.., 2021; The 2022 Yearbook.., 2022]. Ancillary revenues and the services that support them are therefore of strategic importance to airlines around the world. As stated, there is room for research into the resources and skills required to operate effectively with ancillary services.

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